Appendix C
ACHA addendum

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Aboriginal Cultural Heritage Assessment (Addendum)

HVO Continuation Project

Prepared for HV Operations Pty Ltd

November 2023

Aboriginal Cultural Heritage Assessment (Addendum)

HVO Continuation Project

HV Operations Pty Ltd

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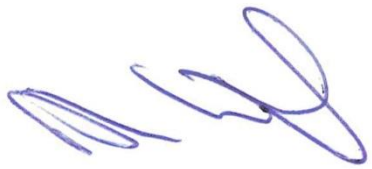

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Executive Summary

Hunter Valley Operations (HVO) is a multi-pit open cut coal mining complex comprising two mine sites separated by the Hunter River: HVO North and HVO South. The HVO Continuation Project (the Project) broadly comprises the continuation of the life of HVO North and HVO South, from the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and 2045 at HVO South. Two new State significant development (SSD) consents are required under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for both HVO North and HVO South. Given that the two mine sites operate as one complex, one environmental impact statement (EIS) has been prepared to support the two development applications required for the project (SSD-11826681 and SSD-11826621 – HVO North and South Open Cut Coal Continuation Project). An Aboriginal cultural heritage assessment report (ACHAR) was prepared as part of the EIS (EMM 2022, Appendix N to the EIS) which provided an assessment of the potential Aboriginal heritage impacts associated with the Project. The EIS was placed on public exhibition from 30 January 2023 until 27 February 2023.

As part of the EIS public exhibition process, Heritage NSW reviewed and provided advice on the ACHAR. This advice sought clarification and additional information. This report has divided the Heritage NSW queries into four main components:

1. Aboriginal consultation – additional information on ongoing stakeholder consultation, engagement with certain organisations and clarification of distributed documentation during the ACHAR.

2. Project area specific geomorphology – further investigation and details of soil units and landforms of potential Pleistocene age, including the Warkworth sand system and CM-CD1.

3. Archaeological resource – further definition and refinement of the cultural materials identified within the ACHAR, and a more detailed consideration of significance and cumulative impact given the level of development in the locale in recent years.

4. Additional information of future archaeological mitigation – providing further consideration of mitigation measures, such as the management of culturally modified trees and archaeological salvage methods, should the project be approved.

This report provides further information on each of these components to supplement the ACHAR. These include the provision of additional information on Aboriginal consultation and specialist advice on the Warkworth sand system.

At the centre of the report is the use of additional available regional and project specific developed information for the Warkworth sand system and archaeological record to further explore and refine the 279 Aboriginal objects, sites and places identified within the Project disturbance area.[1] This confirmed these data show that a significant portion of the cultural assemblage consists of isolated or low densities of stone artefacts found on the surface and often in disturbed environments, as per the conclusions of the ACHAR. This work also enabled further resolution of the cultural assemblage within the Project to highlight those sites and places that may be of higher value based on broader regional perspectives. Specifically, cultural materials considered of higher scientific and/or cultural value within the region typically consist of stratified stone artefacts within the Warkworth sand system and/or where found in high densities (>30/m^2). Culturally modified trees are also encompassed within this category due to their increasing rarity in the region. The ACHAR has previously identified several of these types of sites within the Project, and this report undertakes minor refinement to this existing cultural assemblage. By way

[1] While the ACHAR outlines 304 Aboriginal objects, sites and places, newly undertaken AHIMS searches for the Project area for this report (Section 4.3) found additional sites have been both created and lost since its completion; refinements of the Project and of the ACHAR field results have also been undertaken (leading to the amalgamation of some closely located sites). As such values here are slightly different to EMM 2022.

of illustration, the ACHAR identified 29 Aboriginal sites and places as of moderate and/or high significance, while this report concludes some 31 within the same data.

When reviewing the cultural assemblage against the criterion of dense cultural materials and/or the presence of Warkworth sand system, of the 279 sites within the Project disturbance area, and including post-EIS design refinements:

- Some 31 objects, sites and places are considered to be of moderate and high significance
    - four of these sites have been previously destroyed in accordance with previous approvals
    - 27 sites of moderate to high significance remain extant within the Project disturbance area.

Of the 27 extant sites of significance within the Project disturbance area:

- 16 sites have been identified as of moderate significance
- 11 sites have been identified as of high significance

The Project would adversely affect 12 moderate and high significant sites being:[2]

- ten sites identified as of moderate significance
- two sites identified as of high significance.

The two sites identified as being of high significance that will be impacted by the Project include HVOCP TR195-AS2 (37-3-1619) and HVOCP TR213-AS1 (37-3-1626), both of which are artefacts scatters with deposits located within the heavily constrained Lemington Road re-alignment. It is highlighted that no cultural significance of any site within the identified cultural assemblage was refined, and remains unchanged from the ACHAR, only the scientific criterion has been revisited.

Significant project re-design has occurred following submission of the EIS to continue to reduce the potential Project impacts associated with this proposed road re-alignment, especially to 37-3-1626, and this has avoided all identified culturally modified trees, and substantially reduced the spatial impacts to areas of the Warkworth sand system, with some 2.78 ha (~18%) of the inferred cultural deposit within the Project disturbance area remaining unaffected. It is considered that the loss of the remaining cultural assemblage; that is the low density stone artefacts or isolated objects, reflecting landscape densities of ~1 artefact/3 ha, would not result in substantive cumulative impact or loss.

Further detail on potential archaeological mitigations for sites proposed to be impacted by the Project are outlined in this report. These build on the advice provided in the ACHAR and, as requested by Heritage NSW, include management of culturally modify trees (if required), and proposed approaches, methods and the quantum of archaeological salvage excavations focussing on nine cultural deposits of moderate or high value. In accordance with co-design principles, these post-approval activities would be further developed in consultation with the registered Aboriginal parties prior to finalisation.

[2] For comparison, EMM (2022) identified that three Aboriginal sites of high significance would be adversely affected (including HVOCP TR195-AS2 [37-3-1619], HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635]), and 15 sites of moderate and/or moderate-high value (including HVOCP TR213-AS1 [37-3-1626], which has had its significance increased from moderate-high to high based on data in this report). Following post-EIS refinement, HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635] have both now been avoided.

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1 Introduction

1.1 Background and purpose of the report

Hunter Valley Operations (HVO) is a multi-pit open cut coal mining complex comprising two mine sites separated by the Hunter River: HVO North and HVO South (Figure 1.1 and Figure 1.2). The HVO Continuation Project (the Project) broadly comprises the continuation of the life of HVO North and HVO South, from the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and 2045 at HVO South.

Two new SSD consents are required under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for both HVO North and HVO South and the Project will seek to maintain separate development consents for HVO North and South. However, given that the two mine sites operate as one complex, one Environmental Impact Statement (EIS) has been prepared to support the two development applications required for the Project (SSD-11826681 and SSD-11826621). An Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared as part of the EIS (Appendix N to the EIS) and provided an assessment of the potential Aboriginal heritage impacts associated with the Project. The EIS was placed on public exhibition from 30 January 2023 until 27 February 2023.

As part of the public exhibition process, Heritage NSW reviewed and provided advice on ACHAR. Based on this review, Heritage NSW has stated that there is insufficient information to advise whether the management recommendations proposed are adequate and if the ACHAR complies with the Secretary's Environmental Assessment Requirements (SEARs). Heritage NSW outline that additional information and further investigations may be required to establish the nature and extent of the Aboriginal cultural heritage values proposed for impact by the Project. This advice was provided on 27 February 2023 and is included within Appendix A. This report has been prepared to supplement the ACHAR and to address Heritage NSW's comments. The outcomes of this report takes into consideration the amended Lemington Road re-alignment corridor as described in the HVO North Amendment Report. Table 1.1 provides a summary of the Heritage NSW comments, and where they are addressed in this report.

Notable comments include the need to further consider cumulative impact to the cultural materials within the Project area. While this is discussed further in Section 5, it is highlighted here that significant project re-design has been occurring following submission of the EIS, and this has further reduced the potential impacts to cultural materials, especially within the Lemington Road re-alignment. The constrained nature of this portion of the Project limits complete avoidance, but two culturally modified trees and several hectares of the Warkworth sand system have now been avoided as part of this latest re-design (see Section 5.4 for further details).

Table 1.1 Heritage NSW comments and where addressed in the report

Heritage NSW comments	Where addressed
• Please provide additional documentation of the consultation process as there may be a gap of 10 months between November 2021 and September 2022. Heritage NSW requires that consultation with Registered Aboriginal Parties (RAPs) is continuous. Under our guidelines, breaks in consultation of over six months may not constitute continuous consultation. If an unexplained break of greater than six months has occurred, the applicant may be required to restart the consultation process. • Please provide evidence that the test excavation methodology was provided to the RAPs. The ACHAR notes that the methodology was discussed during an onsite meeting with the RAPs present, however it is unclear if the methodology was provided in writing to all RAPs. • Further information is required on the consultation undertaken with the Plains Clans of Wonnarua People (PCWP). It is understood from the details provided in the ACHAR that PCWP chose to not provide further information as part of the consultation process. However, from the provided correspondence and information in the ACHAR it is apparent that additional discussions were had, which have not been provided in the ACHAR.	Section 2

Table 1.1 Heritage NSW comments and where addressed in the report

Heritage NSW comments	Where addressed
• Further explication is required on the comments made by Wattaka Wonnarua Cultural Consultants Services (represented by Mr. Des Hickey) regarding the details provided in the Cultural Values Report. While we understand that Wattaka Wonnarua Cultural Consultants Services were afforded the opportunity to participate, Heritage NSW would recommend that the assessment of Cultural Values and further interviews be an ongoing process to ensure additional Wonnarua voices are included. • Consideration must be given to the potential impacts the project may have on the Aboriginal cultural heritage values associated with the Section 10 application under the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 that encompasses several areas in the HVO North Project area. Additional archaeological investigation may be required within these areas, subject to the Section 10 application.	
• There are several examples within a regional context (e.g., Spur Hill, Wambo, along Wollombi Brook, Ravensworth Mine) where large numbers of artefacts and/or Pleistocene aged material have been identified on terraces in the vicinity, but not directly adjoining, the Hunter River, Wollombi Brook, and Bowmans Creek. Further explication is required in Section 4.5.4iia of the ACHAR on the potential for Pleistocene aged deposits within the Project area. Following this updated assessment, the predictive model may require updating and additional areas may require further investigation. • Undertaken as a requirement of the SEARs was the re-excavation and dating of Aboriginal site Carrington Mine Colluvial Deposit 1 (CM-CD1, 37-2-1877), which identified that the lower deposits dated between ~9,000-16,000 years ago. The test excavation program across the Project area identified four areas (5, 9, 11, and 12) that contained a minimum of 50 cm of sediment and relatively high numbers of artefacts. However, the ACHAR did not discuss whether, in light of the results from CM-CD1 (37-2-1877), these four areas had the potential to contain Pleistocene deposit. – Further information is also required on the extent that the landform associated with CM-CD1 (37-2-1877) may extend further into the disturbance area and whether any potential sub-surface archaeological deposits may be impacted. • Following the test excavation results, dating of CM-CD1 (37-2-1877), and updated Section 5, detailed assessment and mapping are required of potential localities within the Project area that have not been subject to test excavations that may contain highly significant sub-surface materials.	Section 3
• Heritage NSW notes that the Aboriginal Heritage Information Management System (AHIMS) search is greater than 12 months old at the time of submission. Heritage NSW requires, as per Requirement 1b of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010) ('the Code of Practice'), that AHIMS searches are contemporaneous with the project. We consider that AHIMS searches of over 12 months old need to be updated. Please provide an updated AHIMS extensive search. • Generally, Heritage NSW does not permit vehicle surveys as a replacement for pedestrian surveys, as per Requirement 5 of the Code of Practice. It is understood that vehicle survey was undertaken where the land was inaccessible owing to dense vegetation cover (thistle) and where heavily disturbed. Please clarify where vehicle survey was employed owing to past disturbances and where it was used owing to inaccessibility. Further, please provide additional information on whether these areas, and other areas not subject to survey, will require survey if conditions change prior to proposed impacts. • Please update mapping of test pit locations to include the number of artefacts recovered in each unit. • The significance assessment stated that 84% of all extant Aboriginal cultural heritage sites to be impacted by the development are of low significance. While a number of these sites are isolated artefacts and/or low-density artefact scatters, many of the sites are part of larger site complexes. The ACHAR and Significance Assessment must take into consideration the influence these larger site complexes (including destroyed sites) have on the overall significance of the sites and the landform within which they are situated. • Please clarify and map where impacts have occurred to sites, the relevant approvals impacts were conducted under, and the current status of these approvals (e.g. expired, expiry date). It is unclear in the significance assessment and Appendix I of the ACHAR, which sites have been impacted and to what extent this has impacted their designated significance. Please provide additional justification on how works conducted under prior approvals have influenced the significance of applicable sites.	Section 4

Table 1.1 Heritage NSW comments and where addressed in the report

Heritage NSW comments	Where addressed
• The ACHAR argues that Ecologically Sustainable Development (ESD) and cumulative impact will be addressed through the conservation of materials ex situ and that as many of the sites are considered to be of low scientific significance this is appropriate. However, as explained above, we have concerns about the accuracy of the significance assessments that may limit the reliability of this argument. Limitations in the considerations of ESD and cumulative impact include: – The ACHAR argues that cumulative impact will be managed through conservation of materials collected as part of the salvage program. Little consideration was given to the additional loss of at least 220 known sites as a result of the project. When coupled with the loss of over 700 sites in the local area, the cumulative impact to Aboriginal cultural heritage is quite large. The ACHAR argues that ex situ conservation may be comparable to in situ preservation, however, unlike the Kiribati case study provided, the impacts from the project are avoidable. – There is limited consideration for the avoidance and conservation of significant ACH sites. The ACHAR outlines that 84 sites will be avoided by the project, including one Pleistocene aged site, however, most of these have been deemed to be of low scientific significance with a greater number of moderate to high significance sites being impacted rather than conserved. • Please clarify the extent of expected disturbances within the transmission line relocation areas.	Section 5
• Further details are required regarding the three scarred trees identified as part of the ACHAR, including: – Provisional management options for the scarred trees in the event of their removal; – Further explication on the number of scarred trees that have been impacted in a regional context and the different management options that have been used for their removal and/or conservation; and – Further information on the potential uses of the removed bark from the scarred trees, as there is potential for use as a burial covering. • Further details are required on the proposed salvage excavation methodologies for areas 5, 9, 11, and 12 as well as any additional areas identified in the above reassessment. The methodology should also include provisions for redesign and avoidance if the materials identified are of high local and/or regional significance. • Heritage NSW recommends that an ACHMP be developed and implemented for the project. Heritage NSW recommends the requirement for an ACHMP should be included in the Conditions of Approval and that an ACHMP be created and approved by Department of Planning and Environment prior to any development activities occurring within the project area. Recommended conditions for an ACHMP have been included in Attachment B. • Included in the ACHMP should be provisions for project redesign if sites of high local and/or regional significance, as agreed to by the RAPs, are identified during the course of salvage excavations. • Please clarify the procedure that HVO will undertake in the transition from Aboriginal Heritage Impact Permits (AHIPs) to an ACHMP. For example, will the AHIPs be surrendered following project approval and/or will the AHIP methodologies be incorporated into the ACHMP?	Section 6

Notes: Some of the comments have been re-ordered to encompass broad categories, such as Aboriginal consultation and impact. The original comments can be found in Appendix A of this report.

1.2 Overview of assessment outcomes

A summary of the key assessment outcomes documented within the ACHAR prepared for the EIS, and how these have been updated as a result of the amendment and the additional investigation works described throughout this report, is provided in Table 1.2 below. The purpose of this summary is to provide context to the updated outcomes between the two reports for ease of interpretation. Each assessment outcome is discussed further within the following sections and as referenced in Table 1.2. Apart from further avoidance, it is noted that no changes to mitigation and management measures proposed within the EIS have occurred as result of the additional investigation works.

Table 1.2 Summary of assessment outcome updates to the ACHAR

Aspect	EIS results	Addendum results	Commentary
AHIMS sites within the search area	1,786 records	1,793 records	• An additional seven sites are now listed on AHIMS in the search area (searched on 1 June 2023), compared to when the search was conducted for the EIS on 8-9 June 2021, as discussed in Section 4.1 • The seven sites that were not previously identified in the original search are HROA1 (37-3-1636); WBC 1 (37-3-1639); WBC 2 (37-3-1640); HROA2 (37-3-1641); PK11 (37-6-0880); HVO-2140 (37-6-4172); HVO-2141 (37-6-4196). These sites all comprise undefined open stone artefact scatters and an open camp site. Three are within the Project area; PK11 (37-6-0880), HVO-2140 (37-6-4172), and HVO-2141 (37-6-4196). None of these sites are proposed to be impacted as part of the amended Project.
Aboriginal cultural heritage sites within the Project disturbance area (being the combination of *existing and approved disturbance area* and the *additional disturbance area for the Project*)	304 sites	279 sites	• While the EIS ACHAR (EMM 2022c) identified 304 Aboriginal objects, sites and places, newly undertaken AHIMS searches for the Project area for the ACHAR addendum (as noted in Section 4.2) found additional sites have been both listed and removed since its completion. Minor refinements of the EIS ACHAR field results have also been undertaken, as described in Section 5, leading to the amalgamation of some closely located sites and therefore slightly reducing the number of individual sites present in the Project disturbance area. Aboriginal heritage sites are described within Appendix F. • The amalgamation of sites relates to the outcomes of the geomorphological assessment, in which the Warkworth Sands Sheet has been further defined. • Of the 279 Aboriginal cultural heritage sites identified in the Project disturbance area, 138 are within the existing and approved disturbance area, with the remaining 141 located within the additional disturbance area proposed by the amended Project.
Significance assessment of Aboriginal cultural heritage sites within the Project disturbance area *It is noted that these values amount to the total Aboriginal cultural heritage sites within the Project disturbance area, not the total sites to be impacted which is outlined below.*	Low- moderate: 275 Moderate: 11 Moderate-high: 12 High: 6 Total: 304	Low - 234 Low-moderate: 18 Moderate: 16 High: 11 Total: 279 **No Moderate – high sites are identified within the ACHAR addendum*	• The significance of individual sites was reviewed in respect of the revised cumulative impact assessment and receipt of the geomorphological assessment conducted to respond to comments from Heritage NSW, as discussed in Section 4. • Individual site significance is detailed within Appendix F.

Table 1.2 Summary of assessment outcome updates to the ACHAR

Aspect	EIS results	Addendum results	Commentary
Impact assessment – being a summary of impacts and harm to extant Aboriginal sites within the Project disturbance area *It is noted that values differ to the above as not all sites within the Project disturbance area are proposed to be disturbed on the basis of avoidance measures adopted.*	Low: 190 Low -moderate: 4 Moderate: 6 Moderate-high: 9 High: 3 Total: 222	Low: 181 Low – moderate: 12 Moderate: 10 High: 2 Total: 205 **No Moderate – high sites are identified within the ACHAR addendum*	• The amended Project results in a reduction of impacts and harm to extant Aboriginal sites, noting that AHIMS 37-3-1626, also referred to as HVOCP TR213-AS1, now consolidates AHIMS sites 37-3-1623, 37-3-1624, 37-3-1625, and 37-3-1627 on the basis of further information provided via the geomorphological assessment. In respect of this, the amended Project impacts 17 less sites than that proposed under the EIS. • The EIS identified that three Aboriginal sites of high significance would be adversely affected (including HVOCP TR195-AS2 [37-3-1619], HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635]), and 15 sites of moderate and/or moderate-high value (including HVOCP TR213-AS1 [37-3-1626], which has had its significance increased from moderate-high to high as described in Section 4. Following post-EIS refinement, HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635], being Aboriginal culturally scarred trees have both now been avoided. No Aboriginal culturally scarred trees are proposed to be impacted by the Amended Project. • The two high significance sites proposed to be impacted by the amended Project relate to AHIMS sites HVOCP TR195-AS2 [37-3-1619] and HVOCP TR213-AS1 [37-3-1626], being artefact scatters with archaeological deposits. These sites are located within the amended Lemington Road alignment; however, were also proposed to be disturbed by the alignment proposed in the EIS. The only change is that the significance of site HVOCP TR213-AS1 was slightly updated in the ACHAR addendum (from moderate-high, to high) to reflect the outcomes of the geomorphological assessment, which found that the sites have the potential to retain Pleistocene deposits, as described in Section 3.3. Site HVOCP TR195-AS2 was identified as being oh high significance within the EIS. No changes are proposed to the management of these sites, as proposed in the EIS, with the sites proposed to be salvaged consistent with the management and mitigation proposed in the ACHAR and as further detailed within this report. Registered Aboriginal Parties (RAPs) were made aware of the further avoidance measures proposed by the amended Project on 26 July 2023.

1.3 Project area

The Project proposes to extend the life of HVO primarily through the extraction of coal from deeper seams within existing tenements. It seeks to continue mining operations at the HVO Complex to 2050, that being for a further 25 years at HVO North and 15 years at HVO South beyond the approved mining completion dates of 2025 and 2030, respectively. Other than as described in this EIS, all activities that are currently approved under the existing HVO North and HVO South approvals are intended to continue as part of the Project. The key Project elements are shown conceptually in Figure 1.3.

The Project area comprises the proposed development consent boundary for HVO North and the proposed development consent boundary for HVO South.

1.4 Project terminology

The following key terms are used throughout the ACHAR and this report to describe the HVO Continuation Project:

- HVO Complex – comprises both HVO North and HVO South operations.
- the Project - the project in its entirety, encompassing the continuation of the life of the complex, i.e. both HVO North and HVO South, within their respective proposed development consent boundaries, as illustrated in Figure 1.3 of the ACHAR.
- Project area - the Project area relates to the area that is the subject of the two development applications (i.e. the proposed development consent boundary for HVO North and the proposed development consent boundary for HVO South).
- Existing and approved disturbance area – areas that are disturbed and/or approved to be disturbed under the current development consents that apply to the HVO Complex.
- Approved mining area – the areas within the approved disturbance area that have been previously assessed and approved under the NSW EP&A Act for mining operations.
- Additional disturbance area – the areas that will be disturbed by the Project that are outside of the existing and approved disturbance area. This is inclusive of areas to be disturbed for the purposes of mining, transmission lines and the realigned Lemington Road corridor (as defined below).
- Approved disturbance area other mines – areas that are approved to be disturbed under the current development consents that apply to Ravensworth Operations (Project Approval 09_0176), United Wambo Joint Venture (State Significant Development 7142) and Liddell Coal Operations (Development Application 305-11-01).
- the Assessment area – this is the area that is the subject of fieldwork activities completed for the ACHAR and comprises the Project disturbance area, excluding areas of significant disturbance and or areas where impacts to Aboriginal heritage have previously been approved and completed under current approvals[3] (as shown on Figure 6.1 of the ACHAR).

[3] Approved and valid Heritage NSW Aboriginal Heritage Impact Permits (AHIPs) granted to HVO North currently operating under development consent (DA 450-10-2003).

- Previously approved areas not retained - Areas that are disturbed and/or approved to be disturbed under the current development consents that apply to the HVO Complex, that will no longer be disturbed by the Project, such as the LCPP short rail loop, the Riverview South East Extension and South Lemington Pit 2 mining areas, and the approved temporary crossing across the Hunter River between HVO North and South.

- Project disturbance area – this area is a combination of the existing and approved disturbance area, relevant areas within approved disturbance areas of other mines and the additional disturbance area associated with the Project area, minus the areas not being retained by the Project. If the Project is approved, this will become the 'approved disturbance area' under the new SSD development consents.

- Transmission Line Corridors – two categories of transmission line corridors have been defined for the purpose of quantifying the extent of disturbance for the Project:

    - realigned transmission lines (i.e. new transmission line easements) – the extent of disturbance will be limited to transmission line poles/towers and an access road for maintenance along the alignment, as well as vegetation management to maintain safe powerline clearance

    - existing transmission line easements to be decommissioned – disturbance will be confined to existing access tracks and cleared areas.

- Realigned Lemington Road Corridor – the corridor extends from the Comleroi Road intersection with the Golden Highway at the southern end of the new alignment, along the Comleroi Road alignment around the south-eastern side of HVO South, and then extends in a northerly direction to join the existing Lemington Road at a point approximately 2.3 km south of the New England Highway/Lemington Road intersection. The corridor also allows for two options with respect to the connection to the Golden Highway; one assuming that the Golden Highway is realigned by United Wambo as approved under SSD 7142, and a second option that connects with the current alignment of the Golden Highway.

1.5 Authorship

This report was prepared by:

- Stacey Kennedy (EMM Associate Archaeologist/Technical Lead – Aboriginal Heritage).

In partnership with the following contributors:

- Dr Christopher J Gippel (Fluvial Systems) – Geomorphological Assessment.

This report was reviewed by:

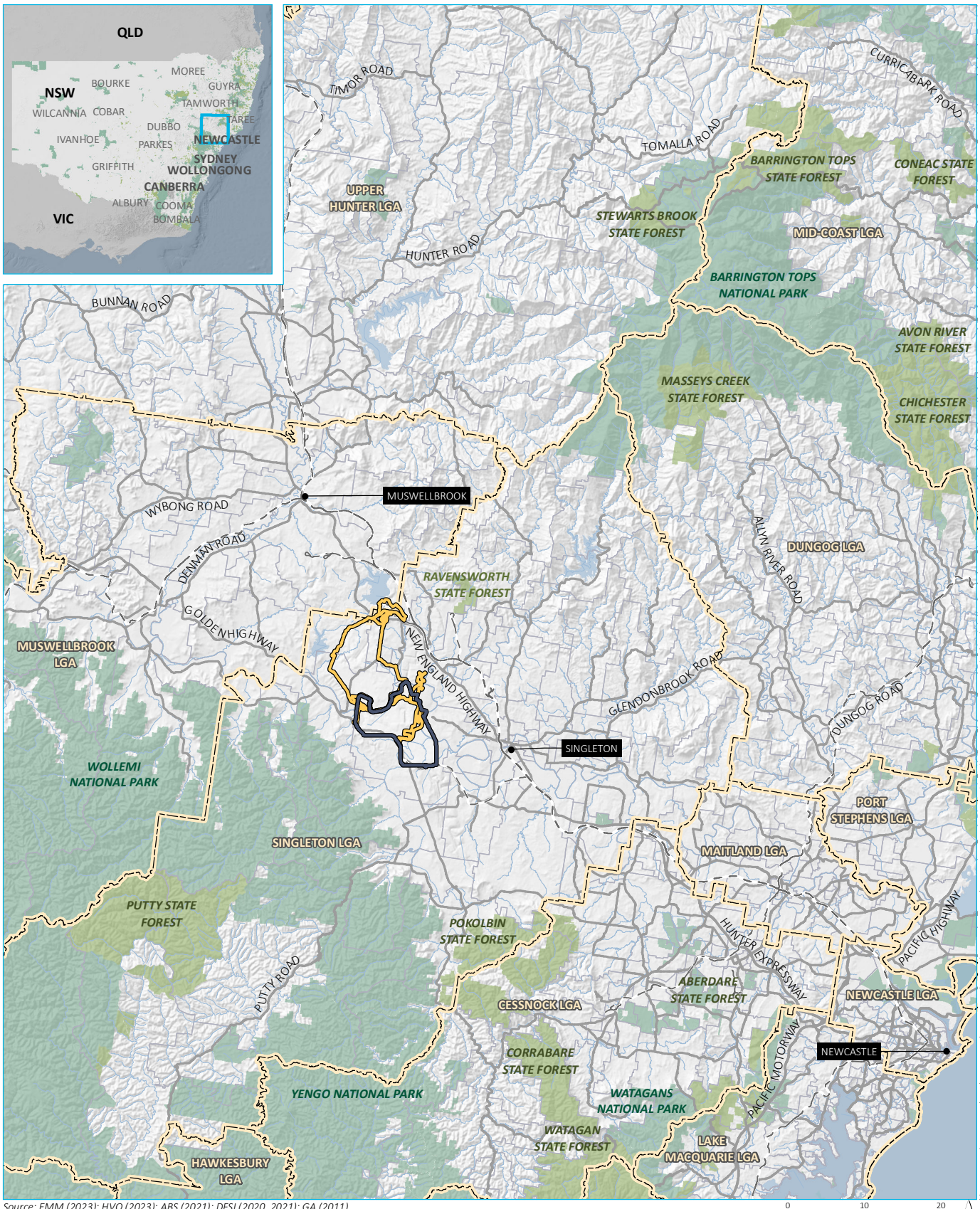
- Dr Alan Williams (EMM Associate Director/Technical Lead – Aboriginal Heritage)

- Nicole Armit (EMM Director)

- James Wearne (EMM Associate Approvals and Environment).

1.6 Limitations

This report is based on existing and publicly available environmental and archaeological information and reports about the Project area. The background research did not include any independent verification of the results and interpretations of externally sourced existing reports (except where the ground-truthing was undertaken). The report further makes archaeological predictions based on these existing data and targeted ground-truthing, and which may contain errors depending on the accuracy of these third-party studies and the extent of ground-truthing (constrained to surface) investigations.



Source: EMM (2023); HVO (2023); ABS (2021); DFSI (2020, 2021); GA (2011)

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GDA2020 MGA Zone 56

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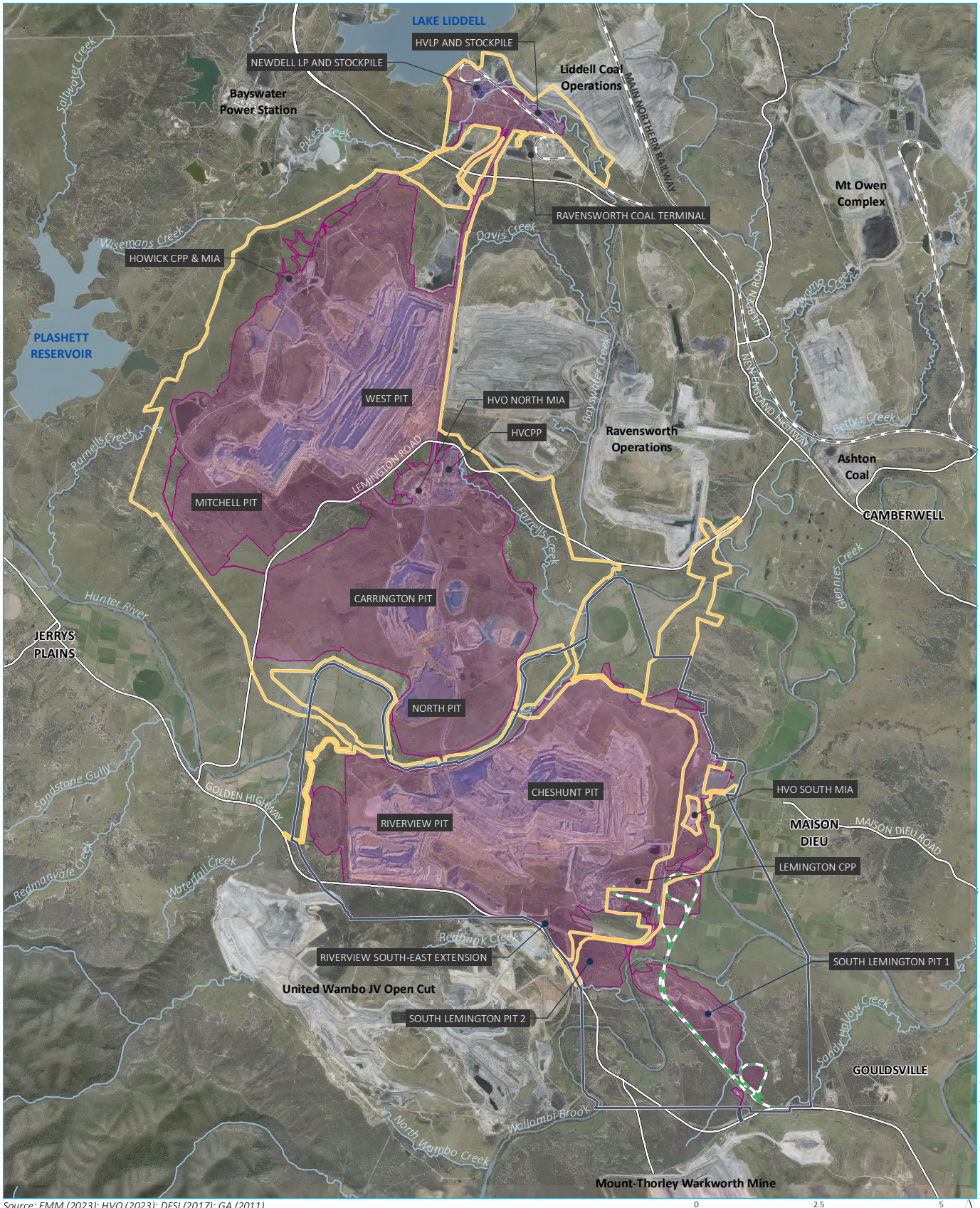
KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Rail line
- Major road
- Named watercourse
- Named waterbody
- Suburb boundary
- Local government area
- NPWS reserve
- State forest

Regional map of the Project

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 1.1

EMM
creating opportunities



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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 2.5 5 km

GDA2020 MGA Zone 56

N

KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- South Lemington Rail Loop and haul route (approved, not yet constructed)

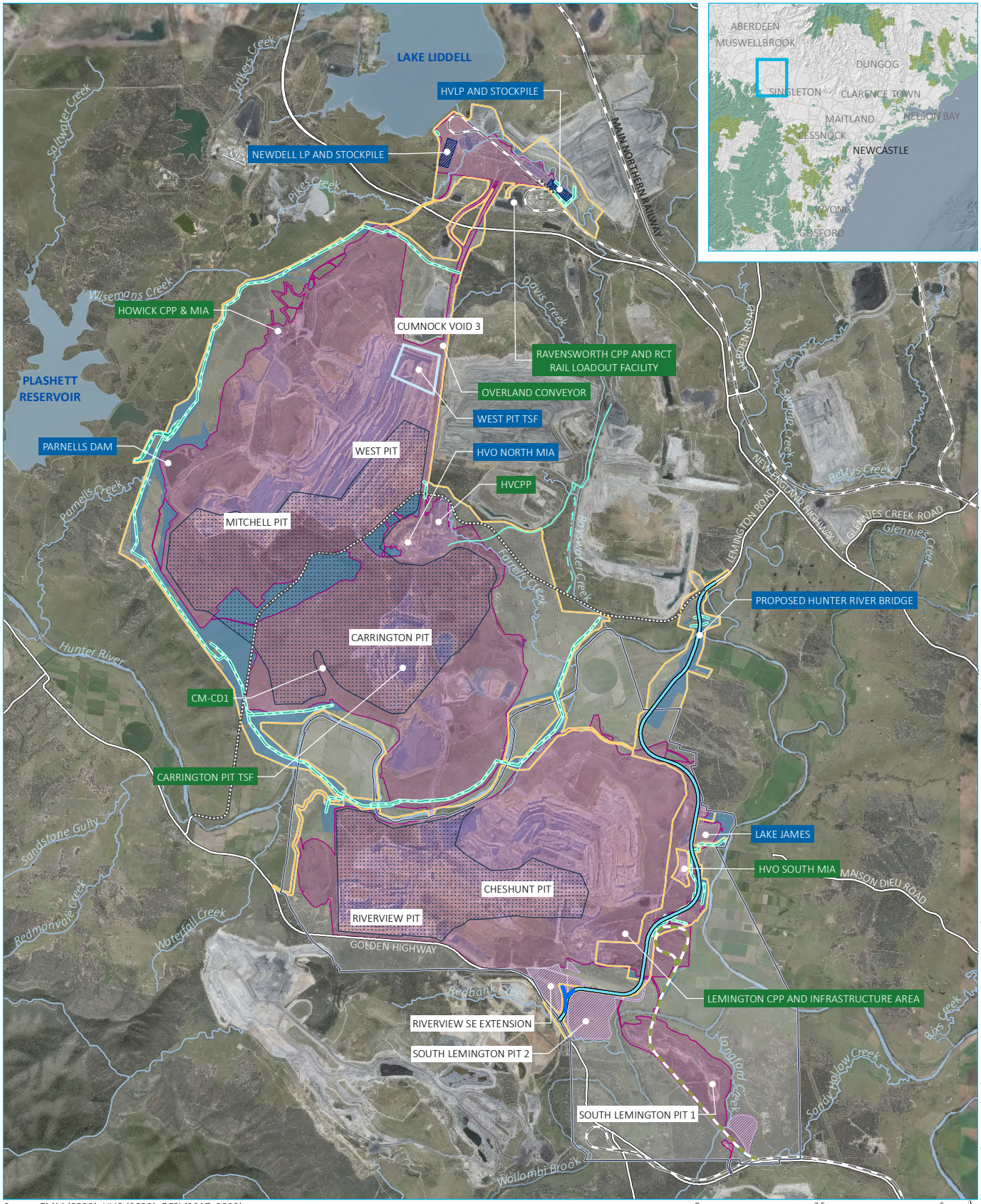
Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

Local map of the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 1.2

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017, 2020)

0 2.5 5 km

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Previously approved area not retained
- Project related item
- Existing item

Existing HVO elements to be maintained

- South Lemington Rail Loop (approved, not yet constructed)

Proposed HVO Continuation Project elements

- Lemington Road realignment
- Indicative location of public road closure
- Haul route to Ravensworth Operations
- Transmission line relocation
- Alternative Golden Highway intersection
- Proposed mining area
- Product stockpile
- Additional disturbance area
- West Pit TSF

Existing environment

- Rail line
- Major road
- Ravensworth Operations access road
- Named watercourse
- Named waterbody
- NPWS reserve (refer to inset)
- State forest (refer to inset)

Proposed Project conceptual layout

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 1.3

EMM
creating opportunities

2 Aboriginal consultation

2.1 Section summary

- Additional information on Aboriginal consultation undertaken for the Project has been provided, which includes activities during the November 2021 – September 2022 period. This primarily focussed on the cultural values mapping study with key knowledge-holders, while the Project was being substantively re-designed to avoid the highly significant Carrington Mine Colluvial Deposit Area 1 (CM-CD1).

- In relation to consultation with the Plains Clan of the Wonnarua People (PCWP), some 91 attempts were made to engage with this organisation. Consultation remains ongoing with all Project RAPs including the PCWP.

- Further consultation has been undertaken with the Wattaka Wonnarua Cultural Consultants Services and other members of the family to discuss the cultural values study. While this organisation has opted not to pursue interviews for the cultural values study, consultation with representatives of the Wattaka Wonnarua Cultural Consultants Services remains ongoing. Members of Wattaka Wonnarua Cultural Consultants Services, Widescope Indigenous Group Pty Ltd and Hunter Valley Cultural Services have participated in a number of additional discussions with HVO and GCAA personnel, including a site inspection of the realigned Lemington Road area. Notably, post submission of the EIS HVO amended the Lemington Road realignment which has resulted in the avoidance of two scarred trees of Aboriginal cultural heritage origin, which Wattaka Wonnarua Cultural Consultants Services and other members of the family had identified as holding significance. Furthermore, HVO has committed to providing the opportunity to the Wattaka Wonnarua Cultural Consultants Services and other members of the family assistance to connect with family and Country, to facilitate the transfer of knowledge and culture to younger generations.

- No further information is currently available in relation to the undetermined Section 10 application under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act). This application covers only a very small portion of the Project area and would be considered in the future as required.

2.2 Additional documentation of consultation November 2021 – September 2022

The SEARs issued for the Project required the adoption of the Heritage NSW *Aboriginal Cultural Heritage Consultation Requirements for Applicants*, which was implemented for the Project. While timeframes for some activities are outlined in these requirements, there is no specific reference or direction in maintaining consultation every six months.

Consultation during this period included informal discussions and liaison over the cultural values mapping component of the ACHA. During this time, the Project was subject to significant mine plan amendment arising, in part, from ongoing consultation and which resulted in the complete avoidance of impact to the Aboriginal heritage site referred to as Carrington Mine Colluvial Deposit Area 1 (CM-CD1) (Section 3.3.3.).

Specifically, some 21 interactions with the registered Aboriginal parties occurred during this period, including with representatives of Widescope Indigenous Group, Ungooroo Aboriginal Corporation, Culturally Aware, Wonnarua Nation Aboriginal Corporation, and Wonnarua Elders Council. These primarily related to the cultural values study for the Project that was ongoing through this time period. Numerous other informal liaison with the registered Aboriginal parties was undertaken by Morgan Wilcox and Dr Phil Clarke during this period.

Detailed information on consultation undertaken throughout the Project has been provided separate to this ACHA addendum for consideration by Heritage NSW and DPE.

In addition, the following broader community information was also provided to the registered Aboriginal parties throughout the development of the ACHAR, and remains ongoing, to keep them informed of the Project's progress:

- HVO News (Issue 8) was issued to the registered Aboriginal parties in December 2021
- HVO News (Issue 9) was sent to the registered Aboriginal parties in October 2022
- HVO News (Issue 10) was sent to the registered Aboriginal parties February 2023
- Advised of the submission of the EIS to DPE – 16 February 2023
- HVO News (Issue 11) was sent to registered Aboriginal parties in April 2023
- HVO News (Issue 12) was sent to registered Aboriginal parties in September 2023
- Advised of the response to submissions process and further avoidance measures – 26 July 2023
- Undertaking additional engagement with Wattaka Wonnarua Cultural Consultants Services, Widescope Indigenous Group Pty Ltd and Hunter Valley Cultural Services to discuss the project and broader cultural values – 18 September – 12 October 2023.

2.3 Further information on PWCP's interactions

Tocomwall Pty Limited – the organisation representing the withdrawn Plains Clan of the Wonnarua People (PCWP) native title application – and as a RAP for the Project - have been provided all required documentation under the Heritage NSW *Aboriginal Cultural Heritage Consultation Requirements for Applicants in NSW*, as presented in the ACHAR (EMM 2022). This includes the distribution of project information, assessment methodologies, invitation to meetings, and offers of participation in fieldwork. Their involvement and attendance has been generally limited, but a sites officer of the PCWP, Mary Franks, did participate in some components of the field survey, test excavation and culturally modified tree activities for the Project.

Overall, some 91 interactions have occurred between the proponent and Tocomwall between September 2020 and November 2022. This included numerous offers to meet with HVO personnel, to undertake their own cultural values assessment and various other opportunities to engage with the Project. To date, all offers have been declined. Details on consultation with Tocomwall has been provided separate to this ACHA addendum for consideration by Heritage NSW and DPE.

2.4 Additional cultural values activities

Following receipt of Heritage NSW comments on the ACHAR, HVO has made further attempts to engage with Wattaka Wonnarua Cultural Consultants Services to understand any residual concerns regarding the cultural values assessment.

On 30 March 2023, correspondence was sent to Wattaka Wonnarua Cultural Consultants Services extending an invitation for them to participate in further discussions and site visits with Dr Phil Clarke (Anthropologist), and to ensure their knowledge and views in relation to the cultural values surrounding the Project area can be heard and considered. At that time, Wattaka Wonnarua Cultural Consultants Services and Widescope did not want to progress the cultural values further.

A recent invitation was provided to the Hickey family to further discuss the Project and undertake a site visit following recent amendments and project refinements outlined in subsequent sections. An invitation was sent to Wattaka Wonnarua Cultural Consultants Services, Widescope Indigenous Group Pty Ltd and Hunter Valley Cultural Services on 18 September 2023 and a meeting was held on 12 October 2023 with these representatives where the amendments to the Project were discussed focussing on the avoidance of impacts to culturally modified trees within the Lemington Road realignment corridor. It is noted that a number of other discussions have been held, outside of the formal events discussed above, with Wattaka Wonnarua Cultural Consultants Services and the family more broadly since submission of the EIS. During these discussions it was noted that there was limited opportunity for RAPs to access Country and pass down culture and knowledge to future generations. This discussion highlighted potential mitigations strategies which HVO could consider to assist RAPs.

The outcomes of the noted meetings and discussions were generally positive, and resulted in two main outcomes:

- There was strong support for the ongoing efforts to minimise impacts to cultural materials, and notably the culturally modified trees (HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635]) along the Lemington Road re-alignment. At least one of which has specific value to the Hickey family.

- Suggestions for the proposed mitigation programs, as documented in the ACHAR (EMM 2022) to include requests for assistance in supporting local cultural events or returns to Country, and also for the development of materials associated with knowledge, connection and learning of Country that would becoming increasing inaccessible into the future. This may include videos and other digital methods to capture such information and enable its distribution.

This second dot point has further refined the mitigation programs and has been integrated into the broader social enhancement strategies proposed for adoption in the ACHAR (EMM 2022) and further discussed in Section 6.3 below.

2.5 Test excavation methodology

As per the consultation log presented in the ACHAR (EMM 2022), the test excavation methodology was issued on the 17 March 2021 to all registered Aboriginal parties. This consisted of a letter, which is presented in Appendix B.1 and which was also discussed at the Aboriginal Focus Group meetings during this period (25-26 May 2021).

2.6 Section 10 application and future requirements

The ATSIHP Act preserves and protect areas and places of particular significance to Aboriginal people from damage or destruction. Steps necessary for the protection of a threatened place are outlined in a gazetted Ministerial Declaration (sections 9 and 10).

HVO is familiar with the Section 10 application lodged by PCWP native title applicant under the ATSIHP Act. This application has yet to be determined and extends over a small portion of the Project area.

Regardless, the Section 10 application under the ATSIHP Act is outside and separate to the consideration of the Project under the NSW planning system. As of 3 October 2023, the application is before the Federal Minister for the Environment and Water for determination.

3 Project area specific geomorphology

3.1 Section summary

- A review of the geomorphic and archaeological literature for the Project area and surrounds has been undertaken to build on existing results and conclusions of the ACHAR. This continues to demonstrate the importance of the Warkworth sand system as being the main deposits within which older cultural material may be present. The Warkworth sand system is generally found south of the Project area in the vicinity of Wollombi Brook and Hunter River, but two sites, Malabar Burnham Wood Site I (37-6-0166) and Hunter Valley 1: Maryville Malabar Site N (37-5-0063), are within the Project area and have characteristics consistent with the Warkworth sand system. Of these, the latter has been destroyed by previously approved mining activities, while the former is outside the Additional disturbance area and accordingly neither site will be impacted as a result of the Project. CM-CD1 (37-2-1877) is also consistently referenced as of Pleistocene age (>10,000 years ago), and further information on the archaeological excavations undertaken by the ACHAR (EMM 2023) and reproduced here is presented.

- While the Warkworth sand system and colluvial units of CM-CD1 (37-2-1877) have been identified as of Pleistocene age (>10,000 years ago), cultural assemblages were recovered typically has Holocene (<5,000 years ago) typology and characteristics. This extends to the findings of the ACHAR, where at both Area 12 (potentially within the Warkworth sand system) and CM-CD1 (37-2-1877), the cultural assemblage appeared younger than the surrounding geomorphological deposits. The ability to disentangle the mixing of older and younger cultural assemblages within these types of deposits is typically achieved on a project specific basis and in some instances has not proven possible.

- An additional geomorphological assessment has been undertaken of the Project area to explore the potential for Pleistocene deposits (Appendix C), and with specific reference to the archaeological excavations undertaken for the Project. This identified that:

    - Area 9 is located on a buried alluvial fan which is likely to be common within the Hunter Valley. It may have deeper geomorphological deposits potentially of Pleistocene age; however, such deposits would be approximately 3 m below current surface and inaccessible when applying required Heritage NSW guidelines for archaeological excavation.[4] As such, further investigation and mitigation of these deposits is proposed and will be included as part of a proposed ACHMP should development consent be granted for the Project, with further details of the draft methodology provided in Section 6.

    - Area 12 reflects a portion of the Warkworth sand system – a documented Pleistocene geomorphological deposit – that extends from a larger expression of these deposits found south-east of the Project area. While the deposit can be of Pleistocene age, the cultural assemblage recovered is considered to be of Holocene age (<5,000 years ago) based on typological analysis, as documented in the ACHAR (EMM 2022). Further investigation and mitigation is proposed and will be included as part of a proposed ACHMP should development consent be granted for the Project, with further details of the draft methodology provided in Section 6.

[4] Currently the project is required to adopt archaeological excavations in accordance with the *Code of Practise for the Archaeological Investigation of Aboriginal Objects in NSW*. These guidelines limit any excavation to 2.25 m^2 (1.5 x 1.5 m) in any location. This size of excavation would not enable benching below 2 m, or the installation of any currently available shoring system that may allow greater depths.

- CM-CD1 (37-2-1877) was considered a discrete geomorphological unit constrained by a unique set of conditions and is unlikely to be present elsewhere in the Project area. The deposit itself was well mapped through geotechnical investigation following its identification in the 1990s; and is being avoided in its entirety by the Project. Other potential comparable deposits are presented in Appendix C in the broader region.

- No further locations beyond those listed above are considered likely to contain Pleistocene deposits.

3.2 Regional geomorphic overview

A literature review of relevant archaeological and geomorphological assessments (local and regional) has been undertaken to supplement the information provided at Section 3 of the ACHAR (EMM 2022). This review assesses the landscape and geomorphological contexts in which Aboriginal objects may be found across the Central Lowlands of the Hunter Valley, to understand the likelihood of archaeological material being present in the landscape, its spatial distribution, preservation, and character (nature, extent, and significance). We then consider the implications of these findings for the Project area.

Section 3 of the geomorphological assessment provided in Appendix C summarises the theory of soil formation across the central lowlands of the Hunter Valley area to explain the archaeological potential of recurring geomorphic forms.

The review of relevant literature indicates that the central lowlands of the Hunter Valley can be broadly characterised by the following geomorphic contexts: texture contrast soils, source bordering dunes and alluvial terraces/floodplain units. While unique, CM-CD1 (37-2-1877) (a colluvial (slope) deposit) is also demonstrated as having potential for older deposits and has been included here.

3.2.1 Texture contrast soils

Hughes (1999), Hughes (2000a), Hughes (2003) and Hughes, Spooner and Questiaux (2014) have described the genesis model for texture contrast or duplex soils outlined by Dean-Jones and Mitchell (1993) to explain why there is a paucity of known Pleistocene archaeological sites in the central lowlands region. The model outlines the following implications for archaeology:

- Duplex soils do not necessarily indicate great age, as ‘mature’ texture contrast profiles can develop in a few centuries. They argued that A-horizon materials in duplex soils in the region are probably between 200 and 3,000 years old, rather than 20,000-30,000 years old.

- Open sites on duplex soils can never be truly stratified in a chronologically useful sense.

- Stone artefacts will behave in the same way as natural stones on a hillslope and will be subjected to surface dispersion, downslope movement and differential burial or exposure by bioturbation. Thus, they may become incorporated into stone lines.

- Intact or relatively undisturbed hearths provide best prospects for dating open sites in these contexts. All other dates, especially those based on scattered charcoal, are likely to be spurious” (Hughes, Spooner and Questiaux 2014: 36).

Hughes, Spooner and Questiaux (2014) characterise the archaeological signature of duplex soils considering the work of Dean-Jones and Mitchell (1993). The B- horizon of duplex soils are identified as having very low archaeological potential as they were formed prior to human occupation of the region. They infer that any artefacts associated with the beginning of occupation of the region would have been discarded onto A- horizon soils (essentially the same as those occurring today) and any stone artefacts of late Pleistocene/early Holocene age (not impacted by erosion/bioturbation etc) would occur as a lag deposit at, or just above the interface between the A and B horizons. They then argue that the artefacts would be incorporated into the basal levels of present A-horizons likely to be mid to late Holocene in age (Hughes, Spooner and Questiaux 2014: 36).

Hughes, Spooner and Questiaux (2014) again defer to the work of Dean-Jones and Mitchell (1993) to argue that stone artefacts situated within A-horizons of duplex soils are likely to have been dispersed both vertically and laterally with higher degrees of lateral dispersion expected on steeper hillslopes. While noting that most sites are situated on gently inclined footslopes to flat terraces, where lateral movement would be less pronounced, whatever the degree of movement any existing late Pleistocene/early Holocene assemblages would be more severely affected by the cumulative effects of erosion (rainwash) and bioturbation. This means that any late Pleistocene/early Holocene aged assemblages (still remaining within these contexts) with dominant or diagnostic materials or technologies would be inevitably mixed with other Holocene aged materials making it impossible to identify patterns or diagnostic features that would allow the relative dating of late Pleistocene/early Holocene assemblages in these contexts.

3.2.2 Source bordering dunes

Hughes, Spooner and Questiaux (2014) further reference the work of Dean-Jones and Mitchell (1993) who note that surfaces covered by sand dunes or sheets of the Warkworth sand system (also known as source bordering dunes) are one of several geomorphic contexts across the Hunter Valley with potential to contain older archaeological sites. They describe three contexts where excavations identified archaeological deposits presumed to be examples of older sites: the Cheshunt sand dune at Malabar Burnham Wood Site 1 (37-6-0166) (located within the Project area – HVO South), the Warkworth West sand system, and colluvial deposits at CM-CD1 (37-5-1877) (located within the Project area – HVO North).

These areas were identified as having potential for older deposits based on the nature of the landforms present and the high degree of weathering present in the deeper sands encountered during excavations. The sand features are believed to have been formed by two geomorphic contexts: late Pleistocene windblown sand dunes/sheets and late Pleistocene/early Holocene colluvial (slope) deposits. The Cheshunt sand dune and the Warkworth sand system represent the former and CM-CD1 (37-2-1877) represents the latter. Although Hughes, Spooner and Questiaux (2014) only refer to three contexts in the region, we supplemented this with additional examples where information was readily available.

i Cheshunt dune: Malabar Burnham Wood Site 1 (37-6-0166)

Archaeological and geomorphological investigations were undertaken on the Cheshunt dune located immediately adjacent to the southern bank of the Hunter River; this site is situated within the Project area (immediately north of the Cheshunt Pit within HVO South) (Section 4.5.3) (Hughes, Spooner and Questiaux 2014). The surface of the dune demonstrated the presence of both Aboriginal and European objects. Excavation included hand, shovel and backhoe pits dug at 11 locations. A total of 822 stone artefacts and 429 European artefacts were identified during the excavations. Optically Stimulated Luminescence (OSL) samples were collected from the sand dune at 1.25 m and 2.25 m below the ground surface and the dates returned were 83,000 and 88,000 years old, respectively. The archaeological material was identified at 0.9 m, at its deepest extent, and it was concluded that while the dune was formed in the late Pleistocene, and prior to human occupation of Australia, the artefacts were likely to be Holocene in origin and had moved downwards from their original context due to bioturbation.

ii Hunter Valley 1: Maryville Malabar Site N (37-5-0063)

Malabar Burnham Wood Site 1 (37-5-0063) is an open stone artefact scatter situated within an aeolian source bordering dune. The site was situated ~200 m east of the Hunter River within the existing and approved disturbance area of HVO north. Although dating of the site was not undertaken, geomorphological assessment indicates that the deposition of the sands was likely to have occurred in the late/terminal Pleistocene or early Holocene. The site was noted to have been subject to several post-taphonomic alterations such as: ploughing, bioturbation, rabbit burrowing, deflation and tree fall. These processes have made it difficult to determine whether the artefacts recovered were indicative of discrete knapping floors or the accumulation of material at certain locations to the site formation processes.

Archaeological salvage excavation across the site recovered a total of 4,633 stone artefacts, and of these a sample of 1,417 were subject to further analysis. The assemblage composition was determined to be typical of artefact scatters across the Central Lowlands and reflect initial reduction and production of occasional backed flakes removed from burinates. Although sediment samples were collected for thermoluminescence dating, it was found that the sediments were unsuitable for dating. Ultimately the site was assigned as having moderate scientific significance based on its known (large) size, location, and high densities of artefacts recovered.

iii W14 Sandsheet (37-6-0946)

Archaeological excavation of a sand sheet adjacent to Sandy Hollow Creek at Warkworth was completed by Australian Museum Business Services (AMBS) (2002) and later by Scarp Archaeology (2009). The sand sheet was located along Sandy Hollow creek approximately 5 km south of the current Project area.

Scarp Archaeology completed an archaeological assessment on behalf of Rio Tinto Coal Australia for the proposed extension of the Warkworth Coal Mine, approximately 12 km west of Singleton and directly south-east of HVO South. The assessment completed archaeological investigation of an exposed area of Warkworth Sands immediately west of the working open cut mine. The sand body at this location was approximately 500 m (north to south) by 200 m (east to west) and up to 4 m in depth. Previous assessment of the area was completed by AMBS (2002), and identified stone artefacts associated with OSL age determinations of at least 14,000 years old. Scarp was engaged to undertake further research of the area.

Scarp noted that the Warkworth sands were present along the gently sloping western bank of Sandy Hollow Creek (minor tributary of the Hunter River) 5 km east of Wollombi Brook, and 5 km south and west of the Hunter River. Due to the uniform grain size of the upper sand unit Scarp determined that the sand sheet was likely to form part of the Warkworth sand system – a larger broader series of aeolian deposits. While the origin of the sand is not ultimately known it was assessed as being most likely associated with Wollombi Brook, the Hunter River or could be representative of a localised breakdown of outcropping sandstones (Scarp Archaeology 2009: 23).

AMBS excavated 10 pits in the area and recovered 213 stone artefacts from the sand sheet (2002). Excavation within Pit 9 identified eight artefacts associated with an OSL age of 13.7 ± 0.3 ka (ANU 1580, at 60 cm depth) and one artefact was identified at 150 cm below the ground surface (Spit 15) and was located beneath ANU 1582, at 125 cm depth which had an OSL age of 47.4 ±2.0 ka (Scarp Archaeology 2009: 26).

Subsequently, Scarp Archaeology investigated the Warkworth sand system area by completing large open area excavations (5 x 5 m pits) across four locations (Trenches 1 to 4). Comprehensive information was presented for each trench and described the stratigraphic profiles and location of OSL dating samples taken, cultural material recovered, and the overall results of the dates obtained from the OSL samples in relation to the cultural material identified.

Their study included geomorphic assessment, a ground penetrating radar (GPR) study, OSL single grain dating samples, charcoal dating, and technical analysis of the recovered stone artefacts. From the results of the excavation and these subsequent studies it was found that there was an upper and lower stone artefact concentration across the sand sheet area. The upper concentration is considered to be 1-2,000 years old and demonstrates the presence of backed artefact typologies characteristic of Holocene stone artefact assemblages of the wider region. The lower concentration is considered to be 8,450-14,100 years old, and the stone artefacts were assessed as not having any diagnostic technological indicators.

The OSL data and interpretations were able to demonstrate significant disturbance to the area from bioturbation, and it was inferred that the previous dates collected for the site by AMBS were not reliable and gave misleading older dates due to mixing of older sands and are unlikely related to stone artefact deposition. It was assessed that the artefacts recovered are most likely all less than 10,000 years in age.

The overall conclusions of the study were that stone artefact frequency was very low averaging 7/m^3 and substantial bioturbation of sand was demonstrated (especially in the upper 1 m). Despite the substantial movement of sand, sand deposition was reconstructed and spanned over 30,000 years. Any sands accumulating prior to this time most likely represent buried fluvial paleochannels. The bioturbation was likely caused by tree root growth, tree collapse, burrowing insects, burrowing mammals (wombats) and fire/rain. The substantial disturbance limited the reliability of dating the associated stone artefacts. Although the lower concentration of artefacts was bracketed by dates of 8,400-14,100 years, it was inferred that the artefacts are more likely to be less than 10,000 years old. The initial OSL ages which suggested that stone artefacts were likely to be over 14,000 years old and up to 45,000 years old were considered unreliable.

iv Wambo coal mine

An Aboriginal cultural heritage assessment (ACHA) was completed for the proposed expansion of the Wambo coal mine in 2003 (White 2003). The area of investigation was located 15 km west of Singleton and approximately 7 km south-west of the confluence between Wollombi Brook and the Hunter River (approximately 5-10 km south of the current Project area). Archaeological survey was completed and covered hillslopes, ridges, small and large creeks. A geomorphological study of potentially sensitive archaeological sites was also conducted by Dr Philip Hughes.

A total of 292 sites were identified as a result of the survey and comprised: a carved tree site, grinding groove sites, a probable culturally modified tree, contact sites and stone artefact scatters (open sites and isolated finds). It was noted that most of the sites across the study area were small and comprised 1-4 surface artefacts and that few large sites were present. Larger sites were most often found closer to larger creeks occurring at lower elevations (White 2003: 12-13).

Areas of high archaeological potential were noted across the study area and were associated with a red sand dune located west of Wollombi Brook, a yellow sand dune located east of Wollombi Brook, large open sites along Waterfall Creek and the escarpment of Wollemi National Park. Wambo Sites 30 and 31 were identified on the red and yellow sand dune landforms associated with Wollombi Brook and were considered to have datable geomorphic contexts. The proposed works were redesigned to avoid impacts to these locations.

Other sites of high archaeological significance comprised a carved tree site (NPWS #37-6-0056), grinding groove sites, a probable scarred tree and possible contact sites. These areas were also avoided by the project. The remaining sites identified by White comprised open stone artefact scatters and isolated finds. Of these, 110 were isolated finds, 69 had 1-4 artefacts, and 18 had over 50 visible artefacts.

3.2.3 Colluvial (slope) deposits

Hughes, Spooner and Questiaux (2014:41) characterise colluvial deposits as follows:

> Colluvial deposits in the central lowlands are difficult to recognise from surface indications. They occur mainly on footslopes abutting alluvial landforms, are uncommon and are generally small in area and thickness. Probably very few of them contain buried archaeological sites.

Only one such site has been documented within the region by these researchers, CM-CD1 (37-2-1877).

i CM-CD1 (37-2-1877) and its geographical extent

a Initial identification and spatial mapping

CM-CD1 (37-2-1877) was originally identified during geomorphological assessment (Hughes 1999) completed as part of a supplementary archaeological assessment completed for the Carrington Mine EIS (ERM 1999). This EIS identified the area as comprising low ridge country and an infilled old river channel with older, potential Pleistocene age sediments expected to underlie more recent deposits (ERM 1999b: 11.6-11.7). Two significant sites with high artefact densities were identified: CM2 (37-2-1505) and CM36 (37-2-1539). CM2 was associated with a low ridge and covered an area approximately 120 m long and 50 m wide. It was identified as an initial stone (silcrete) working area. CM2 was described as a significant silcrete source and tool-making area, whilst CM39 (37-2-1542), located on the same ridge, was a large artefact production site. CM2 and CM39 were assessed as having little further in-situ research value due to their erosional nature making subsoil artefacts unlikely. However, colluvial deposits below the main ridge at CM2 were identified as potentially being Pleistocene in age warranting further investigation.

Geomorphological fieldwork included inspection of the ridgeline and immediate surrounds, as well as the excavation of 13 backhoe geotechnical pits (2 m by 0.7 m) to examine subsurface sediments in key areas (Hughes 1999: 8). Backhoe pits were excavated along a transect extending west from the ridge where CM2 was located, across the low alluvial flats forming the centre of the amphitheatre to the hillslope. A colluvial deposit of presumed Pleistocene age immediately below CM2 on the footslope of the low ridge was identified from the excavation of Pit 9. This location was chosen because it was deemed to be a point at which sandy and gravelly deposits derived from the flank of the low ridge may have accumulated progressively in the form of a colluvial fan.

A further 29 geotechnical boreholes were excavated to identify the extent of the deposits which formed an arrow of about 450 m along the base of the western flank of the low ridge. The deposits were on average about 25 m wide and appear to have been truncated along their western margin by fluvial erosion associated with the deposition of the younger alluvial clays that form the present-day alluvial flats. CM-CD1 (37-2-1877) is located approximately in the centre of this narrow strip (Hughes 2000b: 34). For the purposes of resolving questions in Section 3.1, this mapping exercise provided a robust understanding of the distribution of CM-CD1 (37-2-1877) (Plate 3.1), and which has been further validated in Appendix B.

The fieldwork identified a total of seven stratigraphic units referred to as a 'Younger Stratum' (consisting of Units 1 to 4) and an 'Older Stratum' (encompassing Unit 5). Culturally sterile deposits were situated below this (Units 6 and 7) (Table 3.1) (Hughes 2000b: 15). The overall depth of excavations was 1.5 m below the ground surface, with Unit 5 occurring at about 60–80 cm and being 45 cm thick. The deposits were heavily indurated and most of the excavations occurred using a mechanical excavator. A total of 72 artefacts were recovered from excavations, with 65 artefacts recovered from the Older Stratum (Unit 5). A sample of charcoal from the lower half of Unit 3 (Younger Stratum) was submitted for radiocarbon dating. The measured radiocarbon age was 930 +/- 40 years (Beta-137093). No dateable material such as charcoal was recovered from Unit 5, as such the age of this 'Older Stratum' and its contained artefacts was not known at the time, but its relatively high degree of weathering was used to infer its age as early Holocene/late Pleistocene (Hughes 2000b: 2).

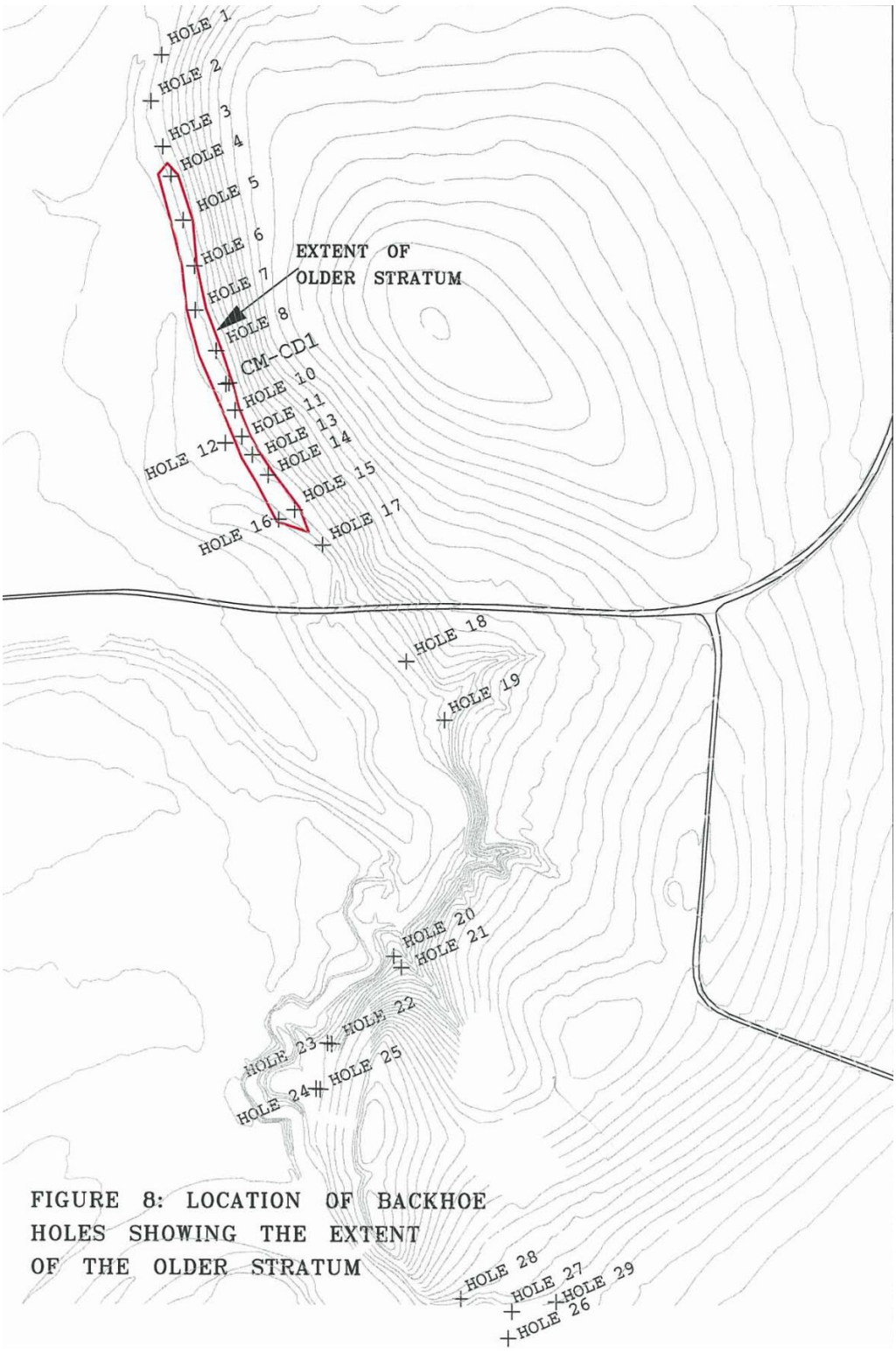


Plate 3.1 **Extent of CM-CD1 (37-2-1877) based on geotechnical excavator trenches and bore-holes (HEH 2000: 35)**

b Additional investigations as part of the Project

As part of the ACHAR, EMM (2022) conducted archaeological test excavation within the extent of CM-CD1 (37-2-1877) to:

- establish the age of colluvial and alluvial deposits within CM-CD1 (37-2-1877) via OSL sampling
- identify if cultural material within Unit 5 is constrained to those previously investigated by Hughes (1999, 2000b), or whether they extend to other parts of the deposit.

Excavations were developed in consultation with Heritage NSW and RAPs and consisted of manual excavation of six test pits in four discrete locales along the length of the deposit (Appendix B). These test pits were undertaken in 10 cm spits, with all material passed through a 5 mm aperture sieve (Figure 3.1).[5] The excavations were deliberately of small scale to minimise harm to these unique deposits and to align with the existing management plan and approvals for activities on the site.

These test pits identified the previous stratum investigated by Hughes, including Units 2–5 and 7, but found that they did not occur uniformly across the site. Unit 1 (a layer of post-European topsoil and modern fill) and Unit 6 (river gravels) were not present in any of the test pits. While the older stratum was not found in TP2 to the north of the deposit and prompted the need to move downslope by several metres to identify the unit (TP20). A summary of test pits excavated across CM-CD1 (37-2-1877) is provided in Table 3.2.

To develop a chronology, a large number of Optically Stimulated Luminescence (OSL) ages were recovered from TP 1 and TP 3 – the latter being the closest excavation to Hughes (2000b) original investigations. These ages demonstrated that units 4–7, the older stratum dates to between ~9,000–16,000 years in age (Table 3.3). These findings demonstrated that the lower deposits of CM-CD1 (37-2-1877) are indeed of Pleistocene age.

However, as is common with other Pleistocene deposits in the region (Source bordering dunes 3.2.2), the small artefactual assemblage recovered (n=42) appeared to be typologically of <9,000 years in age. Specifically, Dr Trudy Doelman (see Appendix H.6 of the ACHAR) summarised the cultural assemblage as follows:

- the dominant material was silcrete (n = 30, 71%), followed by IMTC (n = 10, 24%), chalcedony (n = 1, 2%) and quartzite (n = 1, 2%)
- artefacts presented in comparable numbers throughout all units: Unit 2 (n = 8), Unit 3 (n = 10), Unit 4 (n = 12), and Unit 5 (n = 12)
- differences in the size and weight of artefacts relevant to the depths at which they were identified (i.e. larger objects in the upper stratum and smaller objects in the lower) suggests downward movement or size-sorting of artefacts may have displaced some of the smaller artefacts within the site stratigraphy (i.e. not all artefacts identified within lower units originated from that context)
- tools in the artefact assemblage included scrapers (n=3) and notched artefacts (n=2), with one backed artefact identified in Unit 4 (TP4). Backed artefacts are typically only found in mid to late Holocene sites (<5,000 years ago) which suggests some movement of the assemblage may have occurred.

[5] Please note that CM-CD1 has been erroneously documented in the AHIMS database as a 'rockshelter', rather than an artefact scatter or archaeological deposit, which would be more suitable. As such, some figures continue to present this error, since they are using the existing AHIMS dataset. This is further discussed in Section 4.2.

However, despite the remaining disagreement between the chronology and cultural assemblage, the site was classified as of high significance based on its geomorphological rarity. HVO subsequently excised the spatial extent of the cultural deposit from the Project disturbance area, with the mine plan re-designed to avoid the deposit and CM-CD1 curtilage as shown on Figure 3.1.

Table 3.1 The stratigraphic units identified within CM-CD1 (37-2-1877) (Source: HEH 2000, p. 15)

b	Field Texture	Type	Interpretation	Probable age	Archaeological material?
0	Clay	Artificial fill	Fill of pit dug into Unit 6 gravels	Post European	Not known
1	Sandy loam	Colluvium	Post European 'topsoil'	Post European	Yes
2	Medium to fine textured gravelly sand		Slightly organic colluvium derived from relict tertiary terrace and Unit 6 gravels	Holocene	Yes
3			Inorganic colluvium from same sources	Holocene	Yes
4	Sandy clay	Alluvium and colluvium	Alluvium derived mainly from Hunter River floods with increasing component of colluvial sands and gravels where the unit abuts the ridge slop	Holocene	Yes
5	Course textured gravelly sand	Colluvium	Colluvium derived from relict tertiary terrace and Unit 6 gravels	Late Pleistocene or early Holocene	Yes
6	Gravel	River gravel	River gravels associated with the Hunter River paleochannel	Mid to early Pleistocene	No
7	Massive clay, sandy clay and sand with varying amounts of rock	Colluvium and/or alluvium	*In situ* relict tertiary terrace materials and/or colluvium derived from the terrace	Mid Pleistocene to Tertiary	No

Table 3.2 CM-CD1 (37-2-1877) Test Excavation Summary

TP	Maximum depth (cm)	Number of artefacts	Description
TP1	80	11	TP1 was a 1 m x 1 m test pit. The test pit was excavated to a depth of 80 cm. TP1 was relocated 5 m south of its original proposed location as adjacent results from TP3 indicated that the targeted deposits would be traceable downslope and closer to the nearby watercourse. Previously documented stratum (Units 2–5) were all identified, with a diffuse interface between Units 4 and 5. Unit 4 was a dark brown, dense silty clay identified at approximately 30 cm below ground surface, but its exact starting point was unclear due to a diffuse upper boundary with Unit 3. Unit 4 was approximately 30 cm thick and had a gradual and diffuse boundary onto Unit 5 below. Unit 5 was an indurated, gritty, and stony sandy clay and was identified at approximately 60 cm depth below ground surface. Unit 5 was approximately 10–15 cm thick and had a gradual boundary onto an undulating and delaminating C-horizon which marked the extent of artefact bearing deposits.

Table 3.2 CM-CD1 (37-2-1877) Test Excavation Summary

TP	Maximum depth (cm)	Number of artefacts	Description
TP2	60	6	TP2 was a 1 m x 1 m test pit. The test pit was excavated to a depth of 40 cm, with a smaller 50 cm x 50 cm sondage excavated to 60 cm in the northeast corner to confirm initial findings. TP2 was located partially upslope, and whilst within previously mapped extent of CM-CD1, the test pit did not encounter Units 4 or 5 of the previously identified stratum.
TP20	90-95	4	TP20 was a 1 m x 1 m test pit located on the alluvial flat adjacent the nearby tributary. The test pit was positioned 7.5 m west and downslope of TP2 in an effort to identify the lower stratum (Units 4 and 5). Excavations extended to 90-95 cm below ground surface and identified Unit 4 at 40-80 cm below ground surface, and Unit 5 at 80-95 cm below ground surface.
TP3	120	13	TP3 was a 1 m x 1 m test pit located within 20 m of previous open area test excavations conducted by Hughes (HEH 2000). TP3 was excavated to a depth of 120 cm and identified strata comparable with previous excavations. Unit 4 was identified at 40 cm below ground surface and was 40 cm thick. Unit 5 was identified at 80 cm below ground surface and was 40 cm thick. While unclear Unit 5 appeared to be grading into older stratum, and it was considered that the base of TP3 and lowest 5 cm of excavation may reflect Unit 7.
TP30	60	2	TP30 was a 1 m x 1 m extension adjacent and west of TP3. The test pit was initiated to provide space and address safety issues for archaeologists and Aboriginal participants to work within the increasingly deep and compacted deposit in TP3. TP30 was discontinued at 60 cm since it provided the necessary access to allow completion of TP3. The excavations finished at the base of Unit 4 and did not extend into Unit 5 so as to avoid unnecessary harm to this lower deposit.
TP4	100	6	TP4 was a 1 m x 1 m test pit, with an additional 50 cm x 50 cm extension to enable access to excavate the deeper deposit. The strata of TP4 was largely homogenous and it is unclear as to how the results compared to the identified Units 1-5. It is likely that Unit 4 is present within the soil profile but that it represents the product of previous inundated swamp to the east of the tested footslope. The older stratum (Unit 5) was not identified in this test pit.

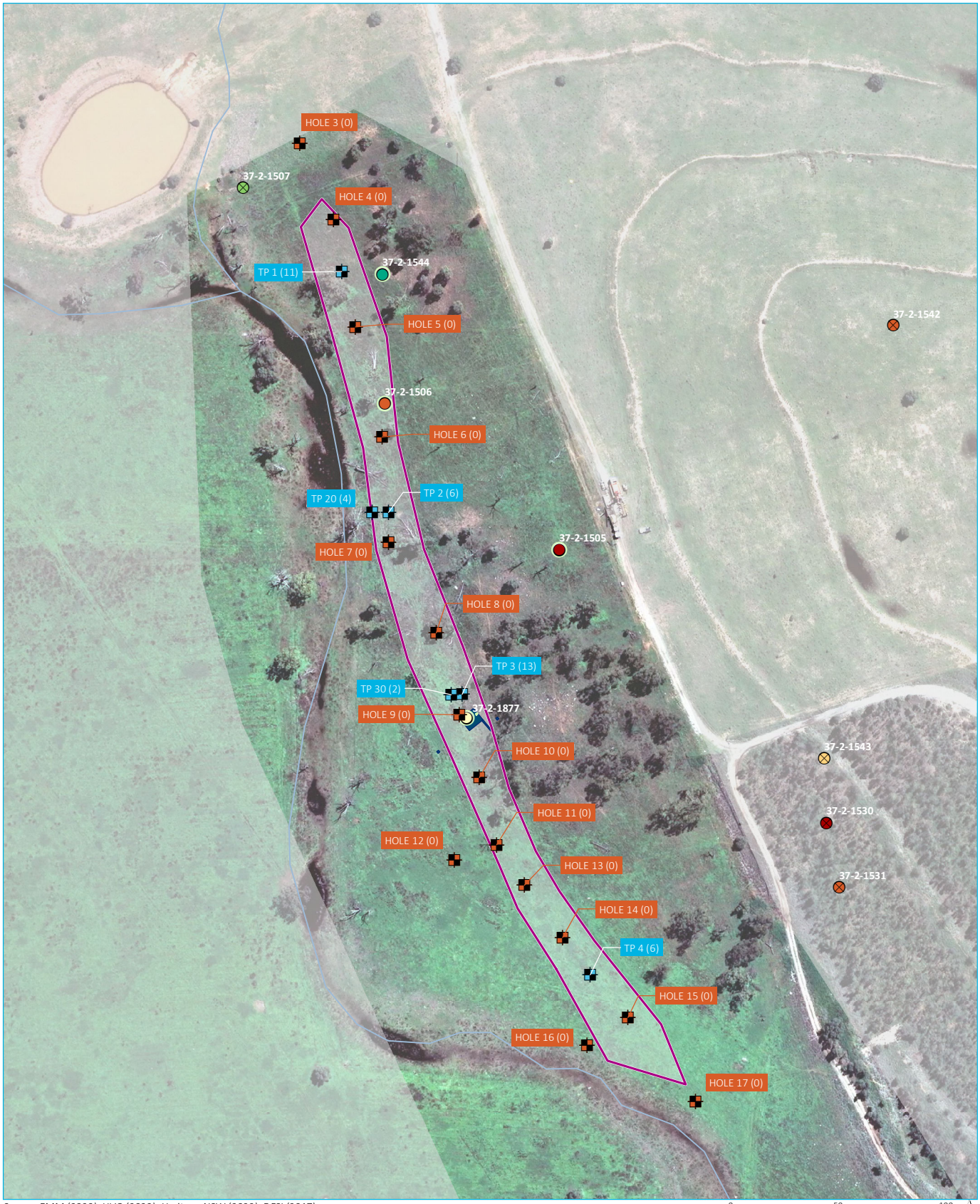
Table 3.3 OSL Age Estimates for CM-CD1 (37-2-1877)

Stratigraphic unit	Test pit	OSL sample	Depth below surface (cm)	Age (years ago)
Unit 4	TP1	OSL 21	56	9,200 (± 500 years)
	TP3	OSL 12	57	10,500 (± 600 years)
	TP1	OSL 22	63	10,200 (± 600 years)
	TP3	OSL 13	70	9,900 (± 600 years)
Interface between Units 4 and 5	TP3	OSL14	85	10,600 (± 600 years)
Unit 5	TP1	OSL 23	69	10,000 (± 500 years)

Table 3.3 OSL Age Estimates for CM-CD1 (37-2-1877)

Stratigraphic unit	Test pit	OSL sample	Depth below surface (cm)	Age (years ago)
	TP3	OSL 15	95	12,100 (± 600 years)
	TP3	OSL 9	97	11,900 (± 600 years)
Base of excavation (Unit 5)	TP1	OSL 24	77	11,900 (± 600 years)
Base of excavation (Unit 7)	TP3	OSL 16	106	16,400 (± 900 years)

Notes ±: Plus or minus used to define the margin of error.



Source: EMM (2023); HVO (2023); Heritage NSW (2022); DFSI (2017)

0 50 100 m

GDA2020 MGA Zone 56

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KEY

- CM-CD1 curtilage
- Proposed mining area
- Test excavation (artefact count) (EMM 2021)
- Geomorphological investigation (artefact count) (HEH 2000)
- Watercourse/drainage line

Previous investigation area (HEH 1999, 2000)

- Archaeological investigation area
- Geomorphological investigation area

AHIMS - Site status

- Destroyed
- Valid

AHIMS - Site type

- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree and medium density artefact scatter (11-30)
- Culturally modified tree and very high density artefact scatter (100+)
- Shelter and Potential Archaeological Deposit

Archaeological and Geomorphological Investigations of CM-CD1

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 3.1

EMM
creating opportunities

3.2.4 Alluvial terraces/floodplain units

Geomorphological assessment completed for the Ravensworth Mine EIS (Umwelt 2009) assessed the archaeological potential of different landforms across the area. The assessment concluded that the interface of footslope colluvial materials and alluvial terrace materials have potential for stratified archaeological deposits but require subsurface investigation to investigate stratigraphy and chronology of formation, but in general older higher terraces have more potential than younger lower terraces (Umwelt 2009).

Drawing on the work of Dean-Jones and Mitchell (1993) and the geomorphological assessment completed for the Project area, alluvial terraces/flood plains are also areas where deep and/or old cultural deposits may be encountered (Gippel 2023:15):

- Buried sites near the apices (apexes) of low angle alluvial fans.
- Overlapping fluvial terraces (no examples of which have yet been recorded from the Hunter region). Most terrace sequences are inset terraces, which are less likely to preserve older sites.
- Where alluvial fans of tributary streams impinge on terraces and floodplains of the mainstream.

Other areas where archaeological material could be present would include: floodplain margins with colluvial/alluvial drapes, and underneath natural levees (associated with cut-off channels on elevated terraces) (Appendix C).

The geomorphological assessment provided at Appendix C assesses the potential of these landforms to be present across the Project area (see Section 3.2.5).

3.2.5 Summary

Hughes, Spooner and Questiaux (2014:42) provide the following conclusions in regard to the landscape and geomorphological contexts in which Aboriginal objects may be found across the Central Lowlands of the Hunter Valley:

- due to the geomorphic and soil formation processes across the Central Lowlands of the Hunter Valley most archaeological sites or materials older than 10,000 years are likely to have been completely removed or so widely dispersed that they are not recognisable as discrete Pleistocene assemblages
- two geomorphic contexts have potential to contain Pleistocene aged stone artefact assemblages: Pleistocene windblown sand dunes/sheets and late Pleistocene/early Holocene colluvial deposits
- the sand dunes/sheets have highest potential because they incorporate relatively large areas and are easily recognisable in the landscape when compared to the colluvial or alluvial fan deposits
- windblown sand bodies are more likely to be identified in areas adjacent to the Hunter River and Wollombi Brook especially near the junction of the rivers and their location and extent. Their exact extent as mapped on the 1:250,000 geological sheets is quite inaccurate and therefore should be determined by geomorphological field work.

Our review of the data above conforms with these overarching views and highlights the importance of both the Warkworth sand system and the colluvial deposits associated with CM-CD1 (37-2-1877) within the general region. When considering the Project area, CM-CD1 (37-2-1877) was already known as an important geomorphological and archaeological feature due to its unique depositional circumstances. This site was subject to additional investigations to validate its age and cultural assemblage, but spatial mapping of the deposit in the late 1990s and early 2000s is considered robust. The mapping demonstrated that the deposit is long and narrow, running for

some 450 m between a small tributary and steep ridgeline. The Project has been re-designed to avoid impact of this deposit (Figure 3.1; Section 5).

In the case of the Warkworth sand system, the deposits have primarily been documented south of the Project area in the vicinity of Wollombi Brook and the Hunter River. Two sites within the Project area have been identified that have the characteristics of a source-bordering dune, and potentially part of the Warkworth sand system, namely Malabar Burnham Wood Site 1 (37-6-0166) and Maryville Malabar Site N (37-5-0063). These each have demonstrated stratified cultural materials within sand units, but in both cases providing definitive evidence of Pleistocene deposition has proven problematic. Rather, the assemblages were typologically of Holocene age, with chronological information for the sites inconclusive, or indicative or a much older period of deposition. Of these, Maryville Malabar Site N (37-5-0063) has been destroyed by past development activities, while Malabar Burnham Wood Site 1 (37-5-0166) is situated north of the existing HVO South mine cut and outside the Project disturbance area.

Further specific consideration of the geomorphological units within the Project area are provided in Section 3.3.

3.3 Geomorphological assessment of the Project area

To further assess the Project area and answer questions posed by Heritage NSW (Section 1.1), a detailed geomorphological assessment was undertaken by Dr Chris Gippel (Appendix C). The assessment was asked to explore the potential for archaeological excavations undertaken as part of the ACHAR (and labelled as Areas 5, 9, 11 and 12) to retain Pleistocene deposits, such as the Warkworth sand system, the potential for colluvial deposits like CM-CD1 (37-2-1877) to be present elsewhere, and the potential for such deposits to be present elsewhere within the Project area.

The report indicates that Areas 5 and 11 do not exhibit any evidence of being Pleistocene in age. Only CM-CD1 and Area 12 were identified as having a likelihood of retaining Pleistocene deposits. In the case of Area 9, the site was characterised as an alluvial fan – a common landform feature in the Hunter Valley – and there is some undetermined potential for older deposits to be present at depths of potentially >3 m. Such depths would be unfeasible to investigate archaeologically under the current Heritage NSW guidelines required for the EIS assessment.[6] As such, recommendations for further investigation and mitigation of Area 9 are proposed in Section 6.

Area 12 is visually consistent with the Warkworth sand system and has the potential to be of Pleistocene age. The deposit encountered within the Area 12 appears to be an extension of a larger aeolian deposit situated between the project edge and Hunter River and may extend to other parts of the Lemington Road re-alignment (Plate 3.2 and Plate 3.3). However, the report indicates that such deposits are typically constrained to the banks of the Hunter River in relation to the Project area. As outlined in the ACHAR, cultural materials recovered from Area 12 appear to be typologically of Holocene age, and primarily found in the upper portion of the soil profile.

In relation to CM-CD1 (37-2-1877), the report suggests that the formation is unique and associated with a 'cut and fill river style' that is not encountered elsewhere within the Project area (Plate 3.4). The geographical situation of the site within the alluvial environment of the Hunter River and constrained by steep terrain to the east and a creek to the west has resulted in its formation; and the potential to replicate these conditions elsewhere would be limited. The report suggests that there are other environments more broadly where this can occur, but not within the Project area, specifically (Appendix C):

[6] Currently the project is required to adopt archaeological excavations in accordance with the *Code of Practise for the Archaeological Investigation of Aboriginal Objects in NSW*. These guidelines limit any excavation to 2.25 m^2 (1.5 x 1.5 m) in any location. This size of excavation would not enable benching below 2 m, or the installation of any currently available shoring system that may allow greater depths.

Most tributaries of the Hunter River over the wider regional area of interest along the Hunter River valley from Bureen to Singleton had areas of CM-CD1-type landform present (alluvial units adjacent to areas of transferral process with a slope of 3 – 10%). In detail, significant areas of CM-CD1-type landform was found on Saddlers Creek, Doyles Creek, Appletree and Saltwater Creek. Waterfall Creek and two unnamed right-bank tributaries also have potential for CM-CD1-type landform near where they meet the Hunter River floodplain. Bayswater Creek, Bowmans Creek and Glennies Creek appear to have low potential for CM-CD1-type landform. Further downstream, and unnamed left-bank tributary and Rixs Creek have potential for CM-CD1-type landform near where they meet the Hunter River floodplain. The potential for CM-CD1-type landform on left-bank tributaries of Wollombi Brook, Redbank Creek, Wambo Creek and North Wambo Creek is uncertain because much of the general landform falls within the slope range 3 – 10%. The detail of the CM-CD1 area suggests that CM-CD1-type landform could extend 250 m downstream along the creek, on the same colluvial slope, but not upstream. The method used in this report did not identify any other areas of CM-CD1-type landform within the Project area.

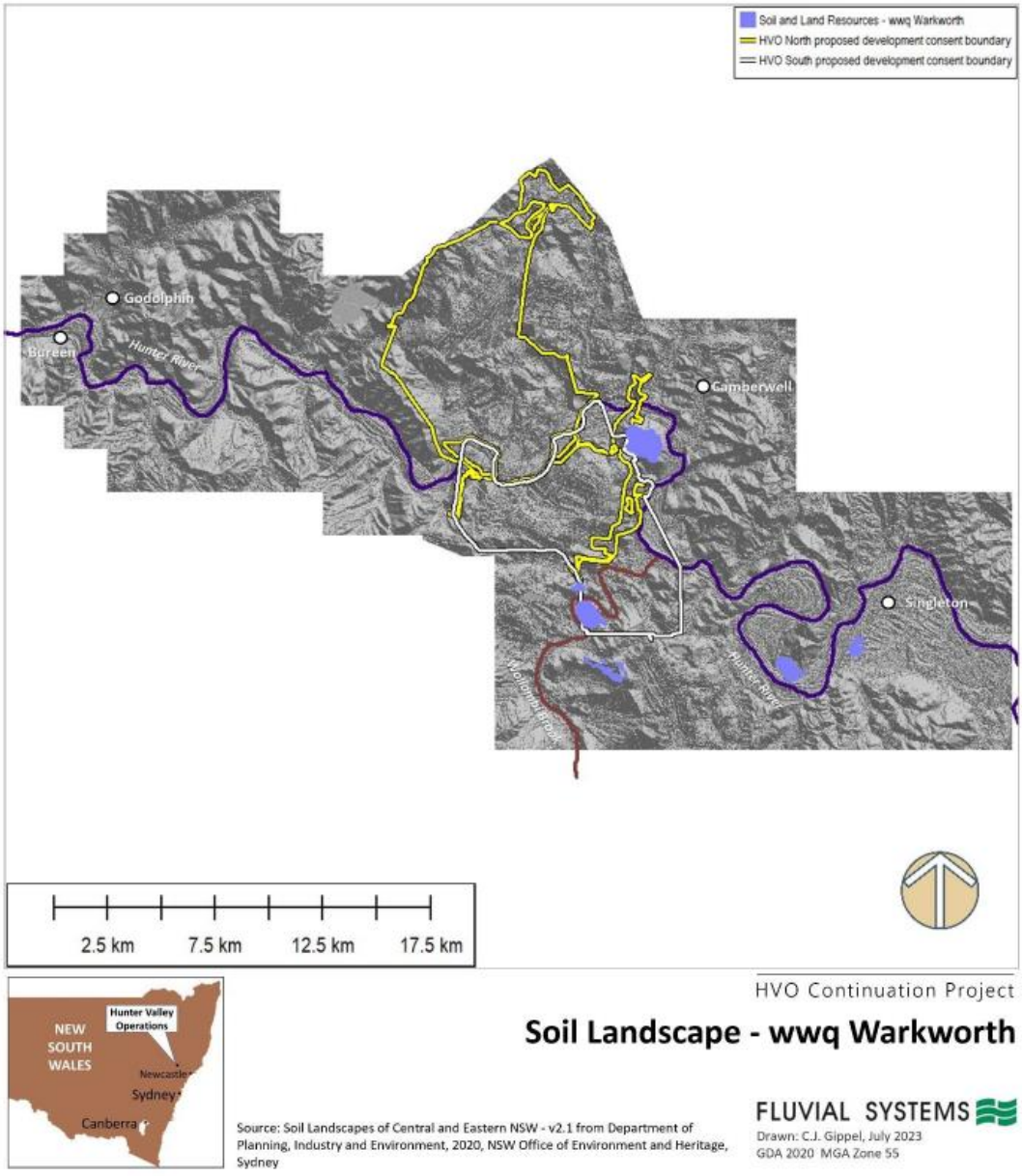


Plate 3.2 **The soil landscape data highlighting the Warkworth sand system (blue), and showing deposits are primarily found south of the Project area, with a small component extending into the Lemington Road re-alignment**

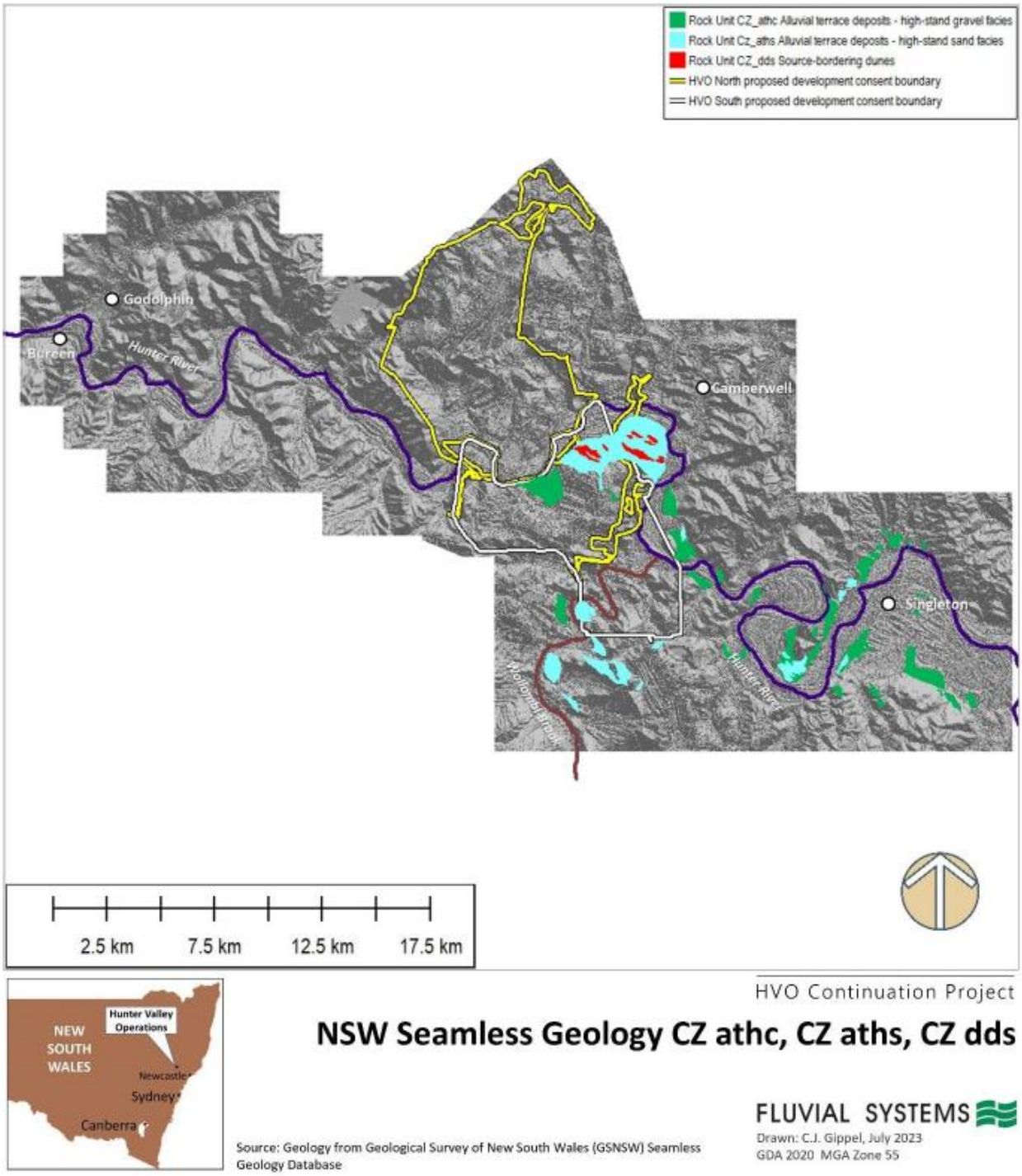


Plate 3.3 **The geological data highlighting source-bordering dunes (red), which form part of the Warkworth sand system; and primarily found south of the Project area**

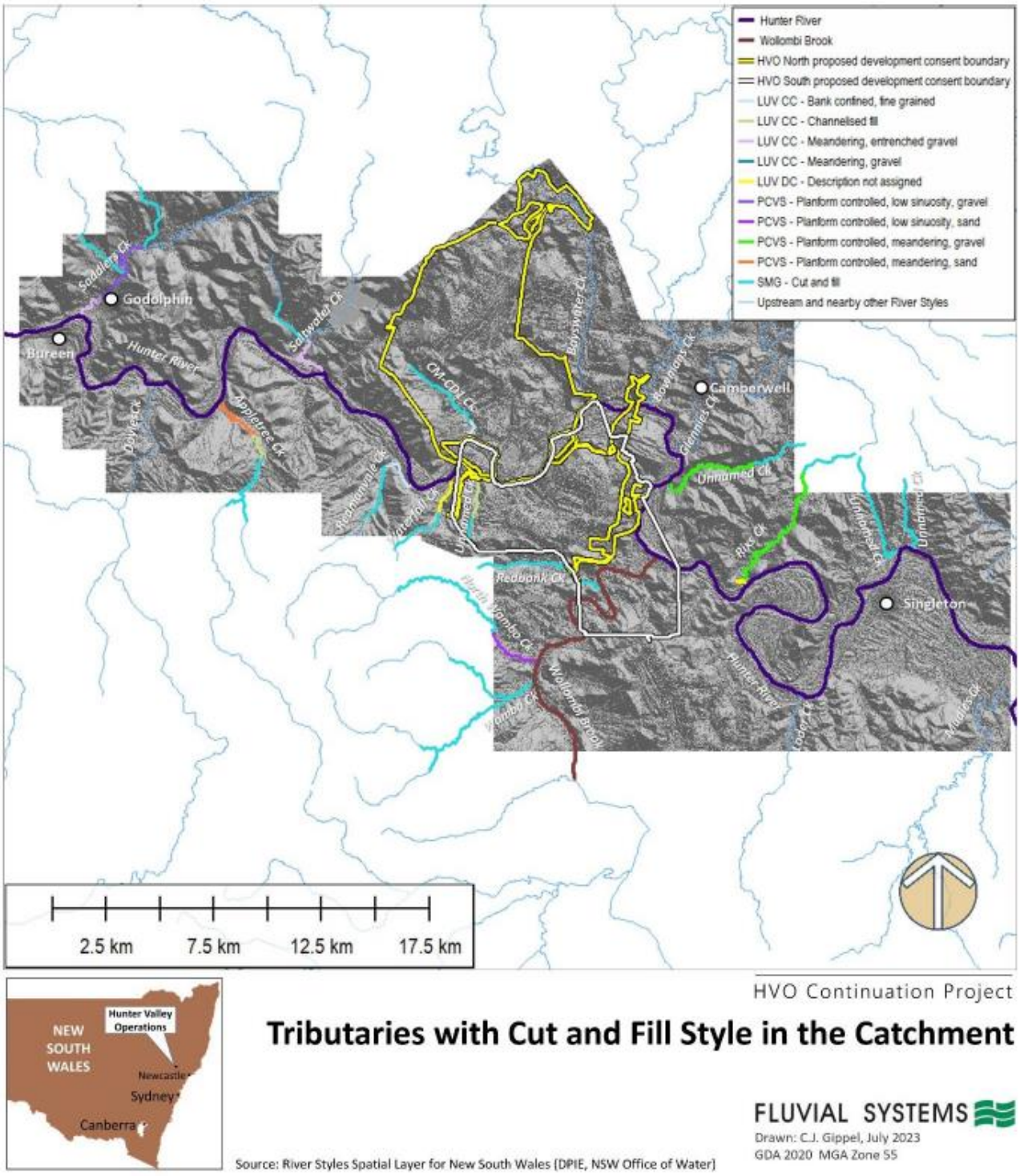


Plate 3.4 **Different river styles present in the vicinity of the Project area. CM-CD1 is found on a cut and fill river style (pale blue), and this map shows other similar tributaries and catchments in the local area**

4 Refining the archaeological resource

4.1 Section summary

- An updated AHMS search has been completed for the Project area (Section 4.2 and Appendix D).
- Some 279 Aboriginal sites are documented within the Project disturbance area. (This is a decrease from 304 in the ACHAR [EMM 2022] following additional site loss in accordance with current approvals since the report's completion and other Project refinements). Based on further review of regional/previous investigations and the geomorphic assessment in Section 3, some 27 of these are considered to contain high densities of stone artefacts, cultural materials stratified in aeolian/colluvial units, and/or culturally modified trees, and indicative of more intense visitation and occupation in the past. Such sites are typically assigned higher levels of significance in previous and regional assessments. A further four sites that have been destroyed by development activities and would also meet these criteria.
- Further assessment of the significance of each identified site has been undertaken, including consideration given the loss of cultural materials over the last several decades from regional development activities (and thereby increasing the rarity of some site types). Ultimately, 11 sites were considered of high significance, including five culturally modified trees, three sites containing stratified and potential or demonstrated Pleistocene geomorphological deposits, and three high density artefact scatters with some potential for stratified cultural deposits. Some 16 sites were assigned a moderate significance, and typically characterised as moderate to high density stone artefact scatters constrained to shallow texture contrast soil profiles. The remaining 252 sites typically reflect isolated or low density stone artefacts that are consistent with the broader background scatter found across the Hunter Valley, indicative of use of the region by Aboriginal people for several millennia, and typically of low significance. This broadly aligns with the findings of the ACHAR, which identified 254 sites of low significance (EMM 2022). The difference in the presented numbers reflects additional sites being recorded and lost since the ACHAR, and the refinement of a small number of sites following the broader review undertaken to address Heritage NSW comments.

4.2 Database searches

4.2.1 Updated AHIMS searches

The AHIMS database is managed by Heritage NSW and includes a location and description of Aboriginal objects and sites recorded through academic research and cultural heritage management throughout NSW. The AHIMS database was originally searched on the 8 – 9 June 2021, with updated data redownloaded from AHIMS on 16 September 2021. The original search conducted 17 AHIMS extensive searches covering a total area of approximately 18,300 ha, centred on the HVO Complex.

Another updated search was conducted on the 1 June 2023 in response to comments by Heritage NSW, using the same parameters as the original search (17 AHIMS extensive searches covering a total area of approximately 18,300 ha centred on the HVO Complex). Copies of the updated searches are presented in Appendix D.

The original collated results of the AHIMS database identified 1,786 records for previously recorded Aboriginal heritage sites within the searched area. The updated search identified 1,793 records, encompassing seven sites that were not previously identified in the original search HROA1 (37-3-1636); WBC 1 (37-3-1639); WBC 2 (37-3-1640); HROA2 (37-3-1641); PK11 (37-6-0880); HVO-2140 (37-6-4172); HVO-2141 (37-6-4196). All of these sites comprise undefined open stone artefact scatters and an open camp site. Three of these are within the Project area, including PK11 (37-6-0880), HVO-2140 (37-6-4172), and HVO-2141 (37-6-4196). (None of these sites are proposed for impact as part of the Project).

An updated breakdown of AHIMS data by site type and status is provided in Table 4.1 below and the distribution of AHIMS records is shown on Figure 4.1. Section 4.2.4 and Figure 4.2further provides information on Aboriginal objects, sites and places that have been previously destroyed.

A number of site types are represented, and include artefact scatters, potential archaeological deposits, culturally scarred trees, natural resources (stone and ochre and quarries), hearths, grinding groove sites and shelters. The most common site type in the region are artefactual sites (n=1,712, 95%). Of these, artefactual sites are frequently isolated finds or low density (<10) artefact scatters, although many artefact sites were undefined in AHIMS. AHIMS registered sites also reflect lesser occurrences of rarer site types such as culturally modified trees (n=21, 1%), rockshelters (n=2, <1%), quarries (n=3, <1%), and grinding grooves (n=1 / <1%).

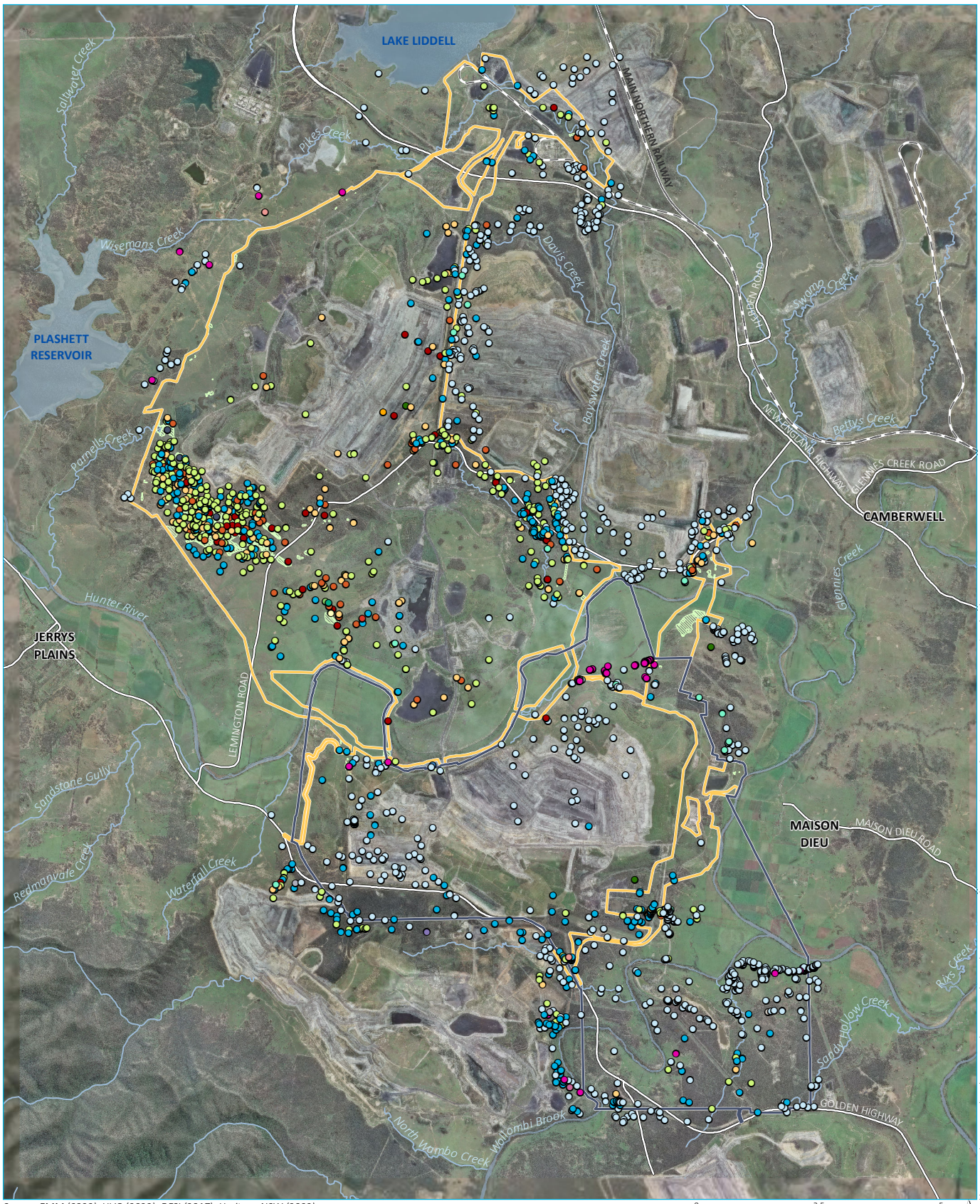
Of these rarer sites, one of the rockshelters is a mis-labelling of CM-CD1, an artefact scatter and deposit outlined in Section 3.3.3. The remaining rockshelter was identified as Site K '#37-1-0399' and is documented as having been previously destroyed. A review of the site card indicates the site was actually some 15-20 artefacts found on the banks of Farrells Creek, and has similarly been mis-labelled in the AHIMS database. Neither the grinding groove site (37-5-0062) nor an ochre quarry (37-6-4004) are within the Project area. Of the remaining two quarries, one has been previously destroyed (37-2-1885), while the other is a natural silcrete raw material outcrop situated southeast of the Project area (37-6-0625).

Table 4.1 Updated AHIMS data for the Project area and environs

Site type	Frequency (n/% of Grand Total)	AHIMS site status (n/% of Site Type Total)			
		Valid	Partially destroyed	Destroyed	Not a site
Artefact sites	1,712/95%	728/42%	39/2%	943/55%	2/<1%
Artefact site (unspecified)	*1,461/85%*	*615/42%*	*27/2%*	*818/56%*	*½%*
Low density artefact scatter (0–10)	*67/ 4%*	*26/39%*	-	*41/61%*	-
Medium density artefact scatter (11–30)	*15/1%*	*11/73%*	*1/7%*	*3/20%*	
High density artefact scatter (31–100)	*3/<1%*	*1/33%*	-	*2/67%*	-
Very high density artefact scatter (101+)	*4/<1%*	*2/50%*	-	*2/50%*	-
Isolated find	*162/9%*	*73/45%*	*11/7%*	*77/48%*	*1/<1%*
Potential Archaeological Deposit	51/3%	31/61%	2/4%	16/31%	2/4%
PAD	*2/<1%*	*1/50%*	-	-	*1/50%*
Artefact site with PAD	*49/3%*	*30/61%*	*2/4%*	*16/33%*	*½%*
Culturally modified tree	21/1%	9/43%	-	7/33%	5/24%
Culturally modified tree	*13/1%*	*7/54%*	-	*2/15%*	*4/31%*
Culturally modified tree with artefact(s)	*8/<1%*	*2/25%*	-	*5/63%*	*1/13%*
Hearth	2/<1%	1/50%	-	1/50%	-
Stone quarry with artefact(s)	2/<1%	1/50%	-	1/50%	-
Shelter with deposit	2/<1%	1/50%	-	1/50%	-
Grinding grooves	1/<1%	1/100%	-	-	-

Table 4.1 Updated AHIMS data for the Project area and environs

Site type	Frequency (n/% of Grand Total)	AHIMS site status (n/% of Site Type Total)			
		Valid	Partially destroyed	Destroyed	Not a site
Ochre quarry with artefact(s)	1/<1%	-	1/100%	-	-
Artefact reburial location	1/<1%	-	-	1/100%	-
Total (n)/ Total (%)	**1,793/100%**	**772/43%**	**42/2%**	**970/54%**	**9/1%**



Source: EMM (2023); HVO (2023); DFSI (2017); Heritage NSW (2023)

0 2.5 5 km

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Artefact reburial location
- Culturally modified tree
- Culturally modified tree and medium density artefact scatter (11-30)
- Culturally modified tree and very high density artefact scatter (100+)
- Culturally modified tree with artefact(s)
- Grinding groove site with artefact(s)
- Hearth with artefact(s) and potential archaeological deposit
- Ochre quarry site with artefact(s)
- Potential archaeological deposit (PAD)
- PAD and very high density artefact scatter (100+)
- Shelter and Potential Archaeological Deposit
- Shelter and high density artefact scatter (31-100)
- Stone quarry and low density artefact scatter (0-10)
- Stone quarry site with artefact(s)
- Undefined artefact site
- Undefined artefact site and PAD
- Undefined artefact site with associated PAD

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

Previously documented sites within the AHIMS database

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.1

EMM
creating opportunities

4.2.2 Previously recorded sites within the additional disturbance area/approved disturbance area other mine

At the time of ACHAR preparation, a total of 104 previously recorded AHIMS sites were located within the Additional Disturbance Area or the Approved Disturbance Area Other Mine. Of the 104 sites, 87 were extant (valid or partially destroyed) and 17 have been destroyed, see Table 5.4 and Appendix F of the EMM (2022).

This information was reviewed with the updated search completed on 1 June 2023. The updated search has identified that 113 previously recorded AHIMS sites were located within the Additional Disturbance Area and of these 62 are extant (valid or partially destroyed) and 51 have been destroyed. Table 4.2 details the AHIMS sites identified within the Additional Disturbance Area/Approved Disturbance Area Other Mine by site type and status.

Table 4.2 AHIMS sites within the additional disturbance area/approved disturbance area other mine

Site type	Valid	Partially destroyed	Destroyed	Total
Artefact sites				
Isolated find	22	-	12	**34**
Low density artefact scatter (0-10)	26	-	18	**44**
Medium density artefact scatter (11-30)	8	-	6	**14**
High density artefact scatter (31-100)	3	1	6	**10**
Very high density artefact scatter (101+)	1	-	3	**4**
Very high density artefact scatter (101+) and potential archaeological deposit	-	-	1	**1**
Undefined artefact site				
Undefined artefact site			5	**5**
Undefined artefact site and potential archaeological deposit	1	-	-	**1**
Total	**61**	**1**	**51**	**113**

4.2.3 Previously recorded sites within the existing and approved disturbance area

At the time of ACHAR preparation, a total of a total of 642 previously recorded AHIMS sites are located within the Existing and Approved Disturbance Area. Of the 642 sites, 141 were extant (valid or partially destroyed) and 501 have been destroyed, see Table 5.4 and Appendix F of the EMM (2022).

This information was reviewed with the updated search completed on 1 June 2023. The updated search has identified that 647 previously recorded AHIMS sites are located within the Existing and Approved Disturbance Area. Of the 647 sites, 138 are extant (valid or partially destroyed) and 506 have been destroyed. Table 4.3 details the AHIMS sites identified within the Existing and approved disturbance area by site type and status.

Table 4.3 AHIMS sites within the Existing and approved disturbance area

Site type	Valid	Partially destroyed	Destroyed	Total
Artefact sites				
Isolated find	32	-	95	**127**
Low density artefact scatter (0-10)	24	-	163	**188**
Stone quarry and low density artefact scatter (0-10)	-	-	1	**1**
Medium density artefact scatter (11-30)	11	-	55	**66**
High density artefact scatter (31-100)	4	-	35	**39**
Shelter with high density artefact scatter (31-100)	-	-	1	**1**
Very high density artefact scatter (101+)	3	2	19	**23**
Very high density artefact scatter (101+) and potential archaeological deposit	-	-	1	**1**
Undefined artefact sites and potential archaeological deposits				
Shelter and potential archaeological deposit	1	-	-	**1**
Undefined artefact site	54	-	127	**181**
Undefined artefact site with associated potential archaeological deposit	5	-	4	**9**
Hearth with artefacts and potential archaeological deposit	-	-	1	**1**
Culturally modified tree				
Culturally modified tree	1	-	1	**2**
Culturally modified tree with artefacts	-	-	2	**2**
Culturally modified tree and medium density artefact scatter (11-30)	1	-	-	**1**
Culturally modified tree and very high density artefact scatter (101+)	-	-	1	**1**
Total	**136**	**2**	**506**	**644**

Notes: These numbers exclude three sites that were considered 'not a site' in the dataset.

4.2.4 AHIP data and sites previously destroyed

Figure 4.2 shows the previous and existing AHIPs that have been obtained across the Project area, and their status. Aboriginal sites that have been destroyed (and registered as such in AHIMS) under these AHIPs are also presented. Table 4.4. provides a summary of the AHIPs details.

Table 4.4 AHIPs within the Project area

AHIP #	Issue Date	Expiry Date	General Location	Sites listed to be adversely affected (AHIMS #)	Sites listed for retention/protection avoidance (AHIMS #)
SZ300	4 August 2000	4 August 2002	Howick	37-2-0797, 37-2-0798, 37-2-0799, 37-2-0800, 37-2-0801, 37-2-0802, 37-2-1884	N/A
SZ315	5 September 2002	5 September 2004	South	65 sites (Appendix D.2)	N/A
2086	14 December 2004	14 December 2006	West Pit	No sites listed in AHIP, references a figure not within the permit (DOC 04/20211)	N/A
2547	9 March 2007	9 March 2012	Carrington	37-6-2078, 37-6-2079, 37-6-2080, 37-5-0494, 37-2-2083, 37-2-2084, 37-2-2085, 37-2-1962, 37-2-1963	37-2-1504, 37-2-1505
2804	31 October 2007	31 October 2009	West Pit	37-2-0525, 37-2-0526, 37-2-0527, 37-1-0399, 37-2-0523, 37-2-0524, 37-2-0147, 37-2-0148	Ancestral remains
C0002193	6 December 2016	6 December 2026	Mitchell Pit	298 sites (Appendix D.2)	Ancestral remains
C0002525 – report only available	N/A	Unknown – archaeological work completed 14 July 2017	West Pit	37-2-5360, 37-2-5361, 37-2-5362, 37-2-0063,37-2-5364, 37-2-5365, 37-2-5366, 37-2-5367, 37-2-5368, 37-2-5369, 37-2-5370, 37-2-5384, HVO-2068, HVO-2069, HVO-2070	N/A
Proposed*	-	-	Mitchell Pit	37-2-6532, 37-2-0527, 37-2-6530, 37-2-6531, 37-2-1869, 37-2-1870, 37-2-6527, 37-2-6528, 37-2-0528, 37-2-6526, 37-2-6529, 37-2-6523, 37-2-6524, 37-2-0800, 37-2-1871, 37-2-6525, 37-2-6522, 37-2-6521	-

Notes *Proposed AHIP currently being prepared in consultation with existing and Project RAPs. AHIP to be sought under existing HVO North approval framework.

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 2.5 5 km

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Page reference

Site status

- Destroyed
- Partially Destroyed
- Not a Site

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree
- Culturally modified tree and medium density artefact scatter (11-30)
- Culturally modified tree and very high density artefact scatter (100+)
- Culturally modified tree with artefact(s)
- Hearth with artefact(s) and potential archaeological deposit
- PAD and very high density artefact scatter (100+)
- Shelter and Potential Archaeological Deposit
- Shelter and high density artefact scatter (31-100)
- Stone quarry and low density artefact scatter (0-10)
- Stone quarry site with artefact(s)
- Undefined artefact site
- Undefined artefact site and PAD
- Undefined artefact site with associated PAD

AHIP within the project area

- #2086
- #2547
- #2804
- #SZ300
- #SZ315
- #C0002525
- #C0002193
- Proposed AHIP – Mitchell Pit

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

Site extent

Site status

- Destroyed
- Partially Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Undefined artefact site

Existing environment

- Rail line
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.1

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

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KEY

HVO North proposed development consent boundary

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)

Existing environment

- Rail line
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.2

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m
GDA2020 MGA Zone 56
N

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KEY

- HVO North proposed development consent boundary
- Site extent

Site status

- Destroyed
- Partially Destroyed

AHIMS - Site type

- Low density artefact scatter (0-10)
- High density artefact scatter (31-100)

Existing environment

- Rail line
- Major road
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.3

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m
GDA2020 MGA Zone 56

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KEY

HVO North proposed development consent boundary

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- Undefined artefact site
- Major road
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.4

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

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GDA2020 MGA Zone 56

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KEY

HVO North proposed development consent boundary

Site extent

Site status

Destroyed

AHIMS - Site type

Isolated find

Low density artefact scatter (0-10)

Moderate density artefact scatter (11-30)

High density artefact scatter (31-100)

Very high density artefact scatter (100+)

Undefined artefact site

AHIP within the project area

#2086

#C0002525

Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.5

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

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KEY

HVO North proposed development consent boundary

Site extent

Site status

Destroyed

AHIMS - Site type

Low density artefact scatter (0-10)

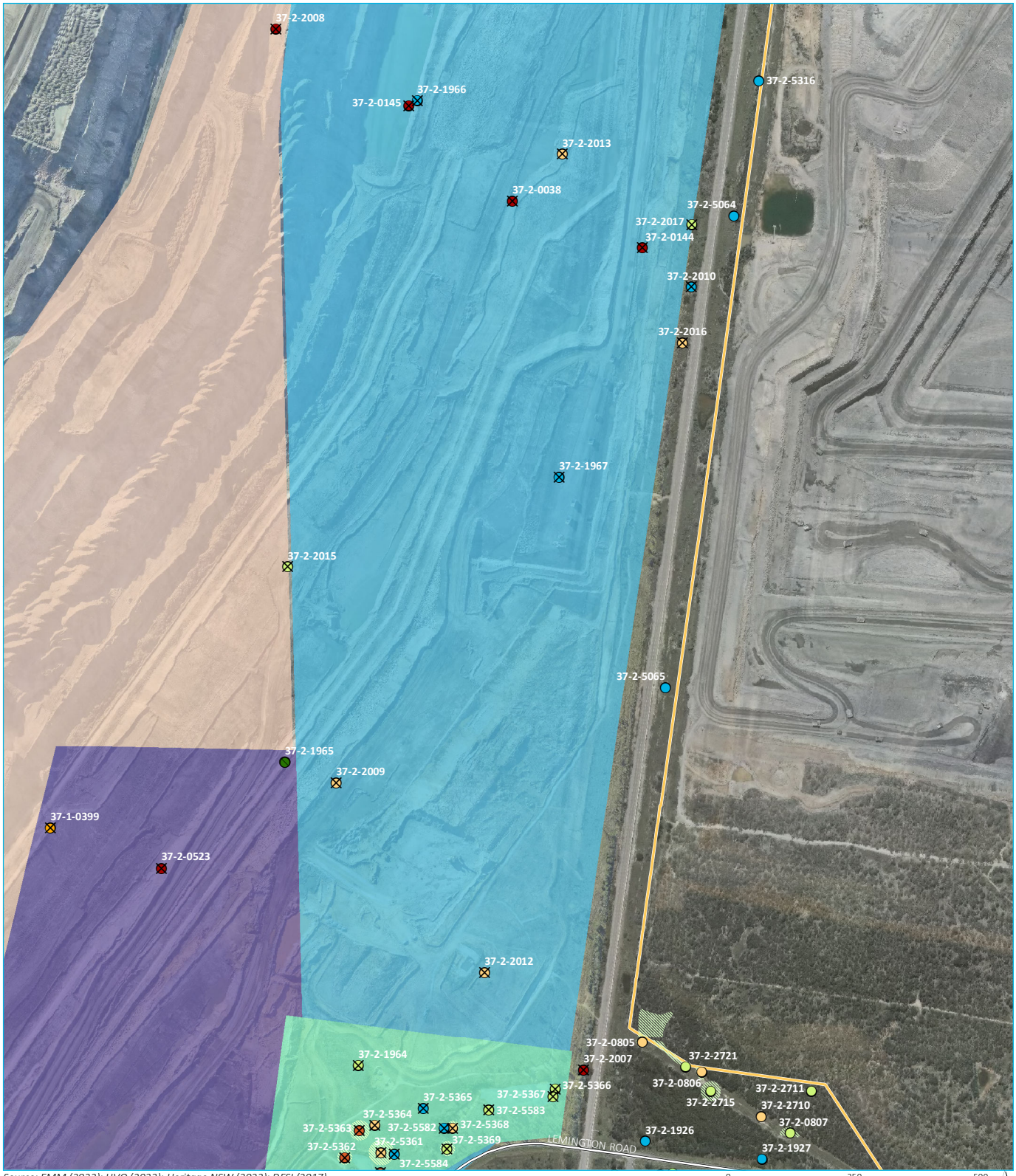
Moderate density artefact scatter (11-30)

Undefined artefact site

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.6

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- Site extent

Site status
- Destroyed
- Not a Site

AHIMS - Site type
- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree with artefact(s)
- Shelter and high density artefact scatter (31-100)

AHIP within the project area
- #2086
- #2804
- #SZ315
- #C0002525
- Major road
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.7

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

Site status

- Destroyed

AHIMS - Site type

- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)

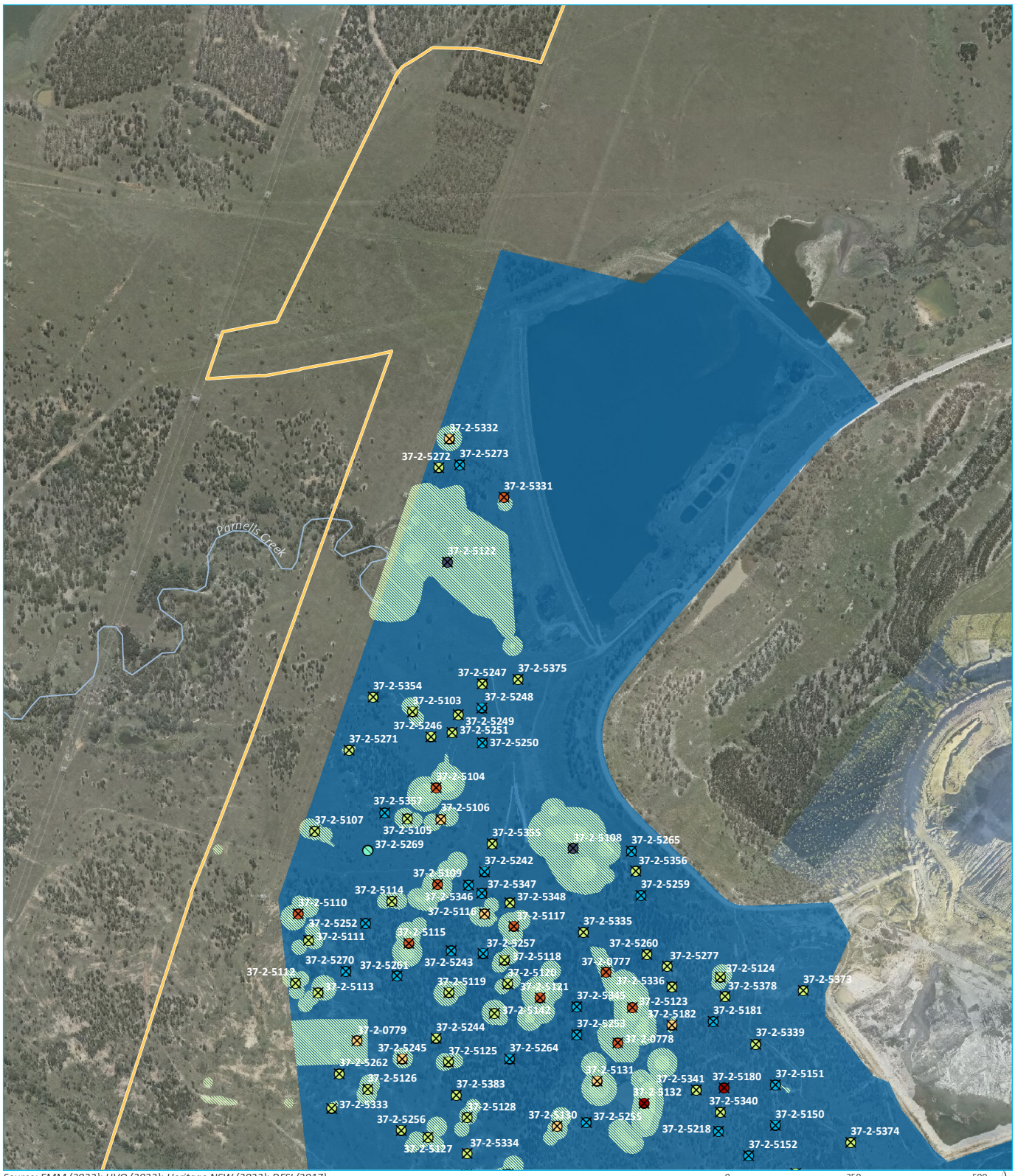
AHIP within the project area

- #2804
- #C0002525
- Proposed AHIP – Mitchell Pit

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.8

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- Site extent

Site status

- Destroyed
- Not a Site

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree
- PAD and very high density artefact scatter (100+)

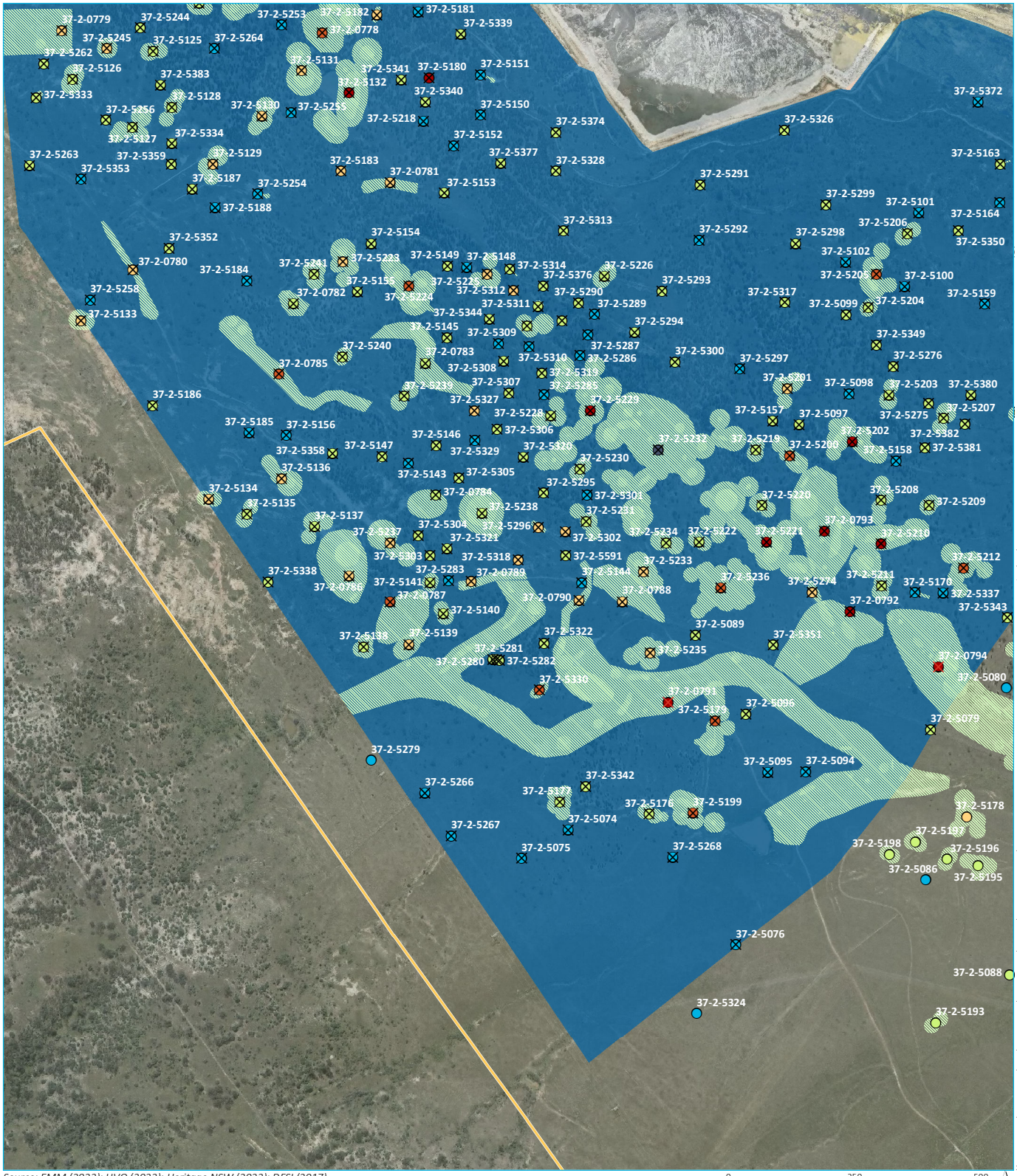
AHIP within the project area

- #C0002193
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.9

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

Site extent

Site status

- Destroyed
- Partially Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- PAD and very high density artefact scatter (100+)

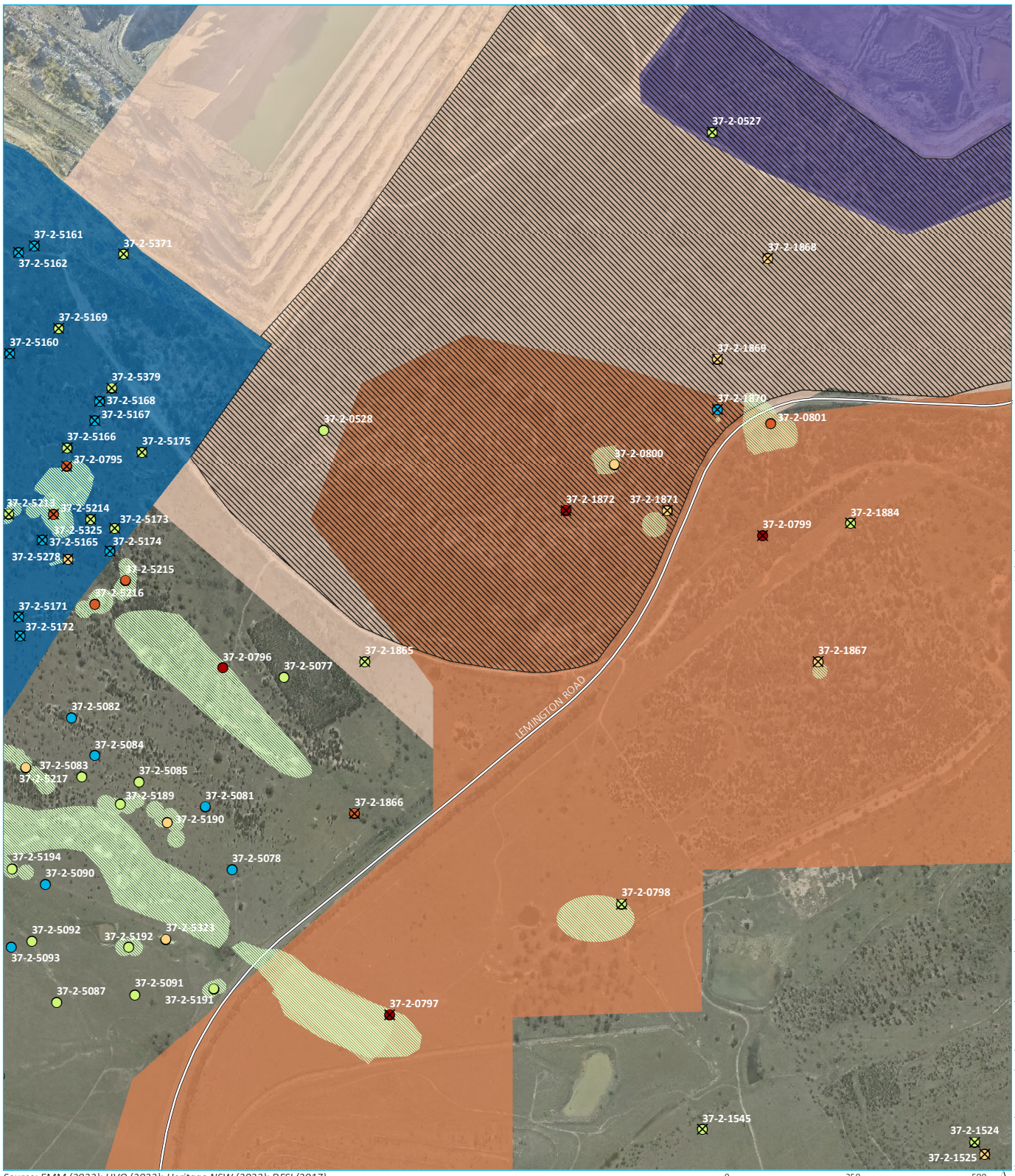
AHIP within the project area

- #C0002525
- #C0002193

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.10

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)

AHIP within the project area

- #2804
- #SZ300
- #C0002525
- #C0002193
- Proposed AHIP – Mitchell Pit
- Major road

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.11

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

Site extent

Site status

Destroyed

Not a Site

AHIMS - Site type

Isolated find

Low density artefact scatter (0-10)

Moderate density artefact scatter (11-30)

High density artefact scatter (31-100)

Undefined artefact site

AHIP within the project area

#2086

#2804

#SZ300

#SZ315

#C0002525

Proposed AHIP – Mitchell Pit

Major road

Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.12

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

Site extent

Site status

- Destroyed
- Partially Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Undefined artefact site

AHIP within the project area

- #2086
- #SZ315

Major road

Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.13

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- Very high density artefact scatter (100+)
- Undefined artefact site
- Major road
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.14

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- Site extent
- Named watercourse
- Named waterbody

Site status

- Destroyed
- Partially Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Undefined artefact site
- Major road

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.15

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Named waterbody

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Major road
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.16

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- Site extent
- Major road
- Named watercourse

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree
- Undefined artefact site

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.17

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

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KEY

HVO North proposed development consent boundary

Site status

- Destroyed
- Not a Site

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Undefined artefact site

AHIP within the project area

- #SZ300

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.18

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree and medium density artefact scatter (11-30)
- Culturally modified tree and very high density artefact scatter (100+)
- Shelter and Potential Archaeological Deposit
- Stone quarry and low density artefact scatter (0-10)
- Undefined artefact site

AHIP within the project area

- #2547
- #SZ300
- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.19

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Very high density artefact scatter (100+)
- Culturally modified tree
- Culturally modified tree with artefact(s)
- Undefined artefact site

AHIP within the project area

- #2547
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.20

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

HVO South proposed development consent boundary

Site status

Destroyed

AHIMS - Site type

Low density artefact scatter (0-10)

Moderate density artefact scatter (11-30)

Very high density artefact scatter (100+)

Undefined artefact site

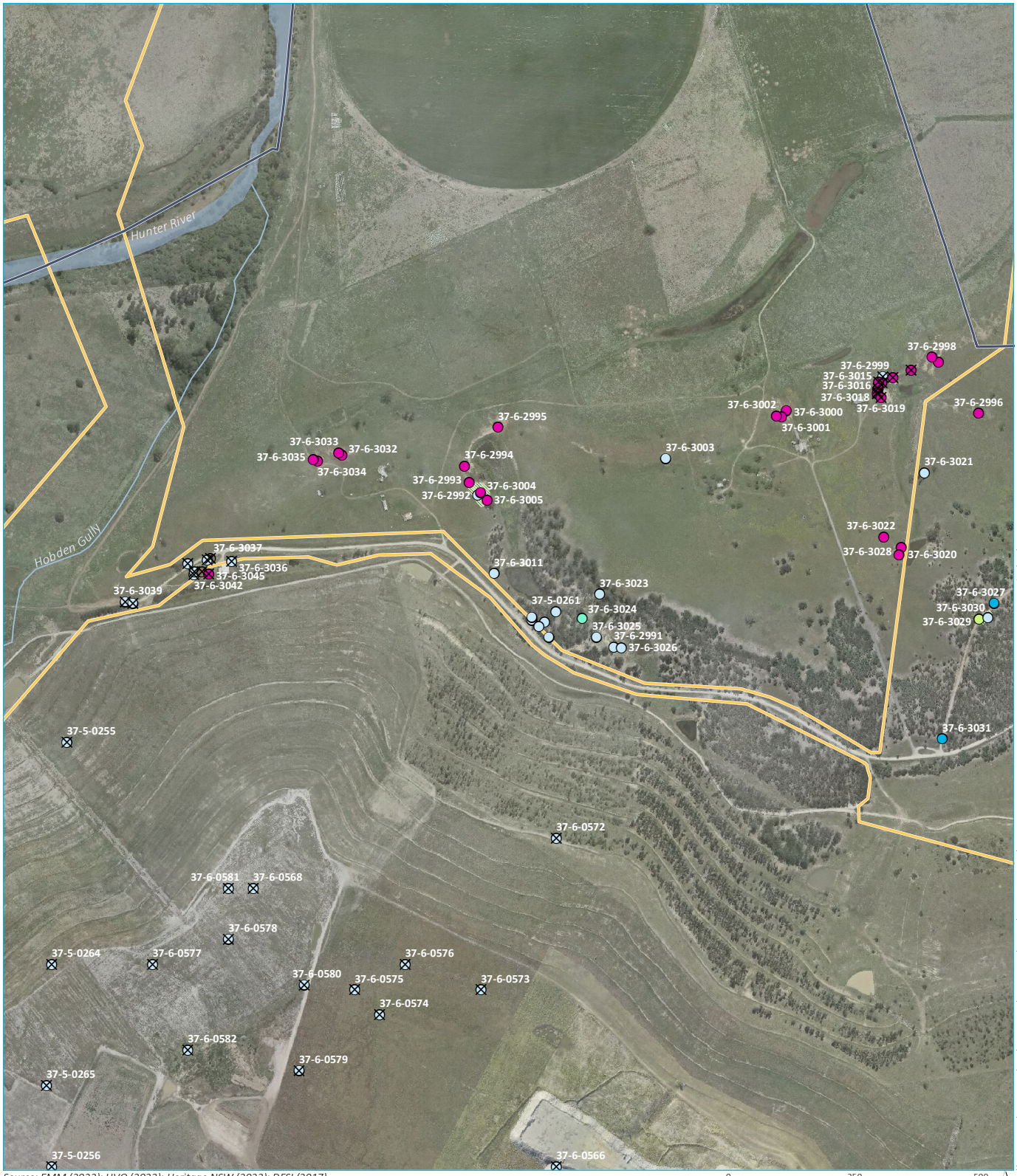
Named watercourse

Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.21

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Named watercourse
- Named waterbody

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Culturally modified tree
- Undefined artefact site
- Undefined artefact site and PAD
- Undefined artefact site with associated PAD

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.22

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary

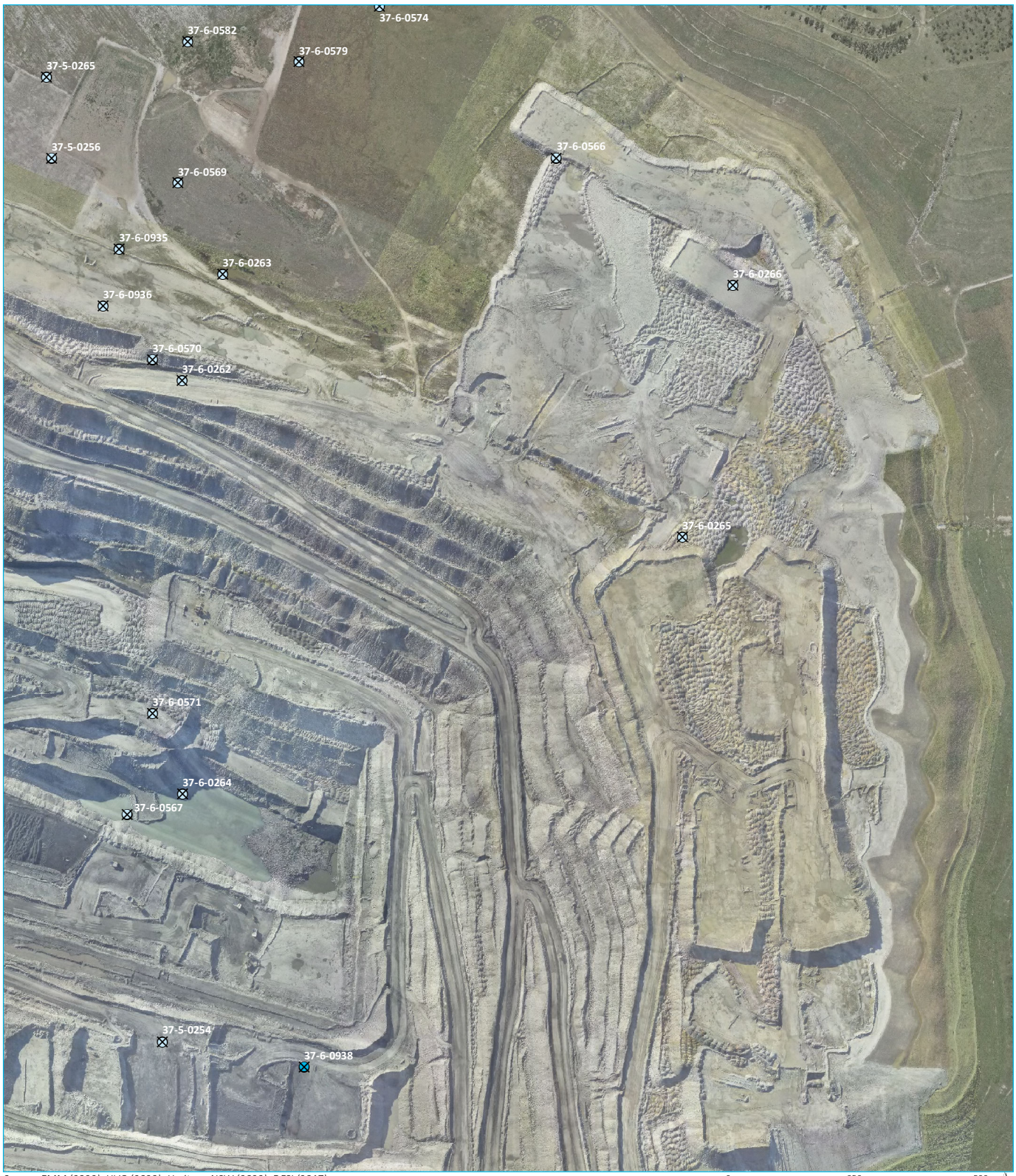
AHIMS - Site type

- Isolated find
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.23

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO South proposed development consent boundary

Site status

- Destroyed

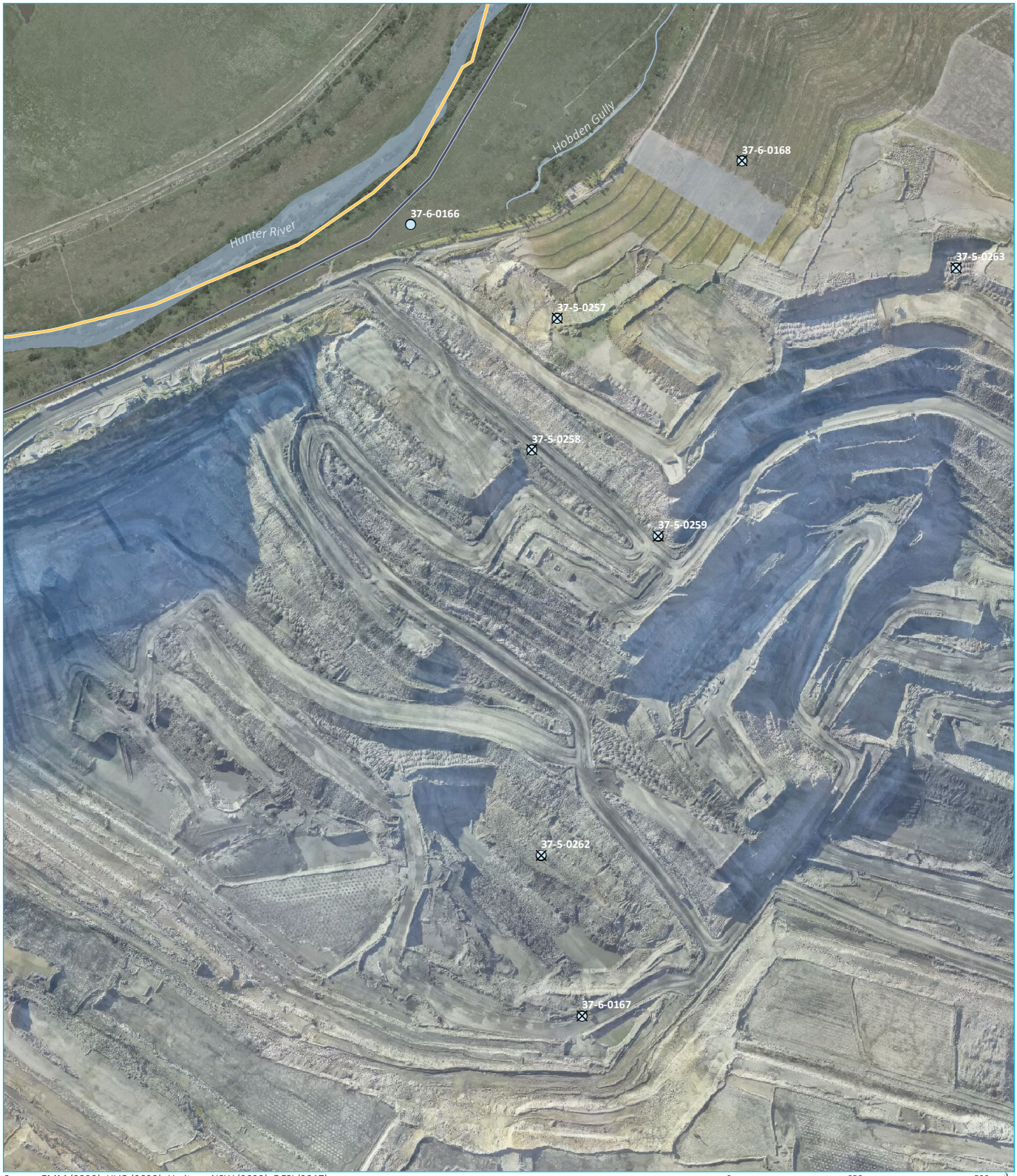
AHIMS - Site type

- Isolated find
- Undefined artefact site

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.24

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

HVO South proposed development consent boundary

Site status

Destroyed

AHIMS - Site type

Undefined artefact site

Named watercourse

Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.25

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Undefined artefact site
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.26

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

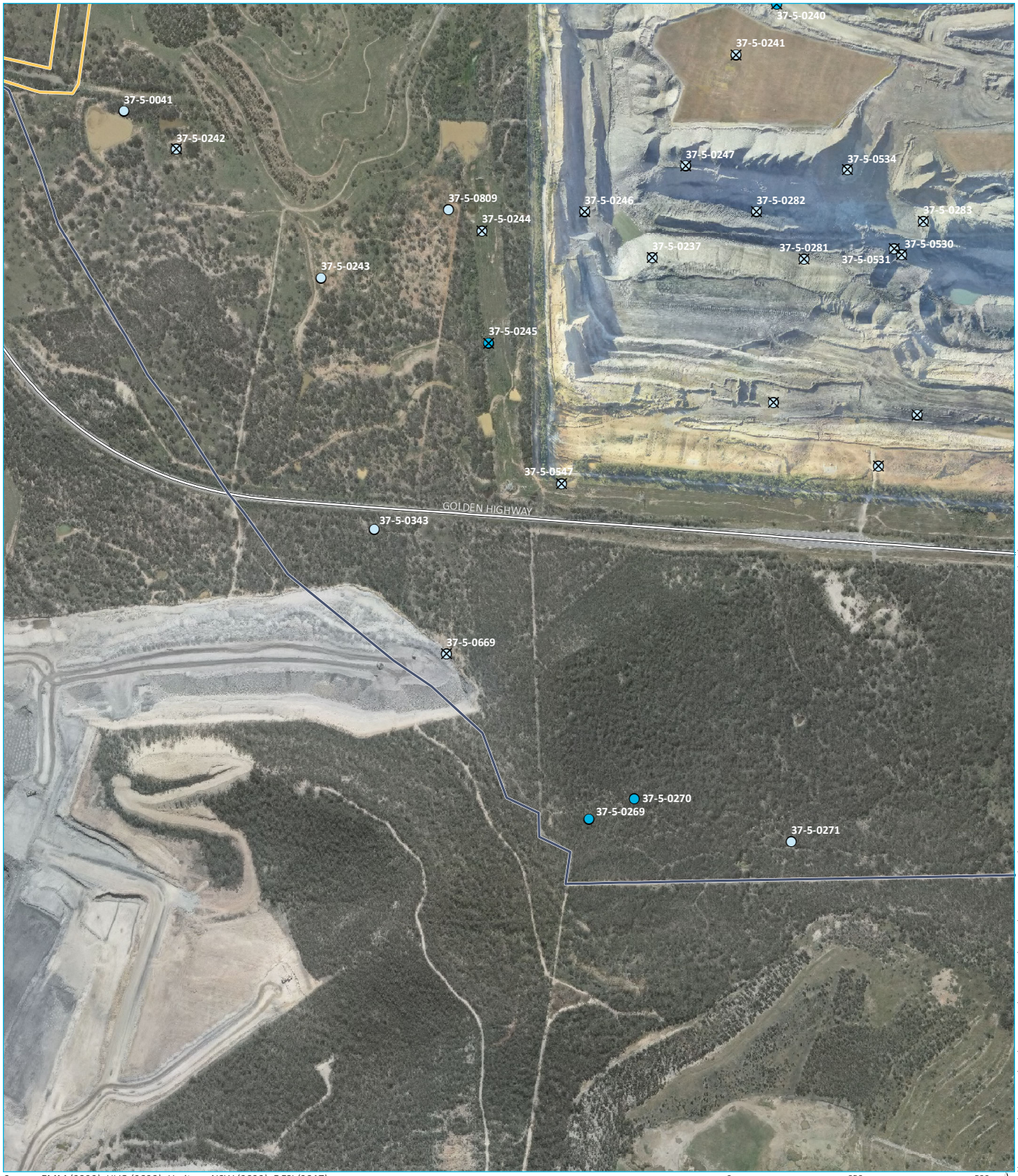
AHIMS - Site type

- Isolated find
- Undefined artefact site
- Undefined artefact site with associated PAD
- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.27

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

HVO North proposed development consent boundary

HVO South proposed development consent boundary

Site status

Destroyed

AHIMS - Site type

Isolated find

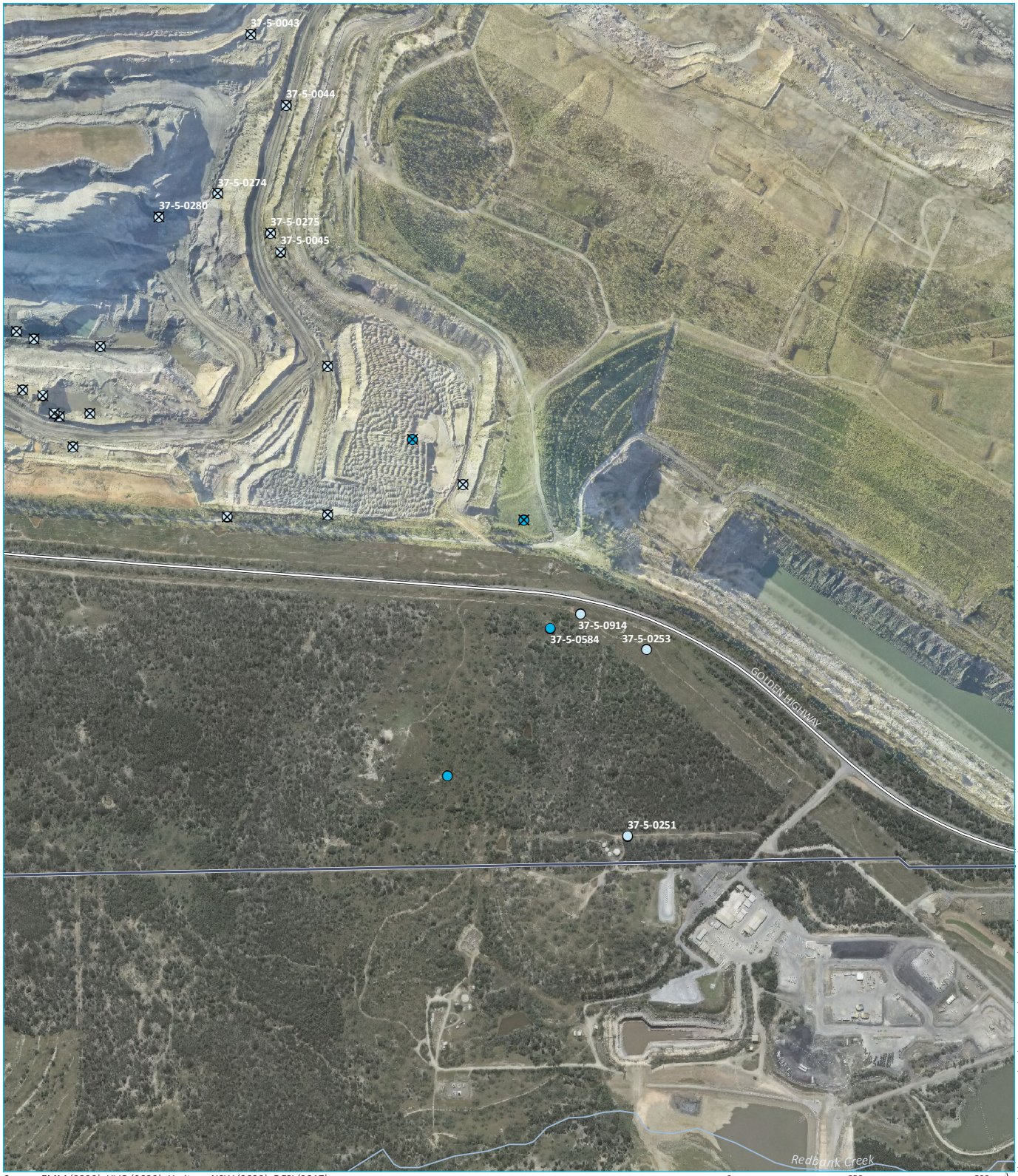
Undefined artefact site

Major road

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.28

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Undefined artefact site
- Major road
- Named watercourse

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.29

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Undefined artefact site
- Major road

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.30

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed
- Not a Site

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- High density artefact scatter (31-100)
- Culturally modified tree
- Culturally modified tree with artefact(s)
- Undefined artefact site

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.31

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Hearth with artefact(s) and potential archaeological deposit
- Undefined artefact site

- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.32

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

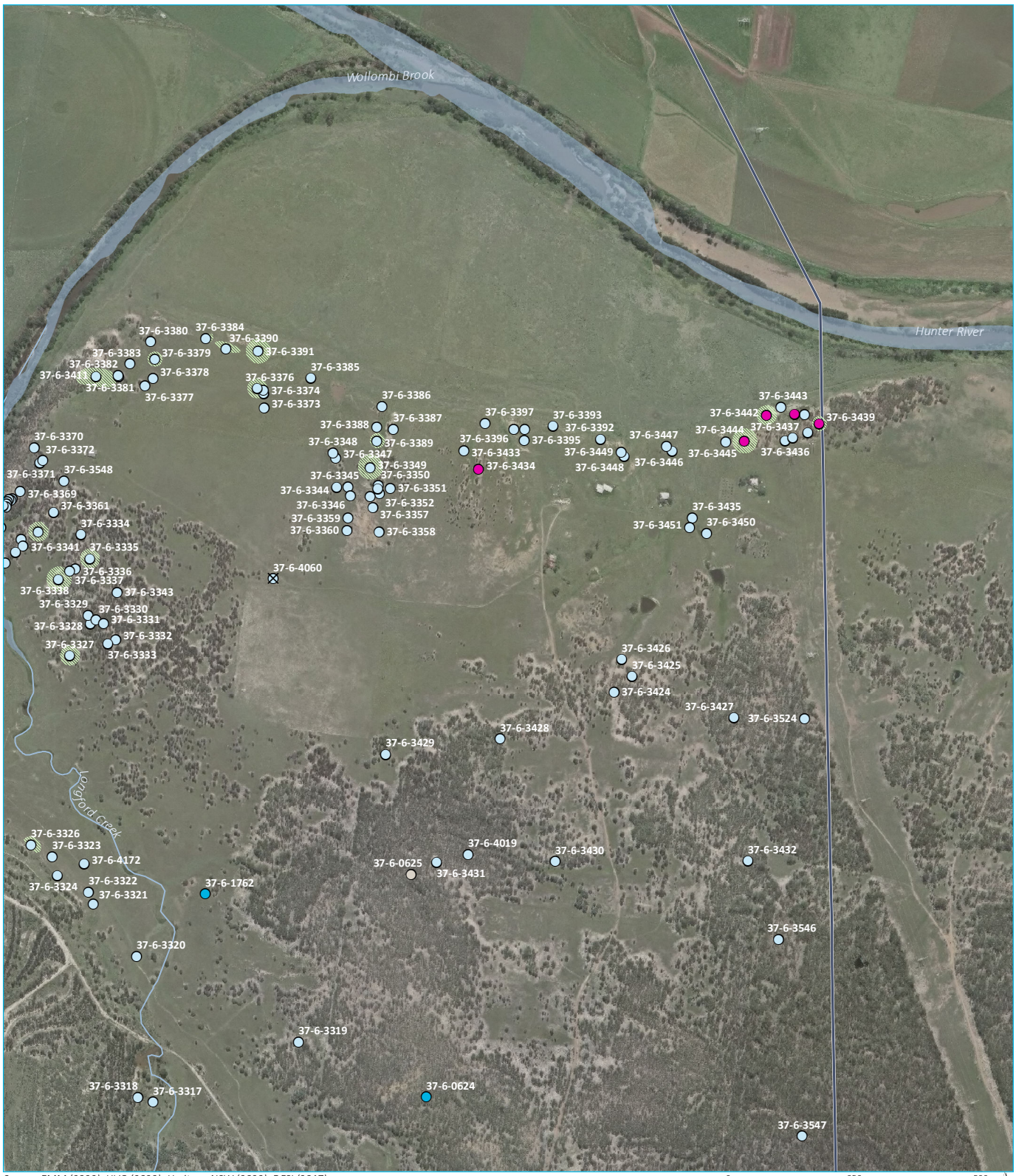
AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Undefined artefact site
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.33

EMM
creating opportunities



Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Stone quarry site with artefact(s)
- Undefined artefact site
- Undefined artefact site with associated PAD
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.34

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO South proposed development consent boundary
- Site extent

Site status

- Destroyed

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Moderate density artefact scatter (11-30)
- Undefined artefact site
- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.35

EMM
creating opportunities

Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO South proposed development consent boundary
- Site extent

AHIMS - Site type

- Isolated find
- Low density artefact scatter (0-10)
- Undefined artefact site
- Undefined artefact site with associated PAD
- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.36

EMM
creating opportunities

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Source: EMM (2023); HVO (2023); Heritage NSW (2023); DFSI (2017)

0 250 500 m

GDA2020 MGA Zone 56

N

KEY

- HVO South proposed development consent boundary

AHIMS - Site type

- Isolated find
- Moderate density artefact scatter (11-30)
- Undefined artefact site
- Major road
- Named watercourse
- Named waterbody

AHIPs and destroyed sites within the Project area

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.2.37

EMM
creating opportunities

4.3 Review of archaeological field investigations

4.3.1 Field survey

Section 6.3 of the ACHAR presents the methods and results of the archaeological survey conducted across the Assessment area. It was noted that thickly grassed hillslopes and plains covered in very dense thistle made completion of pedestrian survey ineffective and unsafe for the field team at these locations and thus slow vehicle traverses were employed in these areas where possible.

Table 6.3 presented the overall landform elements identified across the Project area and what proportion of that area was subject to pedestrian survey versus vehicle traverse. Vehicle traverse was undertaken across the following landform elements: hillcrest, floodplain, plain, terrace, hill slope 1 and 2, watercourse, and modified. The landforms which had the densest thistle or vegetation corresponded to the floodplain landforms which were either under crop or densely overgrown by invasive species. Locations which demonstrated high amounts of disturbance corresponded to this modified landform element. Further details were provided in Appendix E.2 of the ACHAR, which presented the details of each survey transect completed during the archaeological survey and the mode used (pedestrian, inspected or vehicle), the landform encountered, area investigated, exposure, visibility, effective survey coverage (area and percentage) and disturbance noted. Figure 6.2.3 in the ACHAR presented the results of the archaeological survey and displays the location of each transect along with the mode of survey employed (pedestrian, inspected or vehicle).

Generally, the modified or heavily disturbed landforms are not considered to have archaeological potential which would require further survey. Other disturbances were noted with highest levels documented on floodplains and hillslope 1. Low levels of disturbance were noted adjacent to or on terraces overlooking watercourses. The other locations where vehicle survey was employed also generally corresponded to those landforms considered to have lower potential for sites to be present: expansive hill slopes and flats (plains and flood plain) on modified agricultural land. These locations are also not considered to require additional survey if conditions change prior to proposed impacts as they did not demonstrate high archaeological potential where more detailed pedestrian survey was implemented.

Furthermore, a portion of the test excavation program targeted locations where poor ground surface visibility conditions were encountered at the time of survey to confirm assessment of low archaeological potential. Where cultural materials of significance were encountered, they have been identified for subsequent, primarily archaeological excavations should development consent be granted for the Project (Section 6), and as such further field survey would be unnecessary. Areas where test excavation recovered little cultural material confirmed the predictions of low archaeological potential, and similarly remove the need for further investigations.

4.3.2 Test excavations

Additional maps of the test excavations presenting recovered stone artefacts is presented in Appendix D.

4.4 Revisiting the cultural assemblage of the Project

4.4.1 Previous assessments

There have been many assessments previously completed across the HVO North and HVO South Project area (see Section 5.4 of the ACHAR). These studies have included archaeological assessments associated with field survey, sub-surface testing and subsequent salvage compliance requirements across now active portions of the mine (Mitchell Pit, Carrington Pit, HC Coal Preparation Plant (CPP), West Pit etc.). Additional review of these assessments is provided below in order to further refine and characterise the nature, extent and significance of cultural materials identified across the Project area to answer queries posed by Heritage NSW. Specifically, the review seeks to further establish what and how a ‘site’ has generally been defined for the region, and to identify

characteristics and elements that may differentiate a site from the broader background stone artefact scatter encountered across much of the Hunter Valley. This additional refinement then assists to inform the definition of the cultural assemblage, and the potential and cumulative impacts for the Project to it.

i HVO North – Mitchell Pit/West Pit

There have been several archaeological assessments (ERM 1995; JACTO 2008; MCH 2009a; CQCHM 2016; Arrow 2019) completed across the Mitchell Pit and West Pit areas (refer to Figure 1.3 of the ACHAR for Mitchell Pit location and Figure 5.2 for previous assessment area). Relevant sections of these assessments are provided below and are focussed on establishing how the nature, extent and significance of these recorded sites were assessed and defined.

a ERM (1995)

ERM (1995) completed a survey across the Mitchell Pitt/West Pit area for the then Howick Coal Mine. The survey identified a total of 26 open stone artefact scatter sites of varying densities (HC-1 – HC 26 inclusive [37-2-0777 – 37-2-0802 inclusive]). It was noted that the highest density sites were located adjacent to drainage lines. A total of 3,462 stone artefacts were identified across the sites at the time of survey. HC17 had the highest number of artefacts with 1,049 recorded. HC 15, HC 16, HC 18, HC 20, HC 21, and HC 23 also had artefact densities of over 150 and up to 560 artefacts. The remaining sites (n=19) generally demonstrated artefact densities of between 3 to 50. ERM (1995) noted that there was an apparent trend for sites to occur within the western portion of the study area especially adjacent to drainage lines (extending eastwards from the hills). ERM 1995 states artefact distribution along the drainage lines was generally continuous meaning that some sites could extend up to 500 m in length. Where artefact concentrations were separated by 50 m, or were thought to represent more intensive activity, they were recorded as separate sites.

A significance assessment was completed for the recorded sites. HC 17 was assigned 'considerable' significance as it demonstrated high densities of artefacts and was thought to demonstrate a series of knapping floors in some locations. HC 15, HC 16, HC 18, HC 20, HC 21 were assigned 'some' significance with the remaining sites being assigned 'little' significance. It was recommended that further archaeological investigation be completed near: HC 15, HC 16, HC 17, HC 18, HC 20, HC 21 and HC 23 and that a consent to destroy application be submitted for the remaining sites.

b JACTO (2008)

Further survey was conducted across the Mitchell Pit area by JATCO (2008) and resulted in the identification of 467 sites. The report states that the sites ranged from isolated occurrences to hundreds of artefacts, however, there is little to no information provided on the sites in the report, it is also unclear whether the newly identified sites included the sites previously identified by ERM (1995). From reviewing additional assessments completed across the area after the completion of this report it appears that no site cards or information regarding these sites was registered with AHIMS at the time.

c MCH (2009a)

Following the above investigation MCH (2009a) completed further, more comprehensive archaeological assessment of the Mitchell Pit Stage 1 area. A total of 828 Aboriginal sites (HVO 152-979 inclusive) were recorded and included 322 isolated artefacts, 500 artefact scatters, one isolated/stone source, one hearth, one scarred tree and one other unspecified site (this included the re-recording of sites found during JACTO's survey for which no data was available) (Plate 4.1) (MCH 2009: 26). Generally, the extent of the artefact scatters was recorded based on the visible boundaries of artefacts present and/or landform there were situated on.

MCH (2009a) noted that the entire study area had been subject to extensive erosion in the form of sheet wash and creek bank erosion, with very few areas retaining potential for subsurface deposits (MCH 2009a: 22). These observations are generally consistent with the geomorphological soil analysis relating to texture contrast or duplex soils outlined in Section 3.

Of the sites recorded by MCH, 88% (n = 315) are described as being of poor to very poor integrity with no potential for subsurface materials (excluding one site of minimal potential). Of the 13% of sites described as being in good (n = 6) or fair (n = 39) condition, less than half (42%, n = 19) were assessed as having potential for subsurface materials (MCH 2009a: 28-47).

MCH (2009a) noted that the location of the newly identified sites in relation to ERM (1995) shows that there is still a focus of sites along drainage lines but also broad distribution across the overall area (Plate 4.1). They attribute this broad distribution to extensive disturbances associated with: clearing, agricultural activities, control banks, fencing, tracks, dam construction and generalised erosion (MCH 2009a: 53).

Three discrete areas of PAD were identified, and all focus on areas within 50 m of water sources, including creekbanks and flats, which were considered to have more potential to retain A horizon topsoil where erosion was limited (MCH 2009a: 53–54).

A significance assessment for the identified sites was completed and sites were assessed as having low, medium or high significance. The majority of identified sites (isolated artefacts and artefact scatters) were attributed low scientific significance because they were well represented across the landscape, had very poor integrity and low research potential. A total of 18 sites, located within a PAD or designated a PAD, were not assigned any significance. No sites were assessed as having high significance.

MCH (2009a: 55) concluded that extensive disturbance of the study area had altered the cultural landscape significantly, with erosional processes impacting artefact locations and making interpretation of site patterning difficult, however the majority of sites appear to be in association with drainage lines/creeks conforming to general predictive models for the region. Plate 4.1 compares the distribution and extent of sites as recorded and mapped by ERM 1995 and MCH 2009a. Comparison of the sites indicates that the original recordings appear to have larger site extents adjacent to water sources and are not widely distributed. The MCH recordings show a greater number of isolated finds and artefact scatters with relatively smaller extents. The differences between the studies may indicate differences in site recording but are more likely to be largely influenced by subsequent site formation processes, given the passage of time between recordings, and disturbances/erosion noted across the area.

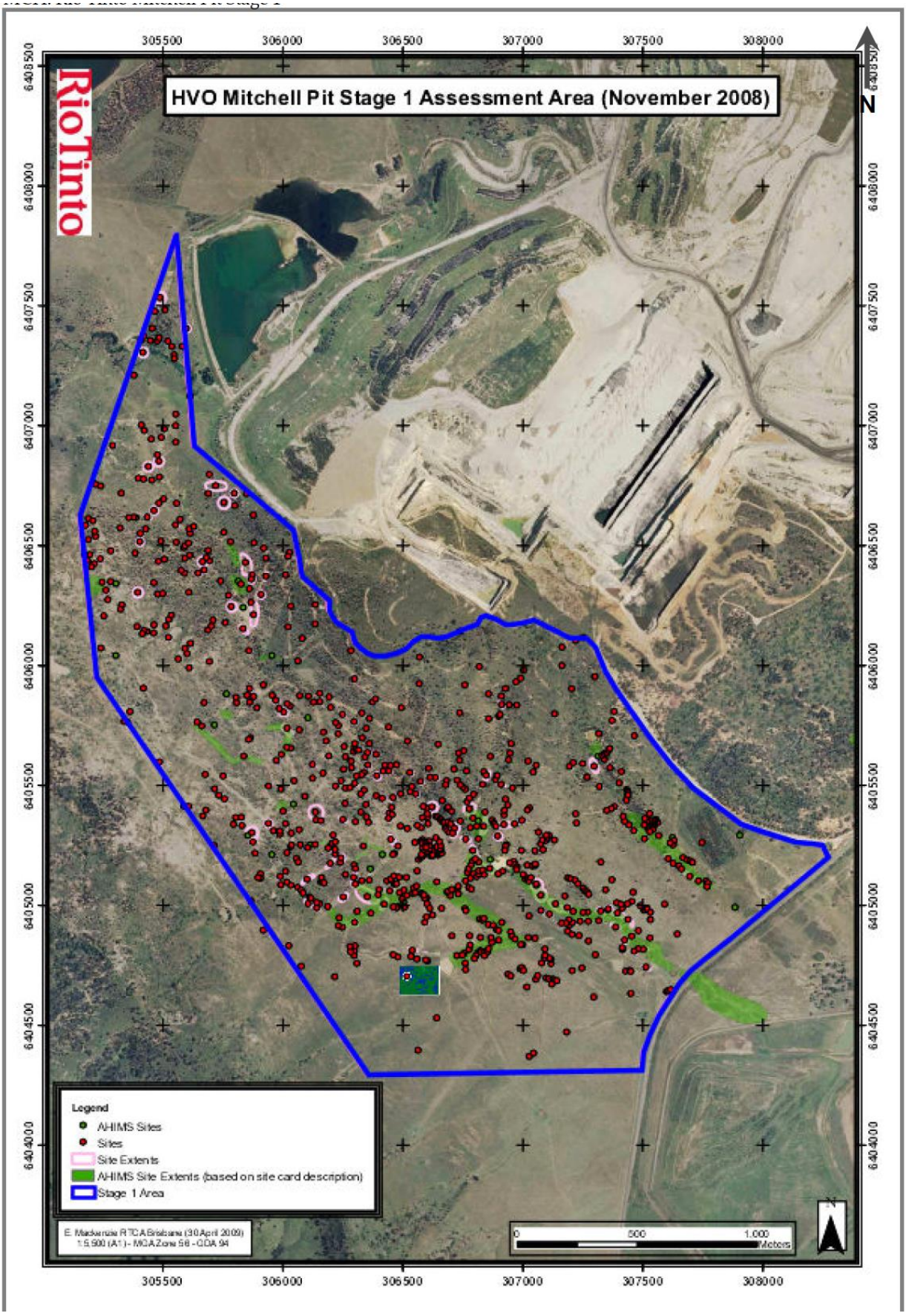


Plate 4.1 **Comparison of sites recorded by ERM (1995) (blue) and MCH (2009a) (red) (source – MCH 2009a: 54)**

d CQCHM (2016) and Arrow Heritage Solutions (2019)

CQCHM (2016) completed an ACHAR for the Mitchell Pit Development Area to support an AHIP application. The main aims of the ACHAR were to summarise all previous assessments, include a reassessment of previously surveyed areas and recorded sites to confirm results, and survey an additional 50 ha area not previously assessed. A test excavation program for eight previously identified PAD areas was also completed. An additional 60 stone artefact scatters were recorded during the reassessment with all comprising stone artefact scatters of a similar nature, form and extent of those previously recorded. Within the additional 50 ha survey area a further six Aboriginal sites were identified and composed a total of eight artefacts and areas of PAD. Test excavation of the previously identified PAD areas identified a total of 49 artefacts, with no material identified in 25 of the 41 test pits. The very low density of sub-surface material identified, and the lack of any identifiable stratigraphy did not qualify the areas investigated as comprising significant archaeological deposits. Furthermore, it was concluded that little, if any, of the stone artefacts remain within their original depositional context.

The ACHA completed by CQCHM (2016) supported the AHIP application. The permit allowed disturbance to 284 Aboriginal sites (over 747 discrete stone artefact locations) upon completion of appropriate management conditions. Of the 284 sites all comprised stone artefact scatters except for the one scarred tree. Arrow Heritage Solutions (2019) completed an Aboriginal cultural heritage site salvage and excavation program across the Mitchell Pit development area under AHIP C0002193.

Arrow Heritage Solutions (2019:19) explains the difference in the current AHIMS Site ID and previous recordings of the sites across the Mitchell Pit area (c 800).

> The difference between the AHIMS Site ID and the site name/number recorded by HVO should be noted here. During the course of the 2008 and 2015 assessment surveys, each instance of stone artefact/s encountered, was recorded with a HVO identifier – i.e. "HVO-879". This location may contain one stone artefact, several stone artefacts, or many stone artefacts. Where more than one stone artefact was recorded, the dimensions of the site were also recorded/estimated and mapped. Rather than approaching these assessments haphazardly, the survey method employed a series of pedestrian transects that covered the survey area comprehensively using mainly straight centre-lines designed systematically across the area. Whilst surveying and recording Aboriginal cultural heritage sites using this method, the geographic or landscape connection between each site is not always apparent in the field. When the site recording data was later analysed using GIS, it became obvious that some groupings of sites should be aggregated based on their proximity to each other or their association with a particular feature – i.e. along a watercourse. These aggregations of "HVO sites" were then registered as a single AHIMS site. Furthermore, many "HVO sites" were found to be located within the bounds of the previously recorded ERM (1995) Aboriginal heritage sites that were already assigned AHIMS site numbers. The HVO site numbers and records were retained as these provided the core site information as well as more specific geographic information of artefact locations.

So although at one point up to 828 sites (MCH 2009a) were identified across the area the salvage work completed by Arrow Heritage Solutions (2019) refined and grouped these recordings where possible into 284 sites.

AHIP #C0002193 also allowed salvage excavations at two locations: MP-001/PAD 1 (37-2-5122) and HC-17/PAD7 (37-2-0793). HC-17/PAD7 (37-2-0793) was originally assess as having considerable significance and over 1,000 artefacts (ERM 1995). The salvage identified a further 689 stone artefacts associated with HC-17 (37-2-0793) and approximately 245 stone artefacts from a sub-surface context. An updated significance assessment was not completed.

Management of culturally modified tree HVO-930 (37-2-5269) permitted by the AHIP, which included removal and relocation of the scarred portion, were not conducted as part of the 2019 salvage scope. In 2021, the scarred tree was reinspected by Glen Morris (formerly NPWS) and representatives of the CHWG, and it was concluded that the scar was likely non-cultural in origin and that it should not be salvaged (Arrow 2021). It was further recommended that the site's AHIMS registration be updated, and the site is now listed as 'not a site'.

The Aboriginal heritage previously identified across the Mitchell Pit/West Pit area comprises stone artefact scatters. These scatters are largely characterised by low density surface distributions, that may once have represented smaller pockets of larger more dense accumulations (especially within proximity to water) but have now been widely distributed across the landscape due to nature of the soil landforms they are situated on (texture contrast/duplex soils) and other erosive site formation processes. Since the area was first assessed (ERM 1995) the majority of the sites identified have been assessed as being of low significance as they represent low to moderate density stone artefact scatters that are relatively common in the region, have low potential for intact stratified deposits, are likely Holocene in age and have assemblages with characteristics common to the region. Only one site was allocated as having higher levels of significance (HC-17/PAD7 [37-2-0793]) and this was largely based on the site demonstrating higher densities of artefacts and having some potential to contain further sub surface deposits. Generally, more stone artefacts were recovered from surface contexts in comparison to sub surface contexts indicating that the area has likely been subject to repeated episodes of erosion and re-deposition.

ii Ravensworth area

a Brayshaw (1981)

Brayshaw (1991) conducted an archaeological survey of the proposed site of the Ravensworth washery and coal loading facility. The study area included two gullies which join Bayswater Creek, bounded on either side by undulating alluvial plains which has been extensively cleared for grazing land, and much of which had been ploughed. Several small dams had been constructed in the gullies (Brayshaw 1981d, p. B1).

Only one site was identified as a result of survey of the area, Liddell Bayswater Creek (37-3-0028), a scatter of less than 10 artefacts exposed along the banks of a gully, extending over 150 m and exposed as a result of ploughing and dam construction. Artefacts included flakes and one chert blade core. Due to high levels of disturbance, no actions were recommended to preserve or salvage the site. Liddell Bayswater Creek (37-3-0028) is located within the HVO Project area and remains valid in the AHIMS database. The site was revisited as part of the ACHAR (refer to Section 6).

b Rich (1990)

Rich (1990) conducted a supplementary archaeological survey and assessment of the proposed Narama mine at Ravensworth, covering approximately 200 ha located to the west of Bayswater Creek. The investigation area contained four previously recorded sites, and survey identified an additional 15 archaeological sites within the area, being 13 artefact scatters and two isolated finds. The majority of these sites (10 of 15) were positioned away from watercourses, on hillslope and spur landforms. Site assemblages were characterised by flakes and flaked pieces of indurated mudstone or silcrete, with lesser numbers of quartz, chert and fine grained siliceous artefacts. Two backed blades and two blade flakes were also recorded, and it was noted that 21 per cent of the assemblage showed retouch and/or usewear. The assemblage also contained a broken axe head recorded on a spur crest. Rich (1990) noted that flake shape appeared to be related to material, with silcrete flakes being long and thin, with mudstone flakes being wider; suggesting that materials were being knapped differently. Only one site contained more than 30 artefacts, and this site contained over 100 artefacts.

Despite the high significance assigned to the Bayswater Creek area, Rich (1990) notes that none of the sites identified during the survey were significant enough to warrant preservation as an alternative to development; and impact mitigation measures – surface collection and excavation – were recommended.

One artefact scatter identified by the assessment, N1 (37-3-0174), is located within the HVO Project area and remains valid in the AHIMS database. The site was revisited as part of the ACHAR (refer to Section 6).

c ERM (1997)

ERM (1997) prepared an EIS for the proposed extension of mining operations at Ravensworth Mine. The EIS included detailed archaeological investigations of the Ravensworth West site. Archaeological survey inspected a sample of each of the three topographic features within the study area, these features being ridges/hill tops, hill slopes, and gullies and creek lines. A total of 58 sites were recorded during the field investigations, comprising a total of 1,737 artefacts. Of the 58 sites recorded, 47 were open artefacts scatters, one of which was associated with possible grinding grooves. The remainder of the sites were isolated finds. Artefacts recorded included knapping debris such as stone tools, cores, flakes and flaked pieces.

The distribution of archaeological sites found during the field survey was consistent with the general pattern of sites in the local area and the region in general and were distributed throughout the study area, with main concentrations along the creek lines and their tributaries. Artefact densities were greater in sites associated with watercourses, probably as a result of the high degree of surface visibility in these areas due to surface erosion, as well as a "real" site distribution pattern. Site detectability was limited in other areas by the degree of vegetation and ground cover. However, the presence of sites in all landform contexts indicates their presence over the entire landscape and it is suggested that their relative density and type would be consistent across each of the landform features.

Subsurface investigations were not considered warranted for the following reasons: the shallowness of the A soil horizon limits the potential for subsurface deposits; the nature and distribution of archaeological material across the site is considered to be consistent with what was found during the survey; there were no rare sites found in the study area; and all sites were artefact scatters which are well represented in the region.

A total of 12 sites identified by this assessment, including 11 artefact scatters and one isolated find (37-2-2714, 37-3-0784, 37-3-0785, 37-3-0787, 37-3-0788, 37-3-0793, 37-2-2710, 37-2-2713, 37-2-2715, 37-3-0781, 37-3-0782 and 37-3-0789), are located within the HVO Project area and remain valid in the AHIMS database. The sites were revisited as part of the ACHA (refer to Section 6).

iii HVO North – Carrington pit

a ERM (1999a)

ERM 1999a completed an archaeological assessment of Authorisation 435 as part of the Carrington Mine EIS. The study area, covering 354 ha, is described as comprised of level to gently undulating ground, steep slopes and low ridge country, featuring three ephemeral drainage lines (Western, Main [Central] and Eastern) and an infilled old river channel with older, potential Pleistocene age sediments expected to underlie more recent deposits (ERM 1999a: 11.6-11.7). This area is known as the Carrington Pit and is situated to the south of the Mitchell Pit/West Pit.

A total of 46 sites were recorded, CM1 to CM46, and were identified across the full range of landforms present. Site types included: open camp sites (74%, n = 34); isolated finds (22%, n = 10); 1 open camp site/scarred tree association; and one open camp site/possible scarred tree association. The number of artefacts observed at open camp sites generally ranged 2 to 200 artefacts, including some dense concentrations and broad scatters of isolated occurrences.

Two significant sites with high artefact densities were identified: CM2 (37-2-1505) and CM36 (37-2-1539).

- CM2 was associated with a low ridge, covered an area approximately 120 m long and 50 m wide, and was identified as an initial stone (silcrete) working area. Extrapolating the numbers of artefacts identified within seven 1 m^2 sample quadrats, the total number of artefacts at the site was estimated to be approximately 70,000 (ERM 1999a: 11.15). Surrounding sites: CM1, CM3, CM4, CM27, CM39, CM40 and CM41 were considered associated with CM2.

- CM 37 (37-2-1540) covered an area approximately 200 m long by 150 m wide and was a stone working area and quarry. Extrapolating a sample area of 4 m^2 the total the number of artefacts at the site was estimated to be approximately 90,000 within the proposed impact zone, and many thousands more extending uphill (ERM 1999a: 11.15).

A significance assessment was completed for the identified sites. CM2 and CM37 were assessed as being significant as they comprise large sites with potentially higher densities of artefacts and were considered to have further research potential. CM1, CM3, CM4, CM27, CM39, CM40 and CM41 were assessed as having enhanced significance by association with CM2. All other sites were assessed as having little significance (ERM 1999a: 11.31-11.32).

b Carrington Mine EIS Supplementary Archaeological Information (ERM 1999b, Hughes 1999, 2000b, Hughes and Hiscock 2000)

ERM (1999b) prepared a supplementary archaeological study, to provide further information on the artefacts of identified sites to better assess the archaeological significance of the Carrington locality. Of particular interest were significant raw material sites CM2 and CM37, as well as the alluvial and colluvial deposits of the study area.

The supplementary assessment found that (ERM 1999b: 4.17):

- CM37 was a silcrete quarry which was frequented for supply however only minimal knapping activities occurred there. One additional raw material source, CM47, not previously identified was recorded by the supplementary study.

- It is possible that the flats may contain some subsurface material, however the likelihood of finding such material is extremely low. The environment is flat and featureless, and no indication of subsurface material has been found.

- CM2 was a significant silcrete source and tool-making area, whilst CM39, located on the same ridge, was a large artefact production site. CM2 and CM39 were assessed as having little further in-situ research value due to their erosional nature making subsoil artefacts unlikely. However, colluvial deposits (now CM-CD1) below the main ridge at CM2 were identified as potentially being Pleistocene in age warranting further investigation.

Subsequent investigations were carried out, including geomorphological and archaeological investigation by Dr. Philip Hughes and Dr Peter Hiscock (Hughes 1999, 2000b, Hughes and Hiscock 2000). Geomorphological fieldwork undertaken in June 1999 included inspection of the ridgeline and immediate surrounds in order to examine topography, and the excavation of 13 backhoe geotechnical pits approximately 2 x 0.7 m to examine subsurface sediments in key areas (Hughes 1999: 8). Backhoe pits were excavated along a transect extending west from the ridge where CM2 was located, across the low alluvial flats forming the centre of the amphitheatre to the hillslope. A colluvial deposit of presumed Pleistocene age immediately below CM2 on the foot-slope of the low ridge was identified from the excavation of Pit 9. This location was chosen because it was deemed to be a point at which sandy and gravelly deposits derived from the flank of the low ridge may have accumulated progressively in the form of a colluvial fan.

Dr. Philip Hughes recommended that a program of archaeological excavations be undertaken to test the proposition that stratified late Pleistocene artefact assemblages might be preserved in the colluvial deposits of below CM2 (Hughes 1999: 17). No program of excavation work aimed at testing for the presence of Pleistocene archaeological materials was considered warranted anywhere else in the study area.

The archaeological fieldwork identified a new site designated Carrington Mine Colluvial Deposit Area 1 (CM-CD1 [37-2-1877]) which is discussed in greater detail above at Section 3. Following the excision of CM-CD1 from mining development plans the Carrington Mine received development consent (DA 106-6-99) which included approval for partial impacts to CM2. Only a small portion of CM2 (37-2-1505), which was protected against impact due to its extending into the exclusion zone for CM-CD1, remains extant. Subsequent extensions and modifications for the HVO West Pit have been granted development approval (DA 450-10-2003) with conditions specific to CM-CD1. This includes the prohibition of mining activities within 20 m of the site.

Hunter Valley 1: Maryville Malabar Site N (37-5-0063) is another site of relative importance in the locality. It was original recorded by Haglund (1982) and is located within the Carrington Pit area of the HVO north area, to the south-east of CM-CD1 (37-2-1877). It was originally described as an open stone artefact scatter running parallel to the Hunter River extending over a distance of 700 m. Since its initial discovery further archaeological investigations occurred (Brayshaw and Haglund 1983; Haglund 1993; Rich 1993) and found that the site was more extensive than originally thought. Throughout the various investigations described above several recommendations for further archaeological investigation and management of the site were made which resulted in a Consent to Destroy for the southern portion of the site and a Consent and Permit to Salvage.

A report detailing the results of the salvage was prepared for ERM by Hiscock, Hughes, Shawcross and Paton (2000). Archaeological salvage excavation across the site recovered a total of 4,633 stone artefacts, and of these a sample of 1,417 were subject to further analysis. Although sediment samples were collected for thermoluminescence dating it was found that the sediments were unsuitable for dating. The extent of the site originally covered an area of approximately 24 ha and around two thirds of this area had been subject to ploughing in the past. The most southern portion of the sites had been destroyed by mining activities and areas to the north and east had also been subject to disturbances. The site is described as being aeolian in origin, probably late Pleistocene/Holocene in age and associated with the Warkworth sand system. From the results of the investigations the following conclusions were drawn – vertical movement of artefacts has occurred, geomorphological assessment indicates that the deposition of the sands was likely to have occurred in the late/terminal Pleistocene or early Holocene. The site was noted to have been subject to several post-taphonomic alterations such as: ploughing, bioturbation, rabbit burrowing, deflation and tree fall. These processes have made it difficult to determine whether the artefacts recovered are indicative of discrete knapping floors or the accumulation of material at certain locations due to the site formation processes. The assemblage composition was determined to be typical of artefact scatters across the Central Lowlands and reflect initial reduction and production of occasional backed flakes removed from burinates.

Ultimately the site was assigned as having moderate scientific significance based on its known (large) size, location, and high densities of artefacts recovered (Hiscock, Hughes, Shawcross and Paton 2000).

iv HVO South – Riverview Pit/Cheshunt Pit

There have been several archaeological assessments completed across the Riverview/Cheshunt Pit area (Brayshaw and Haglund 1981, Brayshaw 1990, and ERM 1998). These assessments have identified a number of sites within the vicinity of the Project area, which aside from 'Barellan Open Site', have been salvaged under previous s90 consent #SZ315 (MCH 2009b: 1). The results of investigations completed across this area were largely similar to those reported for the HVO North area in that most sites identified comprised isolated finds, low density distributions or stone artefact scatters.

Several sites of significance were recorded/identified during geomorphological assessment of the area by Hughes (2001). As a large aeolian sand dune had been identified at Hunter Valley 1/Malabar Site 0 (37-5-0063) adjacent to the Hunter River within the HVO north area (see above), a National Parks Wildlife Service representative visited the HVO South area and determined that a ridge present was geomorphically similar to that identified at 37-5-0063. This ridge was situated to the south of the Hunter River approximately 2 km to the east of 37-5-0063. This ridge was investigated by Hughes (2001) has been referred to as the Cheshunt Dune (Malabar Burnham Wood Site I (Site I) [37-6-0166]) as detailed in Section 3.2.2. Hughes and Shawcross (2001) identify another dune site HVS 38 (37-5-0262) which is situated to the south-east of 37-6-0166. Although there is little information about HVS 38 (37-5-0262) in the Hughes and Shawcross (2001) report each site is thought to be similar representing source bordering dunes of the Warkworth sand system, demonstrated large densities of Holocene aged stone artefacts, and generally had potential to have formed during the late Pleistocene. AHIMS information suggests that 37-6-0262 has been destroyed.

v Summary

In summary, past studies and previously documented sites indicate that cultural materials within the regional context are generally dominated by stone artefact sites, most frequently isolated stone artefacts or low density (<20) artefact scatters. Relatively few sites feature subsurface deposits, and this reflects the nature of shallow duplex soils throughout the Hunter Valley as well as high susceptibility to erosional impacts due to natural and historical disturbances. Archaeological material is scattered almost continuously across the Hunter Region in all contexts, disturbed and undisturbed, across all landforms. These sites have generally been attributed low scientific significance.

Distribution of higher density artefact sites shows a strong correlation with elevated landforms such as ridgelines, spurs or terraces in proximity to water with archaeological evidence in the Hunter Valley primarily contained within a corridor approximately 100 m wide on either side of a watercourse. While these types of sites can demonstrate higher densities of artefacts they still usually reflect disturbed contexts or lack discernible stratification and therefore usually assigned moderate scientific significance.

Stone artefact scatters demonstrating higher densities, stratification and potential to be of greater age (i.e. Pleistocene) are more likely to be identified within aeolian or colluvial sand dune/sheets contexts as they are characterised by deeper deposits with better preservation contexts. These landforms are source bordering dunes which are associated with the Warkworth sand system and are generally found within proximity to the Hunter River, Wollombi Brook and their immediate tributaries (usually within 5 -10 km of their intersection). These site types have generally been assessed as having high scientific significance as they are limited in number, represent stratified deposits (which is rare across the region) and can be of Pleistocene age.

On review of the existing data, only five sites have been previously identified as of high value based on their artefact densities and/or their deposition within sand units. These include HC-17/PAD7 (37-2-0793), CM2 (37-2-1505), CM37 (37-2-1540) that have all been identified as containing high densities of artefacts, ranging from ~4,000 up to >70,000; and Hunter Valley 1/Malabar Site 0 (37-5-0063), Malabar Burnham Wood Site I (Site I) (37-6-0166) and HVS38 (37-7-0167) that had evidence of beings source-bordering dunes within which cultural material was encountered.

When considering the data developed as part of the ACHAR in Section 4.5.2, the presence of higher artefact densities – a conservative value of 30/m^2 is applied, but as outlined above is significantly below previously recorded values – or the presence of sand unit indicative of the Warkworth sand system has been used in refining significance and cumulative impact (Section 5) to address.

4.4.2 Our data

Overall, the ACHAR identified some 279 Aboriginal sites and places within the Project disturbance area (Table 4.5):[7]

- On ratification of the field survey and test excavations, the field survey identified 79 previously undocumented Aboriginal sites within the relevant Assessment Area.[8] This included 76 stone artefact sites (isolated finds and artefact scatters) and three culturally modified trees confirmed by specialist assessment. These sites were predominantly identified on hillslope landforms (48%), which comprise the majority of the Project, or adjacent to or on terraces overlooking watercourses (31%). Few sites were found in the steeper slopes and/or elevations.

- There are 200 extant (valid or partially destroyed) previously recorded sites situated within the additional disturbance area/approved disturbance area other mine (Table 4.2), and existing and approved disturbance area (Table 4.3). These comprise isolated objects and stone artefact scatters, PAD, a possible culturally modified tree with artefacts, and a culturally modified tree. (These values differ from the ACHAR, since some sites have been added and created, as well as destroyed since the completion of that report as a result of ongoing operations).

When correlating the findings of the ACHAR with the detailed geomorphic data in Section 3.3 and previous assessments in Section 4.5.1, few would be considered of high significance or value – a finding previously concluded in the ACHAR (EMM 2022). These broader regional data indicates that sites of high artefact densities, typically in the order of several thousand objects, and/or stratified sand unit deposits, are considered to reflect significant evidence of past use and occupation of the region. Culturally modified trees are also generally considered of higher significance due to their rarity in the region through the level of past development. While the ACHAR findings included a number of these sites listed in previous sections, the cultural assemblage primarily consists of artefactual sites, most frequently isolated stone artefacts or lower density (<30) artefact scatters. Relatively few sites featuring subsurface deposit are present and reflect the nature of the shallow duplex soils throughout the Project area (Section 3).

Based on the field survey, the ACHAR identified some 12 areas were artefact densities and site extents were found to increase, generally in proximity to established waterways. These areas were targeted for test excavation because: i) they were identified as likely to contain potential archaeological deposit due to increased presence of artefacts or presence of specific landforms (terrace, source bordering dune), and/or ii) to counter poor ground surface visibility conditions at the time of field survey and to validate initial views of the areas being of low archaeological potential.

The excavations found that Areas 1–4 inclusive, 6, 7, 8, and 10 had either no or minimal cultural materials present and when identified sites represented isolated stone artefacts or very low-density surface/sub surface stone artefact scatters. Four areas (5, 9, 11 and 12) demonstrated greater densities of artefacts or landforms with evidence of more focused/frequent use (see below). The excavations primarily visited sites identified as part of the field survey and/or from previous data. As such, these additional excavations resulted in only one additional site (a portion of Area 11), being identified with the remainder providing further characterisation of documented cultural deposits.

[7] These values now slightly differ from the previous ACHAR (EMM 2022), which listed 304, for a range of reasons. This is primarily a result of the exclusion of several sites that were in close proximity, but not within the Project disturbance area and listed in the notes of Table F.1, and minor refinements of the field survey and test excavation components, which has resulted in some amalgamation.

[8] This value differs slightly from the ACHAR findings (EMM 2022) of 81 sites (78 stone artefact sites + three culturally modified trees) following further review of the data, in which some sites are now outside the Project disturbance area, and some have been amalgamated being in close proximity to each other, and/or following the identification of their connection with the Warkworth sand system.

Table 4.5 Aboriginal sites within the Project disturbance area

Site type	Newly identified sites (n)	Previously recorded sites (n)	Total (n)	Sites previously destroyed (n)	Overall total (n)
Isolated find	27	54	**81**	107	**188**
Low density artefact scatter (0-10)	35	50	**85**	181	**266**
Medium density artefact scatter (11-30)	8	19	**27**	61	**88**
High density artefact scatter (31-100)	4	8	**12**	41	**53**
Very high density artefact scatter (101+)	2	6	**8**	22	**30**
Very high density artefact scatter (101+) and potential archaeological deposit	-	-	**-**	2	**2**
Undefined artefact sites	-	54	**54**	132	**186**
Undefined artefact sites with potential archaeological deposits	-	6	**6**	4	**10**
Culturally modified tree	3	1	**4**	1	**5**
Culturally modified tree with artefacts	-	-	**-**	2	**2**
Culturally modified tree and medium density artefact scatter (11-30)	-	1	**1**	-	**1**
Culturally modified tree and very high density artefact scatter (101+)	-	-	**-**	1	**1**
Shelter with high density artefact scatter (31-100)	-	-	**-**	1	**1**
Shelter with potential archaeological deposit	-	1	**1**	-	**1**
Hearth with artefacts and potential archaeological deposit	-	-	**-**	1	**1**
Stone quarry and low density artefact scatter (0-10)	-	-	**-**	1	**1**
Total	**79**	**200**	**279**	**557**	**836**

Notes: As outlined in Section 4.2.1, the two rockshelter sites have been assigned an erroneous 'site type'. Both sites actually represent various densities of surface and sub-surface stone artefactual material.

i Area 5

Area 5 was located approximately 450 m downstream of Parnells Dam and features foot slope and plain landforms adjacent to Parnells Creek, a 3rd order watercourse. The area was chosen to investigate potential archaeological deposits associated with moderate to high artefact scatters HVOCP TR47-AS2 (37-2-6497) and HVOCP TR47-AS3 (37-2-6514) which were identified within exposures on the northern and southern banks of Parnells Creek.

Soils across Area 5 were generally uniform and comprised a relatively deep (up to 60 cm depth) yellow brown silty loam or sandy loam A1-Horizon, overlying a sandy silt to depths of 30 cm and mottled basal clay (B2 horizon). Based on the geomorphological assessment this area is likely to represent texture contrast/duplex soils less than 3,000 years old given the hillslope environments present across the majority of the Project area (Section 3).

A total of 59 artefacts were recovered from 14 of the 27 test pits excavated across Area 5, with artefact frequencies ranging from 1 – 9 per 0.25 m^2 test pit, which when extrapolated may indicate foci activities of >36/m^2. There was a noticeable decline in artefact frequencies as the distance from Parnells Creek increased.

ii Area 9

Area 9 encompassed flat plain landforms and the area was chosen to investigate potential archaeological deposits associated with low to moderate density artefact scatters: HVOCP TR104-AS1 (37-2-6507) and HVOCP TR105-AS1 (37-2-6519). Soils across Area 9 were generally uniform and comprised a relatively deep (up to 50 cm depth), dry, friable and bleached reddish brown silty loam A1-Horizon, overlying a dark reddish orange clay B-Horizon. A total of 30 stone artefacts were recovered from 5 of the 31 test pits excavated in Area 9, with artefact densities varying from 1–8 per 0.25 m^2 test pit, which when extrapolated may indicate foci activities of >32/m^2.

Unsurprisingly there was a distinct clustering of artefacts from test pits that were closely associated with known artefact scatters. HVOCP TR104-AS1 (37-2-6507) was found to extend some 85 m south, and the highest frequency of subsurface artefacts was recovered from this site (TP09-22 contained 14 artefacts, TP09-20 contained 6 artefacts and TP09-18 contained one artefact). TP09-27 recovered eight artefacts, and these artefacts are likely associated with the nearby scatter TR105-AS1 (37-2-6519). Interestingly, 25 of the 30 test pits (84%) contained no artefactual material. This may be reflective of the fact that a previously registered site, CM 59 and HC24 (37-2-1867) was previously subject to archaeological salvage under an AHIP (#SZ300) as part of an earlier phase of the Project.

Based on the geomorphological assessment this area is characterised by an alluvial fan and has potential for Pleistocene sediment, at an undetermined depth. If present, however, they may be several metres beneath the current surface.

iii Area 11

Area 11 encompassed crest, spur, slope, and discreet terrace landforms at the confluence of two major watercourses, the Hunter River and Bowmans Creek. A total of 310 artefacts were recovered from the excavations. The area was chosen to investigate potential archaeological deposits associated with low to moderate density artefact scatters and other AHIMS sites across the spur slope (HVOCP TR189-AS1 [37-3-1615], HVOCP TR195-AS1 [37-3-1618], HVOCP TR195-AS2 [37-3-1619], HVOCP TR196-AS1 [37-3-1620], HVOCP TR196-AS2 [37-3-1621], HVOCP TR189-AS2 [37-3-1634]).

Opportunistic conjoin analysis undertaken revealed two definitive sets of conjoining artefacts in Area 11. Two cryptocrystalline quartz artefacts from Spit 1 of TP11-2 could be refitted together, and two red indurated/mudstone/tuff flakes from Spit 1 of TP11-45 could be refitted together. Furthermore, there were nine other potential conjoin sets in Area 11 based on the notion that these artefacts were manufactured from the same cobble but didn't necessarily conjoin. This suggest movement of the artefacts in the upper soil profile has been limited since deposition.

A total of 60 test pits, comprising of 58 x 0.25m^2 and 2 x 1 m^2 test pits and totalling 16.5 m^2, were excavated amongst four linear transects across Area 11. Soils across Area 11 were relatively uniform, with little variation in composition and texture noted across the terrace and spur slope landforms. The typical soil profile included a relatively shallow (<20 cm) mid to dark brown silty clay A1-Horizon, overlying orange heavy clay (B2 Horizon).

Based on the geomorphological assessment, this area is characterised by soil formed in situ from weathered regolith underlain by rock, and is unlikely to be of significant age (Section 3).

A total of 310 artefacts were recovered from the excavation of Area 11. This represents the highest concentration of artefacts from the entire excavation program, and accounts for almost 55% of the total assemblage recovered. Stone artefacts were recovered from 34 of the 60 test pits. Artefact frequencies per test pit ranged from 1 – 35 per test pit, and when extrapolating this data, densities ranged from 4 artefacts/m^2 up to 97 artefacts/m^2.

iv Area 12

Area 12 encompassed a vast elevated terrace and spur slope/crest landform overlooking the Hunter River and its floodplain. The area was chosen to investigate potential archaeological deposits associated with low to moderate density artefact scatters HVOCP TR203-AS1 (37-3-1624), HVOCP TR211-AS1 (37-3-1623), HVOCP TR211-AS2 (37-3-1625), HVOCP TR213-AS1 (37-3-1626) and HVOCP TR213-AS2 (37-3-1627). These sites extend across the terrace and within a heavily eroded sandy gully extending up the spur slope. Two culturally modified trees: HVOCP TR212-ST1 (37-3-1629) and HVOCP TR216-ST1 (37-3-1635) are also present in the area.

Area 12 was identified during survey as having high archaeological potential to contain significant archaeological material within aeolian deposits associated with the Warkworth sand system, a deposit that may be of a considerable age (i.e. Pleistocene) and may potentially contain complex Aboriginal archaeological sites. As anticipated, aeolian deposits associated with the Warkworth sand system was encountered in Area 12. The deposit is characterised by a loosely compacted and moderately moist brown silty sand A1-Horizon with few inclusions and no visible root material, overlying orange-brown compact clay (B2-Horizon).

A total of 148 artefacts were recovered from 34 of the 42 test pits excavated. This represents the second highest concentration of artefacts from the excavation program behind Area 11. Artefact densities ranged from 1 – 12 per test pit, and when extrapolating densities ranged from 4 -48 /m^2. The cultural assemblage was, however, typically found in the upper portion of the soil profile, and typologically was considered to reflect Holocene (<5,000 year old) activity. No evidence of a Pleistocene cultural deposit was encountered based on the recovered assemblage.

4.4.3 Synthesis

Based on the information presented in Sections 4.5.1 and 4.5.2, some 279 Aboriginal sites and places have been documented within the Project disturbance Area. This includes 200 previously documented sites, 79 newly identified sites from field survey and one additional site following the test excavations (Section 4.4.2; Table 4.5).

Of these, only 27 would meet the criteria outlined in Section 4.5.1, namely the presence of high density stone artefacts and/or stratification in sand units, or being a culturally modified tree (Table 4.6; Figure 4.3). These sites can be considered to reflect most intense activities, visitation and/or occupation of a given locale in the Project area by Aboriginal people in the past. While the remaining 253 sites have been considered in the ACHAR and in this report, they are typically part of a broader background scatter of cultural material, reflective of >50,000 years of Aboriginal occupation, and prevalent across the Hunter Valley. Even when these sites are combined, they are extremely common across NSW and typically of low significance.

In addition to these extant sites, four others have been identified in preceding sections that have been destroyed, but would similarly meet the criteria indicative of more intense past activity. These include HC-17/PAD7 (37-2-0793), HVS 38 (37-5-0262), Hunter Valley 1/Malabar Site 0 (37-5-0063) and CM 37 (37-2-1540) (discussed in Sections 3.3 and 4.5.1). While these are not discussed further in the significance assessment, they do inform the cumulative impact presented in Section 5.

For the purposes of considering significance (Section 4.5.3), and developing archaeological salvage requirements (Section 6), these 27 Aboriginal sites have formed the focus of this report.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-2-0796	HC20	Artefact scatter	Valid	557	Originally recorded in 1995 (ERM) as an artefact scatter consisting of 557 mudstone, silcrete, chert and quartz artefacts. The site is south of Dam E along a drainage gully and a contour bank. Artefact types are flakes and flaked pieces. No subsurface potential identified. The assessment concluded site to have "some" degree of archaeological/scientific significance. In 2000 (HEH) a geomorphological study concluded only small amounts of artefacts were eroding out of the Unit A deposit which was generally shallow (<5cm) across the area in both colluvial and alluvial contexts. The geomorphology report concluded that none of the identified sites had the potential for deep subsurface older deposits.
37-2-1504	Carrington Mine CM 1	Artefact scatter with potential archaeological deposit	Valid	214	Originally recorded by ERM (1999a), Carrington Mine CM1 is an artefact scatter of 214 artefacts, and including silcrete, mudstone, chert, basalt, quartz and petrified wood raw materials. The site commenced at the edge of a culvert under Lemington Road and proceeded along the banks of the creek for approximately 300 m, across an area of recent cultivation. The site has research potential due to its association with sites CM2 and CM-CD1 and its potential to contain subsurface cultural material associated with the minor creek line.
37-2-1505	Carrington Mine CM 2	Artefact scatter	Partially destroyed	~70,000	This site is outlined in Section 4.5.1 and was considered to reflect a large quarry on a ridge over-looking CM-CD1. The site has been partially destroyed through mining activities, with only a small amount remaining within a buffer established around CM-CD1.
37-2-1506	Carrington Mine CM 3	Artefact scatter with potential archaeological deposit	Valid	42	Originally recorded by ERM (1999a), Carrington Mine CM 3 is an artefact scatter approximately 60 m long containing 42 artefacts, including 37 silcrete, 2 mudstone, 2 chert and 1 petrified wood. Most artefacts were in a small stone working area approximately 10 x 5m, running parallel with main drainage line. Artefacts were confined to the low to basal slope from a low ridge. Carrington Mine CM 3 was inspected as part of EMM's 2020 test excavations at CM-CD1. Due to significant vegetation coverage no surface artefacts were identified.
37-2-1544	Carrington Mine CM 41	Potentially culturally modified tree with stone artefacts	Valid	-	Originally recorded by ERM (1999a), Carrington Mine CM 41 is an artefact scatter and potential culturally modified tree, showing the removal of a narrow slab of bark of a narrow-leafed Ironbark. Artefacts were found around the base of the tree including a quartz core chopper, a quartzite core, a silcrete core chopper, and 23 silcrete flakes and flaked pieces. A second tree (Slaty Gum) ~75 m from the first tree bore a similar style of scar. A secondary trunk was also removed below the scar. Artefacts were found around the base of this tree, including 15 mudstone flakes or flaked pieces and 6 silcrete flaked pieces.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-2-1877	CM-CD1	Archaeological Deposit	Valid	-	This site is described in Section 3.3.3 and consists of a 450 m cultural deposit adjacent an unnamed tributary of the Hunter River. The site consists of a colluvial deposit dating between 9-16,000 years ago. Recent excavations found a low density of cultural materials throughout the sequence.
37-2-6497	HVOCP TR47-AS2	Artefact scatter with potential archaeological deposit	Valid	92	High density artefact scatter comprising >20 mudstone and silcrete flakes and core fragments in areas of exposure on the southern bank of Parnells Creek. Artefacts are highly likely to extend beyond areas of exposure but could not be identified due to poor visibility. Areas surrounding Parnells Creek identified as retaining subsurface archaeological potential and subject to test excavation. Test Excavation Area 5 (test pits 1-16) confirmed moderate density of subsurface deposits which declines with increasing distance from Parnells Creek. Average artefact density of 7.5/m^2 were encountered.
37-2-6507	HVOCP TR104-AS1	Artefact scatter with archaeological deposit	Valid	4	Low density artefact scatter comprising two mudstone flakes, one mudstone scraper, and one possible broken axe blank. Area identified as having subsurface archaeological potential and to be subject to test excavation with particular focus on stream banks adjacent to unmapped ephemeral creek line located 50 m to the south. Test Excavation Area 9 confirmed high density but shallow subsurface deposits. Some 21 artefacts recovered from three tests pits in the immediate vicinity of TR104-AS1 were recovered.
37-2-6514	HVOCP TR47-AS3	Artefact scatter with potential archaeological deposit	Valid	86	High density artefact scatter comprising >40 mudstone and silcrete flakes and core fragments in areas of exposure on the northern bank of Parnells Creek. Artefacts are highly likely to extend beyond areas of exposure but could not be identified due to poor visibility. Areas surrounding Parnells Creek identified as retaining subsurface archaeological potential and subject to test excavation. Test Excavation Area 5 (test pits 17-26) confirmed moderate density of subsurface deposits, which declines with increasing distance from Parnells Creek. Artefact density of 9.2/m^2 were encountered.
37-2-6519	HVOCP TR105-AS1	Artefact scatter with potential archaeological deposit	Valid	4	Low density artefact scatter comprising two mudstone flakes and two silcrete flakes identified within incised, eroded section of ephemeral stream bank. The artefacts are considered to have eroded from soil profile, with adjacent areas of stream bank identified as retaining subsurface potential and subject to test excavation. Test Excavation Area 9 confirmed high density but shallow subsurface deposits. Some 8 artefacts recovered from three tests pits in the immediate vicinity of TR105-AS1 were recovered.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-3-0449	LID6	Artefact scatter	Valid	36	Originally recorded by Umwelt (2001), LID6 is an artefact scatter located on a small forked drainage depression associated with Bayswater Creek. The site has been exposed by minor gully erosion and artefacts appear to be eroding from the A1 Horizon or are sitting on top of the B2 Horizon. A total of 36 artefacts were recorded in a discontinuous scatter along a 50 m length of the drainage depression. This feature consists of seven silcrete flakes and flaked pieces which probably relate to the same knapping event. Artefact types include flakes, flaked pieces, cores and a retouched flake. The predominant raw materials are silcrete and mudstone, with quartz and chert also occurring. LID was inspected as part of the ACHAR with a large number of artefacts relocated. EMM assessed that there remains the potential for shallow subsurface deposit to be retained in areas outside of the channel bed. The area was not subject to test excavation due to conflict with S10 application. Test excavation would need to be conducted to establish the nature of subsurface deposits in proposed coal stockpile area and apply appropriate management measures on the basis of agreed mitigation for Aboriginal sites of similar significance.
37-3-1069	REA197	Artefact scatter	Valid	50	Originally recorded by Umwelt (2009), REA197 is an artefact scatter located on the west bank of a second order tributary of Bowmans Creek less than 45 m from the stream channel (and 50 metres north of the confluence with a further second order tributaries). The site is situated on a gently inclined slope with an outlook to the north-west and contains 50 artefacts. Vegetation within and surrounding the site is dominated by introduced and native grasses/weeds. The site boundary is defined by surface artefact distribution (300 m^2) across an area with 10 per cent visibility with a centralised exposure of 30 m^2. The site is located along a fenceline with an adjoining graded vehicle access track. The site has also been impacted by vegetation clearing and grazing, revegetation, active sheetwash erosion and bioturbation (ants' nest). These disturbances have acted to remove the A1 Horizon and to have exposed a relatively deep A2 soil horizon of more than 20 cm. The artefacts within the site are eroding from the intact A2 soil profile.
37-3-1618	HVOCP TR195-AS1	Artefact scatter with potential archaeological deposit	Valid	5	Low density artefact scatter comprising four mudstone flakes and one silcrete flake, identified on ant nest at edge of casuarina forest. It was considered likely that more artefacts present within vicinity but not identified due to poor visibility. Area includes a confluence of Hunter River and Bowmans Creek and was identified as retaining subsurface archaeological potential. Test Excavation Area 11 was undertaken in this general vicinity and identified high density subsurface cultural materials.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-3-1619	HVOCP TR195-AS2	Artefact scatter with archaeological deposit	Valid	310	Moderate density artefact scatter extending downslope across an area of approximately 2,500 m^2 with <25 artefacts primarily of mudstone and silcrete identified in small exposures along access track and scalds. It was considered likely that more artefacts were present within vicinity but not identified due to poor visibility. The site includes a confluence of Hunter River and Bowmans Creek and was identified as retaining subsurface archaeological potential and to be subject to test excavation. Test Excavation Area 11 identified very high density subsurface cultural materials (>300 artefacts) associated with blade manufacturing site at this locale.
37-3-1626	HVOCP TR213-AS1	Artefact scatter with potential archaeological deposit	Valid	161	High density artefact scatter identified within large exposure at edge of terrace overlooking broad floodplains of the Hunter River, some 500 m to the north. Wide variety of artefact types including >20 flakes, cores, blades, and tools made from mudstone, basalt, silcrete and quartz. This was Identified as an area of subsurface archaeological potential. Test Excavation Area 12 confirmed moderate to high density subsurface deposit across the terrace and hillslope with approximately 17.4 artefacts/m^2. The deposits exhibited characteristics of the Warkworth sand system, although were typologically of Holocene age. TR203-AS1 (37-3-1624), TR211-AS1 (37-3-1623), TR11-AS2 (37-3-1625), and TR213-AS2 (37-3-1627) have been combined into a single site complex the extent of which has been defined on the basis of surface artefacts and/or confirmed subsurface deposit. Surface material and subsurface deposit and may extend beyond the extent as shown.
37-3-1628	HVOCP TR178-ST1	Culturally modified tree	Valid		Large Narrow-leaved Red Ironbark displaying two scars – one on the western face (Wound 1) and one on the northern face (Wound 2). Specialist inspection confirmed likely cultural origin of both Wound 1 and Wound 2. • Wound 1 is a triangular becoming asymmetrical scar extending from ground to 256 cm and 40 cm at widest at base and comprising two successional wounding events occurring at the same location at different times: an initial inner wound and an outer secondary wound. The initial wound is >120 - <200 years old and the secondary wound is >120 - <150 years old. Wound 1 initial and secondary wounds are highly likely to be of Aboriginal cultural origin likely relating to reworking and opening of the hollow trunk possibly to hunt possums. • Wound 2 is narrow, linear almost occluded, symmetrical scar. The wound is likely to have been up to 30 x 30 cm from the remaining measurable dimensions, but this is unable to be determined. Subject to the extent of wounding present, its' location on the trunk and the depth of the wound, it is expected to be connected to Wound 1 and its cultural practices therefore is highly likely to be of cultural origin.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

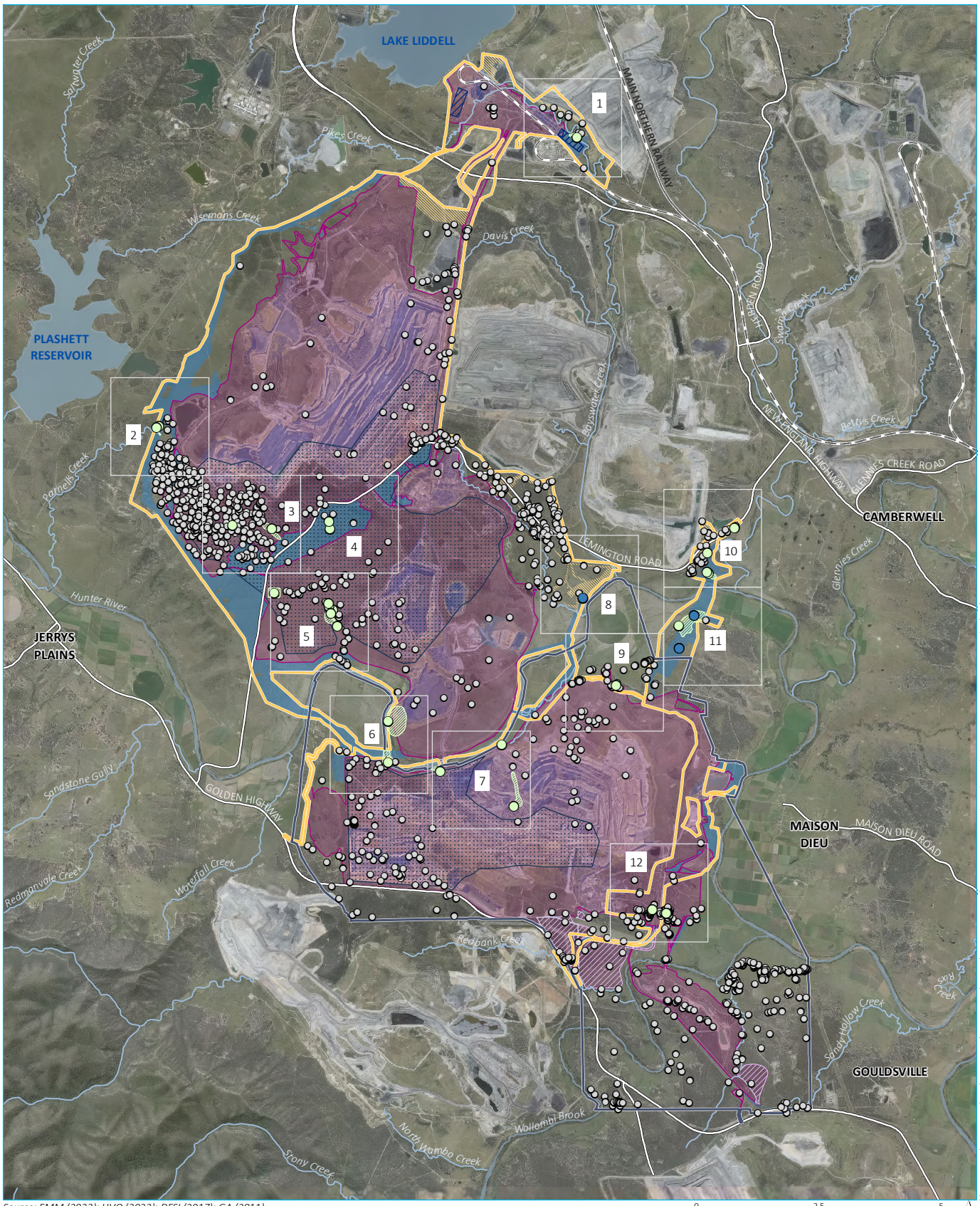
AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-3-1629	HVOCP TR212-ST1	Culturally modified tree	Valid		Large Narrow-leaved Red Ironbark displaying two narrow elongated scars – one on the southern face (Wound 1) and one on the northern face (Wound 2). Specialist inspection confirmed likely cultural origin of Wound 1: • Wound 1 is a narrow oval, symmetrical scar comprising two successional wounding events occurring at the same location at different times: an initial inner wound and an outer secondary wound. The initial inner wound is of likely cultural origin due to the age of the tree and undertaken up to 250 years ago. The secondary wound appears to be the result of an abrasion impact event from farm plant equipment or a truck approximately >75 – 100 years ago. • Wound 2 is a broad, symmetrical oval shape scar resulting from of an abrasion impact event from farm plant equipment or a truck approximately >75 – 100 years ago.
37-3-1634	HVOCP TR189-AS2	Archaeological deposit	Valid	33	No surface artefacts identified due to poor visibility, however Test Excavation Area 11 identified high density shallow subsurface deposit with 33 artefacts recovered from five test pits (~26/m^2). The site extent aligns with a hillcrest landform.
37-3-1635	HVOCP TR216-ST1	Culturally modified tree	Valid	-	Large Narrow-leaved Red Ironbark displaying one narrow oval, symmetrical scar on the northern face. The tree was in poor health, with complete loss to the primary crown and bark, and the living part of the tree limited to a secondary limb and adjoining trunk on the north east side of the tree. There were no cultural attributes, such as tool marks, present on the surface. The basic form and position of the larger scar is typical of deliberate bark removal for shelter construction, though the use of *E. crebra* for such purposes has not been previously documented in traditional Aboriginal culture, and doubts have been raised about the suitability of the bark, being relatively hard and unpliant (Long 2012). Nevertheless, the scar would appear to be most comparable to Aboriginal bark removal scars on other species, such as red gum, yellow box or grey box, and fragmentary though inconclusive evidence of cultural use of ironbark has been noted elsewhere in the region (e.g. Ravensworth North (Long 2012)). As a precautionary measure, the tree was identified as cultural for the purposes of management.
37-5-0047	Malabar Site H Burnham Wood	Artefact scatter	Partially destroyed	50	Originally recorded by Brayshaw (1981), Malabar Site H Burnham Wood is an extensive artefact scatter, with artefacts over an area of ~900 x 400 m on an elevated slope adjacent to the Hunter River. The artefacts are visible on land that has been ploughed and where vehicle tracks and cattle have cut into the surface soil. Site was salvaged under S90 AHIP 798/SZ315. Reinspection of the area at a later date identified dozens of remaining surface artefacts. The site is within the current mining operations and appears heavily modified.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-6-0166	Malabar Burnham Wood Site I	Archaeological deposit	Partially destroyed	829	An aeolian dune deposit situated north of HVO South and discussed in detail in Section 3.3.2. Some 829 artefacts of Holocene age were recovered from a 1.25-2.25 m below surface. A portion of this site has been destroyed by the existing mining operations.
37-5-0571	PAD 1 (Doyles Creek)	Potential archaeological deposit	Valid	-	Originally recorded by MCH (2009) PAD 1 (Doyles Creek) is located at the far eastern side of the Assessment Area. It encompasses an area that extends 100 metres from the Hunter River heading west. The Hunter River is well known for its resources and high sensitivity for past occupation. There are little disturbances and A horizon remains, thus making it ideal as an area for past occupation and increased likelihood of surviving cultural materials. Reviewing site card information it appears as though the registered location of the site is incorrect, with report mapping showing the site on the western bank of the Hunter River. PAD 1 (Doyles Creek) was inspected as part of EMM's 2020 survey. The area was heavily overgrown with invasive weeds, and no cultural materials were observed.
37-6-3024	HVO-1656	Culturally modified tree	Valid	-	This site was originally recorded by Scarp Archaeology in 2011. The site is a dead standing gum. No further information is available within the literature.
37-6-3250	HVO-51	Artefact scatter with potential archaeological deposit	Valid	40	Originally recorded by HLA Envirosciences (2006), this site is an artefact scatter comprised of ~40 silcrete flakes and flaked pieces (potential knapping event) eroding out of an anthropogenically made drain. The site is located in association with an access road, anthropogenically made drainage channel and first order creek. Importantly, this site was located in a vertical section of the anthropogenically made drainage channel between a truncated B2 horizon and the colluvial layer above. The site has the potential to provide stratigraphic and temporal information for this and associated sites.
37-6-3251	HVO-52	Artefact scatter with potential archaeological deposit	Valid	50	Originally recorded by HLA Envirosciences (2006), this site is an artefact scatter consisting of 50 or more flakes of silcrete, quartz and chert and 1 silcrete multi platform core, possible knapping floor. The site is located in association with an access road, anthropogenically made drainage channel and first order creek. The site is thought to directly relate to HVO-51 for both surface and subsurface material. The site consists of a flat area running between the access road and first order creek.
37-6-3294	HVO-98	Artefact scatter	Valid	90	Originally recorded by HLA Envirosciences (2006), this site is an artefact scatter comprised of 90+ flakes of silcrete, chert and quartz, 1 hammerstone of silcrete, 1 multi-platform core of chert. The site is located in an extensive exposure between the first order creek and the access road.

Table 4.6 Aboriginal sites that exhibit high densities of stone artefacts, aeolian soil profiles and/or are culturally modify trees

AHIMS #	Site name	Site type	Site status	Artefacts (n)	Site description
37-3-1649	HVOCP TR195-AS3	Artefact scatter	Valid	35	A moderate density sub surface artefact scatter extending downslope across an area of ~100 m x 50 m with <35 artefacts observed. The site includes an area on the confluence of Hunter River and Bowmans Creek identified as retaining subsurface archaeological potential and subject to test excavation. Test Excavation Area 11 identified very high density subsurface finds (>300 artefacts) associated with blade manufacturing site to the immediate north. This site consists of a series of test pits undertaken in Test Excavation Area 11 that cannot be easily integrated into existing data, and including TP11-07, TP11-06, TP11-05, TP11-04, TP11-03, TP11-02, TP11-01, TP11-46, TP11-47, TP11-48.



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Page reference
- Additional disturbance area
- Existing and approved disturbance area
- Approved disturbance area - other mine
- Previously approved area not retained
- Proposed mining area
- Product stockpile
- Site extent
- Culturally modified tree
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

The archaeological resource

HVO Continuation Project
Aboriginal Cultural Heritage Assessment - Addendum
Figure 4.3

EMM creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Approved disturbance area - other mine
- Product stockpile
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation

Existing environment

- Rail line
- Major road
- Named watercourse

The archaeological resource

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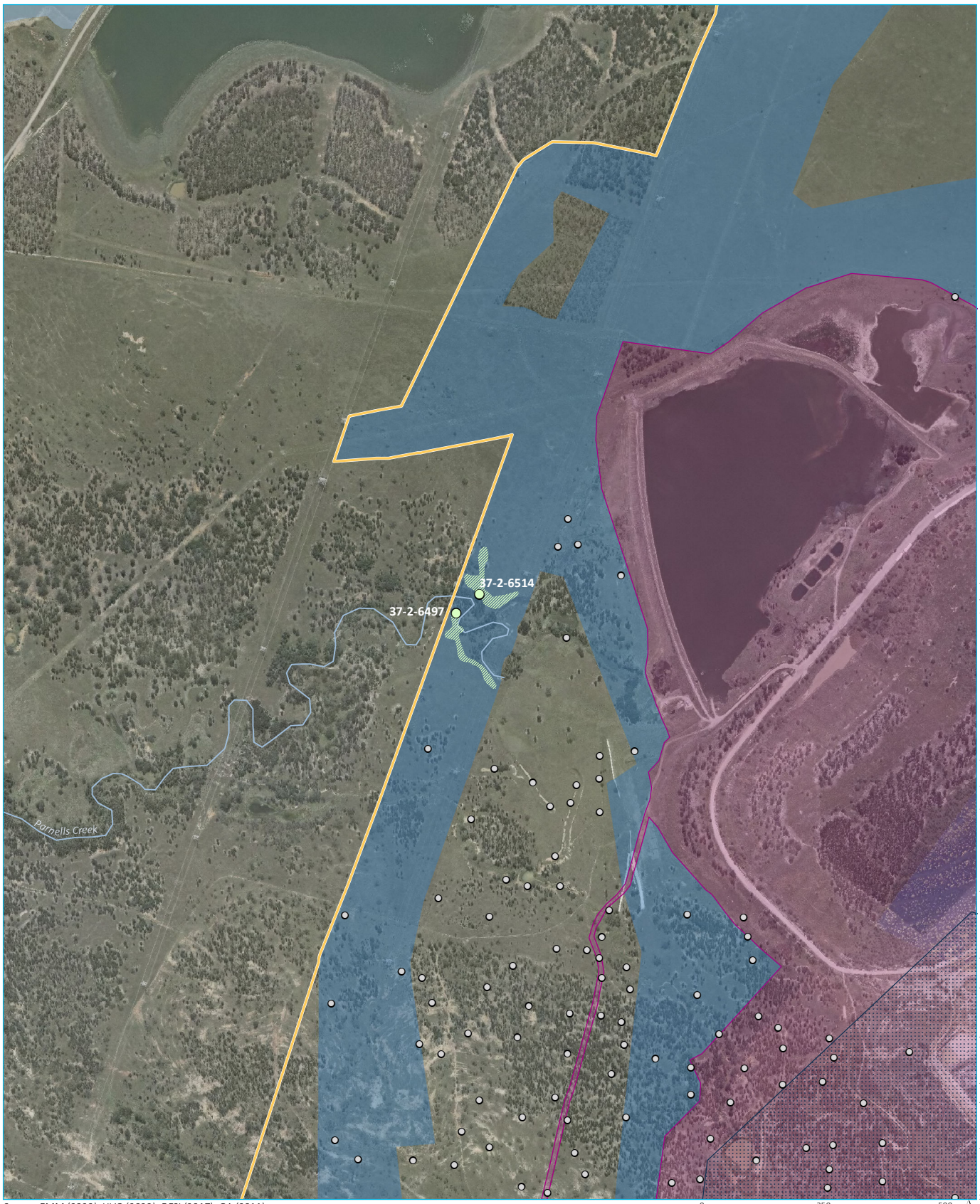
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 4.3.1

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Named watercourse
- Named waterbody

The archaeological resource

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Figure 4.3.2

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Major road

The archaeological resource

HVO Continuation Project
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Figure 4.3.3

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Major road

The archaeological resource

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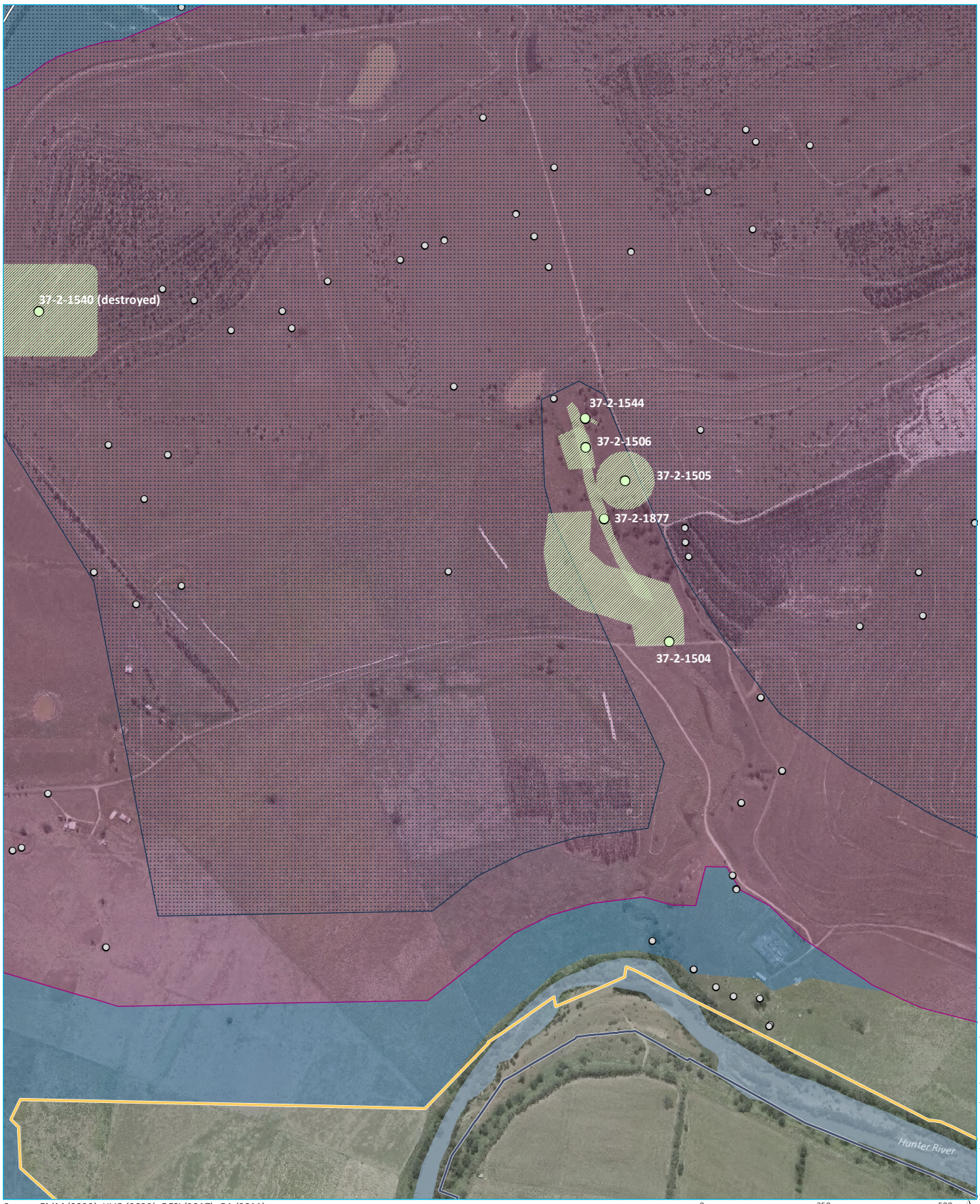
Figure 4.3.4

EMM
creating opportunities



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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

N

KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Major road
- Named watercourse
- Named waterbody

The archaeological resource

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
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Figure 4.3.5

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Named watercourse
- Named waterbody

The archaeological resource

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Figure 4.3.6

EMM
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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

N

KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Proposed mining area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Named watercourse
- Named waterbody

The archaeological resource

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Figure 4.3.7

EMM
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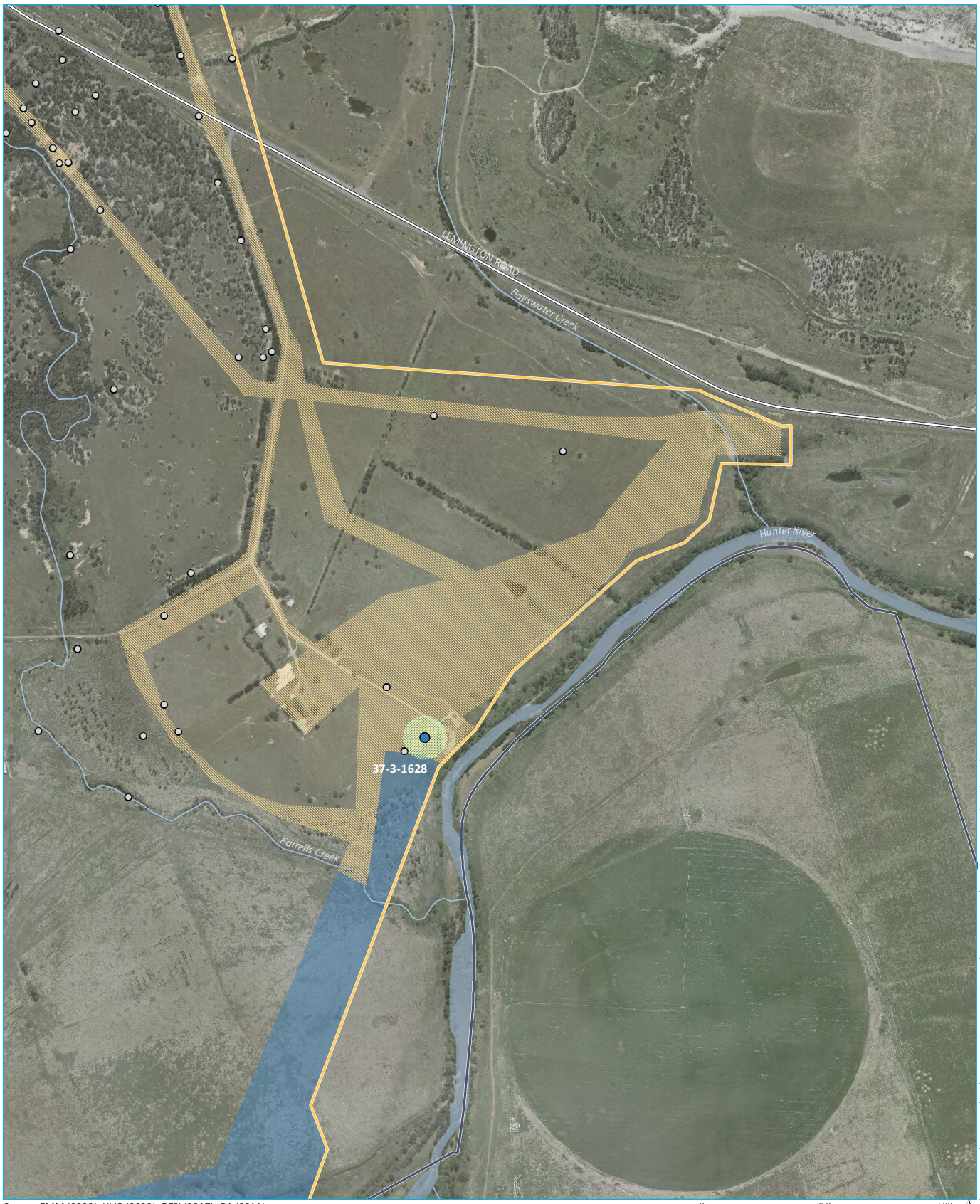

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Approved disturbance area - other mine
- Culturally modified tree
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Major road
- Named watercourse
- Named waterbody

The archaeological resource

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Figure 4.3.8

EMM
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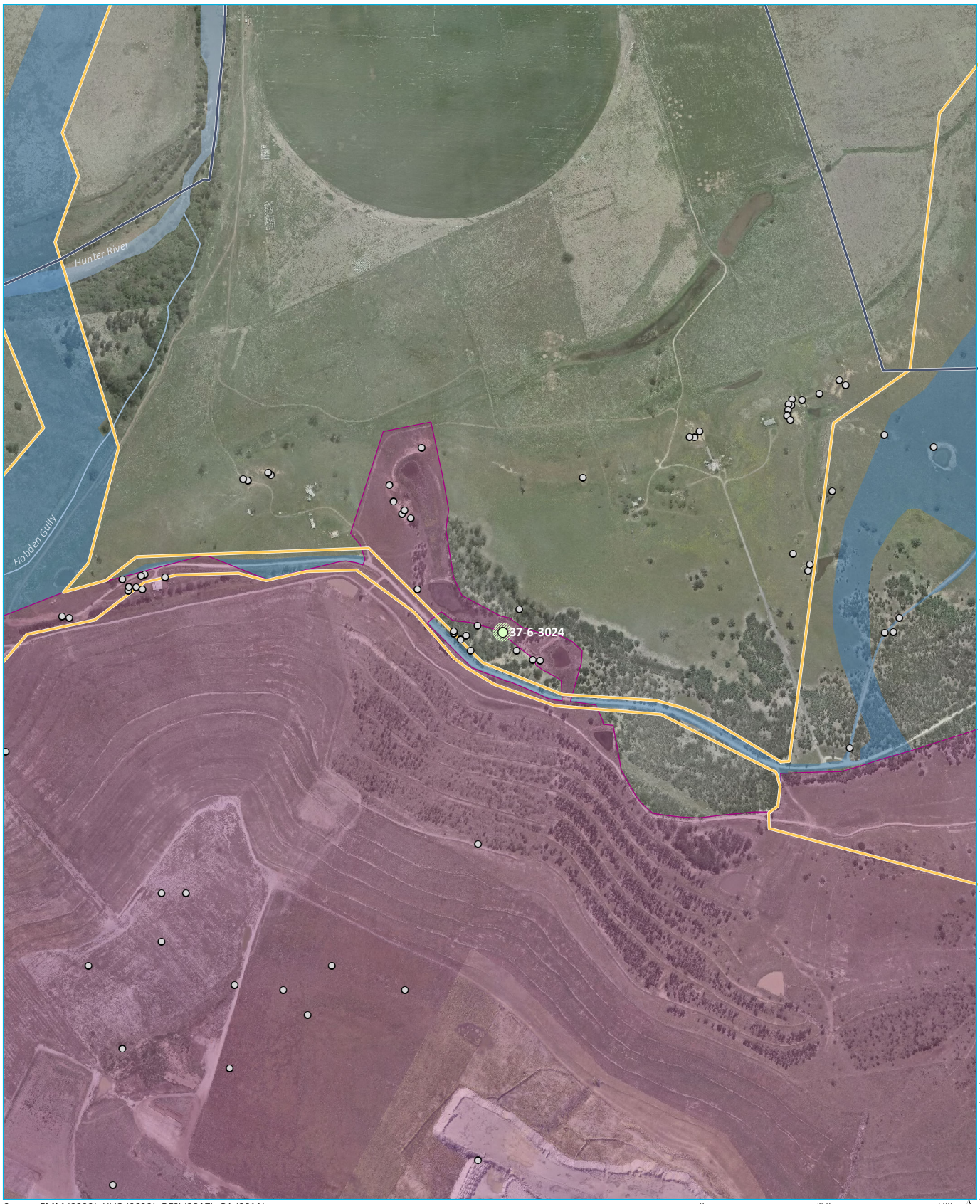

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Named watercourse
- Named waterbody

The archaeological resource

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Figure 4.3.9

EMM
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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Approved disturbance area - other mine
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Major road
- Named watercourse
- Named waterbody

The archaeological resource

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
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Figure 4.3.10

EMM
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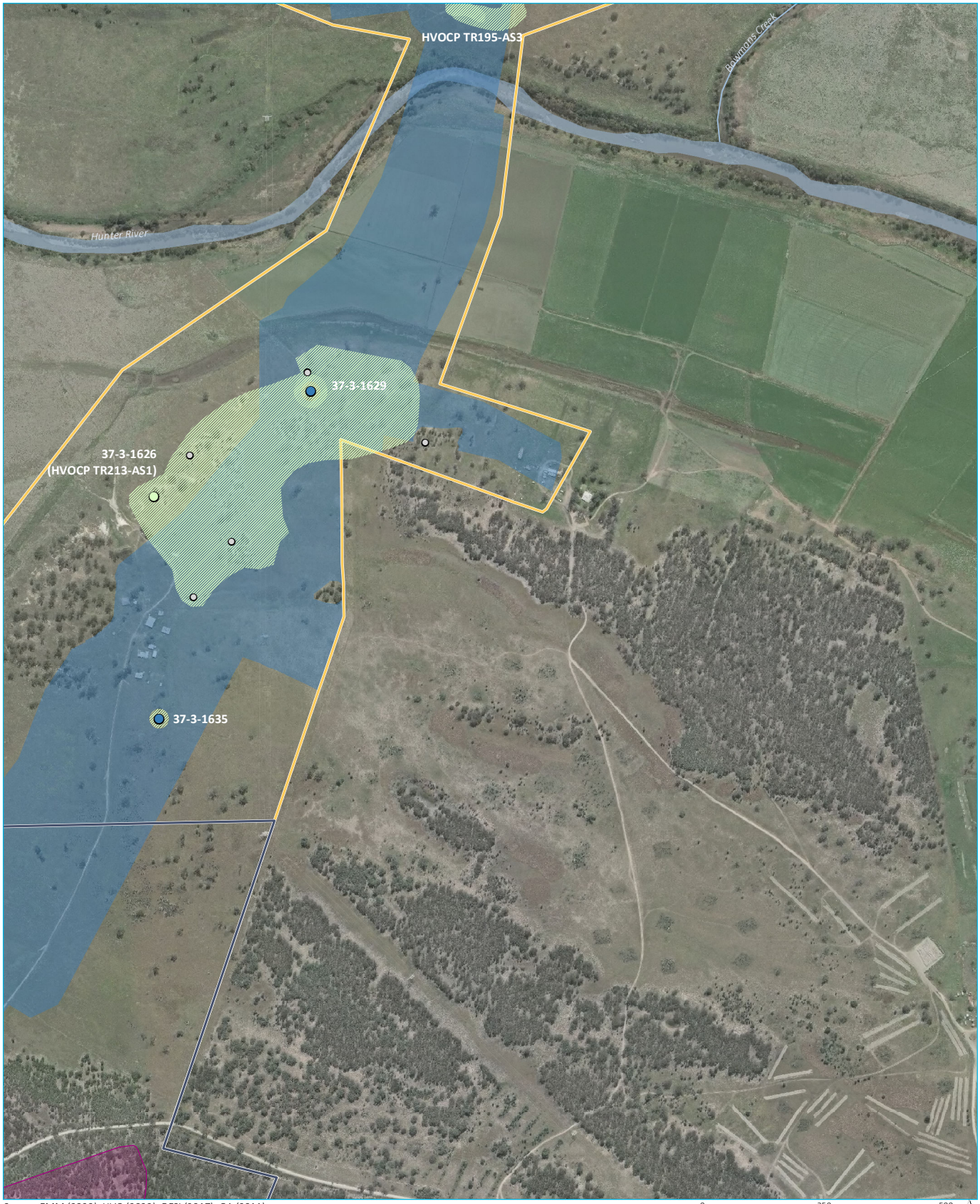

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Culturally modified tree
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Named watercourse
- Named waterbody

The archaeological resource

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Figure 4.3.11

EMM
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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Existing and approved disturbance area
- Additional disturbance area
- Previously approved area not retained
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation

The archaeological resource

HVO Continuation Project
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Figure 4.3.12

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4.4.4 Significance assessment

i Rationale, methods, and summary

An overall significance rating was determined on the basis of four criteria: social, historic, aesthetic, and scientific (archaeological) value. The assessment assigned significance to sites identified by the field investigation and extant (valid or partially destroyed) previously recorded AHIMS sites situated within the additional disturbance area/approved disturbance area other mine, and existing and approved disturbance area. In the case of the latter, these values were typically adopted from the original research and assessments that assigned a classification.

As outlined in Section 4.5.2, on more detailed review of the cultural assemblage identified within the Project area, a small number of the sites are considered to reflect intense past activity and/or visitation in the past. Where identified, researchers have typically identified these as of moderate or high significance. Of the 279 discrete Aboriginal sites and places found in the Project disturbance area, we have determined that 27 meet these criteria and require detailed consideration (see below). In accordance with Heritage NSW's questions (Section 4.1), the significance of these sites includes both their consideration against the four established criteria *and* whether this ranking requires reconsideration due to the level of cumulative impact that has occurred in the region (Section 5). The latter primarily affecting the rarity and representativeness of site's as cultural deposits are lost across the region.

Overall, we consider that with the exception of these 27 sites, the remaining cultural assemblage is of low significance (Table 4.7). These sites that are all isolated or low-density stone artefacts entirely consistent with all previous assessment approaches within the overall Project area and regional models in general. Given the amount of previous investigation across the Project area and the nature of how sites have been recorded in the past (continued additional recording of new sites rather than amalgamation with previous results) it may look like these sites could be part of larger complexes but on closer analysis of data they still reflect lower density distributions which generally do not exceed more than 10 artefacts over a 10-20 m² area; and simply reflect the transient use of the region for several millennia by Aboriginal people. The allocation of sites as isolated or low density scatters/distributions fits the expression and character of the majority of the archaeological resource across the Central Lowlands in that:

- Stone artefact scatters situated within texture contrast or duplex soils are likely to be late Holocene in age (i.e. less than 3,000 years), are unlikely to demonstrate perceivable stratification and more likely to represent palimpsests – i.e. the accumulation of stone artefacts from different and random discard events rather than evidence of discrete knapping floors, one off knapping events, or continued habitation of the one location/specific landform. This is due to site formation processes including but not limited to: the formation of this soil type and the dispersion, downslope movement and differential burial and/or exposure by bioturbation of these soils and stone artefacts contained within. These sites are typically of low density and reflect the long term, transient repeated use of the entire landscape by Aboriginal people in the past. These site types (isolated finds and low density scatters) are assigned low significance.

Of the remaining 27 sites, there are variously assigned moderate and high significance (Table 4.8), with those sites with substantive stone artefacts and/or demonstrated stratification (i.e. within aeolian and/or colluvial deposits) typically assigned higher ranking than those that only just meet thresholds. Of the 27 moderate and high significance sites, 11 will be impacted by the Project, comprising nine sites of moderate significance, and two sites of high significance. Impacts to Aboriginal heritage sites as a result of the Project are further discussed in Section 5.

Specifically, moderate significance has been allocated to stone artefact scatters which have moderate densities and are located on landforms which have greater potential to retain sub surface deposits such as: alluvial terraces or terraces in proximity to the intersection of waterways and their tributaries. While these sites may have moderate densities of artefacts, they are still likely to be Holocene in age and may or may not have intact stratified deposits depending on geomorphology and depositional context.

Highest significance has been allocated to those sites which demonstrate very high densities of stone artefacts and have potential for Pleistocene cultural deposits. Stone artefact scatters demonstrating higher densities, stratification and potential to be of greater age (i.e. late Pleistocene) are more likely to be identified within aeolian or colluvial sand dune/sheets contexts as they are characterised by deeper deposits with better preservation contexts. These landforms comprise source bordering dunes which are associated with the Warkworth sand system and are generally found within proximity to the Hunter River, Wollombi Brook and their immediate tributaries (usually within 5 -10 km of their intersection).

Culturally modified trees are also assigned high values as a result of their increasing rarity in the region as a result of development activities. Two previously recorded culturally modified trees are present within the Project area and an additional three were identified as part of the field survey.

It must, however, equally be identified that the significance of some of the 27 sites may have been reduced from their original classification as a result of modern disturbance, despite increasing cumulative impact in the region. In some instances, the site has been completely salvaged or recovered, and where the significance of the site was based on the material cultural of the site, this must inevitably result in a lowering of its values. This is notably the case in CM 2 that originally documents some of the highest artefact densities in the Hunter Valley, but which following archaeological salvage and recovery has limited representativeness or further research potential.

When applying these methods, we identify 252 sites as being of low or low-moderate significance, 16 sites as being of moderate significance, and 11 sites as being of high significance (Table 4.7; Appendix E).

Table 4.7 Overall significance rating summary for Aboriginal objects, sites and places within the Project disturbance area

b	Newly identified sites	Previously recorded sites	Total (%)
Low	61	173	**234 (84)**
Low-moderate	6	12	**18 (6)**
Moderate	7	9	**16 (6)**
High	5	6	**11 (4)**
Total	**79**	**200**	**279 (100)**

ii The cultural assemblage by significance classification

Of the 279 Aboriginal sites identified, some 27 were identified as areas of past foci and warranting further consideration. Table 4.8 and the subsequent sections further explores these significance rankings.

a High significance

Overall, some 11 sites have been identified as of high significance (Table 4.8). These consist of five culturally modified trees identified for their increasing rarity in the region due to development activities, and six artefact scatters with cultural deposit. These latter sites can all be characterized as containing high densities of stone artefacts, typically over a hundred and in some instances several thousand, and in a stratified context. Several include sites extensively discussed in this report, including CM-CD1 (37-2-1877) (Section 3.3.3), and the Warkworth sand system, which was encountered at both Area 12 (shown as HVOCP TR213-AS1 [37-3-1626]) and Malabar Burnham Wood Site I (Section 3.3.2). The remaining sites, HVOCP TR195-AS2 (37-3-1619), HVO-51 (37-6-3250) and HVO-52 (37-6-3251), reflect the presence of cultural material in deeper texture contrast soils, which hold limited stratification and generally not significant antiquity, but do enable some form of chronological control to be obtained and/or provide an opportunity to explore relative changes of the assemblage through time.

Several sites have been assigned a high significance based in part on the cumulative impacts (Section 5) and/or following additional information developed as part of this report. For example, while CM-CD1 was already considered significant, information developed as part of the ACHAR has further validated this previously largely untested determination. Both Malabar Burnham Wood Site I and HVOCP TR213-AS1 have both been highlighted based on their potential to retain portions of the Warkworth sand system. Information recovered from both sites to date has not recovered Pleistocene cultural materials, but the deposits are consistent with the sand unit that is known to have these types of deposit to be present.

b Moderate significance

Some 16 sites have been identified as of moderate significance (Table 4.8). With the exception of one potential archaeological deposit, these sites are all artefact scatters generally found in association with Parnells Creek or in the vicinity of the Hunter River. Commonly they reflect both surface and subsurface cultural materials, and usually of modest artefact densities (<100). All subsurface deposits have been shown to be, or are considered likely to be, within shallow texture contrast soil profiles, which has limited stratification. Such deposits provide limited opportunity for chronological dating, and the cultural assemblage is often bioturbated to the interface of the topsoil and subsoil limiting relative change information to be discerned. As such, the significance of a site is primarily based on the technological, typological and provenance information that can be obtained from the cultural assemblage to inform past activity and behaviour. Such sites are common across the locale and broader Hunter Valley, limiting their rarity, and hence a moderate level of classification.

Within this classification are also a number of sites that have previously been considered of higher significance, but which have been reduced following development activities over the last few decades. These include both CM 2 and Malabar Site H Burnham Wood, which were originally identified as high density artefact scatters that are comparable with numerous sites of high classification in Table 4.8. However, these sites have been completely or partially salvaged, and little, if any, cultural materials remain within the site's curtilage. Given the value of these sites was in the material culture now no longer present, the significance of the site has been adversely affected by the archaeological mitigation, and this has been reflected in the re-assessment here.

c Low-moderate significance

A total of 18 sites (previously identified and newly recorded; extant) were assessed as having low-moderate significance (Appendix E).

Newly recorded sites assessed as having low-moderate significance comprised stone artefact scatters with higher densities but low to no potential for further sub surface deposits, or lower density artefact scatters with potential for further limited sub surface deposits. These sites were also described as being common site types with common characteristics.

There is one very high density (100+ artefacts) sites which were assessed as having low-moderate significance: 37-2-0794. As with the sites discussed above, even though their overall artefact counts (between 104 and up to 685) suggest a very high-density category when these numbers are considered in regards to their overall large extent they are actually extended over a significant spatial area – and such align with background density scatters of <30/m^2. These sites are also described as having little to no associated sub surface deposit, have been subject to disturbance via erosional processes, and have features/assemblages common to the region (Appendix E).

d Low significance

The remaining cultural assemblage totalling some 234 have been assessed as of low significance (Appendix E). Sites assessed as having low scientific significance generally have low artefact densities, no associated subsurface deposits, no remarkable features and are generally representative of other artefact sites in the upper Hunter Valley, have a high likelihood of being in a secondary context, and have limited research potential to inform on the nature and spatial extent of past Aboriginal occupation.

The only exception to this finding is seven high density artefact scatters (31-100 artefacts) which were assessed as having low significance –37-2-0801, 37-2-2715, 37-2-5215, 37-2-5216, 37-3-0781, 37-3-0819, and 37-3-1081. Although these sites have been identified as being of high density (based on overall artefact count) they actually reflect low density distributions when considering the overall number of artefacts identified (original recording and collected) across the recorded extent of the site which are often quite large (generally over 2,500 m^2). The sites also lack associated sub surface deposit, have been subject to disturbance via erosional processes, and have features/assemblages common to the region (Appendix E). Further, some of these sites have also been subject to mitigation measures which means that only a portion of their overall extent remains within the Project area. Three very high density artefact scatters (100+ artefacts) – 37-3-0785, 37-2-0791 and 37-3-1324 –- were assigned low significance for the same reasons.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-2-0796	HC20	Artefact scatter	Valid	M	L	L	H	M	A high density artefact scatter with limited subsurface cultural deposit. The site is not rare in the region, nor a representative example of this site type.
37-2-1504	Carrington Mine CM 1	Artefact scatter with potential archaeological deposit	Valid	M	L	M	NP	M	A high density artefact scatter with potential archaeological deposits, and suggested in the original report of similarity to CM-CD1 (Section 3.3.3.); and as such potentially of Pleistocene age. Detailed geomorphological assessment in Section 3.4 does not highlight this area as having potential to contain such deposits. As such, the site is considered to reflect a shallow duplex soil profile with some stratification likely limited to Holocene age. Based on this the site is consider to have moderate research potential to inform past activity and behaviour primarily through technological and provenance attributes of the cultural assemblage. The site is not considered to be representative nor rare within the general locale or broader region. This site has been downgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.
37-2-1505	Carrington Mine CM 2	Artefact scatter	Partially destroyed	M	L	L	H	M	Extremely high density artefact scatter, with original documentation suggesting some 70,000 objects identified. The site has subsequently been archaeologically mitigated with little material cultural remaining at the site. This has resulted in a reduction in the research potential of the site, which primarily related to the technological understanding and analysis of the stone artefacts now no longer present, and therefore overall significance. This site has been upgraded from low-moderate in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-2-1506	Carrington Mine CM 3	Artefact scatter with potential archaeological deposit	Valid	M	L	M	NP	M	A moderate density artefact scatter with potential archaeological deposits, and suggested in the original report of similarity to CM-CD1 (Section 3.3.3.); and as such potentially of Pleistocene age. Detailed geomorphological assessment in Section 3.4 does not highlight this area as having potential to contain such deposits. As such, the site is considered to reflect a shallow duplex soil profile with some stratification likely limited to Holocene age. Based on this the site is consider to have moderate research potential to inform past activity and behaviour primarily through technological and provenance attributes of the cultural assemblage. The site is not considered to be representative nor rare within the general locale or broader region. This site has been downgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.
37-2-1544	Carrington Mine CM 41	Potentially culturally modified tree with stone artefacts	Valid	H	M	M	NP	H	A potentially culturally modified tree with associated material cultural. This site has been classified as of high significance based on the rarity of this site type within the broader region. This site has been upgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.
37-2-1877	CM-CD1	Archaeological Deposit	Valid	H	H	M	NP	H	Historically identified as an important archaeological deposit, and which has been validated through additional work for the ACHAR; and shown to be between 9-16,000 years in age. Geomorphological assessment (Section 3.4) indicates that the site is unique in the local area (i.e. rare), and formed through specific environmental conditions, resulting in high aesthetic values, as well as significant research potential.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-2-6497	HVOCP TR47-AS2	Artefact scatter with potential archaeological deposit	Valid	M	L	L	H	M	A high density artefact scatter on the banks of Parnells Creek, including shallow subsurface deposits. The site has moderate research potential given the density of cultural materials, but lacks deeply stratified cultural deposits that may suggest significant age. The site is comparable with other similar sites within the Project area and more broadly.
37-2-6507	HVOCP TR104-AS1	Artefact scatter with archaeological deposit	Valid	M	L	L	H	M	A high density artefact scatter on the banks of a small unnamed tributary, including shallow subsurface deposits. The site has moderate research potential given the density of cultural materials, but lacks deeply stratified cultural deposits that may suggest significant age. The site is comparable with other similar sites within the Project area and more broadly.
37-2-6514	HVOCP TR47-AS3	Artefact scatter with potential archaeological deposit	Valid	M	L	L	H	M	A high density artefact scatter on the banks of Parnells Creek, including shallow subsurface deposits. The site has moderate research potential given the density of cultural materials, but lacks deeply stratified cultural deposits that may suggest significant age. The site is comparable with other similar sites within the Project area and more broadly.
37-2-6519	HVOCP TR105-AS1	Artefact scatter with potential archaeological deposit	Valid	M	L	L	H	M	A low density artefact scatter on the banks of a small unnamed tributary, including shallow subsurface deposits. The site has moderate research potential given the density of subsurface cultural materials, but lacks deeply stratified cultural deposits that may suggest significant age. The site is comparable with other similar sites within the Project area and more broadly.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-3-0449	LID6	Artefact scatter	Valid	M	L	L	H	M	A moderate density artefact scatter near Bayswater Creek. The site has moderate research potential given the density of cultural materials, but lacks deeply stratified cultural deposits that may suggest significant age. The site is comparable with other similar sites within the Project area and more broadly.
37-3-1069	REA197	Artefact scatter	Valid	M	L	L	H	M	A surface artefact scatter of 50 artefacts near Bowmans Creek. The site has moderate research potential given the density of cultural materials, but lacks any subsurface deposits. The site is comparable with other similar sites within the Project area and more broadly; and only marginally above the background scatter assigned to the broader cultural assemblage.
37-3-1618	HVOCP TR195-AS1	Artefact scatter with potential archaeological deposit	Valid	M	L	L	H	M	A low density artefact scatter on the junction of Hunter River and Bowmans Creek. Limited cultural material identified, but potential for subsurface deposits given the proximity to major creek systems. The site has moderate research potential given regional models suggesting the importance of these types of environment for past visitation and occupation.
37-3-1619	HVOCP TR195-AS2	Artefact scatter with archaeological deposit	Valid	H	L	L	H	H	A low density artefact scatter on the junction of Hunter River and Bowmans Creek. Limited surface cultural material identified, but high densities of buried stone artefacts were recovered as part of the excavations (Test Excavation Area 11). While the soil profile is shallow reducing the likelihood of Pleistocene age activities, it nonetheless provides some stratification that would inform differing periods of past behaviour in the locale. The high densities of cultural material would also provide opportunities for provenance and technological analysis. Based on other creek confluences, the site has the potential to be a representative site of this type in the region; and these factors all contribute to its high

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
									significance classification. The site would not be considered rare, however, given the prevalence of such sites in the Hunter Valley.
37-3-1626	HVOCP TR213-AS1	Artefact scatter with potential archaeological deposit	Valid	H	M	L	H	H	A high density artefact scatter and deposit situated on the ridge overlooking the Hunter River, and forming part of Test Excavation Area 12. The site contains deposits consistent with the Warkworth sand system, and while the assemblage is typologically Holocene in age, there is potential for Pleistocene material culture to be present in these types of soil profiles. Given the density of cultural materials recovered, its potential to inform on the past visitation and use of the locale, and the potential for >10,000 year material culture, the site has been classified as of high research potential. The Warkworth sand system is also a unique geomorphological unit found only in the vicinity of Wollombi Brook and the Hunter River, and the site therefore has some rarity within the broader region. This site has been upgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.
37-3-1628	HVOCP TR178-ST1	Culturally modified tree	Valid	H	M	L	H	H	A culturally modified tree located near the Hunter River. Such site types are increasingly rare in the Hunter Valley due to development activities, and this has resulted in a classification of high scientific value. There is some aesthetic significance assigned to the site as well, since the proximity of the site to water and other environmental variables (including certain vegetation types) is critical in its formation. This site has been upgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-3-1629	HVOCP TR212-ST1	Culturally modified tree	Valid	H	M	L	H	H	A culturally modified tree located near the Hunter River. Such site types are increasingly rare in the Hunter Valley due to development activities, and this has resulted in a classification of high scientific value. There is some aesthetic significance assigned to the site as well, since the proximity of the site to water and other environmental variables (including certain vegetation types) is critical in its formation.
37-3-1634	HVOCP TR189-AS2	Archaeological deposit	Valid	M	L	L	H	M	A subsurface deposit of dense cultural material found as part of the Test Excavation Area 11 investigations, and constrained to a hillcrest landform overlooking the Hunter River. While the soil profile is shallow reducing the likelihood of Pleistocene age activities, it nonetheless provides some stratification that would inform differing periods of past behaviour in the locale. The high densities of cultural material would also provide opportunities for provenance and technological analysis. As such the site is considered to have moderate research potential. The site would not be considered rare, however, given the prevalence of such sites in the Hunter Valley.
37-3-1635	HVOCP TR216-ST1	Culturally modified tree	Valid	H	M	L	H	H	A culturally modified tree located near the Hunter River. Such site types are increasingly rare in the Hunter Valley due to development activities, and this has resulted in a classification of high scientific value. There is some aesthetic significance assigned to the site as well, since the proximity of the site to water and other environmental variables (including certain vegetation types) is critical in its formation.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-5-0047	Malabar Site H Burnham Wood	Artefact scatter r	Partially destroyed	M	M	L	H	M	A moderately density artefact scatter situated over-looking the Hunter River and documented some 40 years ago. While the site would have had high research potential originally, primarily as a result of high numbers of stone artefacts that could contribute to provenance and technological questions, the salvage of much of the site has resulted in a reduction of its significance here. Significant cultural material was however still encountered and hence it remains of moderate value to inform past activities of this area. Its proximity to the Hunter River has some aesthetic qualities that are also captured in its significance classification. However, the site would not be considered representative nor rare given the prevalence of such sites in the Hunter Valley.
37-6-0166	Malabar Burnham Wood Site I	Archaeological deposit	Partially destroyed	H	L	L	NP	H	As outlined in Section 3.3.2, a probable deposit of the Warkworth sand system within which substantial cultural material has been recovered, albeit not known at the time. While the assemblage is typologically Holocene in age, there is potential for Pleistocene material culture to be present in these types of soil profiles. Given the density of cultural materials recovered, its potential to Inform on the past visitation and use of the locale, and the potential for >10,000 year old material culture, the site has been classified as of high research potential. The Warkworth sand system is also a unique geomorphological unit found only in the vicinity of Wollombi Brook and the Hunter River, and the site therefore has some rarity within the broader region.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-5-0571	PAD 1 (Doyles Creek)	Potential archaeological deposit	Valid	M	M	L	H	M	A potential subsurface deposit adjacent the Hunter River. No cultural materials have been recovered from this site, however, it aligns with a number of other comparable environments presented in this report where significant cultural material has been encountered; and has been documented as a potential archaeological deposit for over a decade in the literature. Given the potential for subsurface cultural deposits, it has been classified as of moderate research value, and assigned some aesthetic significance given its existence only as a result of the nearby Hunter River. However, the site would not be considered representative nor rare given the prevalence of such sites in the Hunter Valley. This site has been downgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.
37-6-3024	HVO-1656	Culturally modified tree	Valid	H	M	L	H	H	A culturally modified tree. While information on the site is limited, assuming its validity, such site types are increasingly rare in the Hunter Valley due to development activities, and this has resulted in a classification of high scientific value. There is some aesthetic significance assigned to the site as well, since the proximity of the site to environmental variables (including certain vegetation types) is critical in its formation. This site has been upgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-6-3250	HVO-51	Artefact scatter with potential archaeological deposit	Valid	H	L	L	H	H	A high density artefact scatter considered to represent a knapping event and found within a stratified soil profile. The soil profile was not the Warkworth sand system, and therefore the site is unlikely to be of Pleistocene age. However, there is high research potential for chronological information to be obtained from the site, and for the typology and technology to further inform the locale about visitation in the past. The site is considered to have some representativeness and rarity as a stratified site within a duplex soil, but such sites are documented elsewhere within the Project area and Hunter Valley more broadly.
37-6-3251	HVO-52	Artefact scatter with potential archaeological deposit	Valid	H	L	L	H	H	A high density artefact scatter considered to represent a knapping event and found within a stratified soil profile. The soil profile was not the Warkworth sand system, and therefore the site is unlikely to be of Pleistocene age. However, there is high research potential for chronological information to be obtained from the site, and for the typology and technology to further inform the locale about visitation in the past. The site is considered to have some representativeness and rarity as a stratified site within a duplex soil, but such sites are documented elsewhere within the Project area and Hunter Valley more broadly.
37-6-3294	HVO-98	Artefact scatter	Valid	M	L	L	H	M	A high density surface artefact scatter with limited evidence for subsurface cultural material. The site has been classified as of moderate research potential for provenance and technological information that could be obtained from the assemblage. The site is, however, neither representative nor rare in the locale or region. Further the site is documented within a range of anthropogenically created activities, such as roads and drainage channels. This site has been downgraded from moderate-high in the EMM (2022) to reflect the broader comparative analysis presented in Sections 3 and 4.4 above.

Table 4.8 Significance criteria and justification for 27 sites demonstrating area of key foci and/or stratified deposits

AHIMS #	Site Name	Site Type	Site Status	Significance criteria					Significance justification
				Scientific	Aesthetic	Historic	Cultural	Overall	
37-3-1649	HVOCP TR195-AS3	Artefact scatter	Valid	M	L	L	H	M	A surface and subsurface deposit of dense cultural material found as part of the Test Excavation Area 11 investigations overlooking the Hunter River. While the soil profile is shallow reducing the likelihood of Pleistocene age activities, it nonetheless provides some stratification that would inform differing periods of past behaviour in the locale. The high densities of cultural material would also provide opportunities for provenance and technological analysis to be undertaken. As such the site is considered to have moderate research potential. The site would not be considered rare, however, given the prevalence of such sites in the Hunter Valley.

Notes: 1. Significance ranking: H = high; M= moderate; L = Low; NP = Not provided during ACHAR process

2. As is common in discussions with the local Aboriginal community, all sites are considered to have important cultural or social value where such information has been provided; and hence their identification as 'high' throughout the table. To enable some differentiation of the sites within the cultural assemblage, the overall ranking is primarily based on the scientific, aesthetic and historical significance.

5 Potential and cumulative impacts

5.1 Section summary

- Following the identification of cultural materials of moderate and high significance in previous sections, further Project refinement and re-design has occurred to maximise retention of these key sites and places. This has focussed on the Lemington Road re-alignment, and which has reduced disturbance areas through key sites, including portions of the Warkworth sand system and avoidance of two culturally modified trees. CM-CD1 and several adjoining sites and broader cultural landscape have also been avoided due to its significance and uniqueness within the region. Several other sites currently within areas approved for disturbed are committed to be retained and conserved into the future.

- When considering the 27 sites of moderate and high significance, 12 would be adversely affected by the Project. These consist of two sites of high significance, HVOCP TR195-AS2 (37-3-1619) and HVOCP TR213-AS1 (37-3-1626), both situated on the constrained Lemington Road re-alignment, and ten moderately significant sites all consisting of moderate to high density stone artefact scatters within texture contrast soils. In many instances, including HVOCP TR213-AS1 that encompasses a portion of the Warkworth sand system, partial impact (rather than complete loss) has been achieved through refinement efforts.

- Further consideration of cumulative impact has been undertaken. This shows that despite the previous destruction of 557 sites through past mining activities, and the proposed loss of 204 site recordings for this Project, this would constitute limited loss to the broader cultural assemblage. (This is a reduction to the previously identified 220 sites within the ACHAR as a result of post-EIS project refinement and the loss of some sites since the completion of the report). Even when considering these sites as a complex, they demonstrate extremely low densities of stone artefacts found across the Project area (~1 artefact/3 ha) and are common across the Hunter Valley and NSW more broadly. Of these previous records, four sites were identified as having values associated with high density cultural materials and/or stratified sand deposits, including HC-17/PAD7 (37-2-0793), HVS 38 (37-5-0262), CM 37 (37-2-1540), and Hunter Valley 1/Malabar Site 0 (37-5-0063), and which have contributed to the local cumulative impacts to date.

- When considering the 27 sites, potential impacts to HVOCP TR213-AS1 (37-3-1626) are considered to have potential regional cumulative impacts, being a portion of the finite Warkworth sand system. However, extensive re-design has occurred to minimise these impacts, and additional archaeological excavations proposed would further inform the values and management of the remaining portions of the site. The loss of the remaining sites are considered to have some local cumulative loss, but similar sites are more common in the Hunter Valley and elsewhere. Archaeological mitigation of all these sites is proposed in the ACHAR and Section 6.

5.2 Avoidance and conservation – in EIS design

In developing the Project design, HVO has considered various mining options and infrastructure arrangements to optimise the Project's final design in conjunction with constraints and attempting to reduce the impacts to cultural heritage.

Alternatives to Project design including mining options and infrastructure arrangements informed by environmental and social assessments is discussed in Section 2.7 of the Project EIS. Specific reports on Mine Planning and Infrastructure Options were provided as appendices to the Project EIS.

The most notable change to the designs as a result of cultural heritage was the continued excision of CM-CD1 (37-2-1877) following its identification in the ACHAR as of Pleistocene age (EMM 2022); and the uniqueness of the deposits within the broader region (Section 3.2). Indirectly, the protection of CM-CD1 has also resulted in the protection of a number sites of moderate of high significance, including CM 41 (37-2-1544), one of the few culturally modified trees encountered within the Project.

5.2.1 CM-CD1 (37-2-1877)

As outlined in Section 3.3.3, CM-CD1 is an important archaeological deposit that has been validated through additional work for the ACHAR; and shown to be between 9-16,000 years in age. Geomorphological assessment (Section 3.4) indicates that the site is unique in the local area and formed through specific environmental conditions, resulting in high aesthetic values, as well as significant research potential.

Mining through CM-CD1 was initially considered as a mine plan alternative due to the coal resources present and was included within the initial mine plan presented in the Scoping Report for the Project (EMM 2020). This option incorporates most of the constraints and assumptions as per the preferred project mine plan but assumed that the mine progresses through the location of CM-CD1.

Further consideration to the aesthetic value of the cultural landscape within which CM-CD1 is located has been considered in development. The area surrounding the site which has also been excluded from mining activity and development of final landform modelling. The area excluded from mining has been designed to maintain the contextual connection of CM-CD1, and ensuring uninterrupted views to the Hunter River. Final landform modelling has sought to recreate the current topographical context including floodplain flats and hillslope landforms extending to the west to connect with the prominent Wandewoi ridgeline which follows outside of the south-west boundary of the Project area.

In addition, these activities have indirectly resulted in the avoidance of CM 3 (37-2-1506), CM 41 (37-2-1544), and the substantive retention of CM 1 (37-2-1504) and CM 2 (37-2-1505).

5.2.2 Lemington Road re-alignment

HVO commissioned an engineering study (WSP 2021) to review the road design and investigate options to avoid harm to cultural materials found along the alignment, including within areas previously identified as Areas 11 and 12 could be avoided. Alternative routes considered for the Lemington Road realignment, and justification of the preferred path, are documented in the Infrastructure Options and Avoidance Report within the Project EIS.

In addition to the avoidance measures outlined in the EIS, further investigation was completed post submission of the EIS as discussed in Section 5.3.

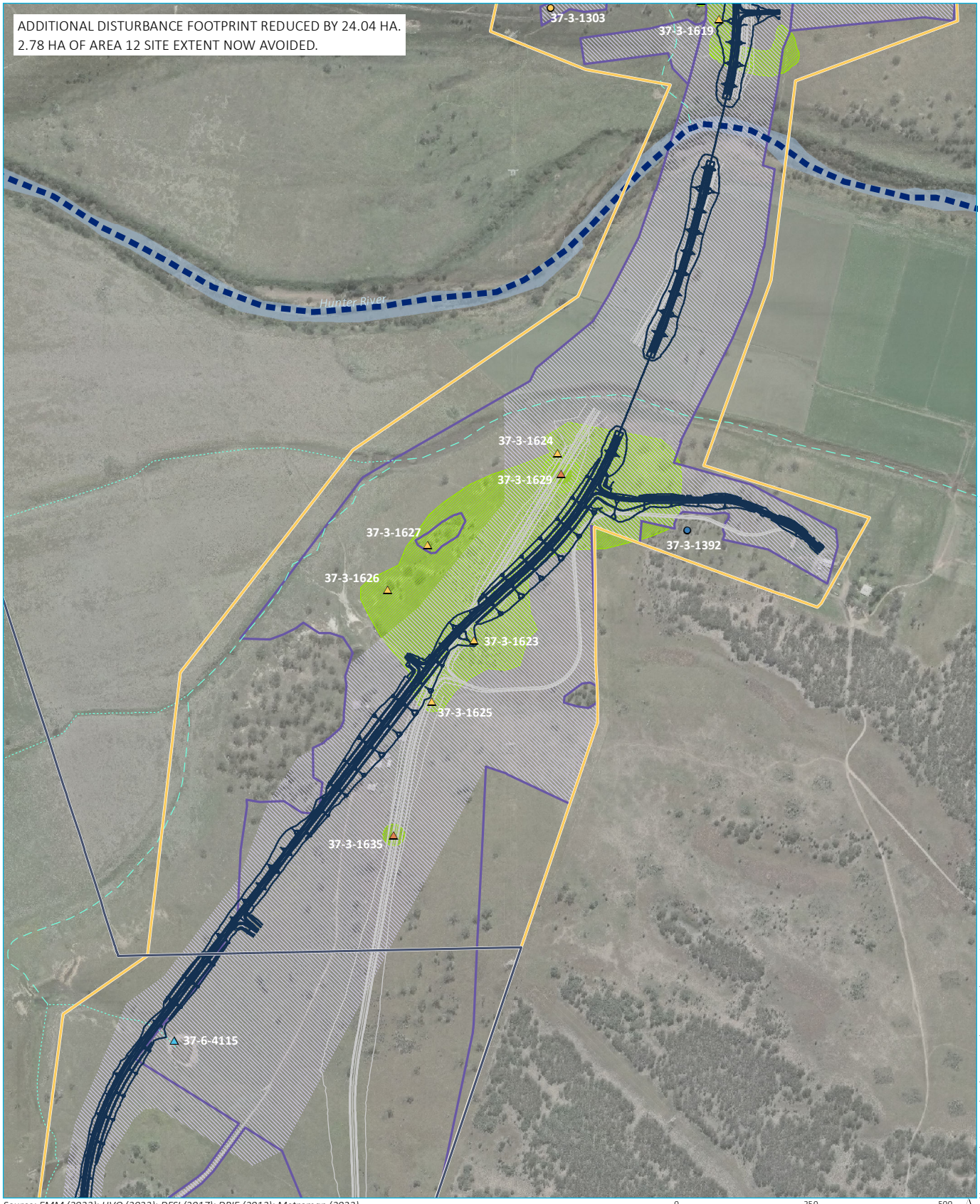
5.2.3 Electricity Transmission Line (ETL) construction

Due to the flexibility in the location of ETL poles, the span between poles and the location of access tracks has resulted in the avoidance of harm to some Aboriginal sites located within the proposed ETL construction corridors. As a result of this process to minimise impacts, of the 73 Aboriginal sites located within proposed ETL corridors harm to 33% (n = 24) has been avoided, including several sites of high and moderate significance: TR178-ST1 (37-3-1628), HVOCP TR47-AS2 (37-2-6497), and HVOCP TR47-AS3 (37-2-6514).

5.2.4 Restricted access zones

HVO maintain their commitment to protect Aboriginal sites within designated restricted access zones in accordance with the HVO South project approval Schedule 3 Condition 40. Restricted access zones protect 53 Aboriginal sites, including HVO 26-43 inclusive, 47–58 inclusive, 84–100 inclusive, 102–104 inclusive and 107–109 inclusive.

This would result in avoidance and conservation of two sites identified as of high significance – HVO 51 (37-6-3250) and HVO 52 (37-6-3251) – and one of moderate values – HVO -98 (37-6-3294).



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013); Metromap (2023)

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Additional disturbance footprint (original)
- Additional disturbance footprint (updated)
- Site extent
- Lemington Road realignment (EIS)
- Revised Lemington Road realignment
- Named waterbody

Strahler stream order

- 1st order
- 2nd order
- 9th order

Previously undocumented Aboriginal Sites

- Open Artefact Scatter
- Open Artefact Scatter with PAD
- Scarred Tree

Previously recorded AHIMS site within existing and approved or additional disturbance area

- Isolated Find
- Open Artefact Scatter with PAD

Lemington Road re-alignment refinement

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5.3 Additional avoidance post EIS submission

Following the EIS submission, further Aboriginal consultation (Section 2) and works undertaken in Section 3 of this report that identified the Warkworth sand system within the Lemington Road alignment, additional avoidance and constraint mapping has been undertaken, (Figure 5.1). The proposed alignment of Lemington Road presented in the EIS would have resulted in the complete loss of HVOCP TR213-AS1 (37-3-1626) – and the broader geomorphological unit of Test Excavation Area 12–- and the associated culturally modified trees: TR212-ST1 (37-3-1629) and TR216-ST1 (37-3-1635). The amended Lemington Road realignment corridor (detailed in the HVO North Amendment Report) has ultimately resulted in the reduction of ~24 ha of potential disturbance and enabled the avoidance of ~2.78 ha of HVOCP TR213-AS1 that was previously proposed for impact (equivalent to ~ 18%). Several of the discrete higher density locales of cultural materials within Test Excavation Area 12 have also been avoided through these re-designs.

The re-design has also ensured the retention of both the culturally modified trees, and both TR212-ST1 and TR216-ST1 would now be avoided by the Project.

5.4 Refining potential impacts

The ACHAR split the source of impact associated with the Project into two elements: mining and infrastructure. Impacts associated with mining elements include general mining activities, including but not limited to pre stripping, overburden removal, coal extraction and rehabilitation activities. These impacts are also inclusive of activities such as the development of clean water drains and diversions, levees, and dams required to support mining activities. Impacts associated with infrastructure include the construction or removal of electricity transmission lines (ETL), access roads, Lemington Road re-alignment and rail and road construction. Degrees of impact include partial (disturbance of part of a site) or total (disturbance of the entirety of the site).

Based on the information presented in Section 4.5.3, some 279 extant Aboriginal sites and places have been documented within the Project disturbance area. This includes 200 previously documented sites and 79 newly identified sites from field survey and test excavations. Of these, 27 are representative of areas of past foci and visitation, and have been identified as of moderate or high significance. These sites are characterised by the presence of high density stone artefacts and/or stratification in sand units, and culturally modified trees. A further four sites (13%) that would have met criteria for high significance have been previously destroyed as a result of development activities in the past. These consisted of two high density artefact scatters (HC-17/PAD7 [37-2-0793], and CM37 [37-2-1540]) and two cultural deposits within source-bordering dunes (Hunter Valley 1/Malabar Site 0 [37-5-0063], and HVS38 [37-7-0167]). The remaining 252 sites have been considered in the ACHAR and in this report but are considered typical of a broader background scatter of cultural material, reflective of >50,000 years of Aboriginal occupation, and prevalent across the Hunter Valley. Even when these sites are combined, they are extremely common across NSW and typically of low/low-moderate significance (Appendix E).

Based on these findings, the focus this section is on the potential impacts to the 27 sites of value, and the cumulative loss resulting from any adverse impacts to them. Of the 11 sites assessed as having moderate and high significance, seven will be avoided – in some cases through careful project re-design presented in the EIS and subsequently during the development of this report (Section 5.3.2).[9] Notably, CM-CD1 (37-3-1877) shown to be a unique geomorphological feature of Pleistocene age, has continued to be avoided through the Project. Following additional avoidance and re-design (Section 5.4), two sites of high significance would be potentially impacted: HVOCP TR195-AS2 (37-3-1619), HVOCP TR213-AS1 (37-3-1626) (part) (Table 5.1; Figure 5.2). These reflect high

[9] For comparison, EMM (2022) identified that three Aboriginal sites of high significance would be adversely affected (including HVOCP TR195-AS2 [37-3-1619], HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635]), and 15 sites of moderate and/or moderate-high value (including HVOCP TR213-AS1 [37-3-1626], which has had its significance increased from moderate-high to high based on data in this report). Following post-EIS refinement, HVOCP TR212-ST1 [37-3-1629], and HVOCP TR216-ST1 [37-3-1635] have both now been avoided.

density cultural materials within texture contrast soils and a potential portion of the Warkworth sand system. All five identified culturally modified trees are also proposed for avoidance.

Of the 16 moderately significant sites, ten would be adversely affected with five subject to total impact, and five only partially intersecting with the Project. These include: HC 20 (37-2-0796), CM 1 (37-2-1504) (part), CM 2 (37-2-1505) (part), HVOCP TR104-AS1 (37-2-6507), HVOCP TR105-AS1 (37-2-6519), LID 6 (37-3-0449) (part), HVOCP TR189-AS2 (37-3-1634), PAD 1 (Doyles Creek) (37-5-0571) (part), HVOCP TR195-AS3 (37-3-1649), and Malabar Site H Burnham Wood (37-5-0047) (part). Four of these are within areas previously approved for disturbance by existing development consents.

Overall, the Project would result in the complete impact to seven and partial impact to five of the 27 sites identified as having high or moderate significance; and equating to ~44.4% of this cultural assemblage. When considering the broader background scatter encompassing the remaining 252 disparate site recordings of this cultural material, some 193 would be adversely affected (Appendix E).

Table 5.1 Degree of harm by site type for moderate and high significant sites in the Project disturbance area. Further details of all sites are presented in Appendix E.

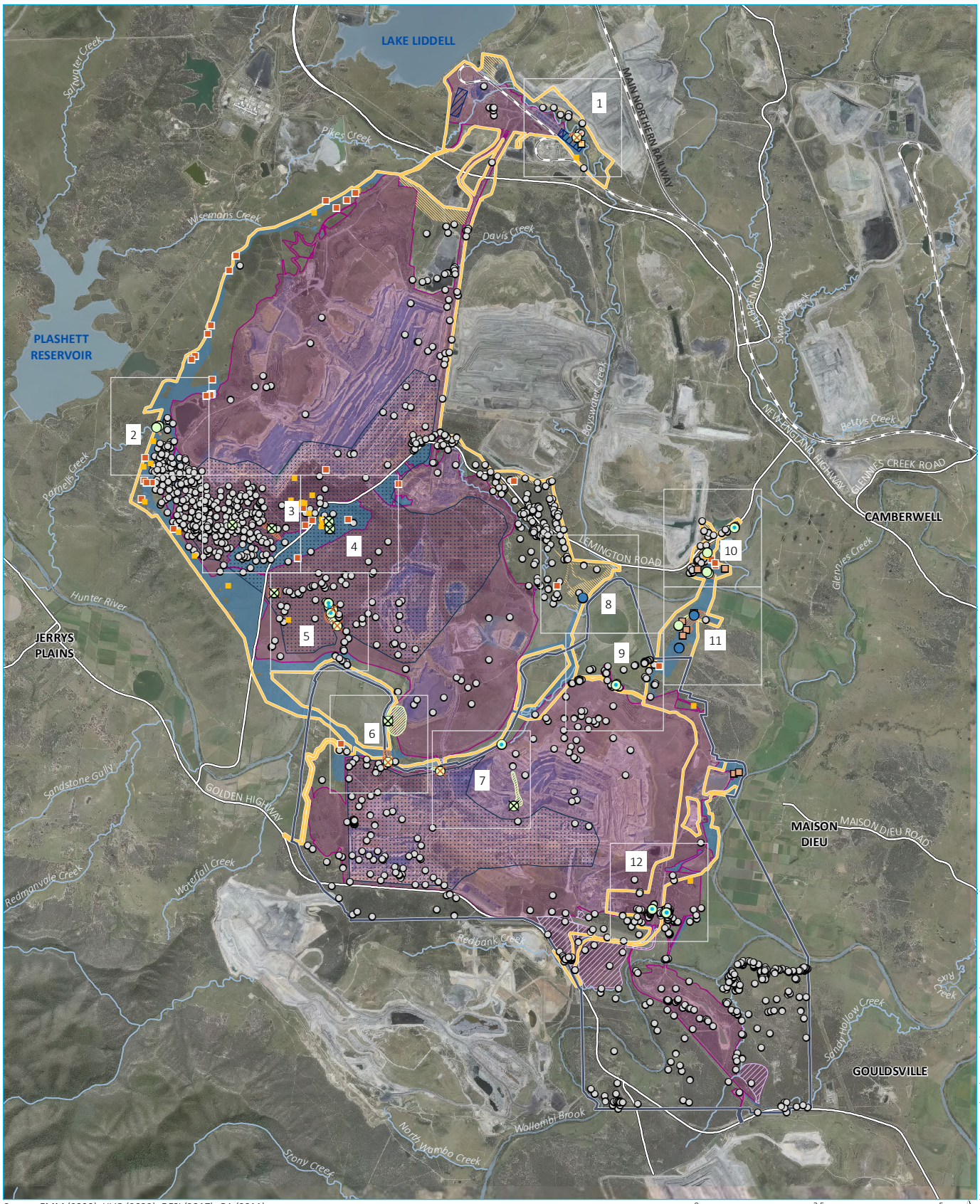
AHIMS #	Site name	Site type	Significance	Type of harm	Degree of harm	Notes
37-3-1619	HVOCP TR195-AS2	Artefact scatter with archaeological deposit	H	Direct	Total	
37-3-1626	HVOCP TR213-AS1	Artefact scatter with potential archaeological deposit	H	Direct	Partial	
37-2-0796	HC20	Artefact scatter	M	Direct	Total	Within the Existing and Approved disturbance area.
37-2-1504	Carrington Mine CM 1	Artefact scatter with potential archaeological deposit	M	Direct	Partial	Within the Existing and Approved disturbance area.
37-2-1505	Carrington Mine CM 2	Artefact scatter	M	Direct	Partial	Within the Existing and Approved disturbance area.
37-2-6507	HVOCP TR104-AS1	Artefact scatter with archaeological deposit	M	Direct	Total	
37-2-6519	HVOCP TR105-AS1	Artefact scatter with potential archaeological deposit	M	Direct	Total	
37-3-0449	LID6	Artefact scatter	M	Direct	Partial	

Table 5.1 Degree of harm by site type for moderate and high significant sites in the Project disturbance area. Further details of all sites are presented in Appendix E.

AHIMS #	Site name	Site type	Significance	Type of harm	Degree of harm	Notes
37-3-1634	HVOCP TR189-AS2	Archaeological deposit	M	Direct	Total	
37-3-1649	HVOCP TR195-AS3	Artefact scatter	M	Direct	Total	
37-5-0047	Malabar Site H Burnham Wood	Artefact scatter	M	Direct	Total	Site has been subject to a previous AHIP, and salvage. Limited information indicates cultural materials are still present. (Section 3)
37-5-0571	PAD 1 (Doyles Creek)	Potential archaeological deposit	M	Direct	Partial	
37-2-1506	Carrington Mine CM 3	Artefact scatter with potential archaeological deposit	M	N/A	N/A	
37-2-1544	Carrington Mine CM 41	Potentially culturally modified tree with stone artefacts	H	N/A	N/A	
37-2-1877	CM-CD1	Archaeological Deposit	H	N/A	N/A	
37-2-6497	HVOCP TR47-AS2	Artefact scatter with potential archaeological deposit	M	N/A	N/A	Within the ETL and proposed commitment to span across the site would result in avoidance.
37-2-6514	HVOCP TR47-AS3	Artefact scatter with potential archaeological deposit	M	N/A	N/A	Within the ETL and proposed commitment to span across the site would result in avoidance.
37-3-1069	REA197	Artefact scatter	M	N/A	N/A	
37-3-1618	HVOCP TR195-AS1	Artefact scatter with potential archaeological deposit	M	N/A	N/A	
37-3-1628	HVOCP TR178-ST1	Culturally modified tree	H	N/A	N/A	

Table 5.1 Degree of harm by site type for moderate and high significant sites in the Project disturbance area. Further details of all sites are presented in Appendix E.

AHIMS #	Site name	Site type	Significance	Type of harm	Degree of harm	Notes
37-3-1629	HVOCP TR212-ST1	Culturally modified tree	H	N/A	N/A	
37-3-1635	HVOCP TR216-ST1	Culturally modified tree	H	N/A	N/A	
37-6-0166	Malabar Burnham Wood Site I	Archaeological deposit	H	N/A	N/A	
37-6-3024	HVO-1656	Culturally modified tree	H	N/A	N/A	
37-6-3250	HVO-51	Artefact scatter with potential archaeological deposit	H	N/A	N/A	Within a restricted access zone, with proposed commitments for ongoing conservation.
37-6-3251	HVO-52	Artefact scatter with potential archaeological deposit	H	N/A	N/A	Within a restricted access zone, with proposed commitments for ongoing conservation.
37-6-3294	HVO-98	Artefact scatter	M	N/A	N/A	Within a restricted access zone, with proposed commitments for ongoing conservation.



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Page reference
- Existing and approved disturbance area
- Additional disturbance area
- Approved disturbance area - other mine
- Previously approved area not retained
- Proposed mining area
- Product stockpile
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Culturally modified tree
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Avoided
- Destroyed
- Partially destroyed

Newly identified site

- Isolated find
- Isolated find with PAD
- Open artefact scatter
- Open artefact scatter with PAD
- Scarred tree

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

Cumulative impacts

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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Approved disturbance area - other mine
- Product stockpile
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status
- Partially destroyed

Newly identified site
- Isolated find
- Isolated find with PAD

Existing environment
- Rail line
- Major road
- Named watercourse

Cumulative impacts

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Figure 5.2.1

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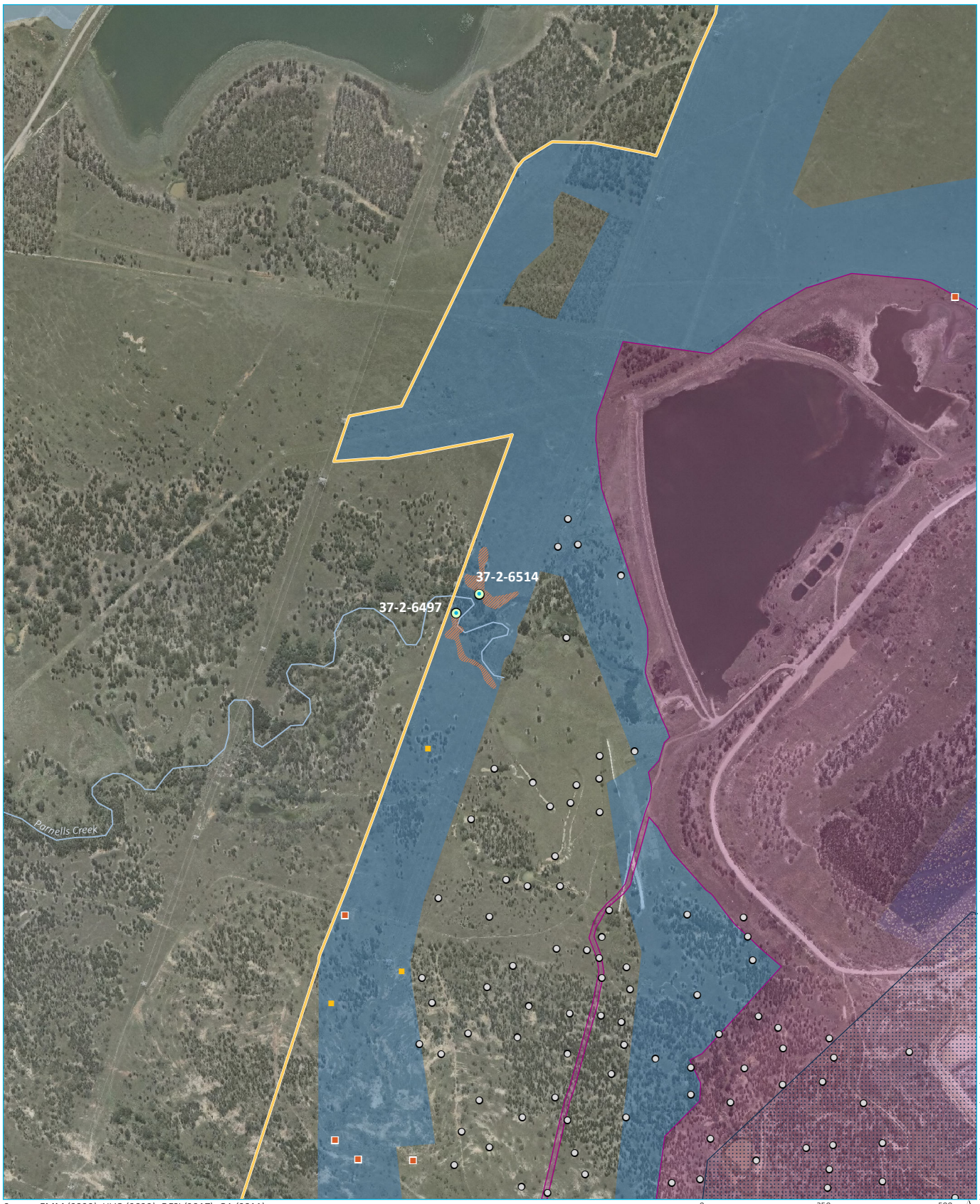

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status
- Avoided

Newly identified site
- Isolated find
- Open artefact scatter
- Open artefact scatter with PAD

Existing environment
- Rail line
- Named watercourse
- Named waterbody

Cumulative impacts

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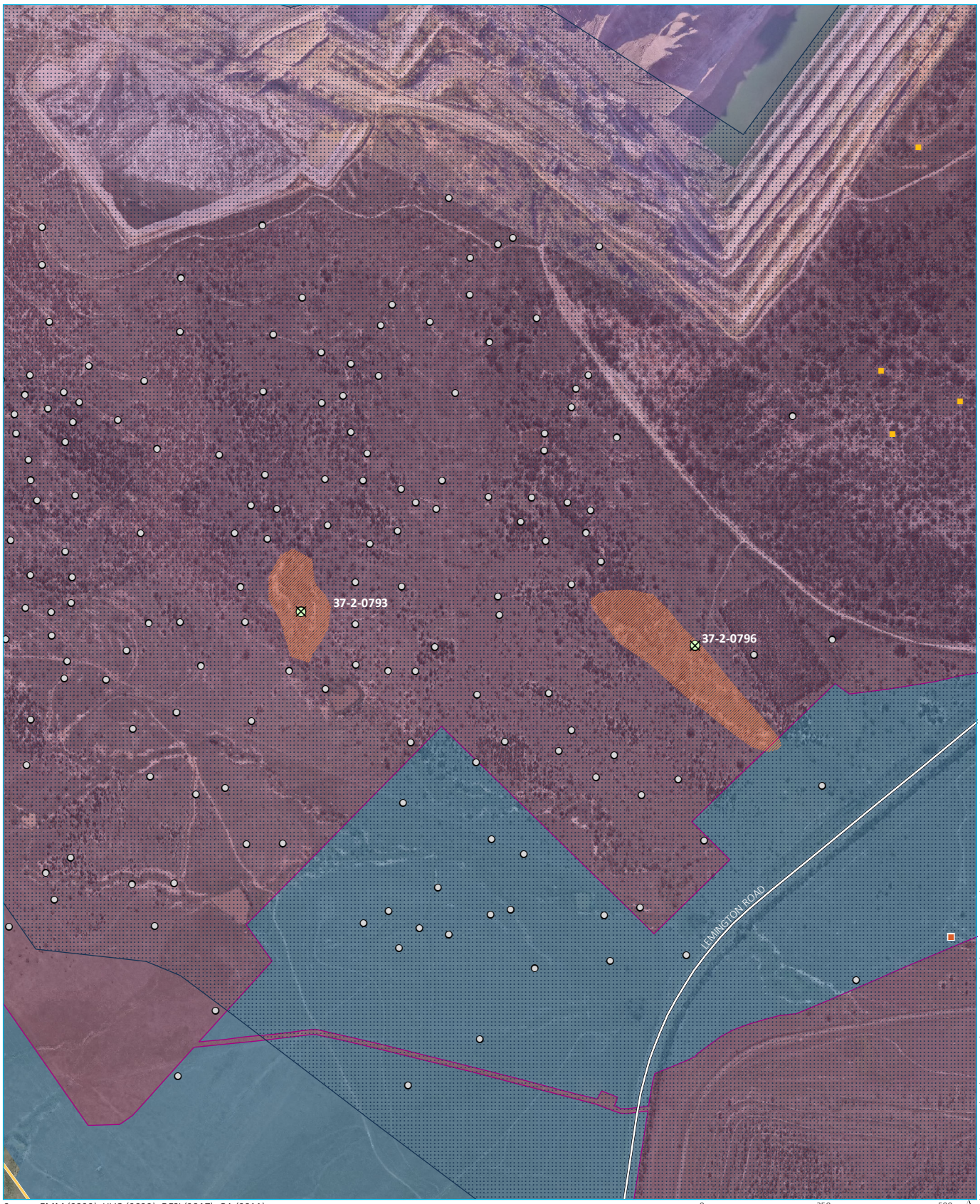
Figure 5.2.2

EMM
creating opportunities



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KEY

- HVO North proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Previously destroyed

Newly identified site

- Isolated find
- Open artefact scatter

Existing environment

- Rail line
- Major road

Cumulative impacts

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Figure 5.2.3

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Previously destroyed

Newly identified site

- Isolated find
- Open artefact scatter
- Open artefact scatter with PAD

Existing environment

- Rail line
- Major road

Cumulative impacts

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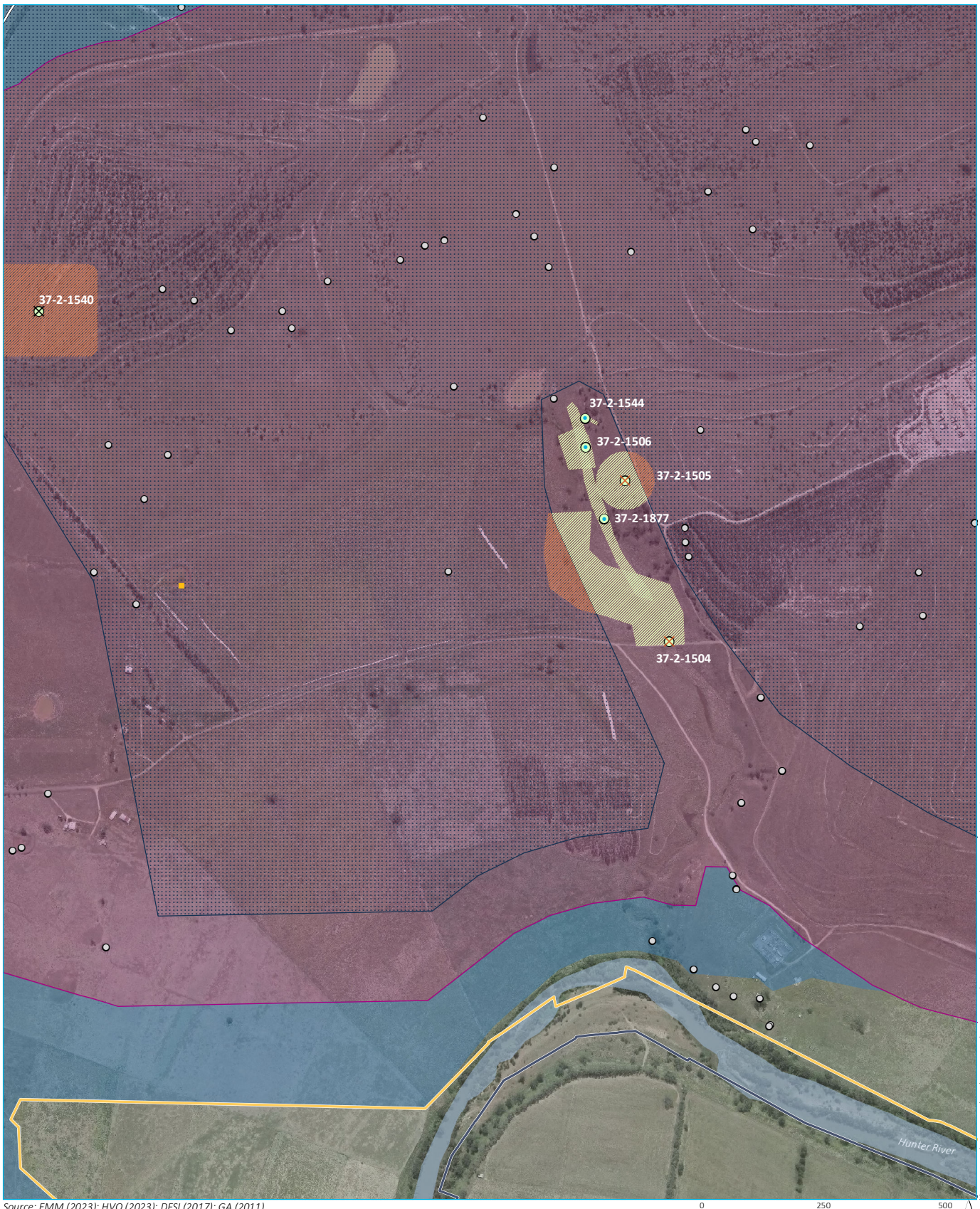
Figure 5.2.4

EMM
creating opportunities



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Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Avoided
- Previously destroyed
- Partially destroyed

Newly identified site

- Isolated find

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.5

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Proposed mining area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status
- Previously destroyed
- Partially destroyed

Newly identified site
- Open artefact scatter

Existing environment
- Rail line
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.6

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Proposed mining area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Avoided
- Previously destroyed
- Partially destroyed

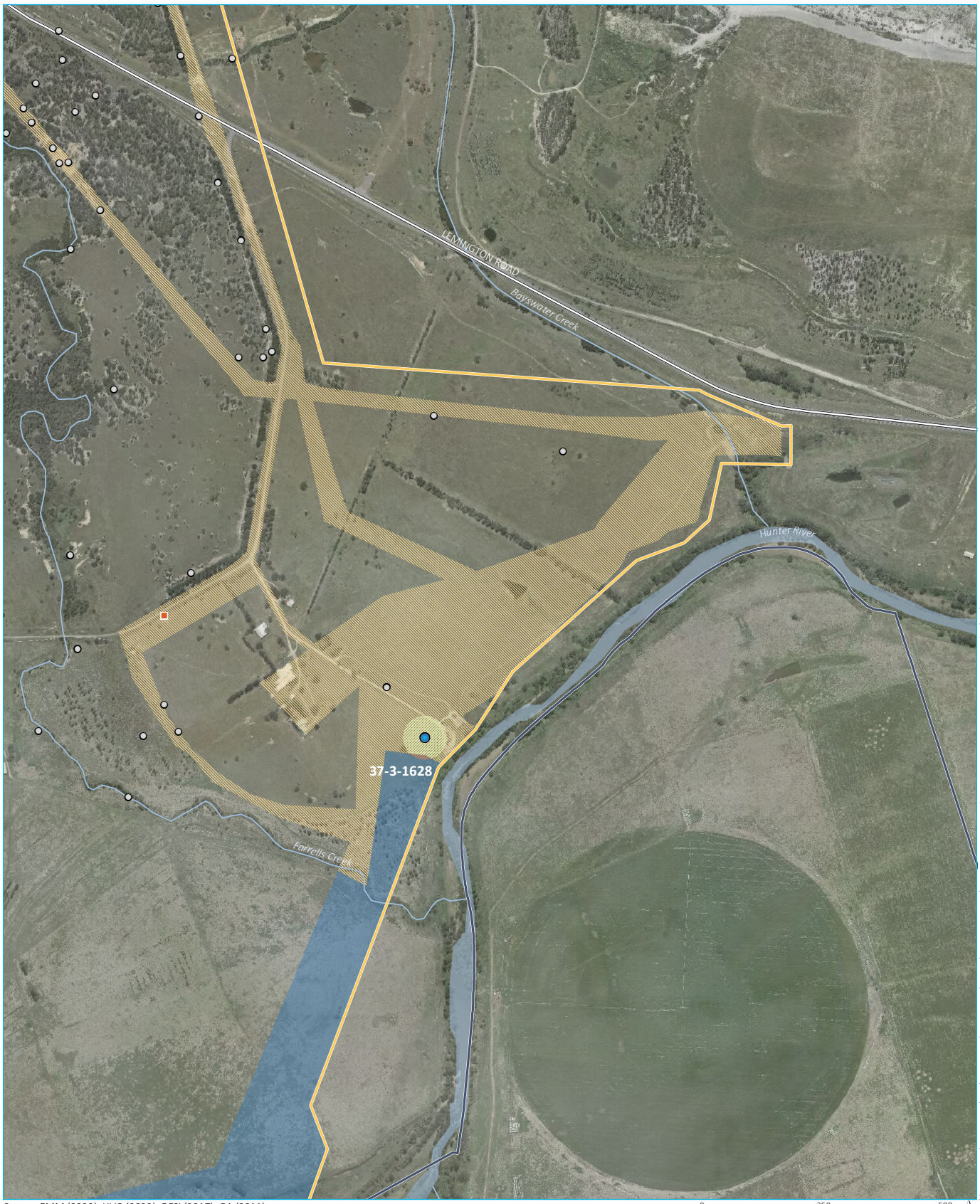
Existing environment

- Rail line
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.7

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Additional disturbance area
- Approved disturbance area - other mine
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Culturally modified tree
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Avoided

Newly identified site

- Open artefact scatter
- Scarred tree

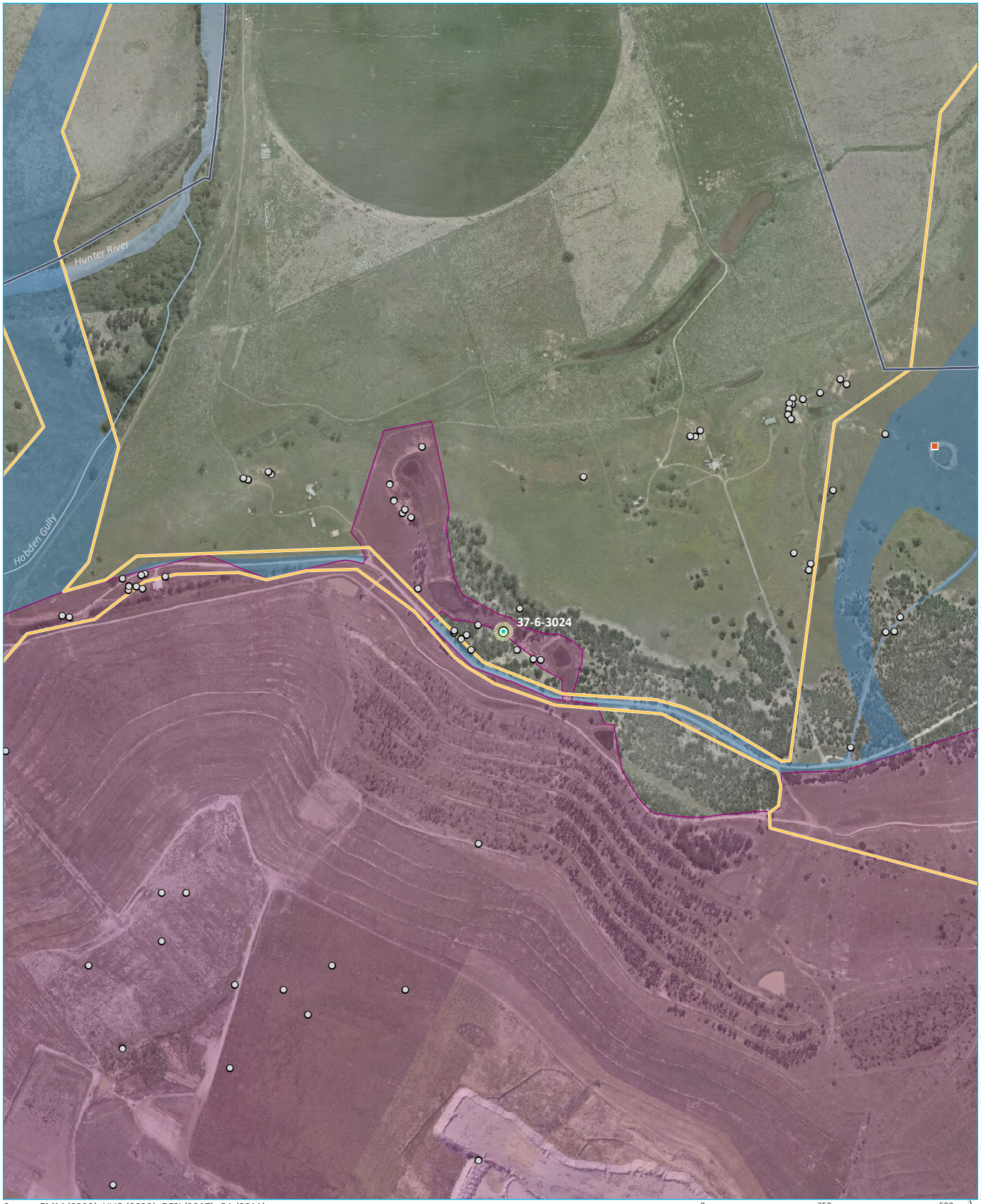
Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.8

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status
- Avoided

Newly identified site
- Open artefact scatter

Existing environment
- Rail line
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.9

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- Additional disturbance area
- Approved disturbance area - other mine
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status
- Avoided

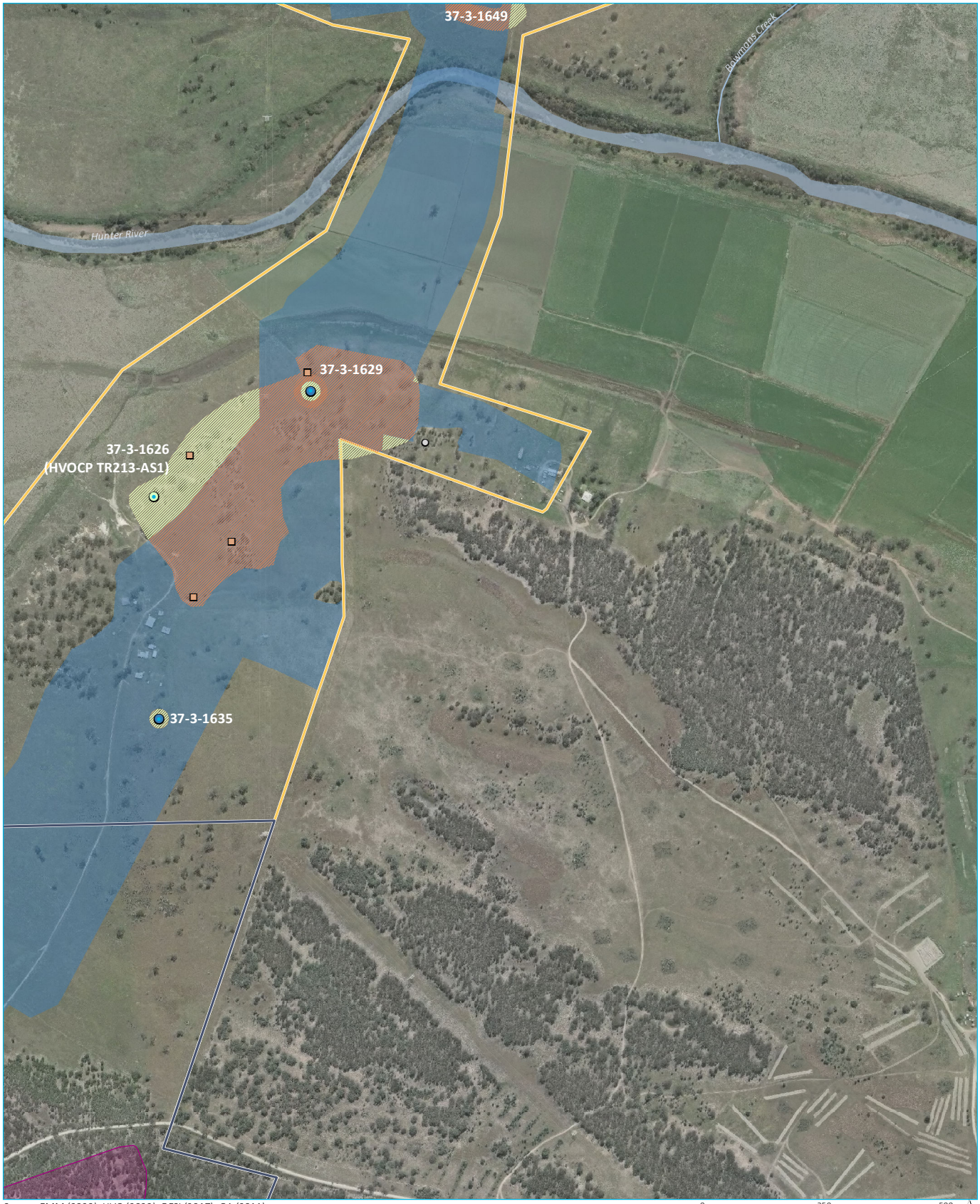
Newly identified site
- Isolated find
- Open artefact scatter
- Open artefact scatter with PAD

Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.10

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Culturally modified tree
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status
- Avoided

Newly identified site
- Open artefact scatter with PAD
- Scarred tree

Existing environment
- Rail line
- Named watercourse
- Named waterbody

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.11

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

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GDA2020 MGA Zone 56

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Previously approved area not retained
- Site extent
- Where not previously destroyed, site extent potentially impacted
- Documented Aboriginal site considered to reflect an area of past visitation and/or occupation
- Documented Aboriginal object and/or site, typically reflecting isolated or low densities of stone artefacts

Site status

- Avoided

Newly identified site

- Isolated find

Existing environment

- Rail line

Cumulative impacts

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure 5.2.12

EMM
creating opportunities

5.5 Cumulative impacts and intergenerational loss/equity

Cumulative impact and loss of cultural heritage as a result of the Project is explored in the ACHAR. Following Heritage NSW's questions (Section 5.1), this section revisits the cultural assemblage following additional analysis undertaken.

Using further specialist analysis and detailed regional review outlined in Sections 3 and 4, sites of significance and value in this locale are typically constrained to high density stone artefacts – usually in the order of hundreds or thousands of objects – stratified cultural deposits, especially the Warkworth sand system, and/or culturally modified trees. These are typically found within a broader cultural landscape that contains a continuous low density of stone artefacts in most locations and landforms.

When viewing the cultural assemblage through this interpretation, some 31 Aboriginal sites and places are considered to reflect past foci of activity, visitation and occupation across the Project area, and are therefore of significance and importance to the scientific and Aboriginal communities. These consist of 27 extant sites (Table 4.8) and four that have been lost over the last 30 years of development activity. Of these, past assessments and documentation has focussed extensively on the potential Pleistocene deposits within CM-CD1, and more recently the Warkworth sand system that is situated primarily south of the Project area.

While a large number of discrete Aboriginal site recordings have been destroyed as a result of previous mining activities (n=557) (Table 4.5), and some 204 are proposed to be adversely affected by the Project, few of these sites retain any of the above characteristics that would suggest they are of significance or could provide information about the past use of the landscape by Aboriginal people. Indeed, acknowledging the AHIMS data is incomplete, when reviewing the number of artefacts documented within this database and removing the 31 sites outlined above, a total of ~6,300 objects are listed. Over a Project area some 200 km^2 in size, this equates to ~1 artefact/3 ha, an extremely low density, indicating a very low use of much of the site in the past. Given this, the loss of these sites, even considering previous development activities, is not considered to result in cumulative loss.

However, when considering the 31 sites in Section 4.4.3, these all demonstrate evidence of extensive intense activity and foci's of past use, and have the potential in some environments to be of significant age. The loss of any of these sites would be considered to reflect a cumulative impact to the locale, and in the case of sites such as CM-CD1 and/or any Pleistocene cultural deposits within the Warkworth sand system, of regional impact. To date, four such sites have been identified within previous assessments where sites of significance have been lost, including high density artefact scatters (HC-17/PAD7 [37-2-0793], HVS 38 [37-5-0262], and CM 37 [37-2-1540]) and a potential portion of the Warkworth sand system (Hunter Valley 1/Malabar Site 0 [37-5-0063]). These sites would account for 13% of the cultural assemblage considered of significance. Further, CM 2 (37-2-1505) and Malabar Burnham Wood Site I (37-6-0166) have been substantively impacted, and in the case of the former has resulted in the loss of research value. The remnants of both of these sites have been largely conserved as part of the Project.

As outlined in Section 5.2, given the loss of previous sites of value and the identified importance of the 27 extant sites of significance, extensive Project re-design and refinement has occurred, and this has resulted in the conservation of a large portion of the cultural assemblage, and especially those sites of high significance. Specifically, some 16 sites (~59.3% of the extant sites; ~51.65 of the extant and destroyed sites) have been preserved. This is despite many of these sites being within active mining operation, and in several cases within areas permitted for disturbance. Further, the Project has made commitments to avoid a number of the most unique and/or rare sites, including CM-CD1 (37-2-1877), cultural deposits along Parnells Creek, and several culturally modified trees. Ultimately, only two of the sites of high significance would be adversely affected, HVOCP TR195-AS2 (37-3-1619) and HVOCP TR213-AS1 (37-3-1626) (part), and these are both within highly constrained portions of the Project area where complete avoidance could not be achieved where Lemington Road re-alignment remains required. HVOCP TR213-AS1 (37-3-1626) encompasses one of the few portions of the Warkworth sand system within the Project area, and while Pleistocene cultural deposits have not been

encountered, the geomorphological unit is finite and any impacts would constitute some regional cumulative loss. However, some ~2.78 ha (~18%) of the site would remain following the activities and future management of these deposits would be outlined in the ACHMP proposed in Section 6. Further, Section 6 provides mitigation measures to offset the loss of these deposits, which to date have not demonstrated Pleistocene cultural deposits; and to further inform any long term management options.

While the loss of the remaining sites – primarily moderately significant artefact scatters – would result in some local cumulative loss, the site type is more common across the Hunter Valley, with other examples along the major creeklines, such as Glennies Creek, Rixs Creek, Redbank Creek, Wollombi Brook, and the Hunter River. As such, the loss of such sites is not considered a regional impact, and their suitable recovery would both offset the Project impacts and can be used to further inform our understanding of the past use and visitation of the locale; and to provide information that would assist in further managing comparable sites proposed for retention across the Project area.

More broadly, archaeological mitigations are proposed in the ACHAR (EMM 2022) and Section 6 to address the cumulative loss. These include the investigations of the Project area to date that have added to the archaeological and scientific understanding of the Hunter Valley region. Information on the past peopling and their activities within the Project area have now come to light, as well as an improved understanding of contemporary sites and values. Such information will only be added to and further refined through future stages of the development of the project (see Chapter 12 of the ACHAR). This project also provides the Aboriginal community with opportunities to undertake heritage interpretation, development of narratives and visual representation of Aboriginal values, stories and places for the Project area – something that is currently lacking from the locale (e.g. Section 2.4). This would improve understanding and public outreach of cultural heritage to the broader community into the future.

The Aboriginal participants have also expressed a desire to remain involved in the project and continue to access the Project area and visit/maintain the identified Aboriginal sites and places into the future. Such opportunities would be further explored in the proposed ACHMP (Section 6.2). Assuming these opportunities are realised, the project provides an important continuation and re-imagining of cultural heritage of the region for future generations. In addition, a range of social enhancement strategies design focussing on Closing the Gap targets are also proposed (EMM 2022; Section 6.3).

6 Further definition of future mitigation measures

6.1 Section summary

- This section outlines the draft content of an Aboriginal cultural heritage management plan (ACHMP) should development consent be granted for the Project, and which would provide a framework for post-approval Aboriginal heritage requirements. The draft ACHMP contents will include the need to develop suitable archaeological mitigation measures and the surrender of existing Aboriginal heritage impact permits, although some direction is included in this section to address Heritage NSW questions.

- General archaeological salvage methodologies for nine Aboriginal sites of moderate and high significance located with the disturbance boundary have been described, with further refinement recommended as part of the ACHMP. These include further characterisation and recovery of cultural deposits found primarily within the broader Test Excavation Areas 9, 11 and 12, as well as a smaller number of other discrete cultural deposits across the Project disturbance area.

- Five culturally modified trees are identified within the Project area. Project re-design has been developed to avoid these sites, but guiding principles for their management in the event of loss is presented below. Given they are no longer proposed for impact and being avoided, additional research to determine cumulative impact, etc, as requested, has not been undertaken.

6.2 Aboriginal cultural heritage management plan

The Heritage NSW comments include a proposed ACHMP requirement, including the contents of the document. Should the Project be approved, HVO will prepare an ACHMP in accordance with the requirements of any conditions of consent, and in consultation with the registered Aboriginal parties. The HVO Complex is already subject to two ACHMPs for their current operation, so is familiar with the framework and requirements of cultural heritage management under these instruments of approval.

To address other Heritage NSW questions, HVO propose to include the following in the ACHMP:

- Processes and procedures for the modification and/or surrendering of the existing Aboriginal Heritage Impact Permits (AHIP) across the Project area, including #4050 (C0002193), #4089 (C0002525), #2086 (expired), #2547, #2804, #3393, SZ300, SZ315 and any other additional AHIPs received prior to development consent being granted for the Project. This would include:
    - Review any overlap of the existing AHIP and identify whether the permit requires variation to encompass a revised boundary or to be surrendered.
    - Review of the conditions of each AHIP to determine any outstanding requirements, such as cultural assemblage analysis, reporting and/or curation.
    - Integration of any outstanding conditions into the project specific requirements of the ACHMP
    - Submission of AHIP variation and/or surrender forms for each active AHIP to Heritage NSW for processing. Liaison with Heritage NSW to ensure changes/relinquishment only come into effect following approval of the ACHMP.

- Processes and procedures for the modification and/or surrendering of the existing Care and Control Agreements across the Project area, including #2863 (expired), C0001890 and C00004768. This would include:
    - Consultation with the registered Aboriginal parties to determine the suitability and ongoing validity of curation management for the Project area.
    - Integration and/or amendment of the requirements of the Care and Control Agreements into the ACHMP.
    - Submission of variation and/or surrender forms for each active to Heritage NSW for processing. Liaison with Heritage NSW to ensure changes/relinquishment only come into effect following approval of the ACHMP.

6.3 Previous proposed mitigation measures

The ACHAR (EMM 2022) outlined the archaeological mitigation measures for all Aboriginal objects, sites and places within the Project disturbance area. Appendix F of this report reproduces these mitigation measures from the ACHAR and incorporates updates to take into consideration amendments and/or refinements developed following the synthesis of the cultural assemblage as presented in Section 4.4. The mitigation measures outlined in Appendix F will be included in the ACHMP when developed. These mitigation measures include the cultural collection of surface stone artefacts and/or the passive/active avoidance of sites not proposed to be adversely affected. Management of culturally modified trees and any further sub-surface excavation would be managed in accordance with Sections 6.4 and 6.5.

In addition, the ACHAR outlined a number of social enhancement strategies aligned with the Closing the Gap themes, including health, education, business, finance, employment, cultural and employment. In addition to these existing commitments, a further social enhancement activity will be undertaken to respond to the Hickey family requests (described in Section 2.4). Specifically, opportunity and support will be provided to enable RAPs to access the Project area and undertake relevant discussion, knowledge-sharing and documentation (e.g. videos, etc) for a future archive for the local Aboriginal community. The social enhancement strategies as outlined in the ACHAR (EMM 2022) are provided in Table 6.1 below, with this additional commitment relating to access to country highlighted for ease of reference.

Table 6.1 Social enhancement strategies

Theme	RAP feedback	Proposed mitigation measure
Employment	• Aboriginal identified positions need to be more meaningful. Consideration should be given to committing to retaining suitable employees for a period of time longer than 3 months. • There are mental health issues, especially around confidence and sense of self worth if Aboriginal Employees are seen as a means to gaining a grant, rather than being recognised for their own merits. • Short term employment affects superannuation, increases need for welfare. • Opportunities for permanent employment need to be maximised.	To assist in closing the gap HVO would consider a program to assist in increasing job readiness and work experience for local Aboriginal people. HVO would investigate linking programs with a third party provider, and any similar programs that have been established by the participants in the HVO Joint Venture. The program would initially run for the first 5 years of the operations and may be continued following an implementation review.
Business	• Support of developing Aboriginal businesses. They need capital, contracts and business training, school based training, subsidised wage for school leavers entering a program. • HVO should consider contracting Aboriginal businesses. • Training and support should be given to Aboriginal business owners so that they can make their tenders more competitive. Support should be given to help them get through the door. • Aim to build long standing contracts and ongoing partnerships. • Consider providing procurement training, i.e. grant and tender writing, so that proposals and tenders for Aboriginal businesses can be more competitive.	As part of the development of the Social Impact Management Plan (SIMP) for the Project, HVO would liaise further with the Aboriginal Community to define an appropriate location and a frequency where briefings could be held on the HVO procurement processes to enable Aboriginal suppliers to be able to tender for work. In addition to briefings, HVO would consider providing funding to support business/procurement training programs. This would be considered as part of the Closing the Gap funding program to be detailed in the SIMP for the Project.
Closing the Gap	• A trust fund should be set up to service Aboriginal people in the valley until the mine ceases in 2050. Aboriginal people are able to apply for funding for Closing the Gap initiatives. • Consideration to be given to offering microloans for white goods, cars, repairs to property. • The trust fund should be aligned with the Government's Closing the Gap initiatives. • Our challenge for the future is to embrace a new partnership between Indigenous and non-Indigenous Australians. The core of this partnership for the future is Closing the Gap between Indigenous and non-Indigenous Australians on life expectancy, educational achievement and employment opportunities. This new partnership on Closing the Gap will set concrete targets for the future: within a decade to halve the widening gap in literacy, numeracy and employment outcomes and opportunities for Indigenous children, within a decade to halve the appalling gap in infant mortality rates between Indigenous and non-Indigenous children and, within a generation, to close the equally appalling 17-year life gap between Indigenous and non-Indigenous when it comes to overall life expectancy. • HVO to consider providing support to RAPs to connect with family and Country to facilitate the transfer of knowledge and culture to younger generations	Following grant of approval, as part of the SIMP for the Project, HVO would develop a funding framework to enable funding of programs and projects that align to Closing the Gap initiatives or community mental health, to the value of $1,000,000 over the first 10 years of the Project. This may be continued following an implementation review. In addition, HVO will provide assistance to RAPs to connect with family and Country to facilitate the transfer of knowledge and culture to younger generations. The form of this assistance will be developed in consultation with these groups and documented within the revised ACHMP.

Table 6.1 Social enhancement strategies

Theme	RAP feedback	Proposed mitigation measure
Mental Health and Addiction	• Previously, the Government has opened rehabilitation facilities, only to close them down again shortly after. • For residents of Singleton and Muswellbrook, the closest mental health facilities are almost an hour away (in Newcastle). There aren't enough mental health /rehabilitation facilities in Newcastle, or even NSW. • There have previously been government funded facilities that incorporate western and traditional healing methods, especially in regard to mental health; however, they are no longer operational. • All the local initiatives put in place keep losing their government funding, however there is still a need for them to be in place. • There would be value in having men's/women's groups – facilitated mental health programs. • Mental health initiatives targeted towards Aboriginal youth are recommended. • Support should be given to support Aboriginal people to be job ready and mentally fit for work. Empowering confident youth in the workforce. • There is Aboriginal identified support for drug rehabilitation. People want to get off drugs, however there is no support that truly understand Aboriginal history and incorporates traditional healing methods with western medicine. • Suggestion that mentoring / sponsorship programs could be developed to support recovering addicts.	To assist in mental health and addiction HVO would consider providing funding to support projects which target mental health and addiction support to Aboriginal people in the region. This would be considered as part of the Closing the Gap funding program to be detailed in the SIMP for the Project.

6.4 Management of culturally modified trees

6.4.1 Additional information

Five culturally modified trees were identified as part of the ACHAR (CM 41 [37-2-1544], HVO-1656 [37-6-3024], TR178- ST1 [AHIMS #37-3-1628], TR212-ST1 [AHIMS #37-3-1629], and TR216-ST1 [AHIMS #37-3-1635]). While two of these were originally proposed for impact associated with the construction of the Lemington Road re-alignment, TR212-ST1 and TR216-ST1 (EMM 2022), following further project refinement (Section 5), all of these sites will be avoided by the Project.

Since no impacts are proposed or expected to the identified culturally modified trees (Appendix F), a regional review of this site type and their management has not been undertaken. A review of the AHIMS database indicates that there are some 21 culturally modified trees within the broader search area (Section 4.3.1). Of these five have been assessed as non-cultural, while seven have been previously destroyed. As such, within the immediate locale, some nine remain. The Project would not change these values.

In relation to removal of tree bark for burials, Aboriginal people removed large bark slabs as stiff sheeting from the trunks of various eucalyptus trees, such as the river red gum (*Eucalyptus camaldulensis*) and other species with relatively clear bark trunks (Clarke 2012). This process has left permanent scars, which is the case whether the bark was removed as sheeting for a shelter, a burial container (i.e., when for making into a cylinder called 'bone boxes in the Top End) or canoes. Smaller scars, such as for making bark containers, would have been apparent for some decades after they had been made, but eventually the scar would have healed over. In the case of making burial shrouds from flexible sheeting cut from paperbark trees (*Callistemon* & *Melaleuca* species), these generally would not have left a scar on the tree, as the cambium layer has not been removed and so therefore the bark has eventually regrown from within the area exposed (Clarke 2012). In terms of the present examples of culturally modified trees, the old scars, dating from no later than the early years of European settlement, typically show considerable regrowth around the edges and a central core of exposed heartwood that is heavily weathered. These culturally modified trees are generally located near seasonal campsites and burial grounds, and therefore often next to watercourses and in the proximity of surface finds of work stone materials.

With the potential exception of TR178-ST1, none of the identified culturally modified trees appear to reflect the potential tree species identified above (being mainly grey box or Narrow leaved iron bark), nor exhibit a scar that would indicate the removal of 'large bark slabs'. In the case of TR178-ST1, it must be noted that one of the arbori-culturists indicated that it was a non-anthropogenic tree wound, while neither field survey nor discussions with Aboriginal participants indicated it was associated with a nearby burial. Such sites would nonetheless be managed in the Aboriginal cultural heritage management plan (ACHMP) outlined in Section 6, and necessary supervision or monitoring implemented if necessary.

6.4.2 Recommended management measures

All management of culturally modified trees would be incorporated into the ACHMP (Appendix F). Given avoidance of these sites types is proposed, the ACHMP would include the following guiding principles in the unlikely event that they would be adversely affected either through the Project and/or natural processes:

- Undertake an archival recording of the site in accordance with Heritage NSW (2006) *Photographic recording of heritage items using film or digital capture* guidelines or equivalent.
- The tree and predicted root bowl dimensions should be suitably demarcated through suitable demarcation prior to construction activities. Protective boarding should be established as needed around the tree's trunk where construction activities are within 5 m.
- The establishment protective boarding should be overseen by a heritage professional and/or representatives of the Aboriginal community.

- Construction personnel should be briefed on the location and management requirements of these sites as part of the on-site inductions or as relevant to their specific task.

In the event of adverse effects through natural or anthropogenic activities, the tree could be removed and relocated in consultation with RAPs. In this instance, the following methods would be adopted (to be refined and finalised in discussions with Aboriginal participants):

- establish safe work surface around the tree
- apply measures to support the trunk of the tree for the duration of the works, and to enable removal of crown, and subsequent movement of the trunk
- Use appropriate equipment to remove the upper portions of the crown and trunk incrementally until the only the trunk ~1 m above the scar remains
- undertake excavations around the base of the tree to enable either removal with the root bole intact, or more commonly to provide enough space to enable sawing of trunk and/or roots a suitable distance below the scar (ideally >1 m) to loosen the tree
- use the mobile crane (or equivalent) to lift the remaining trunk onto a suitable truck. The truck should have a bed of tyres and geofabric material installed to ensure the trunk is protected in transit
- once the trunk is in place, secure appropriately, and relocate to the agreed repository
- the trunk would be moved to the HVO Cultural Heritage Storage Facility where suitable management of the trunk is implemented, including the use of moisture absorbing crystals and/or regular monitoring to ensure long term survival of the tree
- the tree removal would be directed by the arboriculturist with assistance of specialised tree-loping team and ancillary support from the proponent. It would be undertaken with the participation and over-sight of the heritage consultant and representatives of the registered Aboriginal parties.

6.5 Archaeological mitigation (salvage excavations)

The specific archaeological excavation requirements for the Project would be developed and incorporated into the ACHMP. This section provides an indicative *guide* for research questions and objectives, approach, methods, and quantum of archaeological salvage that may be proposed during the development of the ACHMP should development consent be granted for the Project. Further, to align with co-design principles, the ACHMP would be developed in consultation with the registered Aboriginal parties.

6.5.1 Research aims and objectives

The following section provides a proposed archaeological program – or mitigation approach – to offset and minimise the harm to cultural materials that would result from the Project. It has been designed to align with and build upon the findings of the ACHAR (EMM 2022); and recover a large cultural assemblage through salvage excavation for preservation in record and future curation. To date, the ACHAR has been limited to test excavations composed of test pits systematically spread across small parts of the Project area.

While this approach proved robust in providing an archaeological model for the locale, the approach remains a fairly coarse resolution (spatially and temporally) with limited investigation of key heritage foci areas identified in Section 4.4.2 and 6.5.3. As such, additional excavations of the proposed development allow for an improved investigation of areas of higher archaeological value within the Additional disturbance area, and allows finer resolution recovery of these key cultural deposits to further inform the spatial and temporal use of the region in the past.

Overall, the aims of the salvage excavation are to consider the following:

- To answer and/or resolve the research questions outlined in Section 6.5.2 in relation to the formative and stratigraphic nature of the deposits, and what they can tell us about Aboriginal populations in the past.
- To use fine resolution excavation and environmental analyses to further characterise the archaeological deposits relating to the past Aboriginal occupation. This includes a greater understanding of resource exploitation; technological attributes; identification of any change through time in spatial and chronological phases of activity; and site formation processes.
- To obtain an appropriate assemblage of Aboriginal objects, for detailed documentation and long-term curation, within the spatial limits of the Project (i.e. preservation in record).
- To allow greater cultural association between the site and the registered Aboriginal parties (i.e. 'cultural salvage') through involvement in the excavation, and options for the interpretation of the results as part of the overall project.
- To ensure that the Project can proceed with minimised risk of unknown or unexpected significant Aboriginal objects/features being harmed during activities.
- To integrate with the recommendations of the ACHAR to provide a holistic and comprehensive understanding of the archaeological landscape and cultural materials within it.
- To inform any future interpretation for the Project.

6.5.2 Research questions

The following provide a series of research questions that should be further considered and/or answered as part of any archaeological investigative and salvage excavation program:

- What is the chronological age of the various soil profiles encountered?
    - Are Pleistocene deposits present, and if so what is their spatial extent and depths (within the Additional disturbance area)?
    - Can a robust chronology be developed from the texture contrast soil profiles to further improve the hypothesis that they are <5,000 years in age?
- What is the age, composition, technological attributes, and significance of cultural materials within the Additional disturbance area?
    - Are any of the cultural materials of Pleistocene age?
    - Can we identify changes in technology, procurement and general activities through time?
    - Can inter and/or intra- variation within the cultural assemblage be identified? How do these variations inform the timing and specific activities at each locale investigated?

- Can the spatial extent of discrete past activities (i.e. site size) be determined to inform the potential distribution of cultural materials elsewhere in the Project area and environs; and to further inform any subsequent salvage excavation requirements?

- What are the environmental characteristics associated with the distribution of cultural materials within the Additional disturbance area?

  - Can the formative processes of the stratigraphic profile provide information on the nature, movement and/or survivability of the cultural materials?

  - Can further understanding of frequently recovered Holocene cultural materials in Pleistocene deposits be undertaken, characterised and quantified?

  - Can pollen, phytoliths, geochemistry and/or other analyses inform the development of the environment, and Aboriginal people's activities within them?

  - Are there other key factors in the distribution and extent of the material culture within the area?

- How does the additional excavations along the edges of various creeks and tributaries inform the zones of archaeological sensitivity developed for the Project area? Are they robust, or require further modification?

- What are the cultural, social and public values associated with the cultural materials in the Additional disturbance area? Does the excavations support or require modification of the significance and values previously assigned to Aboriginal sites, places and/or locales within the Additional disturbance area?

6.5.3 Aboriginal sites for focussing archaeological excavation

Based on Sections 4 and 5, archaeological investigative and salvage excavations should be focussed upon identified sites with high density artefact densities and/or containing stratified cultural deposits, *and* where proposed for impact.

Overall, some 11 sites of high or moderate significance are proposed for complete or partial impact as part of the Project (Section 5; Appendix F). Several of these have limited evidence of subsurface deposits, including HC20 (37-2-0796) and CM 2 (37-2-1505), and are therefore not considered for archaeological excavation. (Recommendations for these sites remain outlined in the ACHAR; Appendix F). The remaining nine sites reflect discrete cultural locations within geomorphological deposits of archaeological value, including (Figure 6.1):

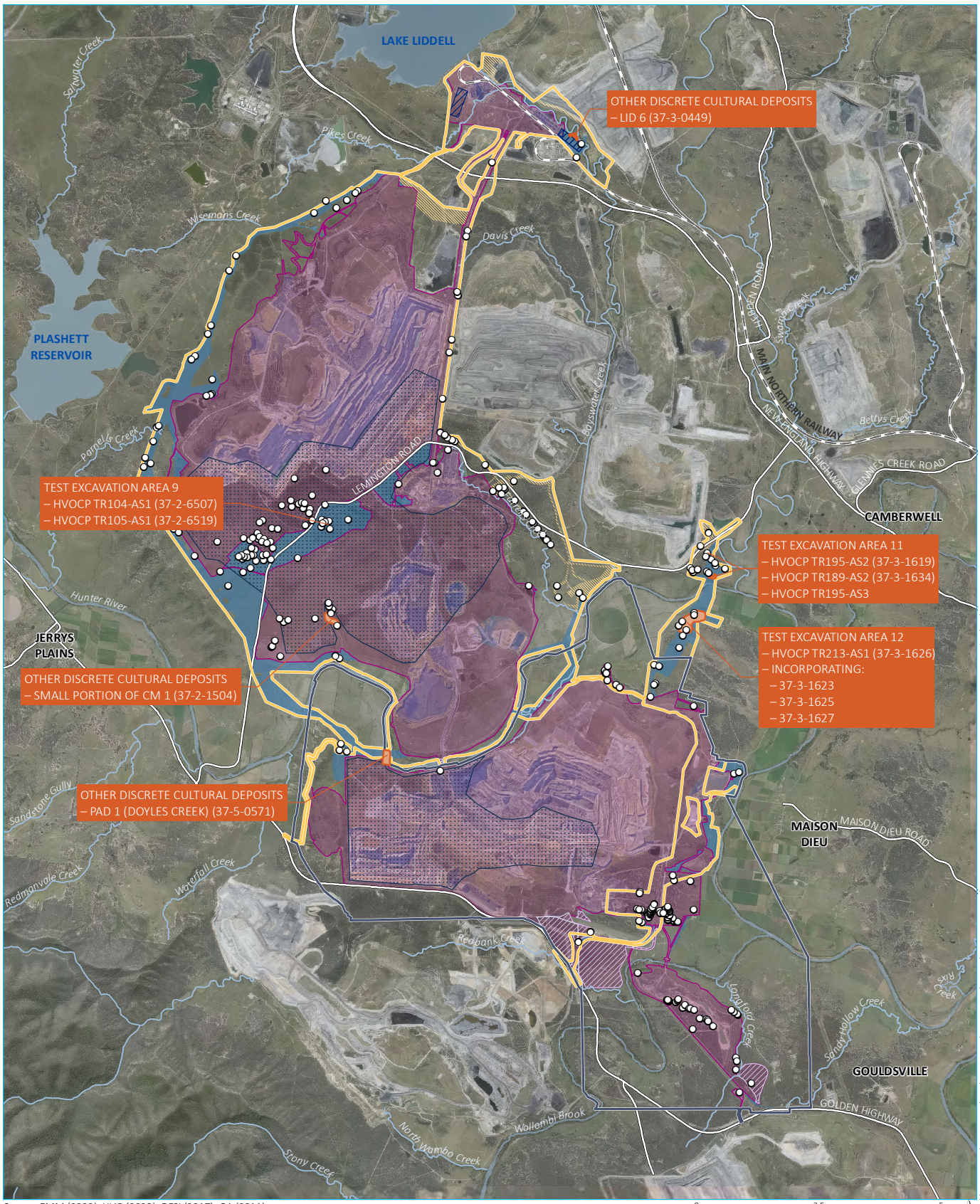
- Test Excavation Area 9 (HVOCP TR104-AS1 [37-2-6507] and HVOCP TR105-AS1 [37-2-6519])

- Test Excavation Area 11 (HVOCP TR195-AS2 [37-3-1619], HVOCP TR189-AS2 [37-3-1634], and HVOCP TR195-AS3 [37-3-1649])

- Test Excavation Area 12 (HVOCP TR213-AS1 [37-3-1626, and incorporating 37-3-1623, 37-3-1625, 37-3-1627])

- Other discrete cultural deposits where impacts are proposed, including the partially destroyed PAD 1 Doyles Creek (37-5-0571), LID 6 (37-3-0449), and a small portion of CM 1 (37-2-1504).

These sites and their broader geomorphological deposits would be subject to archaeological excavations as outlined in Section 6.5.4. Given the findings of the geomorphological assessment, Area 9 is also proposed more broadly for investigation to determine whether deeper Pleistocene deposits are present, and whether they contain cultural materials.



Source: EMM (2023); HVO (2023); DFSI (2017); GA (2011)

0 2.5 5 km

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Approved disturbance area - other mine
- Previously approved area not retained
- Proposed mining area
- Product stockpile
- Community artefact collection
- Archaeological salvage excavation proposed

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

Proposed archaeological mitigation measures

HVO Continuation Project
Aboriginal Cultural Heritage Assessment - Addendum
Figure 6.1

EMM creating opportunities

6.5.4 Approach and methods

Given the spatial extent of several of the sites, archaeological excavation would typically include an investigative phase followed by a salvage excavation where cultural materials and/or findings meet certain thresholds. The approach and methods would be undertaken to inform and answer the research questions, as well as to recover a substantive portion of the cultural materials that may be lost due to development activities.

Two investigative methods are proposed below to account for the different geomorphological characteristics encountered across the sites proposed for archaeological mitigation. Notably, Area 9 requires an understanding of deposits that cannot be easily undertaken through manual methods, and as such a mechanically assisted program is proposed. In contrast the remaining sites can all be suitable investigated through manual methods, and their cultural deposits, especially their depths, better understood.

i Salvage excavations

a Area 9

The investigative archaeological methods to be proposed for Area 9 would be as follow:

- Salvage Excavation
    - Excavation would be undertaken with the assistance/advice of a geomorphologist to inform the depths of excavation, and areas where cultural material may be expected to be present; and this advice would be used to refine the excavations as they progress.
    - A row of ~3 m^2 test pits would be established across the identified site curtilage + 20 m buffer where within the Additional disturbance area using a differential GPS device (or equivalent). Test pits would be spaced every 20 m across these areas. The larger test pit size would enable installation of shoring systems where required.
    - All test pits would be dug by a mechanical excavator using a flat bladed bucket. (Toothed bucket may be adopted in situations were hard rock or indurated sediments are encountered). Each test pit would be given an alpha-numeric label for identification purposes.
    - All excavation would be undertaken in ~20 cm spits to the depths advised by the geomorphologist. Nominally, this would be to: i) the depth of the underlying geology, or ii) to the full extent of the excavator reach (~3m).
    - All sediment will be stockpiled in its respective spits, labelled according to its assigned test pit number and recorded and documented. Fifty per cent (50%) of each stockpile would be sieved through a 5 mm aperture mesh, and any cultural material recovered, bagged and labelled for subsequent analysis and curation. In the event that Aboriginal objects are recovered, the remaining 50% of the sediment from that spit would be sieved to maximise cultural material recovery.
- Field Documentation
    - All test pits would be documented using photographic records, written descriptions and scaled drawings.
    - Soil profiles would be recorded in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010), including scaled drawings, photographs, and written descriptions.

- Soil samples may be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information. Optically Stimulated Luminescence (OSL) samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.

- Reduced levels of the top and bottom of the test pit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.

We highlight that excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with Project RAPs and HVO as the conditions in the field and nature of the excavations develop. This includes the movement/discontinuance of test pits to avoid existing obstacles, buried services and disturbances.

b Areas 11, 12, 37-5-0571, 37-2-0449, and 37-2-1504

The investigative archaeological methods for these sites (Section 6.5.3) are proposed as follows:

- Salvage Excavation

  - A grid of 1 m^2 test pits would be established across the identified site curtilage + 20 m buffer (Figure 4.3; Figure 5.2) and within the Additional disturbance area using a differential GPS device (or equivalent). Test pits would be spaced systematically every 10-20 m across these areas.

  - All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required Excavation would be undertaken as 1m^2 units. Each square would be given an alpha-numeric label for identification purposes.

  - All excavation would be undertaken in 10 cm spits to the depth of under-lying clay subsoil (~50 cm below surface).

  - All sediment would be placed in buckets, labelled according to its assigned test pit number and spit, and recorded and documented. All sediment would then be sieved through a 5 mm wire aperture mesh, and any historic and/or Aboriginal cultural material recovered, labelled and bagged for subsequent analysis and curation.

- Field Documentation

  - All test pits would be documented using photographic records, written descriptions and scaled drawings.

  - Soil profiles would be recorded in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010), including scaled drawings, photographs, and written descriptions.

  - Soil samples may be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information. OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.

- Reduced levels of the top and bottom of the test pit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.

Excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with the Project RAPs and HVO as the conditions in the field and nature of the excavations develop. This includes the movement/discontinuance of test pits to avoid existing obstacles, buried services and disturbances.

ii Thresholds for archaeological salvage

The initiation of salvage excavation would *only* be undertaken in areas where the thresholds outlined below are met. The location of salvage excavations would be determined at the completion of the investigative phase outlined above and at those locations where the greatest potential for answering the research questions (Section 6.5.2) is identified.

The thresholds for salvage expansion would include:

- Stone artefact densities greater than 30/m^2 and therefore indicative of past occupation based on our broader understanding of the Project area (Section 4.5). Values of several hundreds and even thousands were documented as part of the ACHAR, and as such higher values would be considered more favourably.
- Where evidence of multiple phases of past activity is identified through changing raw material types and/or distinct technological attributes at different depths within the soil profile. Currently two phases of past activity have been documented, preference would be given to locations that demonstrate this pattern and/or where greater number of phases is identified.
- Where dense concentrations of cultural materials are discovered at depths that may be considered of Pleistocene age and/or at depths that may be of this time period.
- Where rare or unique stone artefacts and/or other archaeological material is recovered.
- Where unique and/or rare archaeological features (e.g. hearths, cooking pits, etc) are identified.
- Where identified cultural deposits have the ability to inform the research questions Section 6.5.2.

iii Archaeological salvage excavation

Where thresholds are met (Section 6.4.4ii), additional archaeological excavations would be undertaken in these identified locations. These works are proposed to consist of contiguous open area salvage excavation using higher resolution recovery techniques.

It is considered that each open area salvage excavation would be a maximum of 25 m^2 (5 x 5 m), and up to 10 would be applied across the Project area where thresholds are met. Whether salvage excavations exceed 10 locations would also be determined based on the findings of the investigative program and to answer the research questions and/or recover significant cultural materials. The number, size, extent and location of open area excavations, and whether they continue beyond the 250 m^2 provided here would be developed based on thresholds, significance of the findings, and in discussion with the Excavation Director, HVO and Aboriginal participants.

The following methods are proposed for all salvage excavations:

- Excavation
  - Establishment of a 5 x 5 m grid centred on area/s of archaeological interest proposed for expansion following investigations in Section 6.4.4i using a hand-held Leica RTK CS10/GS08 survey grade Differential GPS device (or equivalent).

- Where cultural deposits forming the focus of investigation are found at depth:
    - consideration to the bulk removal/discard of upper parts of the soil profile to allow the program to focus on the deposits of interest; and/or
    - consideration to the bulk removal/discard of any surrounding deposits to allow safe access/egress to the works area (such as benching or sloping).
- All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required. Excavation would be undertaken as $1m^2$. Each square would be given an alpha-numeric label for identification purposes.
- All excavation would be undertaken in 5 cm spits to the depth demonstrated to be culturally sterile within the investigative stages of the archaeological excavation (Section 6.5.4i).
- All sediment would be placed in buckets, labelled according to its assigned test pit number and spit, and recorded and documented. All sediment would then be wet-sieved through a 3 mm wire aperture mesh, and any historic and/or Aboriginal cultural material recovered, labelled and bagged for subsequent analysis and curation.

• Field Documentation

- All excavations would be documented using photographic records, written descriptions and scaled drawings.
- Soil profiles would be recorded in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010), including scaled drawings, photographs, and written descriptions.
- Soil samples would be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information. OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.
- Reduced levels of the top and bottom of the test pit, and at the top of each fourth spit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.

Excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with the Aboriginal participants and proponent as the conditions in the field and nature of the excavations develop. This includes the movement/discontinuance of test pits to avoid existing obstacles, buried services and disturbances.

6.5.5 Post excavation analysis and reporting

The post-excavation analysis (incorporating data from the excavations) would be designed to address the research objectives and aims based on the results of the excavation. Typically, these activities would occur following any field campaign and once the development activities would commence. These would include, but not be necessarily limited to the following:

- Stone artefact analysis, including descriptive and functional recording of the assemblage, as well as interpretation of past activities, post-depositional change and comparison with other nearby data. Conjoining may also be attempted where sufficient cultural materials have been recovered. Geochemical analysis of stone artefacts for provenance and other material source research questions using X-Ray Fluorescence, Inductively Coupled Plasma Mass Spectrometry and/or Thermal Ionisaton Mass Spectrometry may also be undertaken. These samples would be processed either at Australia's Nuclear Science and Technology Organisation (ANTSO), University of Wollongong and/or University of New South Wales.

- Other human indicators, including the consideration of sediment DNA and/or faecal biomarkers. While of limited commercially available, Consiglio Nazionale delle Ricerche (National Research Council of Italy) Institute of Polar Sciences (CNR-ISP), Venice, Italy and the Australian Centre for Ancient DNA, University of Adelaide would be contacted to explore the interest and feasibility to undertake these types of analyses. These are both cutting edge techniques that can further inform the presence of past human activity, but their application in cultural heritage management has not been explored to date in Australia.

- Geochronology, including the processing and analysis of samples to inform the absolute age of the soil profile and/or cultural assemblage recovered. This would include Optically Stimulated Luminescence ages, as well as radiocarbon samples were recovered. While large number of these samples are likely to be collected, given the prohibitive cost of processing, it is probable that a small number of ages would be obtained in a small number of master-sequences to inform the broader archaeological program. The samples would be processed by either University of Gloucestershire and/or University of Wollongong.

- Geochemistry and soil analysis that would be used to further inform and interpret the formation history of the soil profile from which cultural materials are recovered. This would include the use of Itrax X-ray Fluorescence (XRF) core scanning methods at ANTSO, as well as particle size analysis to explore changes in the alluvial and colluvial history of the river corridor.

- Palaeo-environmental analysis, including palynology, phytolith analysis and/or charcoal analysis to explore the past vegetation and fire regimes that may have influenced and/or modified by past human activity. These would utilise the same samples collected for geochemistry and/or sampling and sent to a range of university specialists in these fields to process and interpret the results.

- Reporting that would provide information on the field investigations, compilation and synthesis of the post-excavation analyses, and interpretation of the results to inform the past activity and use of the region.

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Appendix A

Heritage NSW – Advice on Environmental Impact Statement (EIS) (SSD-11826681 and SSD 11826621)

EMM
creating opportunities

Joe Fittell
Team Leader
Energy, Resources & Industry Planning Assessments
Email: Joe.Fittell@planning.nsw.gov.au

Your reference: SSD-11826681 and SSD-11826621
Our reference: DOC23/60225 and DOC23/60557

Dear Joe,

Heritage NSW - Advice on Environmental Impact Statement (EIS) - State Significant Development (SSD-11826681 and SSD-11826621) – HVO North and South Open Cut Coal Continuation Project

Thank you for your referral uploaded to the Major Projects Portal on 30 January 2023 seeking advice on the above State Significance Development (SSD) proposals. This advice is for both the HVO North and HVO South Open Cut Coal Continuation Projects as a single Environmental Impact Statement (EIS) was provided in support of both SSDs.

In preparing this advice the following document has been reviewed:

- Appendix N – Aboriginal Cultural Heritage Assessment– prepared by EMM, dated December 2022.

Based on the Aboriginal Cultural Heritage Assessment Report (ACHAR), provided in support of the EIS, there is insufficient information provided for Heritage NSW to advise the Department on whether the management recommendations are adequate and if the ACHAR substantially complies with the SEARs. In order to establish the nature and extent of the Aboriginal cultural heritage values proposed for impact by this development additional information and, possibly, further investigations are required.

We have included detailed advice in **Attachment A** and recommended draft Conditions of Approval in **Attachment B**. Heritage NSW is available to provide further advice on any additional assessment work conducted. Please note that the above comments relate only to Aboriginal cultural heritage regulation matters. Heritage NSW may provide separate comments in relation to environmental heritage considerations.

If you have any questions regarding these comments, please contact Corey O'Driscoll, Senior Assessments Officer, at Heritage NSW on 6229 7079 and corey.odriscoll@environment.nsw.gov.au.

Yours sincerely

Sam Gibbins
A/Manager Assessments
Heritage NSW
Department of Planning and Environment
(As Delegate under *National Parks and Wildlife Act 1974*)
Date: 27 February 2023

Attachment A – Detailed Aboriginal Cultural Heritage Advice

Aboriginal Cultural Heritage Assessment Report (ACHAR)

- Undertaken as a requirement of the SEARs was the re-excavation and dating of AHIMS site #37-2-1877 (Carrington Mine Colluvial Deposit 1 [CM-CD1]), which identified that the lower deposits dated between ~9,000-16,000 years ago. The test excavation program across the project area identified four areas (5, 9, 11, and 12) that contained a minimum of 50 cm of sediment and relatively high numbers of artefacts. However, the ACHAR did not discuss whether, in light of the results from CM-CD1, these four areas had the potential to contain Pleistocene deposit.
    - Further information is also required on the extent that the landform associated with CM-CD1 may extend further into the disturbance area and whether any potential sub-surface archaeological deposits may be impacted.
- There are several examples within a regional context (e.g., Spur Hill, Wambo, along Wollombi Brook, Ravensworth Mine) where large numbers of artefacts and/or Pleistocene aged material have been identified on terraces in the vicinity, but not directly adjoining, the Hunter River, Wollombi Brook, and Bowmans Creek. Further explication is required in Section 5 of the ACHAR on the potential for Pleistocene aged deposits within the project area. Following this updated assessment, the predictive model may require updating and additional areas may require further investigation.
- Following the test excavation results, dating of CM-CD1, and updated Section 5, detailed assessment and mapping are required of potential localities within the project area that have not been subject to test excavations that may contain highly significant sub-surface materials.
- Further details are required on the proposed salvage excavation methodologies for areas 5, 9, 11, and 12 as well as any additional areas identified in the above reassessment. The methodology should also include provisions for redesign and avoidance if the materials identified are of high local and/or regional significance.
- Heritage NSW notes that the Aboriginal Heritage Information Management System (AHIMS) search is greater than 12 months old at the time of submission. Heritage NSW requires, as per Requirement 1b of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) ('the *Code of Practice*'), that AHIMS searches are contemporaneous with the project. We consider that AHIMS searches of over 12 months old need to be updated. Please provide an updated AHIMS extensive search.
- Further details are required regarding the three scarred trees identified as part of the ACHAR, including:
    - Provisional management options for the scarred trees in the event of their removal;
    - Further explication on the number of scarred trees that have been impacted in a regional context and the different management options that have been used for their removal and/or conservation; and
    - Further information on the potential uses of the removed bark from the scarred trees, as there is potential for use as a burial covering.
- Consideration must be given to the potential impacts the project may have on the Aboriginal cultural heritage values associated with the Section 10 application under the *Aboriginal and Torres Strait Islander Heritage Protection Act (1984)* that encompasses several areas in the HVO North Project Area. Additional archaeological investigation may be required within these areas, subject to the Section 10 application.

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- Generally, Heritage NSW does not permit vehicle surveys as a replacement for pedestrian surveys, as per Requirement 5 of the *Code of Practice*. It is understood that vehicle survey was undertaken where the land was inaccessible owing to dense vegetation cover (thistle) and where heavily disturbed. Please clarify where vehicle survey was employed owing to past disturbances and where it was used owing to inaccessibility. Further, please provide additional information on whether these areas, and other areas not subject to survey, will require survey if conditions change prior to proposed impacts.
- Please update mapping of test pit locations to include the number of artefacts recovered in each unit.
- Please clarify the extent of expected disturbances within the transmission line relocation areas.

Consultation

- Please provide additional documentation of the consultation process as there may be a gap of 10 months between November 2021 and September 2022. Heritage NSW requires that consultation with Registered Aboriginal Parties (RAPs) is continuous. Under our guidelines, breaks in consultation of over six months may not constitute continuous consultation. If an unexplained break of greater than six months has occurred, the applicant may be required to restart the consultation process.
- Please provide evidence that the Test Excavation methodology was provided to the RAPs. The ACHAR notes that the methodology was discussed during an onsite meeting with the RAPs present, however it is unclear if the methodology was provided in writing to all RAPs.
- Further information is required on the consultation undertaken with the Plains Clans of Wonnarua People (PCWP). It is understood from the details provided in the ACHAR that PCWP chose to not provide further information as part of the consultation process. However, from the provided correspondence and information in the ACHAR it is apparent that additional discussions were had, which have not been provided in the ACHAR.
- Further explication is required on the comments made by Wattaka Wonnarua Cultural Consultants Services (represented by Mr. Des Hickey) regarding the details provided in the Cultural Values Report. While we understand that Wattaka Wonnarua Cultural Consultants Services were afforded the opportunity to participate, Heritage NSW would recommend that the assessment of Cultural Values and further interviews be an ongoing process to ensure additional Wonnarua voices are included.

Significance Assessment

- The significance assessment stated that 84% of all extant Aboriginal cultural heritage sites to be impacted by the development are of low significance. While a number of these sites are isolated artefacts and/or low-density artefact scatters, many of the sites are part of larger site complexes. The ACHAR and Significance Assessment must take into consideration the influence these larger site complexes (including destroyed sites) have on the overall significance of the sites and the landform within which they are situated.
- Please clarify and map where impacts have occurred to sites, the relevant approvals impacts were conducted under, and the current status of these approvals (e.g., expired, expiry date). It is unclear in the significance assessment and Appendix I of the ACHAR, which sites have been impacted and to what extent this has impacted their designated significance. Please provide additional justification on how works conducted under prior approvals have influenced the significance of applicable sites.

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Consideration of Ecologically Sustainable Development (ESD) and cumulative impact

The ACHAR argues that ESD and cumulative impact will be addressed through the conservation of materials *ex situ* and that as many of the sites are considered to be of low scientific significance this is appropriate. However, as explained above, we have concerns about the accuracy of the significance assessments that may limit the reliability of this argument. Limitations in the considerations of ESD and cumulative impact include:

- The ACHAR argues that cumulative impact will be managed through conservation of materials collected as part of the salvage program. Little consideration was given to the additional loss of at least 220 known sites as a result of the project. When coupled with the loss of over 700 sites in the local area, the cumulative impact to Aboriginal cultural heritage is quite large. The ACHAR argues that *ex situ* conservation may be comparable to *in situ* preservation, however, unlike the Kiribati case study provided, the impacts from the project are avoidable.
- There is limited consideration for the avoidance and conservation of significant ACH sites. The ACHAR outlines that 84 sites will be avoided by the project, including one Pleistocene aged site, however, most of these have been deemed to be of low scientific significance with a greater number of moderate to high significance sites being impacted rather than conserved.

Aboriginal Cultural Heritage Management Plan (ACHMP)

- Heritage NSW recommends that an ACHMP be developed and implemented for the project. Heritage NSW recommends the requirement for an ACHMP should be included in the Conditions of Approval and that an ACHMP be created and approved by Department of Planning and Environment prior to any development activities occurring within the project area. Recommended conditions for an ACHMP have been included in Attachment B.
- Included in the ACHMP should be provisions for project redesign if sites of high local and/or regional significance, as agreed to by the RAPs, are identified during the course of salvage excavations.
- Please clarify the procedure that HVO will undertake in the transition from Aboriginal Heritage Impact Permits (AHIPs) to an ACHMP. For example, will the AHIPs be surrendered following project approval and/or will the AHIP methodologies be incorporated into the ACHMP?

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ATTACHMENT B: RECOMMENDED DRAFT CONDITIONS FOR ABORIGINAL CULTURAL HERITAGE

Below are our recommended draft conditions for the protection of Aboriginal Heritage and the implementation of an Aboriginal Cultural Heritage Management Plan.

Aboriginal Heritage

1) All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects except as authorised by this approval.
2) The Registered Aboriginal Parties (RAPs) must be kept informed about the SSD. The RAPs must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the SSD.

Aboriginal Cultural Heritage Management Plan

3) Prior to carrying out any development, the Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
    a) be prepared by suitably qualified and experienced persons;
    b) be prepared in consultation with the RAPs;
    c) be reviewed by Heritage NSW;
    d) include a methodology for a test excavation and salvage excavation program (with RAP participation) for sites to be impacted with consideration to understanding site characteristics, and local and regional archaeological context;
    e) include a description of the measures that would be implemented for:
        i) protecting the Aboriginal heritage items identified within the project footprint or items located outside the approved development footprint, including fencing of the Aboriginal heritage items prior to commencing construction;
        ii) salvaging and relocating the Aboriginal heritage items located within the approved development footprint;
        iii) salvaging, relocating or avoiding any Aboriginal heritage items located within the approved development footprint identified during test excavations of the site;
        iv) include updated baseline mapping of the heritage items within and adjoining the development disturbance footprint;
        v) include updated mapping of all areas that have been and will be subject to monitoring, test excavations, and salvage excavations;
        vi) include conservation options for the mitigation and avoidance of impacts to AHIMS registered sites situated within and outside the project footprint;
        vii) prepare a methodology outlining when RAPs must be notified of changes to the Aboriginal Cultural Heritage Management Plan;
        viii) include a procedure for assessing significance of Aboriginal Objects identified during the monitoring, test excavations, and salvage excavation and ensure that the management and mitigation measures are considered for all sites, and with special consideration for those of high significance;
        ix) include a strategy for the long-term management of any Aboriginal heritage items or material collected during the test excavation or salvage works;
        x) include an Unexpected Aboriginal Objects and Human Remains Procedure to manage unexpected Aboriginal objects and cultural values, and human remains, in accordance with any guidelines and standards prepared by Heritage NSW.

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(1) the Unexpected Aboriginal Objects and Human Remains Procedure must be prepared by a suitably qualified and experienced heritage specialist in relation to Aboriginal cultural heritage, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010) and submitted to the Planning Secretary for information no later than one (1) month before the commencement of construction.

(2) the Unexpected Aboriginal Objects and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction.

xi) ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions; and

xii) ongoing consultation with the RAPs during the implementation of the plan; and

f) at the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitably qualified expert. The Aboriginal Cultural Heritage Excavation Report(s) must:

i) be prepared in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, 2011, and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, 2010; and

ii) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds).

iii) The RAPs must be given a minimum of 28 days to consider the draft report and provide comments before the report is finalised. The final report must be provided to the Planning Secretary, Heritage NSW, the relevant Councils, and the relevant Local Aboriginal Land Council, and the RAPs within 24 months of the completion of the Aboriginal archaeological collections and excavations (both test and salvage).

g) where previously unidentified Aboriginal objects are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects must not recommence until Heritage NSW has been consulted with. The measures to consider and manage this process must be specified in the Unexpected Aboriginal Objects and Human Remains Procedure and include registration in the Aboriginal Heritage Information Management System (AHIMS).

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Appendix B
Aboriginal consultation

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HUNTER VALLEY OPERATIONS

17 March 2021

Dear Registered Aboriginal Participant,

Hunter Valley Operations Continuation Project
Proposed Archaeological Test Excavation Program

1 Introduction

Thank you for your continued involvement in Aboriginal community consultation for Hunter Valley Operations Continuation Project (the Project) proposed by the Hunter Valley Operations (HVO). This letter provides information about a proposed program of archaeological test excavation as part of the Aboriginal Cultural Heritage Assessment (ACHA) currently being prepared for the project by EMM Consulting Pty Limited (EMM) on behalf of HVO. The test excavations have been developed following recent field survey that identified areas of potential sub-surface archaeological deposits. We welcome your feedback on the content of this letter prior to **14 April 2021**.

EMM plans to conduct the fieldwork with the assistance of representatives of the registered Aboriginal parties (RAPs) and will be starting on approximately **15 April 2021**. The exact dates of the fieldwork including a roster for Register Aboriginal Party (RAP) fieldworker representatives will be provided closer to the proposed start date.

2 Proposed excavation methodology

2.1 Overview

EMM initially presented proposed assessment methodology for the project to RAPs in November 2020. This outlined that test excavation may be required as part of the project ACHA. EMM stated that the test excavation would follow the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (the Code) (DECCW 2010).

Through recent archaeological surveys of the Project area undertaken between December 2020 and February 2021, we have identified a number of locations where potential for sub-surface archaeological deposits is considered likely. Such excavations were also foreshadowed in our recent Aboriginal Focus Group meeting in December 2020.

EMM proposes to undertake test excavation within 12 areas in accordance with the Code to characterise the potential archaeological deposit in these locations. These locations are provided in Figure 1, with the separate areas defined in greater detail in subsequent Figures provided. The results of the test excavation will determine the significance of these sites and provide the basis to form suitable management measures. The primary aims of the excavation will be to establish the presence or absence of subsurface artefacts in each area, their frequencies and distribution and the potential significance of the deposits. A small portion of the proposed test excavation program will also focus on verifying predictions of low archaeological potential to ensure the model developed is robust.

HVO may decide to exclude one or more of the sites from the development footprint in the period between when this letter is issued to RAPs and the commencement of the proposed test excavation. If this occurs, test excavation will not be completed at the sites designated for avoidance.

PO Box 315, Singleton, NSW 2330

1011 Lemington Road, Ravensworth, NSW 2330

HV Operations Pty Limited ABN 76 606 478 399

Alternatively, if one or more sites with potential archaeological deposits (PAD) are included in the development footprint, they would be added to the program.

2.2 Proposed methodology

The proposed excavation method will follow the Code and will generally be as follows:

- all test excavation pits would be spatially located using a differential GPS device, which would also provide elevation data;
- manual excavation of 0.25m² test pits (50x50cm) in a systematic grid and/or linear transects across areas of archaeological interest (see Figure 1);
- expansion of test pits in 0.25m^2 test pits up to a size of 3m^2 in any one location where further information or characterisations is deemed necessary. Given the timeframes of the project, it is likely only a small number of locations would be achievable for expansion;
- all excavation would use hand tools. Excavation of the first unit would be in 5cm spits, with subsequent excavation allowed in 10cm spits or according to stratigraphy (whichever is smallest) depending on the results of the first unit. Manual excavation would continue to either:
    - i) the base of the cultural deposits;
    - ii) to the depth of the underlying geology; or
    - iii) to the maximum depth possible via hand excavation (likely ~ 80cm).
- sieving of all manually excavated material through a 5mm sieve;
- reduced levels of the top and bottom of the test pit would be documented using a dumpy level against a known elevation. Other levels may be taken as required;
- soil profiles would be recorded in accordance with the Code, including scaled drawings, photographs, and written descriptions;
- soil samples may be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information; and
- excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with the Aboriginal stakeholders and the proponent as the conditions in the field and nature of the excavations develop. This includes the movement of test pits to avoid existing built structures, buried services and disturbances not identified during the desktop phase.

Once the works are completed, all Aboriginal cultural material recovered will be securely stored at the EMM Newcastle office for analysis. At the completion of the analysis and reporting, artefacts will be transferred to HVO and securely stored at the HVO Hunter Valley Services Cultural Heritage Storage Facility in accordance with HVO North Aboriginal Cultural Heritage Management Plan and HVO South Aboriginal Cultural Heritage Management Plan.

Basic recording and analysis will be undertaken for the artefact assemblage recovered from the test excavation with the aim to form a baseline characterisation of the excavated material. Analysis of excavated stone artefacts will include:

- initial sorting and cleaning of excavated material;

- establishment of a computer database using Microsoft Access or Microsoft Excel (depending on the size of the assemblages) to record all provenance information;
- measuring and recording the attributes of stone artefacts; and
- statistical analysis of the data to explore the frequency, distribution, raw material type, implement type and size of the of the artefacts in the assemblage.

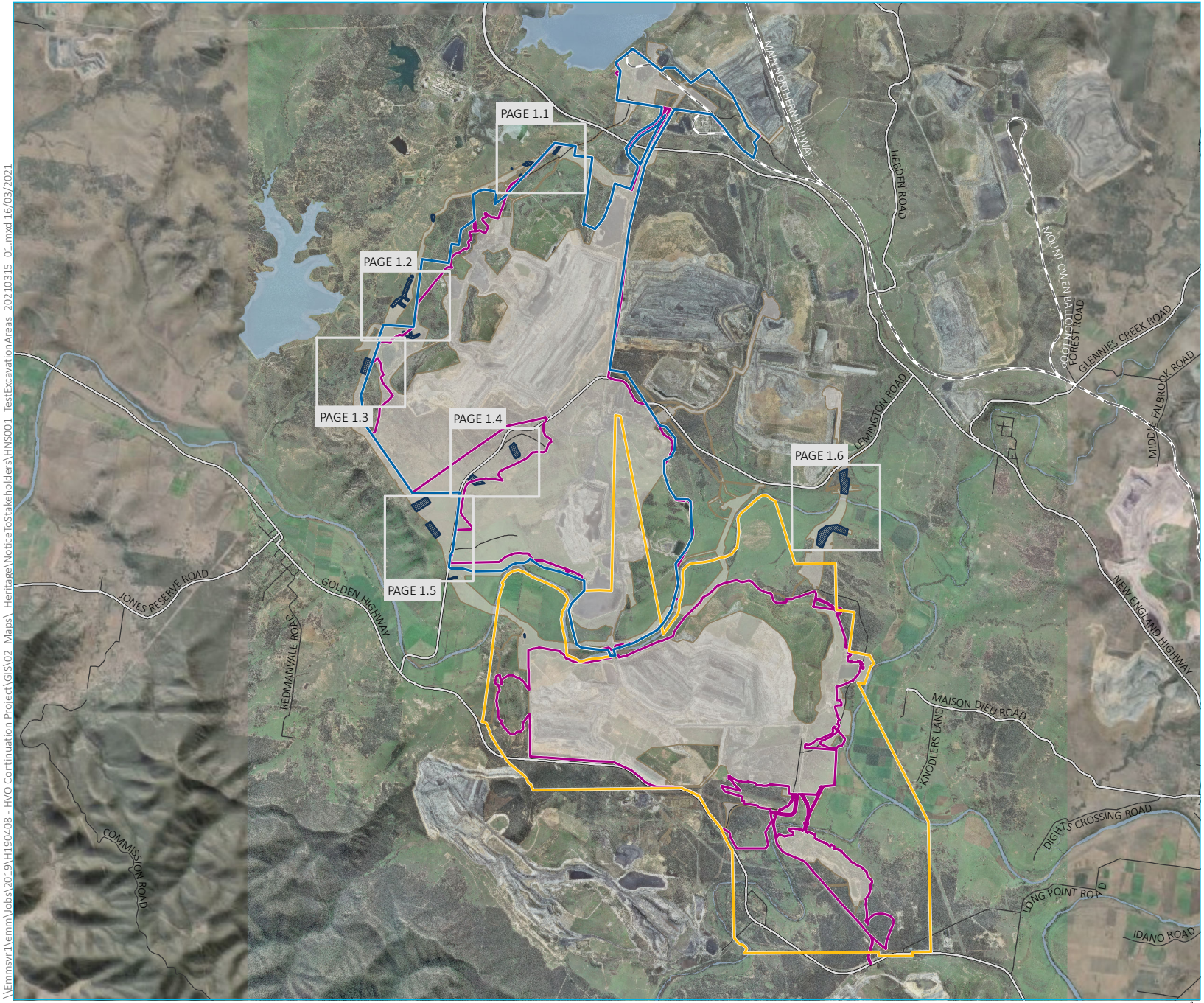
3 Closing

Thank you for your time. We appreciate the opportunity to consult with RAPs to decide on the most appropriate assessment methods. We will be contacting RAPs shortly with further details about fieldwork, including a fieldwork roster and logistics. If you have any queries in regard to the content of this letter, please do not hesitate to contact me on my details below.

Yours sincerely,

Vicki McBride

Approvals Manager



KEY

- Page reference
- HVO North development consent
- HVO South project approval
- Approved disturbance
- Project footprint
- Proposed test excavation area

Existing environment

- Major road
- Minor road
- Rail line
- Named waterbody

Proposed test excavation locations

HVO Continuation Project
Figure 1

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Source: EMM (2021); DFSI (2017); GA (2011)

0 2.5 5 km

GDA2020 MGA Zone 56

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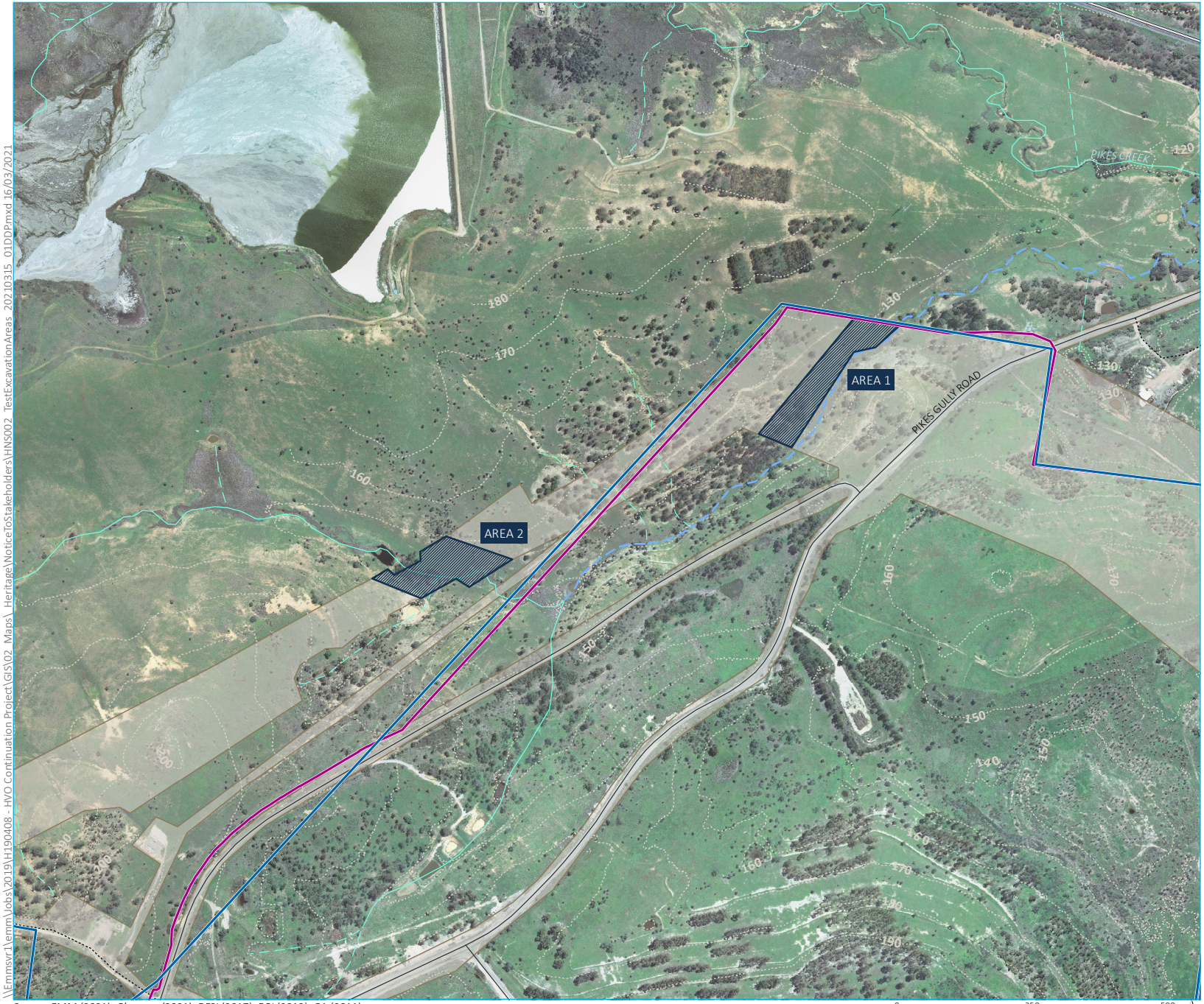

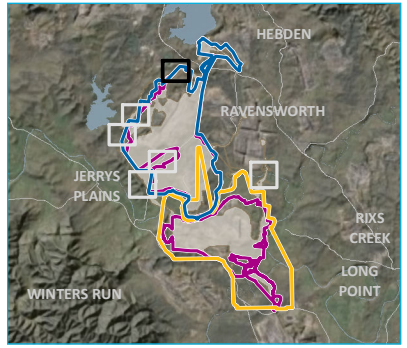

KEY

- HVO North development consent
- Approved disturbance
- Project footprint
- Proposed test excavation area

Existing environment

- Major road
- Minor road
- Vehicular track
- 10 m contour

Strahler stream order

- 1st order
- 2nd order
- 3rd order

Source: EMM (2021); Glencore (2021); DFSI (2017); DPI (2013); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

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Proposed test excavation locations

HVO Continuation Project
Figure 1.1

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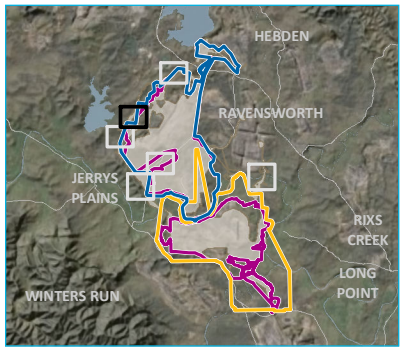

KEY

- HVO North development consent
- Approved disturbance
- Project footprint
- Proposed test excavation area

Existing environment

- Minor road
- Vehicular track
- 10 m contour

Strahler stream order

- 1st order
- 2nd order
- 3rd order

Proposed test excavation locations

HVO Continuation Project
Figure 1.2

Source: EMM (2021); Glencore (2021); DFSI (2017); DPI (2013); GA (2011)

0 250 500 m
GDA2020 MGA Zone 56

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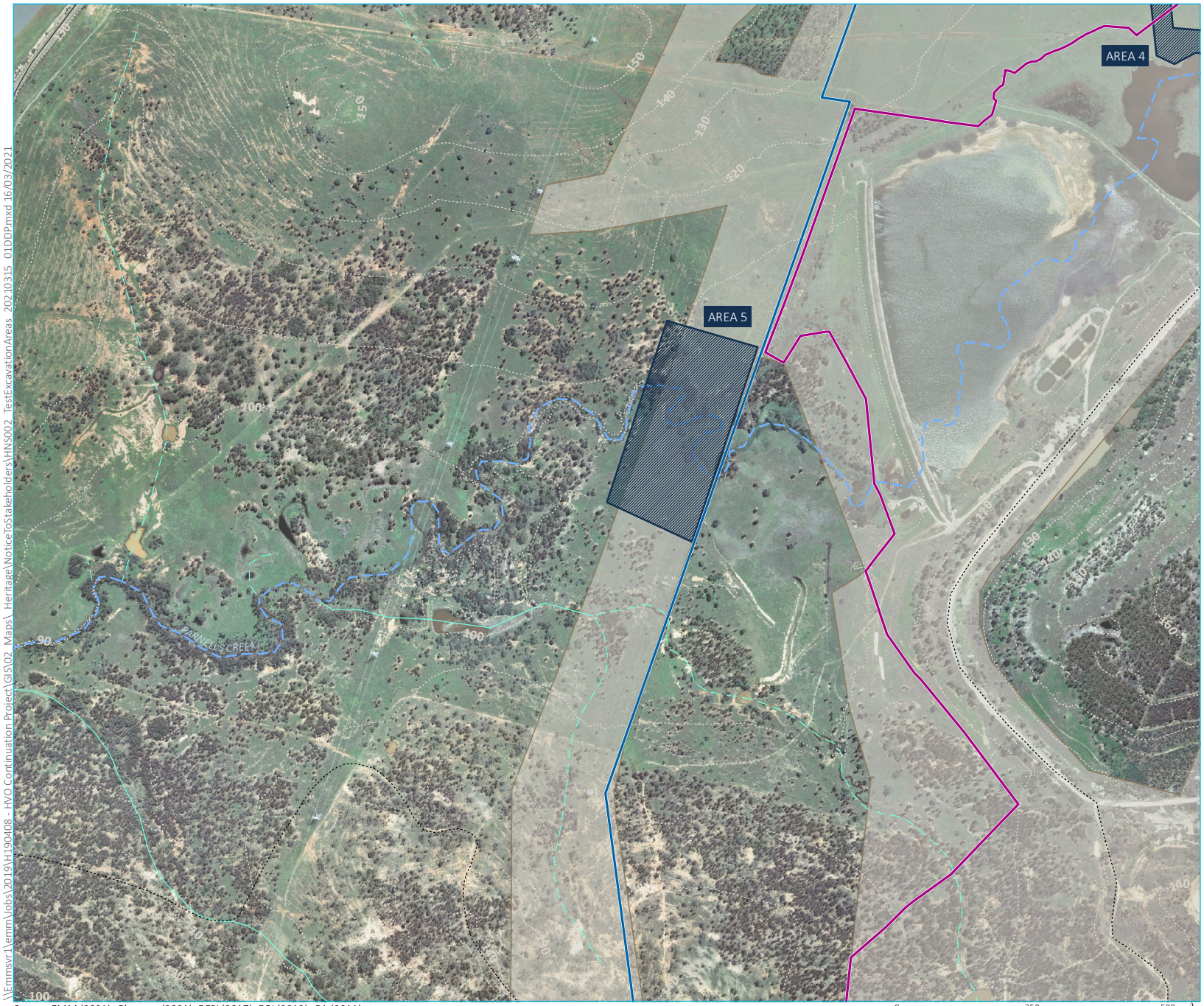

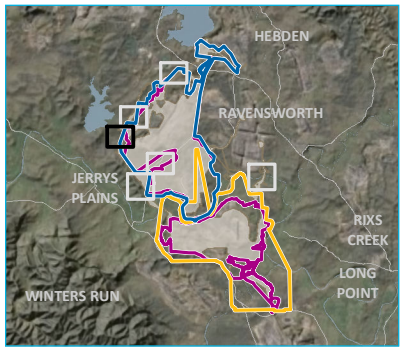

KEY

- HVO North development consent
- Approved disturbance
- Project footprint
- Proposed test excavation area

Existing environment

- Minor road
- Vehicular track
- 10 m contour
- Named waterbody

Strahler stream order

- 1st order
- 2nd order
- 3rd order

Proposed test excavation locations

HVO Continuation Project
Figure 1.3

Source: EMM (2021); Glencore (2021); DFSI (2017); DPI (2013); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

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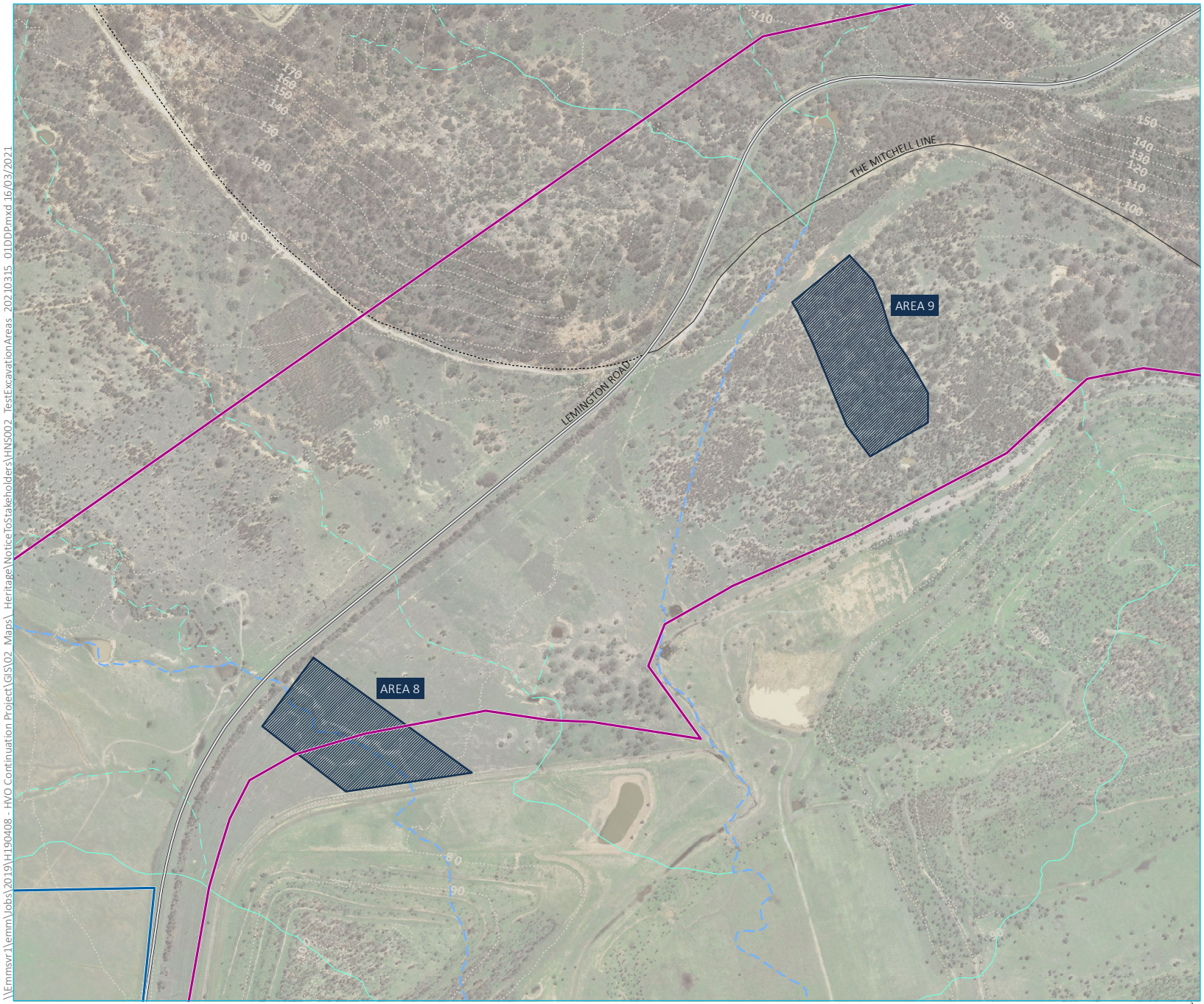

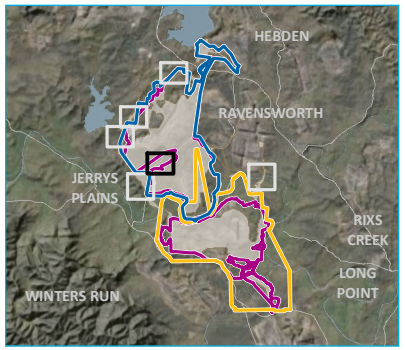

KEY

- HVO North development consent
- Approved disturbance
- Project footprint
- Proposed test excavation area

Existing environment

- Major road
- Minor road
- Vehicular track
- 10 m contour

Strahler stream order

- 1st order
- 2nd order
- 3rd order

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Source: EMM (2021); Glencore (2021); DFSI (2017); DPI (2013); GA (2011)

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GDA2020 MGA Zone 56

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Proposed test excavation locations

HVO Continuation Project
Figure 1.4

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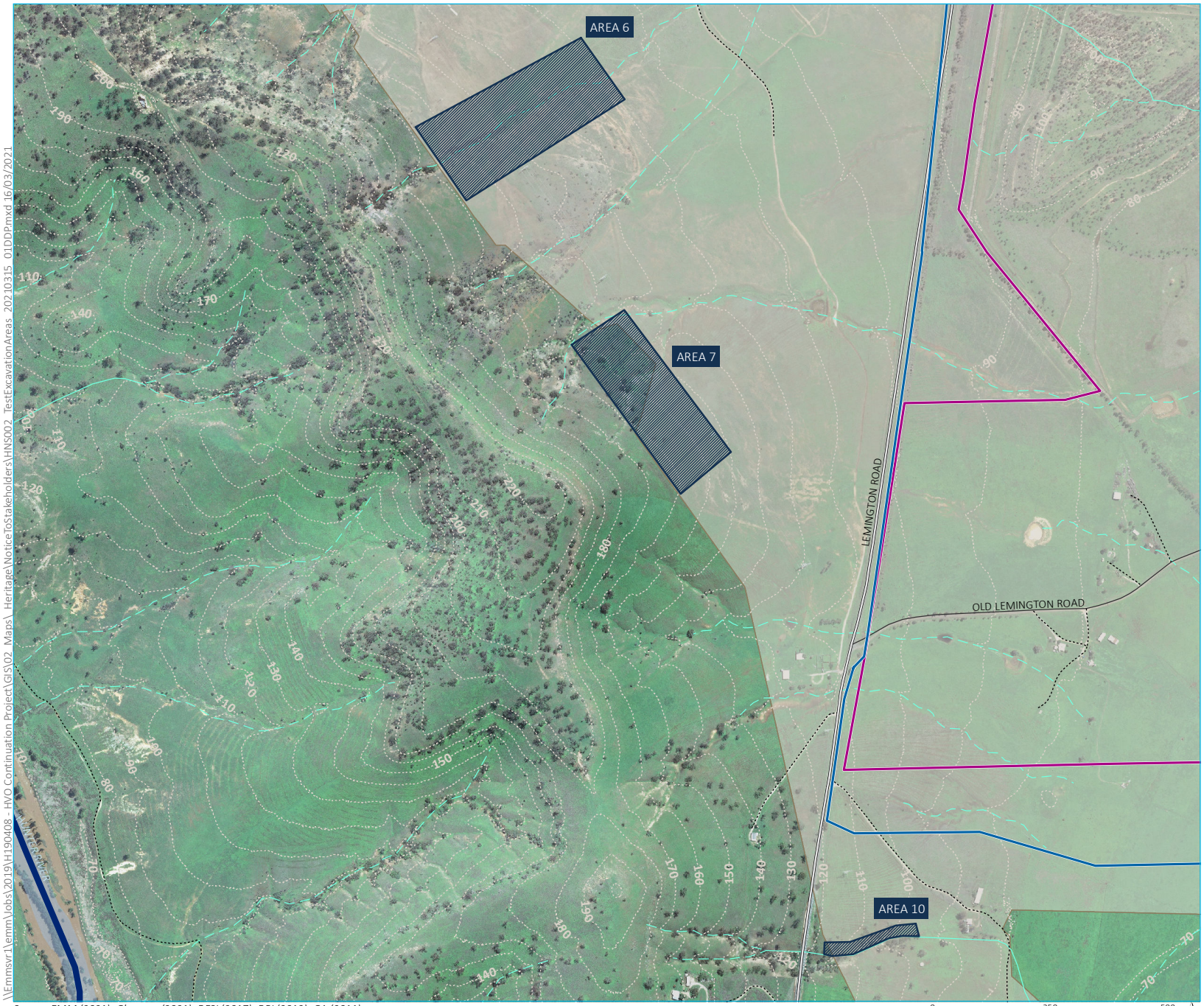

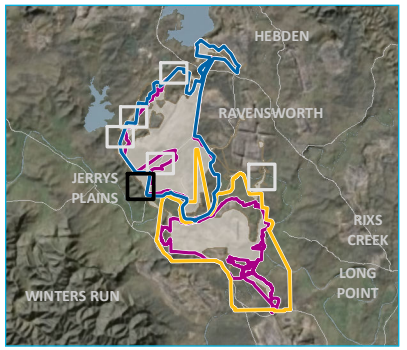

KEY

- HVO North development consent
- Approved disturbance
- Project footprint
- Proposed test excavation area

Existing environment

- Major road
- Minor road
- Vehicular track
- 10 m contour
- Named waterbody

Strahler stream order

- 1st order
- 2nd order
- 9th order

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Source: EMM (2021); Glencore (2021); DFSI (2017); DPI (2013); GA (2011)

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Proposed test excavation locations

HVO Continuation Project
Figure 1.5

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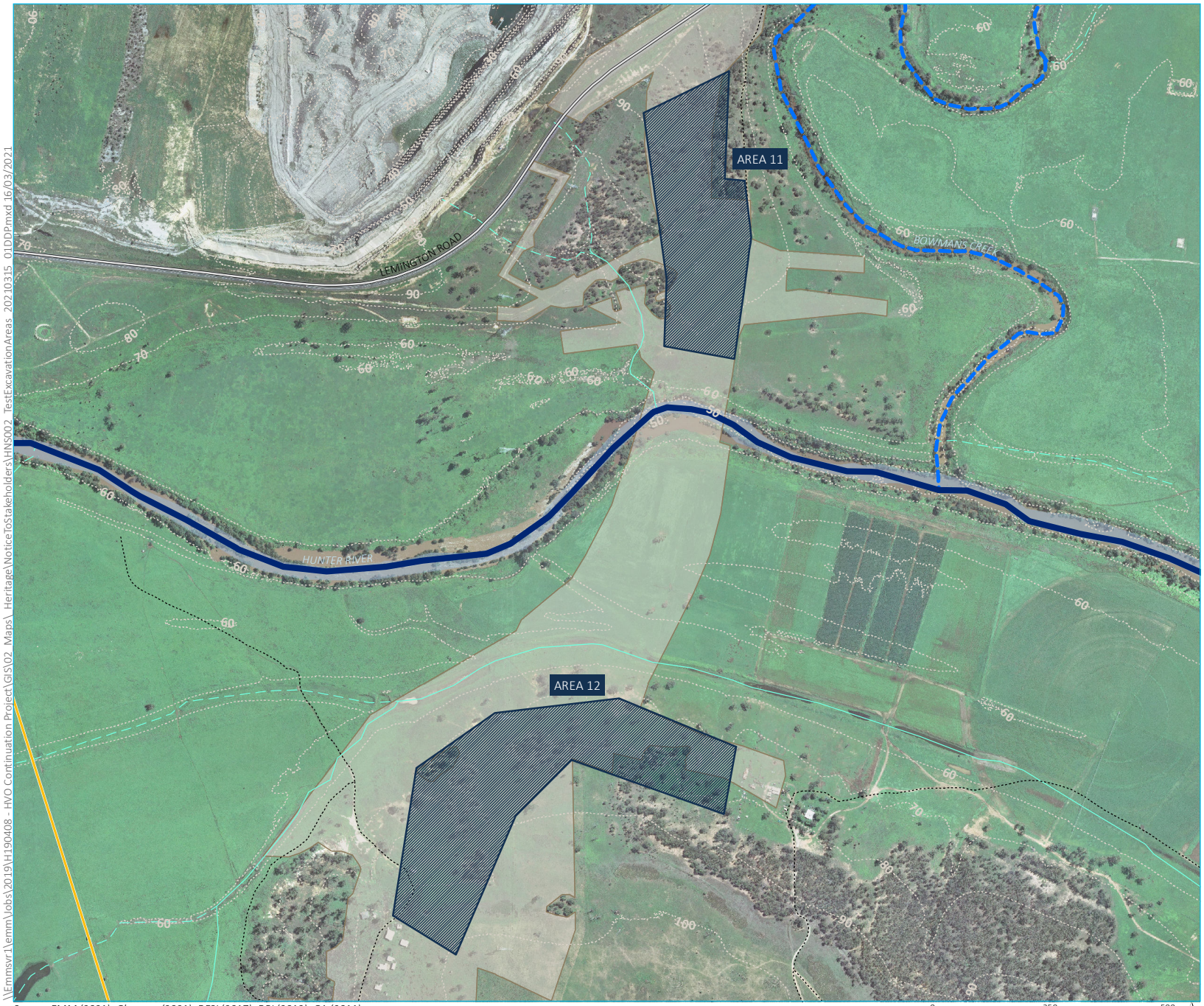

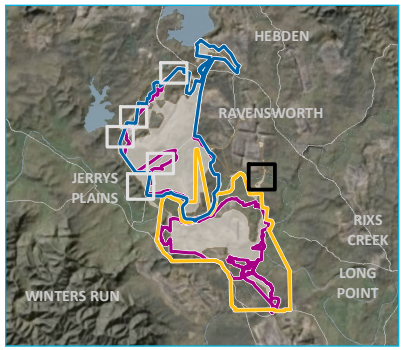

KEY

- HVO South project approval
- Project footprint
- Proposed test excavation area

Existing environment

- Major road
- Vehicular track
- 10 m contour
- Named waterbody

Strahler stream order

- 1st order
- 2nd order
- 6th order
- 9th order

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Source: EMM (2021); Glencore (2021); DFSI (2017); DPI (2013); GA (2011)

0 250 500 m

GDA2020 MGA Zone 56

N

Proposed test excavation locations

HVO Continuation Project
Figure 1.6

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Appendix C
Geomorphological Assessment

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HVO Continuation Project

Geomorphological Assessment of Potential Extent of Late-Pleistocene Deposits Across the Project Area

Dr Christopher J Gippel

August 2023

FLUVIAL SYSTEMS

HVO Continuation Project

Geomorphological Assessment of Potential Extent of Late-Pleistocene Deposits Across the Project Area

Prepared for:

HV Operations Pty Ltd

Prepared by:

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August 2023

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Prepared by	Christopher Gippel
Reviewed by	Alan Williams, Stacey Kennedy and Nicole Armit (EMM), J. R. Martin (Glencore)

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			Name/Position	Signature
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B	19-Jul-2023	Revised Draft for Review	Chris Gippel Director Geomorphologist	
C	5-Aug-2033	Final	Chris Gippel Director Geomorphologist	

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Executive Summary

This report documented the geomorphological character of the land associated with the HVO Continuation Project. The main objective was to assess the potential for late-Pleistocene aged (i.e., older than the start of the Holocene 11,700 years ago) deposits within the Project area.

The methodology used a well-established approach to make use of digital topographic and aerial photographic data, supported by field inspection, to analyse the characteristics of the terrain. Detailed LiDAR data were available for the main area of interest, and SRTM data were used to represent elevation of the terrain surrounding the main area of interest. The terrain indicators MRVBF and Terrain Surface Classification were used together with existing soil and geology data and evidence from the literature concerning comparable sites, to interpret landform history and identify areas with potential for finding preserved sub-surface late-Pleistocene aged deposits.

The Aboriginal Cultural Heritage Assessment for the Project undertook an archaeological survey and based on the results, identified 12 locations within the assessment area for test excavation. Four of these sites were then selected for further investigation by this geomorphic report. These areas were identified as having Potential Archaeological Deposit (PAD). This geomorphic report also included a previously investigated site known as CM-CD1, and two areas subject to soil survey that potentially belonged to the Warkworth sand system, an aeolian deposit known to be associated with PAD. It was concluded that the likelihood of finding preserved sub-surface late-Pleistocene deposits over the project area was low except for the site CM-CD1, which is known to have such material, and Area 12, which has characteristics similar to other Warkworth sand system source-bordering dunes where such material has previously been found through excavation and dating. Most of the A horizon sedimentary material on the hillslopes of the Project area is probably less than 3,000 years old, so hillslope environments of the Project area have low potential for finding sub-surface late-Pleistocene deposits. Area 9 was located on an alluvial fan and could have late-Pleistocene sediment at a, as yet undetermined, depth in the profile.

The regional distribution of Warkworth sand system varied depending on the information source, so there remains considerable uncertainty about its actual distribution. This report identified a previously unmapped area of potential Warkworth sand system on Wollombi Brook on the basis of NW – SE trending dune morphology apparent on the LiDAR-derived DEM. It appears that Warkworth sand system occurs in patches confined to the Hunter River and Wollombi Brook extending from the Project area to Singleton. Warkworth sand can occur in the form of regular NW – SE trending linear dunes, which are readily identified from the LiDAR-derived DEM, and sand sheets, which require field soil survey for identification.

Most tributaries of the Hunter River over the wider regional area of interest along the Hunter River valley from Bureen to Singleton had areas of CM-CD1-type landform present (alluvial units adjacent to areas of transferral process with a slope of 3 – 10%). In detail, significant areas of CM-CD1-type landform was found on Saddlers Creek, Doyles Creek, Appletree and Saltwater Creek. Waterfall Creek and two unnamed right-bank tributaries also have potential for CM-CD1-type landform near where they meet the Hunter River floodplain. Bayswater Creek, Bowmans Creek and Glennies Creek appear to have low potential for CM-CD1-type landform. Further downstream, and unnamed left-bank tributary and Rixs Creek have potential for CM-CD1-type landform near where they meet the Hunter River floodplain. The potential for CM-CD1-type landform on left-bank tributaries of Wollombi Brook Redbank Creek, Wambo Creek and North Wambo Creek is uncertain because much of the general landform falls within the slope range 3 – 10%. The detail of the CM-CD1 area suggests that CM-CD1-type landform could extend 250 m downstream along the creek adjacent to CM-CD1, on the same colluvial slope, but not upstream. The method used in this report did not identify any other areas of CM-CD1-type landform within the Project area.

This report concluded with responses to the four questions that formed the scope of work:

Scope question	Response
What are the characteristics and depositional history of the soil profiles in Areas 5, 9, and 11 (as identified in EMM, 2022, Figure 6.3). Are these likely to be of Pleistocene age? What is their probable distribution across the Project area, and more broadly?	Area 5, not late-Pleistocene. Area 9 could have late-Pleistocene sediment at a, as yet undetermined, depth in the profile. Area 11 appears to be soil formed insitu from weathered regolith underlain by rock. Area 5 reworked valley fill is likely to be common within the Hunter Valley. Area 9 alluvial fan is likely to be common within the Hunter Valley. Area 11 interfluve is likely to be very common within the Hunter Valley.
What are the characteristics and deposition history of the sandy soil profile within Area 12? Are these likely to be of Pleistocene age? What is the probable distribution of this soil profile across the Project area, and more broadly? Is this likely to be part of the Warkworth sand sheet? What is the broader extent of the Warkworth sand system?	The soil profile likely has characteristics and deposition history similar to sites excavated, described and dated nearby on the Warkworth sand system, as reported in the literature. The maximum area occupied by this system would be limited to undisturbed land in proximity to the Hunter River and Wollombi Brook, in particular in the reach from the Project area to Singleton. The extent of the Warkworth sand system was mapped using existing information, but there was considerable uncertainty in the distribution. Knowledge of the full and accurate extent of Warkwoth sand system would require a comprehensive program of field survey and laboratory analysis.
We have demonstrated that the fairly unique CM-CD1 colluvial deposit is of Pleistocene age. Is there likely to be other comparable deposits elsewhere in the Project area or nearby? What is the potential for this deposit to be present more broadly? What are some of the conditions where such deposits might be present to inform future projects in the region?	Areas of CM-CD1-type landform were found in the broader region, but not within the Project area. Site CM-CD1 is situated at the Interface of colluvial slope (at around 3 – 10% gradient) and alluvial plain and is associated with upstream Cut and Fill River Style. The site is within the influence of large floods on the Hunter River. The most important site factors are more likely to be presence of a stable late-Pleistocene alluvial surface overlain by a stable colluvial deposit. The extent of CM-CD1-type deposit was mapped using existing information. Knowledge of the full and accurate extent of CM-CD1-type landform would require a comprehensive program of field survey and laboratory analysis.
General map of the potential extent of Pleistocene deposits (if determined) across the Project area and more broadly.	Maps were produced covering the Project area and beyond that identified the likely distribution of Warkworth sand system and CM-CD1-type landforms, which this report concluded had potential for presence of sub-surface late-Pleistocene deposits. Knowledge of the full and accurate extent of these landforms and associated sub-surface late-Pleistocene deposits, would require a comprehensive program of field survey and laboratory analysis.

1.0 Introduction

1.1 HVO Continuation Project

Hunter Valley Operations (HVO) is a multi-pit open cut coal mining complex, comprising two mine sites separated by the Hunter River; HVO North and HVO South. HVO is approximately 24 kilometres (km) north-west of Singleton in the Hunter Valley of New South Wales (NSW) (Figure **1**). While the two mine sites are approved under separate development consents, they are operated as one complex with fully integrated environmental management systems. The HVO Complex is illustrated at a local scale in Figure **2**.

HVO North comprises the approved mining areas of West Pit, Mitchell Pit, Carrington Pit and North Pit as shown in Figure **2**, as well as the Hunter Valley (HV) and Howick Coal Preparation Plants (CPP) and the HVO North mine infrastructure area (MIA) (EMM, 2022a). It operates under development consent DA 450-10-2003 which allows extraction of up to 22 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal until 12 June 2025. Pursuant to Condition 41 of the current development consent, Aboriginal heritage at HVO North is managed under an approved HVO North Aboriginal Heritage Management Plan (HMP), whereby Aboriginal Heritage Impact Permits (AHIPs) are currently required prior to the disturbance of any Aboriginal cultural heritage site and/or objects.

HVO South comprises the approved mining areas of Riverview Pit, Cheshunt Pit, Riverview South-East Extension and South Lemington Pits 1 and 2, as well as the MIA, and the Lemington CPP (LCPP) and rail loop (approved but not constructed) as shown in Figure **2**. It operates under Project Approval (PA) 06_0261 which allows extraction of up to 20 Mtpa of ROM coal until 24 March 2030. As required by Condition 40 of the project approval, HVO South currently manage Aboriginal heritage in accordance with an approved HVO South Aboriginal Cultural Heritage Management Plan.

Mining across HVO is undertaken using dragline and truck and shovel methods. ROM coal from HVO North and South is currently processed at the Howick CPP (at HVO North), from which product coal is predominantly transported via overland conveyor to the HV load point (LP) or Newdell LP and via rail to the Port of Newcastle for export. The Lemington CPP (LCPP) and associated rail loop, which is approved under PA 06_0261 and would process and rail coal from HVO South, is yet to be constructed.

HVO is owned by subsidiary companies of Yancoal and Glencore, as participants in the unincorporated HVO Joint Venture (JV). HV Operations Pty Ltd is the appointed manager of the JV.

1.2 Project overview

The HVO Continuation Project (the Project) broadly comprises the continuation of the life of HVO North and HVO South, from the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and 2045 at HVO South (EMM, 2022a). The continuation of mining across the HVO Complex will increase resource recovery from the existing operation, predominantly by mining through previously mined areas and to the extent of existing mining tenements and extracting coal from deeper seams at HVO North.

At HVO South an extension to the life of the mine is proposed to facilitate improved mine sequencing outcomes and reduction in mining rate. The Project proposes a reduced mining footprint at HVO South compared to what is approved for extraction, with the previously approved coal extraction in the Riverview South East Extension area and South Lemington Pits 1 and 2 proposed to be removed from mine plan (and future approvals) for the Project. However, some rehabilitation works will be required to be undertaken in the South Lemington Pit 1 area, as part of the mine closure process. The approved shorter rail loop option associated with the LCPP has also been removed from the Project.

A number of infrastructure upgrades and changes are also required to facilitate the Project (and are included as part of it), including realignment of part of Lemington Road, relocation of transmission and telecommunication lines, an upgrade of the Newdell LP including construction of a new product stockpile and train loading bin, an upgrade of the HVLP product stockpile including an extension to the existing coal stockpile, and improvements to Lake James and Parnells Dam (EMM, 2022a). To enable the Project, two new State significant development (SSD) consents will be required; one for HVO North and one for HVO South, under Part 4, Division 4.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The Project will seek to maintain separate development consents for HVO North and South, as is currently the case. Given that the two mine sites operate

as one complex, one Environmental Impact Statement (EIS) has been prepared to support the two development applications required for the Project.

The Aboriginal Cultural Heritage Assessment (ACHA), Appendix N of the EIS (EMM, 2022b), provided an assessment of the potential Aboriginal heritage impacts of the Project. It also assessed the potential incremental impacts of the continuation of HVO North and HVO South given separate development consents are being sought for each operation. It documented the assessment methods and results, initiatives to avoid and minimise Aboriginal heritage impacts and additional management and mitigation measures proposed to address impacts not able to be avoided.

Detailed information on the key components of the Project as they relate to HVO North and HVO South can be found in chapter 4 of the EIS (EMMa, 2022). The proposed conceptual layout of the Project, inclusive of both HVO North and South, is provided in Figure **3**.

1.3 Proposed Project operations relevant to this geomorphological assessment

This geomorphological assessment of the potential extent of late-Pleistocene[1] deposits across the Project area is mainly concerned with describing the geomorphological character of the area associated with the mine infrastructure zone (Figure **3**).

1.4 Purpose of this report

1.4.1 Background to this report

A review of the Aboriginal Cultural Heritage Assessment for the Project (EMM, 2022b) was undertaken by Heritage NSW. The review identified a number of questions around potential late-Pleistocene deposits within the study area. Heritage NSW wrote:

> *There are several examples within a regional context (e.g., Spur Hill, Wambo, along Wollombi Brook, Ravensworth Mine) where large numbers of artefacts and/or Pleistocene aged material have been identified on terraces in the vicinity, but not directly adjoining, the Hunter River, Wollombi Brook, and Bowmans Creek. Further explication is required in Section 5 of the ACHAR on the potential for Pleistocene aged deposits within the project area. Following this updated assessment, the predictive model may require updating and additional areas may require further investigation.*

EMM commissioned Fluvial Systems to undertake a geomorphic assessment that addressed the potential for late-Pleistocene-aged deposits within the Project area.

1.4.2 Background to objectives

The Aboriginal Cultural Heritage Assessment for the Project (EMM, 2022b) undertook an archaeological survey and based on the results, identified 12 locations within the Assessment Area for test excavation. The locations of these 12 sites were illustrated on Figure 6.3 of EMM, 2022b, p. 100). These areas were targeted for test excavation because: a) they were identified as likely to contain potential archaeological deposit, and/or, b) to counter poor ground surface visibility conditions at the time of survey and confirm assessments of archaeological potential. The objectives of the test excavations were to: ground-truth archaeological predictions made within the Assessment; to determine the nature, extent, distribution and significance of any newly documented or previously recorded Aboriginal sites; to help define any areas of high archaeological significance; and, to identify cultural heritage constraints that may require further mitigation work (such as recording, monitoring or salvage excavation) prior to commencement of any development. Areas 5, 9, 11 and 12 were then selected for further investigation by this geomorphic report. These areas were identified by EMM (2022b) as areas of Potential Archaeological Deposit (PAD) associated with either moderate to high (Site 5) or low to moderate (Sites 9, 11 and 12) density artefact scatters.

One of the key aspects and outcomes of the approved development at HVO North that will remain the same under the Project is continued avoidance of the Aboriginal heritage site known as Carrington Mine – Colluvial Deposit 1 (CM-CD1) (EMM, 2022b, p. 7). Two geomorphic contexts with high archaeological potential for old sites

[1] A note on relevant terminology and dates of the geological time scale: The Cenozoic era (last 66 million years of Earth's history) is divided into three periods: the Paleogene, Neogene, and Quaternary. The Quaternary period spans from 2.58 million years ago to present day. Within the Quaternary period, the Pleistocene epoch lasted from 2.58 million to 11,700 years ago and the Holocene epoch began 11,700 years ago and lasts to the present day. The Late-Pleistocene is an unofficial age conventionally defined as the time between c. 129,000 and c. 11,700 years ago.

have been identified which are of relevance to the Project area: late-Pleistocene windblown sand dunes/sheets; and late-Pleistocene/early Holocene colluvial (slope) deposits. Within the Project area, Area 12 represents the former and CM-CD1 represents the latter. Whilst Area 12 was assessed for archaeological potential by EMM (2022b), two other areas were assessed by MineSoils (2020a, 2020b) for likelihood of the presence of Warkworth sand system as a contribution to the mapping of Warkworth Sand Woodland for the Environmental Impact Statement for the Project (EMM, 2022a). These two sites are referred to in this report as Sand area 1 (Hunter River area) and Sand area 2 (Wollombi Brook area). EMM (2022b, p. 38) describes CM-CD1 as "…*a significant colluvial deposit at the foot of a relict Tertiary terrace*…". This terminology is misleading, as the landform above CM-CD1 is not a terrace[2] and the underlying geology unit is late-Permian[3]. CM-CD1 has demonstrated potential for archaeological evidence of late-Pleistocene occupation in the region (Hughes et al., 2014) and this was confirmed by the Aboriginal Cultural Heritage Assessment for the Project (EMM, 2022b). This explains the particular focus of this geomorphology report on Warkworth sand sites and CM-CD1 site.

1.4.3 Objectives

The scope of work for this report was provided by EMM. The scope was expressed in the form of four questions:

- What are the characteristics and depositional history of the soil profiles in Areas 5, 9, and 11 (as identified in EMM, 2022, Figure 6.3). Are these likely to be of Pleistocene age? What is their probable distribution across the Project area, and more broadly?
- What are the characteristics and deposition history of the sandy soil profile within Area 12? Are these likely to be of Pleistocene age? What is the probable distribution of this soil profile across the Project area, and more broadly? Is this likely to be part of the Warkworth sand sheet? What is the broader extent of the Warkworth sand system?
- We have demonstrated that the fairly unique CM-CD1 colluvial deposit is of Pleistocene age. Is there likely to be other comparable deposits elsewhere in the Project area or nearby? What is the potential for this deposit to be present more broadly? What are some of the conditions where such deposits might be present to inform future projects in the region?
- General map of the potential extent of Pleistocene deposits (if determined) across the Project area and more broadly.

[2] Speight (2009) described 'terraced land (alluvial)' as "*a landform pattern including one or more terraces (alluvial) and often a flood plain*" (p. 71), noting that *"…the term 'terrace' should be restricted to landform patterns above the influence of active stream flow*" (p. 33). The typical element 'terrace flat' was a "*small flat aggraded or eroded by channelled or overbank stream flow, standing above a scarp and no longer frequently inundated; a former valley flat or part of a former flood plain*" (p. 43), and 'terrace plain' was the same except that rather than being small it was a "*large or very large flat*" (p. 44). Terraces were an aggraded landform, typically level with slope <1%, with very low relief of 9 – 30 m.

[3] Tertiary is an obsolete term for the geologic period from 66 million to 2.6 million years ago, beginning at the start of the Cenozoic Era, and extending to the beginning of the Quaternary period. NSW Seamless Geology describes the underlying geology unit as Pwj, Jerry Plains subgroup of Wittingham Coal Measures, late Permian age (259.10 Ma to 251.90 Ma).

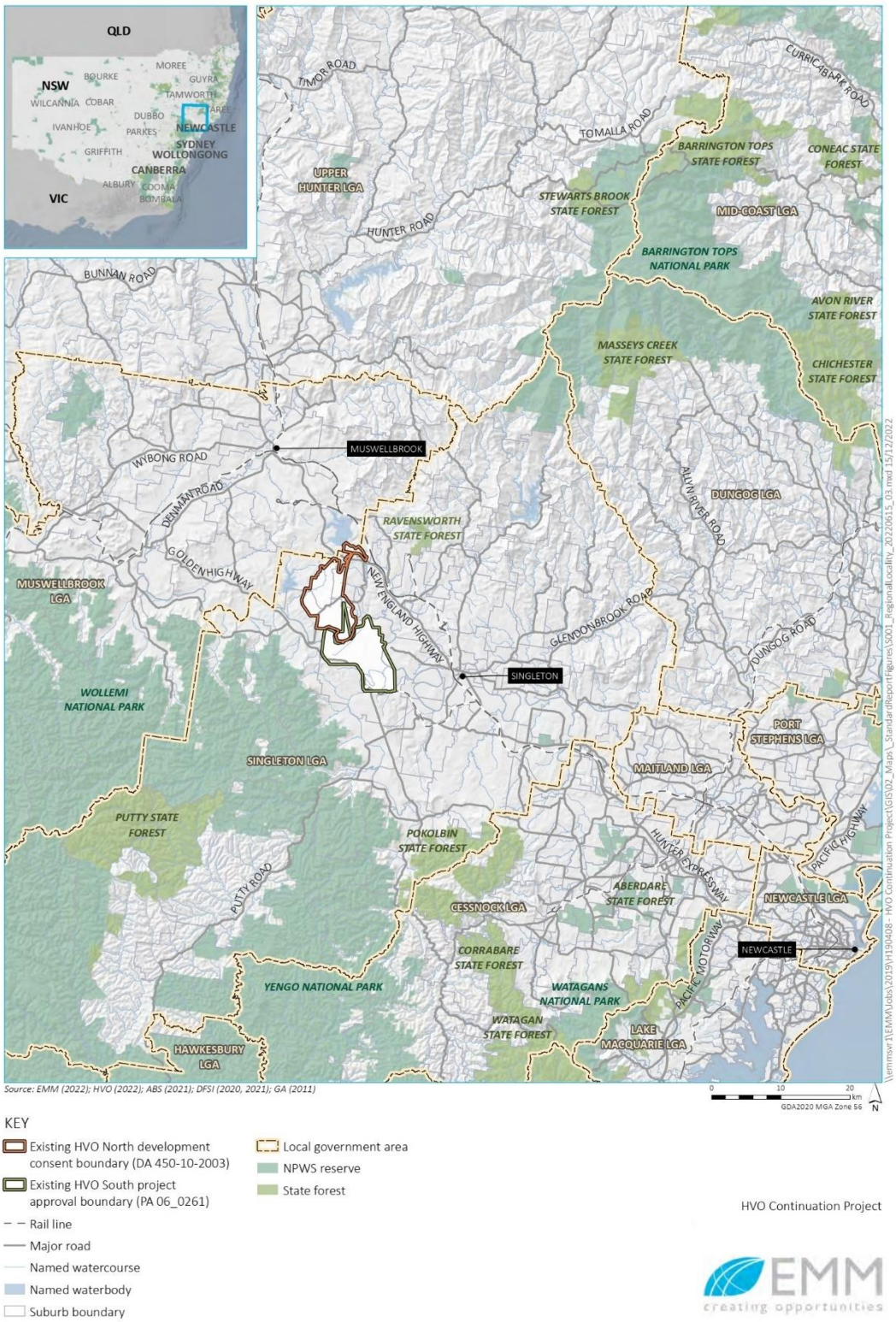

Figure 1. HVO Continuation Project location. Source: EMM (2022b, Fig 1.1).

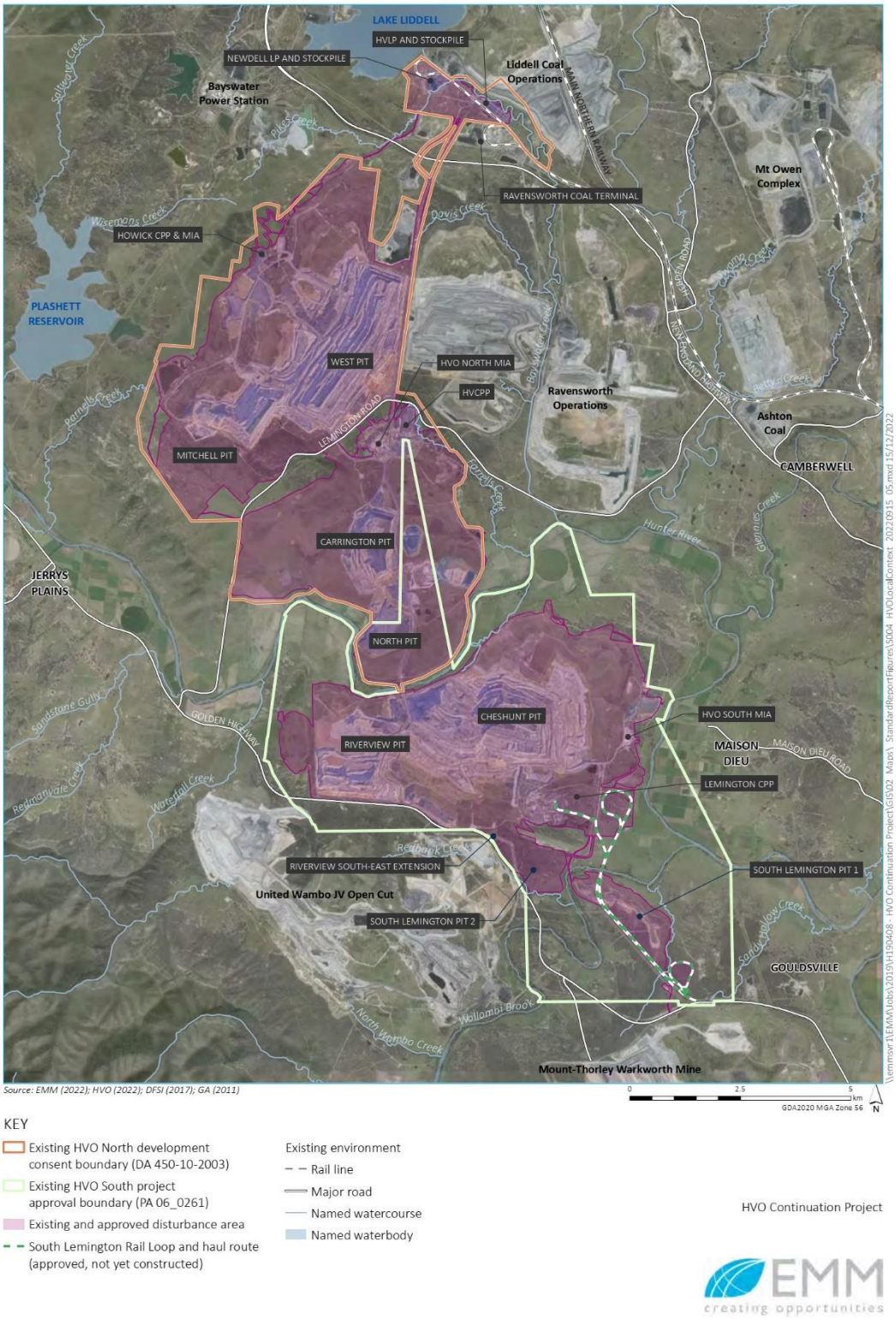

Figure 2. HVO Continuation Project existing environment. Source: EMM (2022b, Fig 1.2).

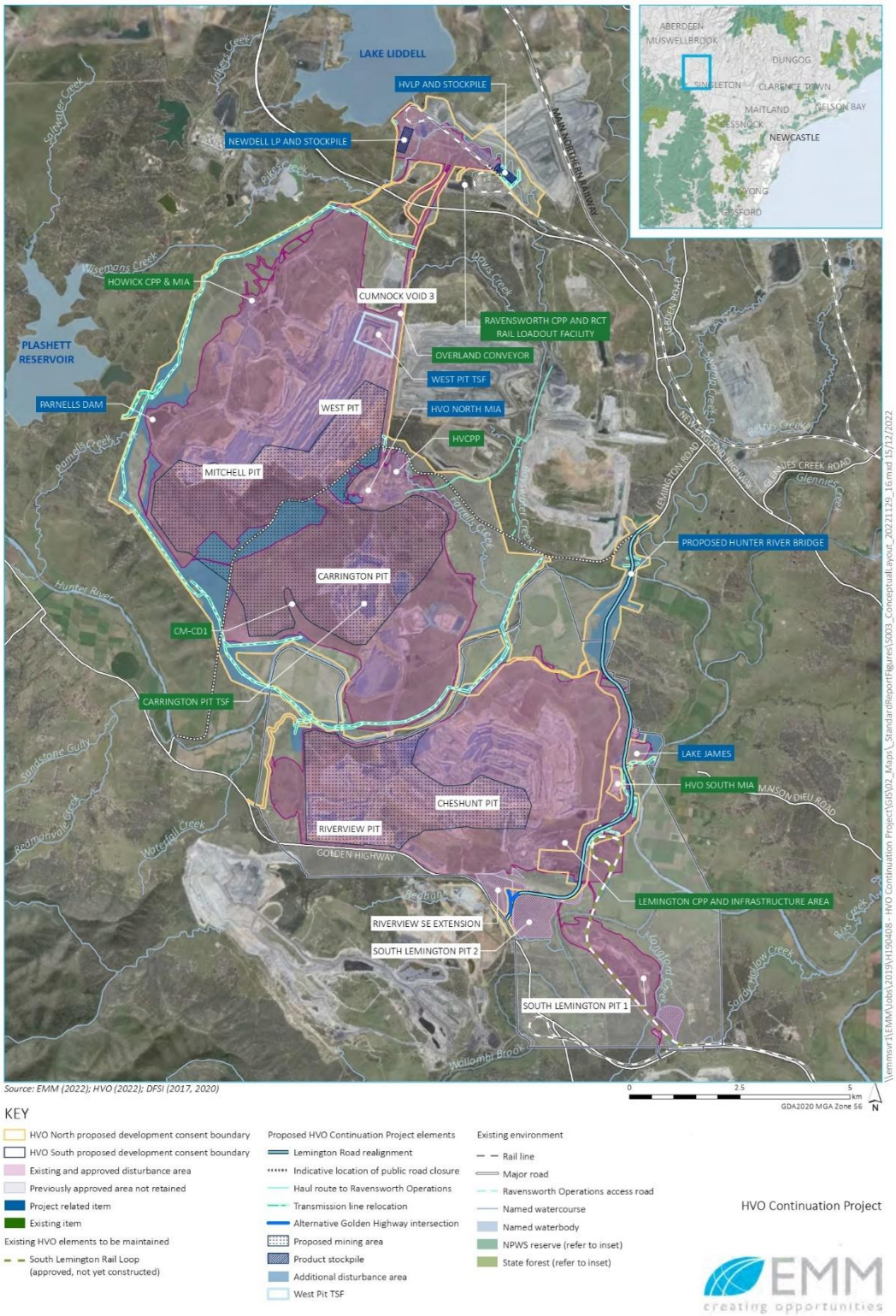

Figure 3. HVO Continuation Project proposed conceptual layout. Source: EMM (2022b, Fig 1.3).

2.0 Methodology

2.1 Study Area

The Project area is defined as land within the HVO North proposed development consent boundary and HVO South proposed development consent boundary. The Study area of this report includes Project area but was expanded to include catchments draining into the HVO mine area (Figure 4). A smaller detailed area of interest was defined for the purpose of presentation of maps within this report. This area covered the test excavation sites and included the majority of the Project area (Figure 4).

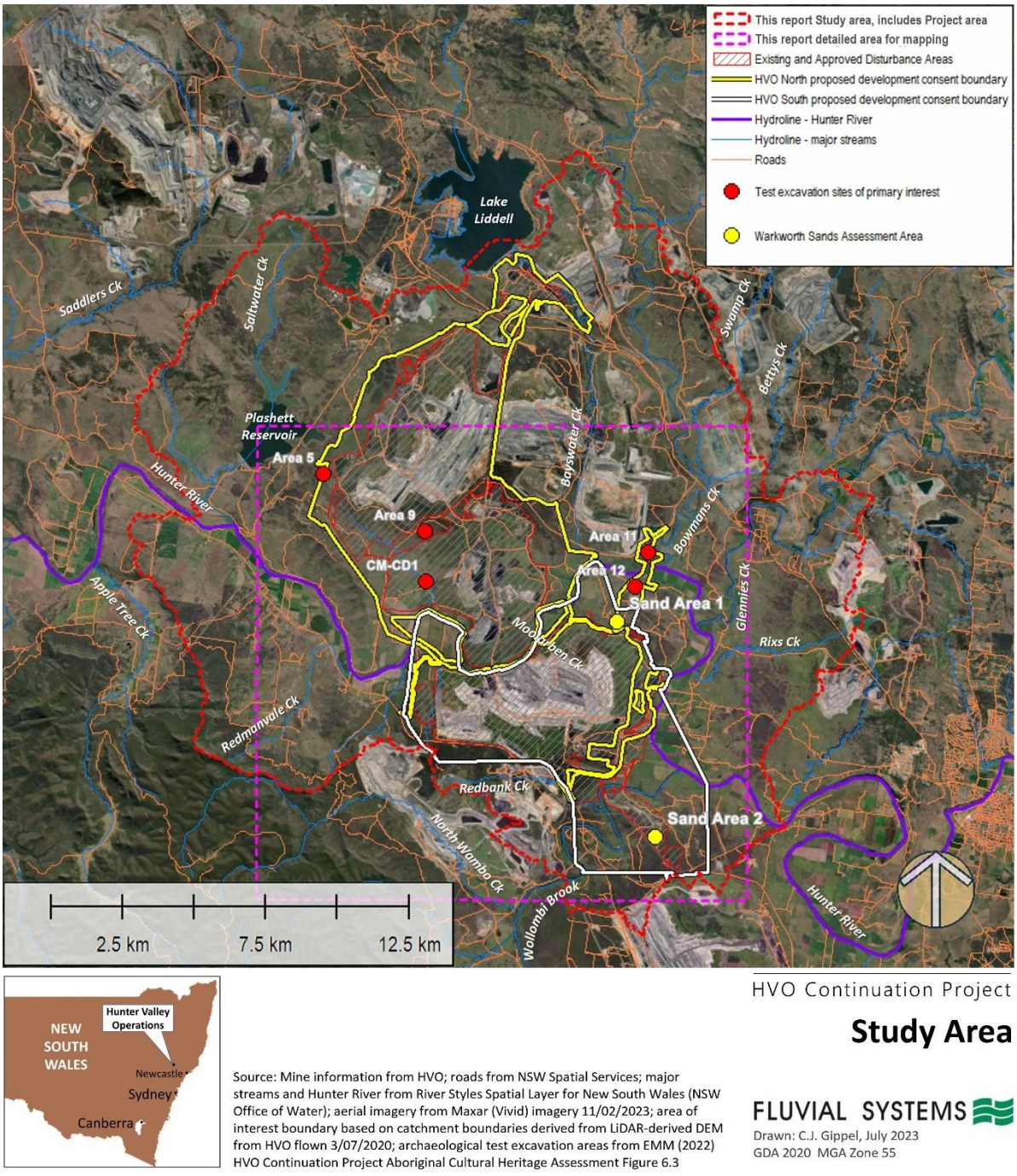

Figure 4. Study area covering catchments draining into the HVO mine area, and the detailed area of interest within the study area (containing the Project area), covered by the maps presented within this report.

A wider regional area of interest along the Hunter River valley from Bureen to Singleton was defined for the purpose of exploring the distribution of geomorphic conditions similar to those where deposits of archaeological significance have been found within the study area, in particular CM-CD1 and Warkworth sand system (Figure 5).

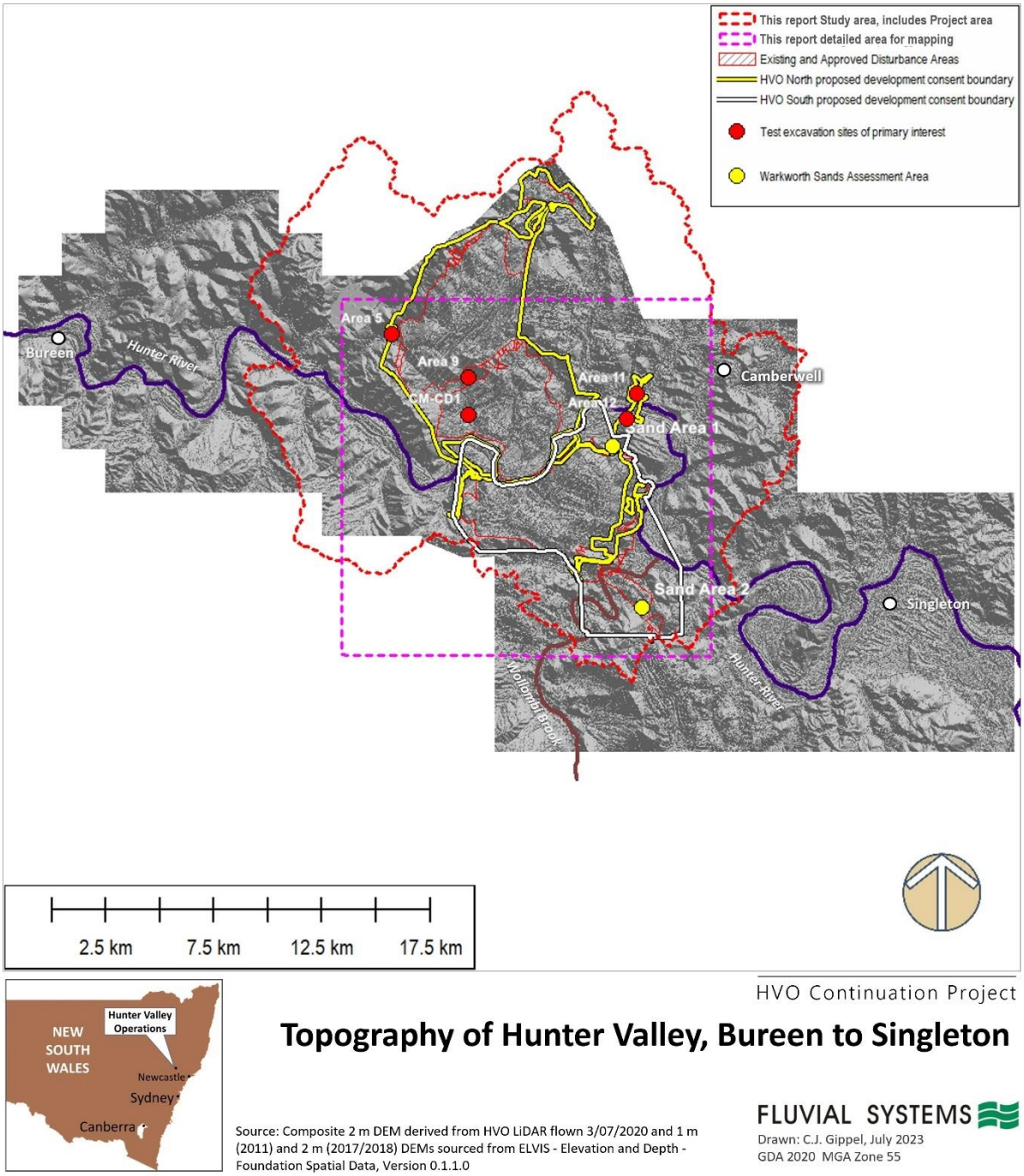

Figure 5. Wider regional area of interest along the Hunter River valley from Bureen to Singleton which contains the study area and the detailed area of interest within the study area (containing the Project area), covered by the maps presented within this report.

2.2 Data and Information Sources

2.2.1 Primary data

A field visual inspection of the study area was undertaken by Dr Christopher Gippel of Fluvial Systems Pty Ltd on 26 June 2023. Specifically, Areas 5, 9, 11 and 12 were inspected as well as site CM-CD1. In addition, two areas were inspected where the presence or absence of Warkworth sand system had previously been assessed by MineSoils (2020a, 2020b) as a contribution to the mapping of Warkworth Sand Woodland for the Environmental Impact Statement for the Project (EMM, 2022a). These two sites are referred to in this report as Sand area 1 (Hunter River area) and Sand area 2 (Wollombi Brook area).

2.2.2 LiDAR

The investigation relied heavily on detailed topographic data and aerial photography. Airborne Laser Scanning (ALS), also known as Light Detection and Ranging (LiDAR), data acquired from a fixed wing aircraft on 4 May 2020 were supplied by HVO. The data were supplied as 1 km × 1 km tiles of classified point elevations covering the Project area. The data had a point density of around 0.9 points per square metre, The surface elevation of areas that were of interest beyond the LiDAR coverage was estimated from 1 second SRTM Digital Elevation Model (DEM) data obtained from Geoscience Australia. The SRTM data have a much poorer spatial and vertical resolution than the LiDAR data and the elevations represent vegetation, not ground, surface.

The 2020 LiDAR flight only partially covered the area of Wollombi Brook near the Hunter River junction, and land to the east of Wollombi Brook that was of interest from the perspective of potentially being aeolian landform. These areas were investigated using an additional 1 m LiDAR-derived DEM, sourced from ELVIS - Elevation and Depth - Foundation Spatial Data, Version 0.1.1.0 (http://elevation.fsdf.org.au/). The LiDAR was flown from 19/10/2011 to 27/11/2011. Spatial accuracy in the horizontal was +/-0.80 @95% confidence Interval and spatial accuracy in the vertical was +/-0.30 @95% confidence Interval.

The regional area of interest was characterised by 1 m LiDAR-derived DEM east of the Project area, and 2 m LiDAR-derived DEM west of the Project area, both sourced from ELVIS - Elevation and Depth - Foundation Spatial Data, Version 0.1.1.0 (http://elevation.fsdf.org.au/). The 1 m DEM LiDAR was flown from 19/10/2011 to 27/11/2011, while the 2 m DEM LiDAR was flown from 2/11/2017 to 15/04/2018. For both DEMs, spatial accuracy in the horizontal was +/-0.80 @95% confidence Interval and spatial accuracy in the vertical was +/-0.30 @95% confidence Interval. Where there was overlap between the 2011 and 2017 data the 2017 data were preferred. In the Project Area, the 2020 LiDAR were preferred over the 2011 and 2017 data.

2.2.3 Aerial photography

Digital aerial photography at 0.2 × 0.2 m pixel resolution flown on 27 December 2022 was supplied by HVO for the entire area of interest. In addition, aerial imagery acquired by Maxar (Vivid) imagery on 11 February 2023 was available.

2.2.4 Mine boundaries

Mine boundary data were supplied by HVO.

2.2.5 Watercourses

The watercourses displayed on maps within this report are referred to as hydrolines – major streams. This watercourse layer is that used by NSW Office of Water (2012) to map River Styles.

2.2.6 River Styles

River Styles is a system for classifying stream geomorphic type based on valley setting, level of floodplain development, bed materials and reach-scale physical features within the stream (Brierley et al., 2011).

Classification requires collection of data concerning valley setting, stream slope, channel dimensions and shape, slope, bed material type, sinuosity, and stream energy. While most of the mapping can be done on the basis of spatial data sets and aerial imagery, it is usual practice to undertake field work. Also, River Styles has an emphasis on larger alluvial streams, and assessments are usually limited to streams of third order and higher. Whilst in principle the classification system could be extended to smaller streams, some of the expected attributes are scale-dependent and might not be found on small streams.

The literature has not reported an association between River Style types and probability of presence of sub-surface preserved late-Pleistocene-age artefacts. Stream types found in headwater sediment source areas, and

mid-catchment sediment transfer areas are usually situated within confined valley settings that are unlikely to offer a stable aggrading landform that favours presence of sub-surface preserved late-Pleistocene-age artefacts. Cut and Fill type could be an exception. This style is mapped as Cut and Fill only if in the filled phase, whereby the whole valley bottom is 'channel'. The dominant sediment within the streambed and streambank within this River Style varies between clays, silts and sands, dependant on the reach slope and local geology. Cut and Fill streams store large volumes of sediment for long periods, with sediment flushed quickly and efficiently when incision is triggered. Incision can be caused by natural or human-induced processes. The Cut and Fill reaches, if only partially scoured during erosion events, could retain sub-surface deposits on their margins. Or, more importantly, alluvial stream reaches immediately downstream of Cut and Fill reaches could experience episodic burial and preservation of alluvial surfaces. River Style types within partly-confined or laterally unconfined valley settings offer aggrading conditions that could favour presence of sub-surface preserved late-Pleistocene-age deposits. However, dynamic reworking of alluvial sediment by channel migration and floodplain stripping would greatly lower the probability of presence of sub-surface preserved late-Pleistocene deposits.

Geomorphic condition is strongly linked to the degree of naturalness and extent of cover of riparian vegetation (Outhet and Cook, 2004; Outhet and Young, 2004a). Poor geomorphic condition would usually be associated with higher than expected rates of erosion and incision.

NSW Department of Planning, Industry and Environment and Macquarie University together developed the River Styles Spatial Layer for New South Wales (NSW Office of Water, 2012). The database provides River Style, fragility, sensitivity to disturbance, condition, rarity and recovery potential. The data were derived from a number of sources depending on the Catchment Management Authority area. Cook and Schneider (2006) classified and mapped River Styles, geomorphic condition, and recovery potential, of streams in the Hunter River basin.

2.2.7 Geology

Lithology was from Department of Regional New South Wales NSW Seamless Geology, published 1 May 2019 and updated 28 April 2023 (https://data.nsw.gov.au/data/dataset/nsw-seamless-geology). The product represents a seamless GIS compilation of the best available vector geology data for New South Wales. The data have been organised into a series of layers, or time slices, representing the major lithotectonic units of NSW. In this study, the units of interest were alluvial or aeolian in origin as these stable, aggrading units present the greatest probability for presence of sub-surface preserved late-Pleistocene-age deposits. The study area contained seven such lithological units (Table 1).

2.2.8 Soil type

Soil data were from Australian Soil Classification (ASC) Soil Type map of NSW (Department of Planning, Industry and Environment, 2021) (https://datasets.seed.nsw.gov.au/dataset/australian-soil-classification-asc-soil-type-map-of-nsweaa10) which provides soil types across NSW using the ASC at Order level (Isbell et al., 1997; Jacquier et al., 2001; Isbell and the National Committee on Soil and Terrain, 2020). It uses the best available soils natural resource mapping coverage developed for the Land and Soil Capability (LSC) dataset. It was derived from a lookup table system linking a Great Soil Group classification soil type to a most appropriate Australian Soil Classification (ASC) class for each mapping unit. There were eight ASC soil orders mapped within the study area, including Kurosols, Kurosols - Natric, Rudosols, Rudosols (alluvial), Rudosols and Tenosols, Sodosols, Tenosols (Alluvial) and Vertosols (Table 2).

Two areas were assessed by MineSoils (2020a) to determine the likelihood of the soils being Warkworth Sands. The assessment comprised 22 soil sampling points in Sand area 1 (Hunter River area) and 24 in Sand area 2 (Wollombi Brook area) (Figure 4). At each sampling point, a multi-criteria assessment was applied to determine the likelihood that the soil represented Warkworth Sands (MineSoils, 2020b).

Table 1. Descriptions of alluvial and aeolian lithological units found in the study area, listed potentially oldest to youngest by medial age.

Unit Name	Age (medial)	Age (range)	Description	Deposition mode
Alluvium (CZ_a)	Cenozoic Era	66.00 Ma to 0.00 Ma	Unconsolidated alluvial clay; silt; sand; and gravel deposits	Undefined deposition mode
Alluvial levee / overbank deposits (Q_al)	Quaternary Period	2.58 Ma to 0.00 Ma	Fluvially deposited fine- to medium-grained lithic to quartz-rich sand, silt, clay	Terrestrial fluvial deposition
Alluvial valley deposits (Q_av)	Quaternary Period	2.58Ma to 0.00Ma	Silt, clay, (fluvially deposited) lithic to quartz-lithic sand, gravel	Terrestrial fluvial deposition
Alluvial gravel deposits (CZ_ag)	Holocene Epoch	66.00 Ma to 0.00 Ma	Unconsolidated alluvial gravel, sand, silt and clay with variable humic content. Gravels commonly clast-supported	Terrestrial fluvial deposition – backplain
Alluvial terrace deposits - high-stand gravel facies (CZ_athc)	Holocene Epoch	23.03 Ma to 0.00 Ma	High-level gravel and conglomerate	Terrestrial aeolian deposition
Alluvial terrace deposits - high-stand sand facies (CZ_aths)	Holocene Epoch	23.03 Ma to 0.00Ma	High-level sand and sandstone	Terrestrial fluvial deposition – depression
Source-bordering dunes (CZ_dds)	Pleistocene Epoch	0.13Ma to 0.01Ma	Red-brown to light-brown, poorly sorted to bi-modal, very fine- to medium-grained feldspathic quartz sand	Terrestrial aeolian deposition

2.2.9 Soil Landscape

Soil Landscapes of Central and Eastern NSW (Department of Planning, Industry and Environment, 2020) (https://datasets.seed.nsw.gov.au/dataset/published-soil-landscapes-of-central-and-eastern-nsw37d37) is a compilation of all 40 published soil landscape maps that cover central and eastern NSW, based on standard 1:100,000 and 1:250,000 topographic sheets. The mapping provides an inventory of soil and landscape properties of the area and identifies major soil and landscape qualities and constraints. It integrates soil and topographic features into single units with relatively uniform land management requirements. In the associated reports, soils are described in terms of soil materials in addition to the Australian Soil Classification, the Great Soil Groups, and the Northcote systems. There were 25 soil landscapes mapped within the study area.

Soil Landscape data includes the ‘Soil Landscape Geomorphic Class’, used to describe the dominant geomorphic process associated with the soil landscape. In the study area, the relevant process categories are vestigial, aeolian, erosional, transferral, alluvial, colluvial, residual, disturbed plus the categories water (Milford et al., 2008) (Table 3).

Table 2. Descriptions of Australian Soil Classification Units units found in the study area. Source: Isbell and the National Committee on Soil and Terrain (2020).

ASC Soil Order	Description
Kurosols	Soils with strong texture contrast between A horizons and strongly acid B horizons. Soils other than Hydrosols with a clear or abrupt textural B horizon and in which the major part of the upper 0.2 m of the B2t horizon (or the major part of the entire B2t horizon if it is less than 0.2 m thick) is strongly acid
Kurosols – Natric	Kurosols in which the major part of the upper 0.2 m of the B2t horizon is sodic
Rudosols	Soils that have little, if any, pedologic organisation. They are usually young soils in the sense that soil forming factors have had little time to pedologically modify parent rocks or sediments. The soils are apedal or only weakly structured with little or no texture or colour change with depth.
Rudosols (alluvial)	Rudosols formed from alluvial sediments.
Rudosols and Tenosols	By definition, Rudosols soils will grade to Tenosols.
Sodosols	Soils with strong texture contrast between A horizons and sodic B horizons which are not strongly acid. They have a clear or abrupt textural B horizon and in which the major part of the upper 0.2 m of the B2t horizon (or the major part of the entire B2t horizon if it is less than 0.2 m thick) is sodic and not strongly acid.
Tenosols (Alluvial)	Tenosols formed from alluvial sediments, with generally only weak pedologic organisation apart from the A horizons, excluding soils that have deep sandy profiles with a field texture of sand, loamy sand or clayey sand in 80% or more of the upper 1.0 m.
Vertosols	Clay soils with shrink-swell properties that exhibit strong cracking when dry and at depth have slickensides and/or lenticular peds. Although many soils exhibit gilgai microrelief, this feature is not used in their definition. A clay field texture or 35% or more clay throughout the solum and when dry, open cracks occur at some time in most years.

The probability of presence of sub-surface preserved late-Pleistocene-age deposits would be higher in a stable aggrading landform, where a surface of late-Pleistocene age was relatively rapidly covered by a layer of sediment. Vestigial, erosional, residual and disturbed processes are least likely to be associated with the presence of sub-surface preserved late-Pleistocene deposits. Colluvial process could be associated with the presence of sub-surface preserved late-Pleistocene deposits on cliff footslopes subject to episodic deposition due to mass movement. There would be a greater probability of presence of sub-surface preserved late-Pleistocene deposits associated with footslopes and fans formed by transferral process. Alluvial landscape formation is characterised by aggradation, but also dynamic reworking of sediment by channel migration and floodplain stripping. These processes would greatly lower the probability of presence of sub-surface preserved late-Pleistocene deposits. The exception would be geomorphologically dormant terraces, i.e., elevated abandoned floodplains, no longer hydraulically active. In this case, the elevated terrace would need to overlay an older late-Pleistocene-age former floodplain surface. A landscape situation possessing moderate potential for presence of sub-surface preserved late-Pleistocene deposits is the interface of landforms formed by transferral (or colluvial) and alluvial processes. In this case, the alluvial surface would be late-Pleistocene-age, later buried by an episodic deposit of material from upslope.

Table 3. Descriptions of Soil Landscape Geomorphic Class used to describe dominant geomorphic process in Soil Landscapes of Central and Eastern NSW (Department of Planning, Industry and Environment, 2020) (Milford et al., 2008, pp. 5-6).

Soil Landscape Geomorphic Class	Description
Residual Landscapes	Residual soil landscapes are dominated by sites where deep soils have formed from in situ weathering of parent materials (This has presumably taken place over long periods where the rate of soil formation has been greater than rate of erosion.) Residual soil landscapes typically have level to undulating elevated topography. Landform elements include some summit surfaces, plateaux, terrace plains, peneplains and old ground surfaces. Stream channels are usually poorly defined.
Vestigial Landscapes	Vestigial soil landscapes are dominated by sites where shallow soils have formed from in situ weathering of typically resistant parent materials. Vestigial soil landscapes typically have level to undulating elevated topography. Landform elements include summit surfaces, plateaux and old ground surfaces. Rock outcrop may be common.
Colluvial Landscapes	Colluvial soil landscapes are affected by mass movement. Soil parent material mostly consists of colluvial mass movement debris including scree and talus along with other landslide, mudflow and creep deposits. Colluvial soil landscapes usually include alcoves, cliffs, cliff-foot slopes, scarps, landslides, talus, some moderately inclined to precipitous hillslopes and areas of commonplace evidence of mass movement.
Erosional Landscapes	Erosional soil landscapes have been primarily sculpted by erosive action of running water. Streams are well defined and competent to transport their sediment load. Soil depth is usually shallow (with occasional deep patches) and mode of origin is variable and complex. Soils may be either absent, derived from water washed parent materials or derived from insitu weathered bedrock. Erosional soil landscapes usually consist of steep to undulating hillslopes and may include tors, benches, and areas of rock outcrop. Evidence of mass movement is rare.
Transferral Landscapes	Transferral soil landscapes are deep deposits of mostly eroded parent materials washed from areas directly upslope. Stream channels are often discontinuous and slopes are generally concave. Transferral landscapes include footslopes, valley flats, fans, bajadas and piedmonts.
Alluvial Landscapes	Alluvial soil landscapes are formed by deposition along rivers and streams. Soil parent material is alluvium. Alluvial soil landscapes include floodplains and alluvial deposits. Typical landform elements include those found on meander plains; including bars, backplains, scrolls, scroll plains, flood-outs, ox-bows, levees, terraces, prior and current stream channels.
Aeolian Landscapes	Aeolian soil landscapes have accumulated by deposition of sand-sized particles by wind action. Aeolian soil landscapes include dunefields, dunes, blow-outs, sand sheets and lunettes.
Disturbed Landscapes	Disturbed soil landscapes are dominated by ground surfaces arising from human activity. Soil parent materials have been moved, accumulated, removed or replaced (with soil or other items). Landform elements include fill-tops, embankments, cut faces, cut-over surfaces, dams, mounds and pits.

Aeolian landscapes offer high potential for presence of sub-surface preserved late-Pleistocene deposits in situations where sand dunes or sand sheets cover late-Pleistocene-age alluvial terraces. The aeolian Warkworth Soil Landscape (S-ww) [also Warkworth Land System (wwq)] is known to be associated with late-Pleistocene-age artefacts and occurs in the study area. van de Graf (1963) described the Warkworth sandy aeolian regosols as occurring in scattered locations along the Hunter River and Wollombi Brook "*between Singleton and Warkworth*". Galloway (1963b) described the distribution of Warkworth land system as follows: "*The Warkworth land system consists of low dunes fringing the lower Hunter and Wollombi; the deep soil on these dunes indicates a considerable age. Thin sand sheets near Cessnock, probably derived from weathering sandstone outcrops, have been included in this land system*". Hiscock et al. (2000), citing Story et al. (1963), described the Warkworth land system "…*as occurring in numerous locations downstream from around Camberwell*…". Storey et al. (1963)

described the Warkworth land system as comprising two units. Unit 1 consisted of linear sand dunes 1 – 6 m high, generally aligned NW – SE and resting on high river terraces. Unit 2 consists of long, low linear dunes less than 1 m high, 100 – 200 m apart, up to 800 m long, and also generally aligned NW – SE. Unit 2 is also characterised by thin sand sheets with gentle undulations, reflecting the underlying rock surface. Soil Landscapes of Central and Eastern NSW maps 9 locations of Warkworth sand occurring adjacent to the Hunter River and Wollombi Brook between Camberwell and Singleton.

Some Soil Landscapes in the study area appear to be closely associated with certain lithological units and soil types. Soil Landscapes formed by alluvial process, e.g., Singleton, are associated with Tenosols (alluvial) ASC Soil Order and Alluvial Valley Deposits Rock Unit. The Soil Landscapes formed by aeolian process, i.e., Warkworth, is associated with Rudosols and Kurosols, Natric ASC Soil Orders and Source-bordering dunes and Alluvial Terrace Deposits – high-stand sand facies Rock Units. In the study area, Soil Landscapes formed by transferral processes are not associated with particular lithological units and soil types.

2.2.10 Streambank erosion and gullying

A survey of erosion in the Hunter valley was undertaken by Emery (1985). This survey found the region containing the study area was among the more degraded areas of the Hunter Valley. Consistent with this survey, but more recent, and available in in digital form, is the spatial layer Erosion Gully and Streambank – Landform and Condition Dataset downloaded from State Government of NSW, Office of Environment and Heritage (https://datasets.seed.nsw.gov.au/dataset/erosion-gully-and-streambank-landform-and-condition-dataset206b0).

Gully and streambank erosion were mapped as linear features, classified according to severity and depth (Taylor, 2011) (Table 4). The metadata indicate that mapping was carried out on 1:25,000 scale topographic maps from 1:25,000 scale aerial photography. Linear features less than 100 m in length were not represented. The estimated positional accuracy of the linework is between 12.5 m and up to 75 m. Linework was based on aerial photograph interpretation (photographs dated between 1991 - 1993) by staff with training in natural resource assessment.

The relevance of streambank erosion and gullying to probability of presence of sub-surface preserved late-Pleistocene artefacts is erosion can disturb and remove buried artefacts, but it can also expose artefacts and increase the chance of discovery.

Table 4 Streambank and gully erosion type, severity and depth classes, mapped by OEH. Source: Taylor (2011).

Erosion type class	Erosion severity class	Description of severity class	Erosion depth class
Gully	Minor	Isolated discontinuous linear gullies, confined to primary or minor drainage lines	< 1.5 m 1.5 – 3.0 m 3.0 – 6 m >6 m
Gully	Moderate	Continuous linear gullies to primary or minor drainage lines	< 1.5 m 1.5 – 3.0 m 3.0 – 6 m >6 m
Gully	Severe	Discontinuous or continuous gullies branching into minor drainage lines, or multiple >6m deep branching within primary drainage lines	< 1.5 m 1.5 – 3.0 m 3.0 – 6 m >6 m
Gully	Extreme	Discontinuous or continuous multiple branching gullies, or sub-parallel gullies in dispersible soils, frequently feature tunnels in surrounding soils and structures	< 1.5 m 1.5 – 3.0 m 3.0 – 6 m >6 m
Streambank	No severity classes	No severity classes	< 1.5 m 1.5 – 3.0 m 3.0 – 6 m >6 m

2.3 Terrain Analysis

Geomorphology is concerned with both physical form and process. Process involves the dimension of time, so tends to be more difficult to measure and model than form. For this reason, geomorphologic assessments often interpret process on the basis of an analysis of physical form. Terrain analysis is concerned with the automated analysis of landforms using digital elevation data sets. The analysis involves application of algorithms within a GIS (Geographic Information System) at detailed scales over wide areas to map characteristics of interest (e.g., Gardner and Sawowsky, 1990; Wilson and Gallant, 1998; Wilson and Gallant, 2000; Lindsay, 2005; Drăguţ and Blaschke, 2006; MacMillan and Shary, 2009). Using an example from the Southern Coalfield, Palamara et al. (2006) illustrated application of terrain analysis to underground coal mine impact assessment. Similar methods were used in this report.

The purpose of undertaking terrain analysis for this investigation was to distinguish the geomorphic forms of alluvial floodplain, colluvial slope, and hillslopes of residual soil. Residual soil is formed from the weathering of the bedrock below. Colluvial soil is formed from the weathering of bedrock which moves downslope by gravity. Alluvial soil is formed from sediment deposited by flowing streams. Mapping of three forms can provide clues to landform formation.

Terrain analysis was undertaken using two different GIS applications: Global Mapper Pro V23.1.0 March 3 2022 Build (Blue Marble Geographics), and SAGA (System for Automated Geoscientific Analyses) GIS (http://www.saga-gis.org; Institute of Geography, Section for Physical Geography, Klimacampus and University of Hamburg, Germany) (Cimmery, 2007-2010; Böhner et al., 2006; Böhner et al., 2008).

2.3.1 Topography (digital elevation) definition

The topography of the study area was defined by LiDAR derived DEM (Digital Elevation Model), with the supplied point field data converted to a 2 × 2 m elevation grid. The LiDAR-based grid was combined with the 30 × 30 m SRTM grid to include areas outside the LiDAR coverage. This grid was resampled to produce a 25 × 25 m DEM that were suitable for classification of broad-scale landform features.

2.3.2 Landform classification

A number of different methods have been proposed for classifying landforms based on topographic data (e.g., Schmidt and Hewitt, 2004; Iwahashi and Pike, 2007; Niculiță and Niculiță, 2011). Landform classification can provide objective assistance to stream type classification, and to delineate hydrologic and geomorphic units such as valley bottoms (also known as floodplains, or alluvium) (Gallant and Dowling, 2003). The objectivity of automatic identification of floodplain extent is an advantage over subjective methods, although manual methods that combine hydraulic, slope and soils data can produce a rational and defendable result and might be preferred in cases where high quality and high-resolution data are available.

In this report three methods of landform classification, all implemented in SAGA GIS, were investigated:

- Topographic Position Index (TPI)
- Terrain Surface Classification (TSC)
- Multiresolution index of valley bottom flatness (MRVBF)

After considerable effort applying these three classification systems to the study area, for the reasons explained below, TPI was not used, while TSC and MRVBF were utilised.

Topographic Position Index

The TPI was proposed by Guisan et al. (1999) and elaborated by Weiss (2001). An example application of TPI to landform classification in the Carpathian Mountains, Slovakia can be found in Barka et al. (2011). The TPI algorithm compares the elevation of each cell in a DEM to the mean elevation of a specified neighbourhood around that cell. Positive TPI values represent locations that are higher than the average of their surroundings, as defined by the neighbourhood (ridges). Negative TPI values represent locations that are lower than their surroundings (valleys). TPI values near zero are either flat areas (where the slope is near zero) or areas of constant slope (where the slope of the point is significantly greater than zero). The default SAGA radius settings are inner radius 100 m and outer radius 1000 m. Experimentation with data from the study area using different radius combinations made little difference to the result.

The TPI algorithm in SAGA divides the terrain into 10 landform classes:

- High ridges
- Midslope ridges
- Local ridges
- Upper slopes
- Open slopes
- Plains
- Valleys
- Upland drainages
- Midslope drainages
- Streams

These 10 classes can represent all landforms across the world, so a particular region will not necessarily have all of these classes present. On a global scale the study area has relatively subtle topography, and implementation of the TPI algorithms in SAGA GIS resulted in the majority of the area falling into just two landform classes: Open slopes and Plains. The resolution of this classification was too simplistic to be useful for aiding landform definition, so the TPI index was not used.

Terrain Surface Classification

The TSC was proposed by Iwahashi and Pike (2007). This unsupervised classification method divides an area into landform classes using three taxonomic criteria: slope gradient, local convexity, and surface texture. To subdivide increasingly subtle topography, grid cells sloping at less than the mean gradient of the input DEM are classified by designating mean values of successively lower-sloping subsets of the study area (nested means) as taxonomic thresholds, thereby increasing the number of output categories from the minimum 8 to 12 or 16 (Figure 6). According to Iwahashi and Pike (2007), the classifications reflect physiographic regions, geological structure, and landform as well as slope materials and processes; fine-textured terrain categories tend to correlate with erosional topography or older surfaces, coarse-textured classes with areas of little dissection. Iwahashi and Pike (2007) found that in Japan the resulting classes approximate landform types mapped from airphoto analysis, while in the Americas they create map patterns resembling Hammond's terrain types or surface-form classes; SRTM30 output for the United States compares favourably with Fenneman's physical divisions.

The TSC algorithm was implemented in SAGA GIS with a possible 16 classes (Figure 6). Each class tends to be associated with a landform type (Figure **6**; Karimzadeh et al., 2019; Iwahashi et al., 2018). Stable, aggrading late-Pleistocene deposits would most likely fall into the TSC Moderate and Gentle slope classes 9 to 16. TSC is an index that can assist with classification of landforms. On its own it cannot identify the location of late-Pleistocene deposits.

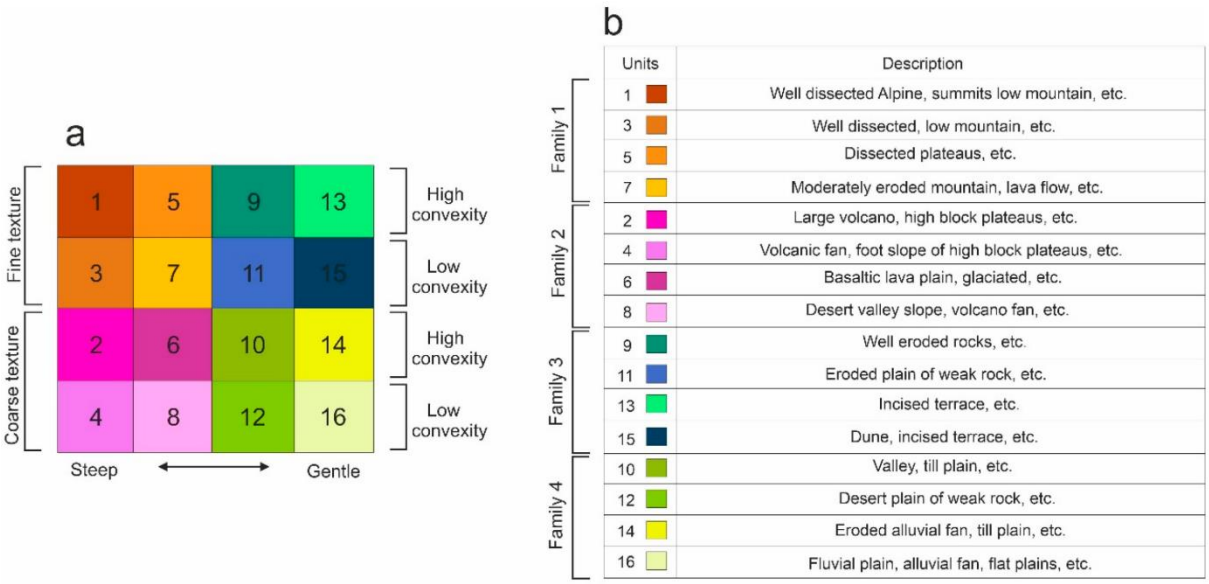

Figure 6. (a) The 16 landform classes of the terrain surface classification (TSC) algorithm of Iwahashi and Pike (2007), and (b) description of associated terrain units (Karimzadeh et al., 2019).

Multiresolution index of valley bottom flatness

The MRVBF was proposed by Gallant and Dowling (2003) mainly as a tool to assist in the objective separation of floodplains from their surrounding hillslopes. The algorithm uses the two terrain attributes slope and elevation percentile. Slope is computed as a percentage or 100 times the tangent of the slope angle. Elevation percentile is a ranking of the elevation of a grid point with respect to the surrounding cells in a circular region of user-specified radius. It is calculated as the ratio of the number of points of lower elevation to the total number of points in the surrounding region. Low values indicate the point is low in the local landscape since most of the surrounding points are higher. The MRVBF algorithm was developed using 25 m resolution DEMs and although Gallant and Dowling (2003) claimed that it can be applied at any resolution provided appropriate adjustments are made they noted that use of the algorithm at fine resolution DEMs is still under investigation. The original 2 m DEM was converted to a 25 × 25 m grid and the MRVBF algorithm was implemented in SAGA GIS which allowed use of the original parameter settings and way of interpreting the MRVBF value to define a valley bottom. According to Gallant and Dowling (2003), values of MRVBF less than 0.5 are not valley bottom areas; values from 0.5 to 1.5 are considered to be the steepest and smallest resolvable valley bottoms for 25 m DEMs; flatter and larger valley bottoms are represented by values from 1.5 to 2.5, 2.5 to 3.5, and so on. Thus, there is no absolute threshold of MRVBF that unequivocally identifies a valley bottom, or floodplain, for all situations, but experience suggests that a value of 3 is applicable in many cases. MRVBF is an index that can assist with identification of alluvial landforms. On its own it cannot identify the location of late-Pleistocene deposits.

2.4 Identification of wider distribution of CM-CD1 and Warkworth sand system geomorphic type deposits

The literature does not describe a unique set of geomorphic characteristics possessed by CM-CD1 deposit that explain its high archaeological potential. If a set of such characteristics could be described, it would facilitate locating geomorphologically similar areas elsewhere in the Project area or nearby. Thus, the method employed in this report was to identify basic geomorphological characteristics of the CM-CD1 site, and then search for locations with those characteristics over the wider area of interest along the Hunter River valley from Bureen to Singleton.

The aeolian Warkworth sand system has been mapped as Warkworth (wwq) Soil Landscape. One of the mapped locations, on a meander of Wollombi Brook, was described and mapped by Page (1971). Another one of those locations, on a meander of the Hunter River, NSW Seamless Geology mapped it as Source-bordering dunes (CZ_dds), while other occurrences were mapped as Alluvial terrace deposits - high-stand sand facies (CZ_aths). The LiDAR-derived 2-metre DEM was rendered with vertical exaggeration and shading to accentuate NW – SE

trending dunes, then carefully searched for existence of areas of Warkworth sand system morphology that were not included on the Soil Landscape of NSW Seamless Geology layers.

Hiscock et al. (2000) examined archaeological site 37-5-63 on the left bank of the Hunter River, known and previously examined since 1982. They found the soil at the site comprised a sand A horizon (Level 1) unconformably lying over a clayey sand B horizon (Level 2). Hiscock et al. (2000) concluded that "*The Level 1 material undoubtedly consists of aeolian sandy sediment derived from the Hunter River floodplain to the west and northwest. It is likely that the Level 2 sediment is also aeolian but the evidence for this is not conclusive*". Hiscock et al. (2000) identified the sands as a small and localised occurrence of Unit 2 of the Warkworth Land System. Hiscock et al. (2000) concluded that the artefact-bearing Level 1 sands were unlikely to be older than late-Pleistocene, with conditions conducive to their deposition more likely to have prevailed in late- or terminal-Pleistocene, or early-Holocene times than in mid or late Holocene. The Level 2 material was judged to be very much older than the Level 1 material.

Hughes and Shawcross (2001) examined archaeological site 37-5-0166, on a broad sand ridge on the right bank of the Hunter River, aligned parallel to the river to the north and rising to about 10 metres above the surrounding floodplain of the Hunter River and Hobden Gully. The floodplain was about 10 m higher than the bed of the Hunter River. The ridge consisted of an alluvial clay core capped by a sand dune at least 3.6 m thick. The clay core was likely either a levee or terrace. The sand belonged to the Warkworth Land System, with its morphology consistent with having formed by sand and dust blown up from the bed of the Hunter River by north-westerly winds. Hughes and Shawcross (2001) considered the sand dune to be late-Pleistocene age.

The final method of locating known or potential Warkworth sand system was to map Warkworth Sands Woodland in the Sydney Basin Bioregion. The data were from Department of Planning and Environment (2019) State Vegetation Type Map: Upper Hunter v1.0. VIS_ID 4894 (https://datasets.seed.nsw.gov.au/dataset/state-vegetation-type-map-upper-hunter-v1-0-vis_id-4894). Warkworth Sands Woodland is low woodland, typically dominated by *Angophora floribunda* (rough-barked apple) in the canopy and *Banksia integrifolia* subsp. *integrifolia* (coast banksia) and/or *Acacia filicifolia* (fernleaved wattle) in a sub canopy; together with other small trees, shrubs and groundcover species typical of sandy soils in the Hunter Valley region. The Plant Community Type (PCT ID 1658) is 'Rough-barked Apple - Narrow-leaved Ironbark - Blakelys Red Gum - Bull Oak - Coast Banksia woodland on sands of the Warkworth area'. The PCT was mapped for the State Vegetation Type Map using three methods: spatial modelling, manual editing, and site survey.

3.0 Theory of Soil Formation and Potential to Contain Late-Pleistocene Archaeological Materials

3.1 Setting and context

Hughes et al. (2014) pointed out that although the central lowlands of the Hunter Valley are rich in Holocene-aged (3,000 – 5,000 years old) open stone artefact concentrations, to date, very few verified traces of late-Pleistocene occupation have been found there. They found it likely that most archaeological materials older than ca 10,000 years have been either completely removed or widely dispersed across the landscape and are no longer recognisable as discrete late-Pleistocene-aged assemblages. Although Hughes et al. (2014) considered sand bodies to have the greatest potential to contain older sites, their integrity has usually been compromised, principally by bioturbation.

The sandy soils of the alluvial terraces and lower slopes of the study area were classified by Story et al. (1963) into two broad groups: sandy aeolian regosols and duplex/texture contrast soils (solonetzic or podzolic). The duplex soils generally comprise a homogeneous massive sandy A horizon overlying an abrupt transition with a dark coloured underlying and mottled fine-grained B horizon with blocky structure. The aeolian soils have been variously associated with the terms Warkworth Sands, Warkworth Sand Sheet, Warkworth Soil Landscape or Warkworth Land System, but in geological mapping the formation is referred to as source-bordering dunes.

3.2 Archaeological potential of texture contrast soils

Hughes (1999), Hughes (2000), Hughes (2003) and Hughes et al. (2014) summarised the hypothesis of Dean-Jones and Mitchell (1993, pages 40-46) on the genesis of texture contrast, also known as duplex, soils and their implications for archaeology. This hypothesis challenged the conventional idea that the A and B horizons in duplex soils developed in situ over long time periods and were of the same age. From the early 1980s, Hughes

and colleagues began describing these soils in sedimentological rather than pedological terms as Unit A being modern to Holocene sediments unconformably overlying Unit B deposits of late-Pleistocene age. Dean-Jones and Mitchell (1993) proposed that in the Hunter region, duplex soils are the result of superposition of two unlike materials through the action of contemporary lateral movement of sediments down the slope (Hughes, 2000). Rainsplash acting together with rapid shallow bioturbation are the mechanisms of downslope transport of fine material, effectively coarsening the A horizon at the expense of the B horizon and commonly leading to the presence of a stone layer between these horizons.

If the above described theory is correct, the implications for archaeology are, according to Dean-Jones and Mitchell (1993), and listed by Hughes (2000) and Hughes et al. (2014): (i) the A horizons of duplex soils are between 200 and 3,000 years old, rather than 20,000 to 30,000 years old; (ii) duplex soils are not stratified chronologically; (iii) stone artefacts will behave in the same way as natural stones on a hillslope and will be subjected to surface dispersion, downslope movement and differential burial or exposure by bioturbation; and (iv) intact or relatively undisturbed hearths provide the best prospects for dating open sites in these contexts.

Considering the work of Dean-Jones and Mitchell (1993), Hughes (2000) and Hughes et al. (2014) suggested that A horizons would need to be at least 300 mm thick before considering the possibility that older basal archaeological materials can be distinguished from overlying younger materials. Hughes (2000) also referred to the work of Nanson and Young (1988) on the lower Nepean River which suggested a period of major hillslope sediment stripping (the ‘Cranebrook Pluvial’) began more than 100,000 years ago and may have completed by 50,000 years ago. The suggestion here is that the last glacial maximum (about 20,000 to 18,000 years BP) was typified by low level fluvial activity. If episodes of major hillslope stripping occurred during the late-Pleistocene, then it was probably before about 50,000 years ago. The processes of rainwash erosion and bioturbation acting continuously through time would have repeatedly reworked the A horizon material such that at any given time over the past 50,000 years, the A horizon sediment would never have been older than about 3,000 years. The B horizon would have been little affected by this reworking process. Hughes (2000) agreed with Dean-Jones and Mitchell (1993) that any stone artefacts contained in the evolving A horizons would have been dispersed vertically and laterally, such that that most duplex soils have no or negligible archaeological potential. The colluvial B horizon material is likely to have developed prior to human occupation of the Hunter region, so Hughes (2000) argued that B horizons of these duplex soils also have negligible potential to contain late-Pleistocene archaeological materials.

On Widden Brook, a low-sinuosity, terrace- and bedrock-confined, sand-bed stream in the upper Hunter Valley, NSW Cheetham et al. (2010) found that inset, step-terrace sequences had progressively younger terrace deposits towards the channel. Colluvial deposits on top of older terraces generally yielded younger ages than fluvially deposited sediments on subsequent or younger terraces. Cheetham et al. (2010) noted that this observation was consistent with the general understanding that hillslope instability would maintain sediment supply to colluvial deposits after terrace formation (Williams, 1978).

Below a depth of about 0.5 m there would be potential to find stratified deposits on floodplain soils containing archaeological materials. Sites with the highest potential would be those having a protective colluvial, alluvial or aeolian sediment layer. Hughes et al. (2014) pointed out that in the central lowlands, colluvial deposits, which occur mainly on footslopes abutting alluvial landforms, are uncommon, small in area, and difficult to recognise from surface indications. In addition, very few of them are thought to contain sub-surface archaeological sites.

Hughes and Hiscock (2000) investigated a deposit known as CM-CD1 located within the study area of this report. A detailed description of the investigation of CM-CD1 undertaken at the time is provided by Central Queensland Cultural Heritage Management Pty Ltd (2009). The Younger Stratum capped older colluvial deposits referred to as the ‘Older Stratum’, which were about 450 mm thick. The Older stratum contained stone artefacts, but no dateable material. Although the age of this stratum and its associated artefacts was not determined, Hughes and Hiscock (2000) and Hughes et al. (2014) suggested that the relatively high degree of weathering indicates that it is likely to be at least early Holocene in age, and more probably late-Pleistocene. More recently, EMM (2022b) used optically stimulated luminescence (OSL) to date the deposit to terminal Pleistocene. Today, the land adjacent to CM-CD1 is post-mining rehabilitated landform, while the undisturbed narrow strip of land on which CM-CD1 is located is sloping downwards towards the adjacent watercourse (a mapped hydroline) (which flows over Hunter River floodplain) at about 3% gradient. CM-CD1 has been described as a colluvial deposit at the foot of a relict Tertiary terrace (EMM, 2022a, p. 38). Whilst CM-CD1 might be on colluvium, the land above it is too steep to be classified as a floodplain or terrace, which is typically <1% gradient (Speight, 2009, p. 49). The Hunter River floodplain downstream of CM-CD1 is Quaternary age, which covers the Pleistocene and Holocene periods.

3.3 Archaeological potential of alluvial terrace/floodplain units

Umwelt (2009) reviewed the literature concerning archaeological potential of landforms for Ravensworth Operations, supported by a field inspection. Valley fills across the central lowlands include sequences of one to three terraces. The oldest terrace has strong texture contrast profile while the lowest and youngest terrace has a weakly structured profile and appears to be post-European settlement. This lower terrace can still be overtopped by very large floods. Terraced, alluvial watercourses also typically contain an inset active floodplain. The valley fill stratigraphy suggests widespread stripping of sediment in the late-Pleistocene, followed by a period of deposition. Swampy chain of ponds River Styles developed over this phase. Some of these chain of ponds watercourses remain intact, while others became channelised or gullied since European occupation. There is a great deal of variation apparent in timing, rates, and extents of erosion and deposition over the region, as terrace formation is often related to exceedance of local geomorphic thresholds, not simply climatic events. Multiple cycles of cut and fill may be absent from the stratigraphic record, or preserved at only a few sites (Umwelt, 2009). These factors make it difficult to correlate depositional sequences observed and interpreted in the field with archaeological potential.

Umwelt (2009) concluded that the interface of footslope colluvial materials and alluvial terrace materials appears to present the best potential for archaeological deposits. However, they recognised that identifying areas with greater archaeological potential would require detailed stratigraphic investigation to reconstruct the chronology of landform formation. In general, the older, and higher, terraces would offer more potential than the younger, lower terrace, which could have at least partly formed since European settlement.

3.4 Archaeological potential of source bordering dunes

The Warkworth Sand formation has received considerable attention from geomorphologists and archaeologists due to the belief that this landform holds the greatest potential for finding late-Pleistocene archaeological material. There is debate in the literature concerning the date of formation of the Warkworth Sands. Some environmental assessment literature has cited Galloway (1963a) as the source of the age of "*18,000 – 15,000 years ago*". Examples are Coal Australia – Mount Thorley Warkworth (2017) and Yancoal (2018), which both included the identical statement: "*The sand substrate is believed to have formed during the Pleistocene epoch, some 18,000-15,000 years ago, from the sandy alluvium of the Wollombi Brook, possibly from erosion in Wollemi and Yengo National Parks (Galloway 1963)*". The problem with this statement is that Galloway (1963) did not mention the age range or source material of Warkworth Sand (stating only that it was Quaternary age). A possible explanation is that the authors were quoting from a secondary reference, possibly the incorrect attribution by Peake et al. (2002): "*It is believed that the sand dunes at Warkworth formed some 18,000 to 15,000 years ago from the sandy alluvium of Wollombi Brook (Galloway 1963)*."

One of the earliest scientific interpretations of Warkworth source bordering dune was an investigation of the prominent dune system within a meander loop of the Wollombi Brook by Page (1971), although he indirectly acknowledged the work on nearby sites by Story et al. (1963). Page (1971) confirmed that the source of the sand was the adjacent river, with Warkwoth sand occupying the southern and eastern margins of the stream channel, with sand transported there by dominant northwesterly winds. Page (1971) speculated a fairly young age for the dune, suggesting that it was younger than the underlying terrace, which had been dated at a site upstream to 4,000 years ago. A problem with this young age is the assumption by Hughes et al. (2014) that the Hunter River could not have been the source of so much sand during most, if not all, of the Holocene. Wollombi Brook carries a much higher sand load, but not sufficient to explain the widespread, often thick, sand dunes and sand sheets further away from the river (Hughes et al., 2014). The lack of an adequate sand source during recent times suggested to Galloway (1963a) that the Warkworth sand formations were of late-Pleistocene or early-Holocene age. More recent dating has confirmed this interpretation.

Australian Museum Business Services (AMBS) (2002, pp. 74–91) excavated 10 pits in the sand sheet on the west side of Sandy Hollow Creek (east of Wollombi Brook) at Warkworth West. Numerous stone artefacts and heat shattered fragments were recovered from the ten pits. Three sand samples from the southern part of the sand sheet were collected for optical dating. In 2002 the samples were dated using the multiple-aliquot Australian slide method. In 2013 sub-samples of sand from these three samples were redated at the University of Adelaide using a single-grain OSL technique (Hughes et al., 2014), with estimates made for central and minimum age. Hughes et al. (2014) concluded that the OSL technique provided valid estimates of the central ages for these samples. The uppermost (60 cm) sample had a central age date of ~12 ka. The 125 cm deep sample had a central date of ~53 ka. The lowest pit, at 175 cm, had a central date of ~61 ka years. Hughes et al. (2014) concluded that If the two lowermost artefacts found were more or less in situ, they were almost certainly discarded more than ~23 ka

and possibly as much as ~50ka (noting that the vertical distribution of sand grains and artefacts could be affected by bioturbation).

Further excavations by Scarp Archaeology (2009) in the central part of the sand sheet reached a different conclusion, suggesting that the oldest artefacts buried in the Warkworth sands were all probably Holocene in age or perhaps slightly older. Their doubts about the older age estimates were based on the potential problem of differential translocation of artefacts and sand grains up or down the profile due to bioturbation. Gliganic et al. (2016) also reported OSL dating of samples from a site around 4 km downwind (based on the dominant wind direction) and east of Wollombi Brook. It is not clear when Gliganic et al. (2016) undertook the sampling, nor is it clear how this work is related to that of Scarp Archaeology (2009). Gliganic et al. (2016) acknowledged that their work was funded by Scarp Archaeology and Rio Tinto Coal and Allied, and they referred to a soil survey by Lockwood (2009), who worked on the sand sheet at the same time on behalf of Coal and Allied. Gliganic et al. (2016) combined a mixing zone conceptual framework with the minimum age model (MAM) to show that phases of significant sand aggradation likely occurred at the sampled site at ~29.9, ~18.3, ~10.3 ka, and continued through the Holocene. These dates are not inconsistent with those reported by Hughes et al. (2014).

It is unlikely that formation of Warkworth sand system beginning around 23 ka to 30 ka was a geographically isolated phenomenon. Thermoluminescence dating of relict source-bordering dunes in the middle and upper Shoalhaven River catchment by Nott and Price (1991) showed them to have been active between 19 ka and 6 ka. Except for a brief period of dune stability sometime between 18 ka and 14 ka, the climate during this time was considerably drier than present. The onset of aeolian activity in the Shoalhaven catchment coincided with the Last Glacial Maximum (LGM), the period 24 ka to 18 ka (De Dekker et al., 2020), which indicates that it was not until then that arid or semi-arid conditions were able to penetrate the humid coastal rim of south-east Australia (Nott and Price, 1991). Hesse et al. (2003) reported that sand dunes on the Newnes Plateau, west of Sydney, were active during the LGM, made possible through wind acceleration on windward slopes, ready sand supply from the weathered sandstone of the plateau and sparse vegetation cover. Source-bordering dunes have also been described in association with all of the major southern tributaries of the Murray-Darling river system. For example, thermoluminescence dating of three stratigraphic units within riverine source bordering sand dunes near Wagga Wagga by Page et al. (2001) showed that phases of sand accumulation occurred between 15 ka and 25 ka, between 35 ka and 60 ka, and between 80 ka and 120 ka. These ages were in agreement with those determined respectively for the Yanco, Kerarbury and Coleambally phases of palaeochannel activity on the Riverine Plain (Page et al., 2001). Based on evidence from the Hunter River valley and elsewhere in southeastern Australia, it can be reliably assumed that the Warkworth sand system started developing during the LGM, such that artefacts buried by the sand unit must date from the late-Pleistocene (from earliest occupation to 11,700 years ago).

3.5 Summary of geomorphic forms with the highest archaeological potential

Dean-Jones and Mitchell (1993, pages 39, 63 - 64) identified four geomorphic situations favouring the preservation of older open sites in the Central Lowlands of the Hunter Valley, three of which are related to alluvial sequences (the other being aeolian). Hughes (2000) listed the four situations as:

1. Buried sites near the apices (apexes) of low angle alluvial fans.
2. Overlapping fluvial terraces (no examples of which have yet been recorded from the Hunter region). Most terrace sequences are inset terraces, which are less likely to preserve older sites.
3. Where alluvial fans of tributary streams impinge on terraces and floodplains of the main stream.
4. Within dunes or on older surfaces buried by advancing dunes and sand sheets.

As well as areas on floodplain margins with colluvial/alluvial drapes, the other situation with potential would be underneath natural levees associated with cut-off channels on elevated terraces (higher elevation suggests greater antiquity, possibly late-Pleistocene). Areas in proximity of the active river channel banks, on the side from which the river channel has migrated, are likely to be disturbed by erosion and deposition over the past few hundred years, so would have low potential for late-Pleistocene deposits.

Hughes et al. (2014) concluded that the two geomorphic settings most likely to reveal late-Pleistocene artefacts were: (i) late-Pleistocene windblown sand dunes/sheets (i.e., Warkworth sand), and (ii) late-Pleistocene/early-Holocene colluvial deposits (e.g. CM-CD1). Of these two, sand dunes/sheets were considered by Hughes et al. (2014) to have higher potential because, compared with prospective colluvial or alluvial fan deposits, they cover relatively large areas and can more easily be recognised in the landscape, being limited to areas adjacent to the Hunter River and Wollombi Brook, particularly near the junction of these two rivers. However, Hughes et al. (2014)

considered that their location and extent as marked on geological sheets was very inaccurate, and determination of their presence or otherwise required geomorphological fieldwork.

4.0 Results

4.1 Areal land characteristics

4.1.1 Elevation

The elevation over the selected catchments draining to the Project area ranged up to 640 mAHD on the land south of the Hunter River, but land elevations were lower to the east of the Project area (Figure 7). Over the Project area, the highest elevation was 236 mAHD.

4.1.2 Geology

The alluvial and aeolian geological units identify the areas of land which could contain late-Pleistocene deposits (Figure 8). Of those units, Source-bordering dunes (CZ_dds) have known potential to contain late-Pleistocene deposits. This unit is associated with Warkworth sand dunes and sand sheets. Alluvial gravel deposits (CZ_ag), Alluvial terrace deposits - high-stand gravel facies (CZ_athc) and Alluvial terrace deposits - high-stand sand facies (CZ_aths) have a medial age of Holocene (past 11,700 years), so are less likely to contain late-Pleistocene deposits. Alluvial terrace deposits - high-stand sand facies (CZ_aths) occurs in conjunction with Source-bordering dunes (CZ_dds) and could have late-Pleistocene archaeological potential if its age was underestimated. The extensive Alluvial valley deposits (Q_av) of the Hunter River and tributaries, and the Alluvial levee/overbank deposits (Q_al) of Wollombi Brook were deposited over the Quaternary Period, which comprises the Pleistocene and Holocene Epochs. These deposits would have a history of flood events reworking sediment over time, possibly disturbing any late-Pleistocene deposits and artefacts that might have been present. A small area of Alluvium (CZa) unit is located on the right side of the Hunter River upstream of the detailed area of interest. The Geology map revealed that Area 5, Area 12 and CM-CD1 were located on the edge of Alluvial valley deposits (Q_av). Area 11 and Area 9 were not located on Alluvial or Aeolian units (Figure 8).

4.1.3 Australian Soil Classification Order

The eight ASC Soil Orders present in the study area have varying potential to contain late-Pleistocene deposits, and the distribution of Soil Orders was only loosely connected to the distribution of geological units (Figure 9). On the Hunter River, Tenosols (Alluvial) were associated with Alluvial valley deposits, and on Wollombi Brook, Rudosols (Alluvial) were associated Alluvial terrace deposits - high-stand sand facies (CZ_aths). Also on Wollombi Brook, Rudosols were associated with Alluvial levee / overbank deposits (Q_al). The ASC Order map revealed that CM-CD1 was located on the boundary of Vertisols and Kurosols – Natric. Area 5 was wholly within Sodosols, and Area 9, Area 11 and Area 12 were wholly within Kurosols – Natric (Figure 9).

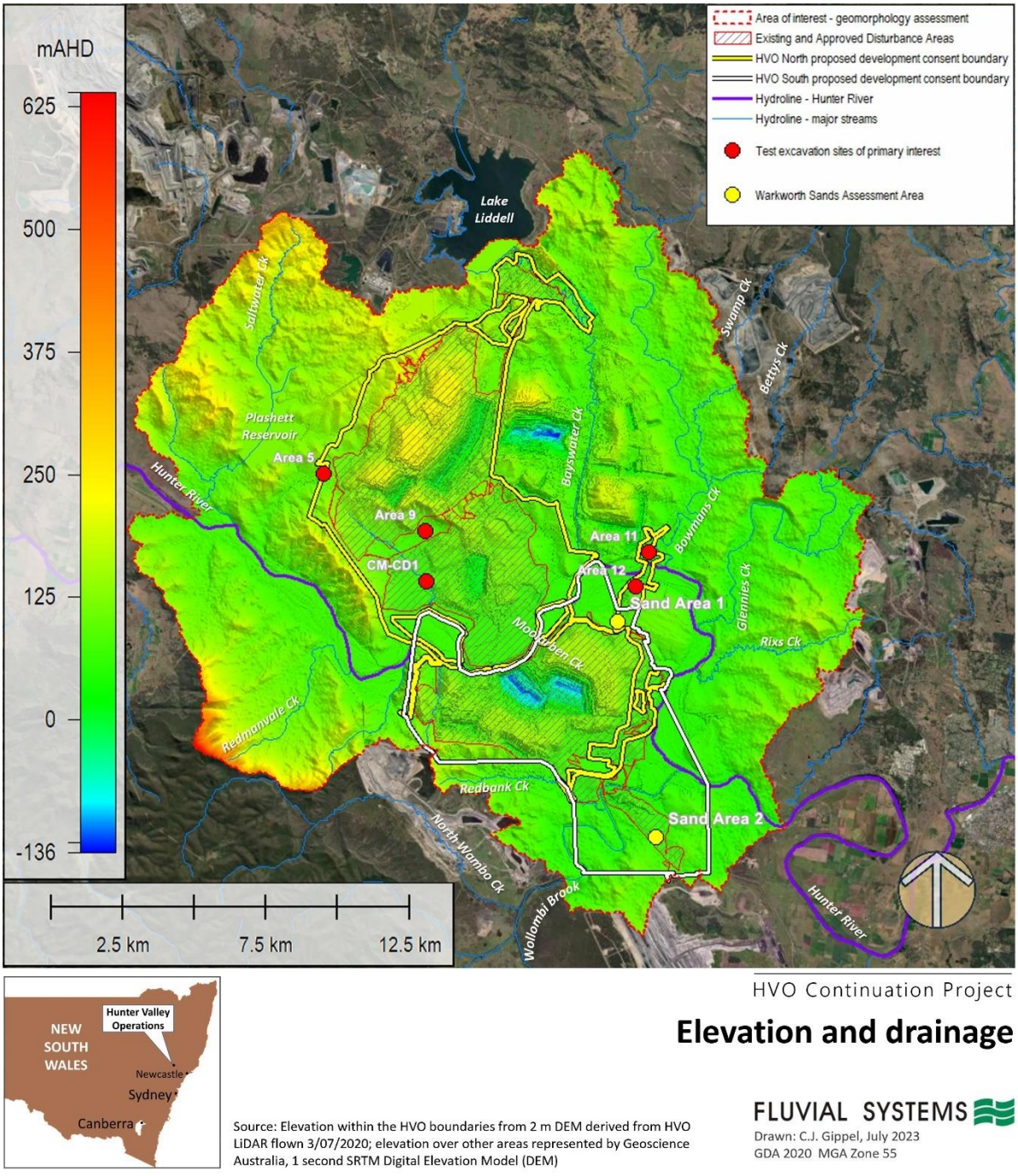

Figure 7. Elevation and pattern of drainage over the Project area and surrounding catchments.

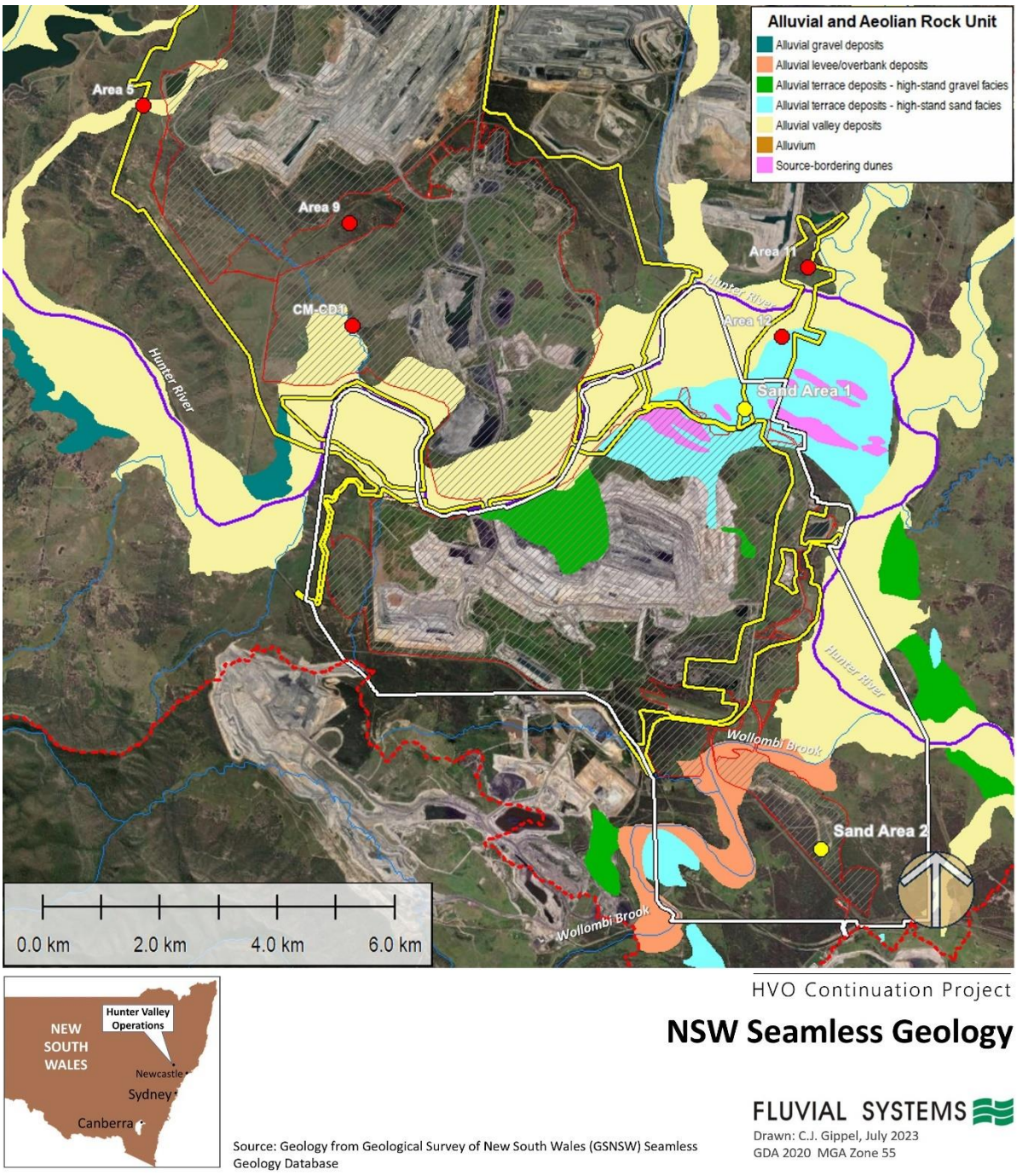

Figure 8. Alluvial and aeolian rock units defined by NSW Seamless Geology, mapped over the detailed area of interest.

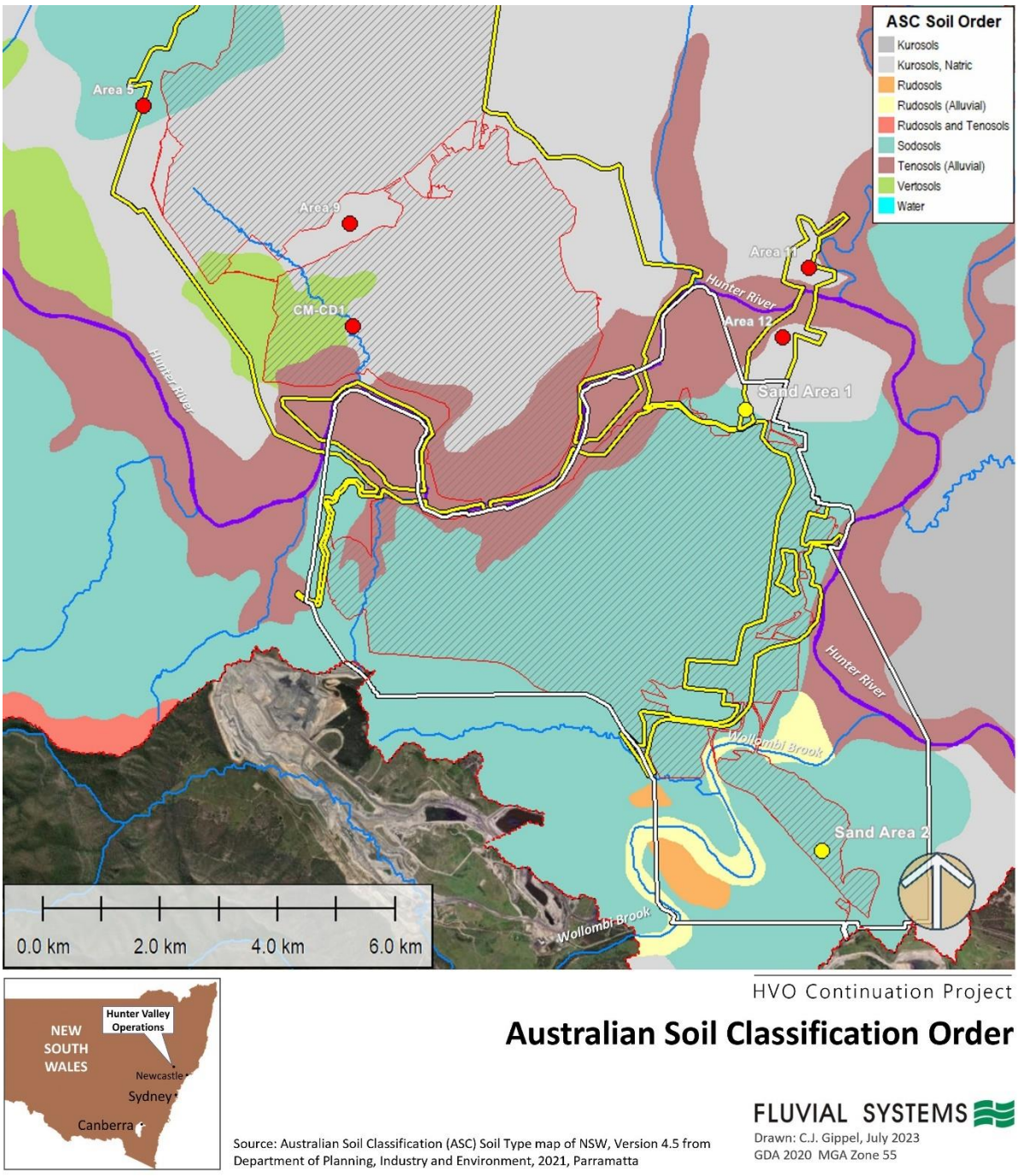

Figure 9. Australian Soil Classification (ASC) Order, mapped over the detailed area of interest.

4.1.4 Soil Landscape

There was a mosaic of Soil Landscapes over the study area (Figure 10), with the distribution loosely associated with, yet more detailed than, the distributions of Geological Units and ASC Soil Orders. The distribution of Warkworth Soil Landscape (*Quaternary sand dunes and sheets derived from channel sands blown out to the west and south of parts of the Hunter River and Wollombi Brook downstream of Singleton, sitting either atop hard rock or atop previously deposited alluvium. Surface expression is very subtle and probably has more extensive occurrences than mapped*) was limited to one meander of Wollombi Brook and one meander of the Hunter River. The Warkworth sand system has been found in these locations but there is evidence that its distribution is wider than this, in particular extending several kilometres towards Sandy Hollow Creek.

The Soil Landscape map revealed that CM-CD1 was located on the boundary of Donalds Gully (*Brown Clays with some Black Earths comprising alluvium and colluvium derived from moderately to strongly weathered, sandstone, conglomerate, mudstone, calcareous shale, coal and basalt*) and Disturbed Terrain variant a. Area 5 was within Foy Brook (*Alluvial Soils comprising sand, silt and clay*) but adjacent to Donalds Gully. Area 9 was wholly within Donalds Gully. Area 11 and Area 12 were wholly within Ravensworth (*Moderately deep to deep, imperfectly to poorly drained Brown and Yellow Natric Kurosols (Yellow Soloths) and Brown and Yellow Sodosols (Yellow Solodic Soils and Solodised Solonetz) dominate crests and hillslopes. Moderately deep to deep, well-drained to imperfectly drained Red, Brown and Yellow Kurosols (Red and Yellow Podzolic Soils) and Chromosols (Red Brown Earths and Noncalcic Brown Soils) also occur throughout the landscape, often in better drained positions*) (Figure 10).

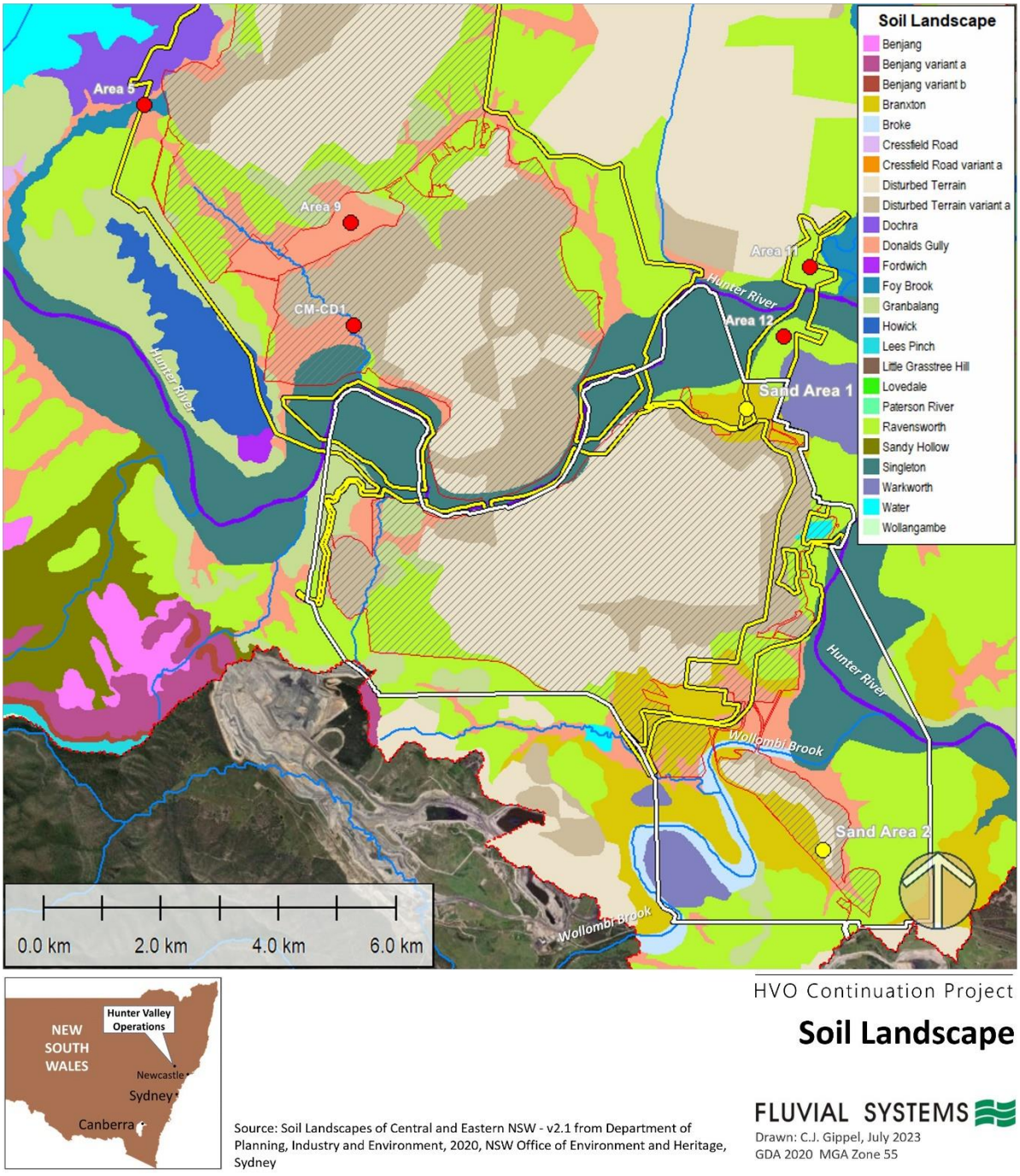

Figure 10. Soil Landscapes, mapped over the detailed area of interest.

4.1.5 Soil Landscape Process of Formation

Soil Landscape descriptions identify the main process in formation of the Landscape, being Residual (formed in situ) Erosional, Transferral (sediment transfer through the Landscape), Alluvial, Colluvial (both depositional), Aeolian (formed by wind-blown sediment) or Disturbed (by human activity) (Figure 11).

The Soil Landscape process map revealed that CM-CD1 was located on the boundary of Transferral and Disturbed Terrain variant a process. Area 5 was within Alluvial process, but adjacent to Erosional and Transferral process. Area 9 was wholly within Transferral process. Area 11 and Area 12 were wholly within Erosional process. The areas with Aeolian process were in the expected locations, but likely extend further than indicated by the map (Figure 11).

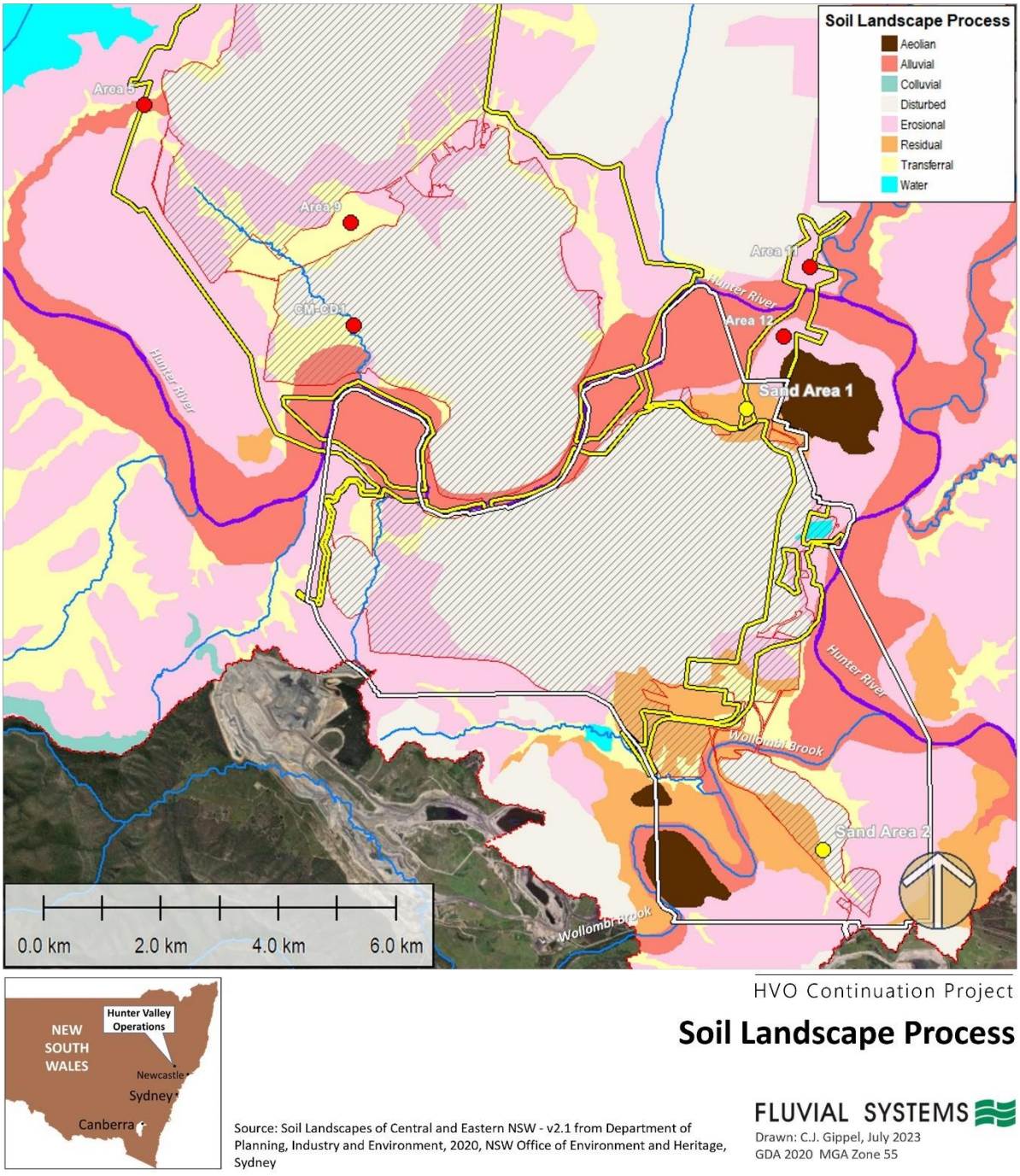

Figure 11. Soil Landscape process of formation, mapped over the detailed area of interest.

4.2 Channel characteristics

4.2.1 Gully and Streambank Erosion

Streambank and gully erosion was widespread throughout the study area (Figure 12). This suggests the possibility that since intensive clearing associated with European settlement, some sites of archaeological potential could have been lost through erosion, whilst others, downstream of gullying or bank erosion, might have aggraded. The Gully and Streambank Erosion map revealed that CM-CD1 was located downstream of a historical gully, although it was of minor severity. Gullys were also present in the vicinity of Area 5, Area 9 and Area 11. Area 5, Area 11 and Area 12 were nearby to areas of streambank erosion (Figure 12).

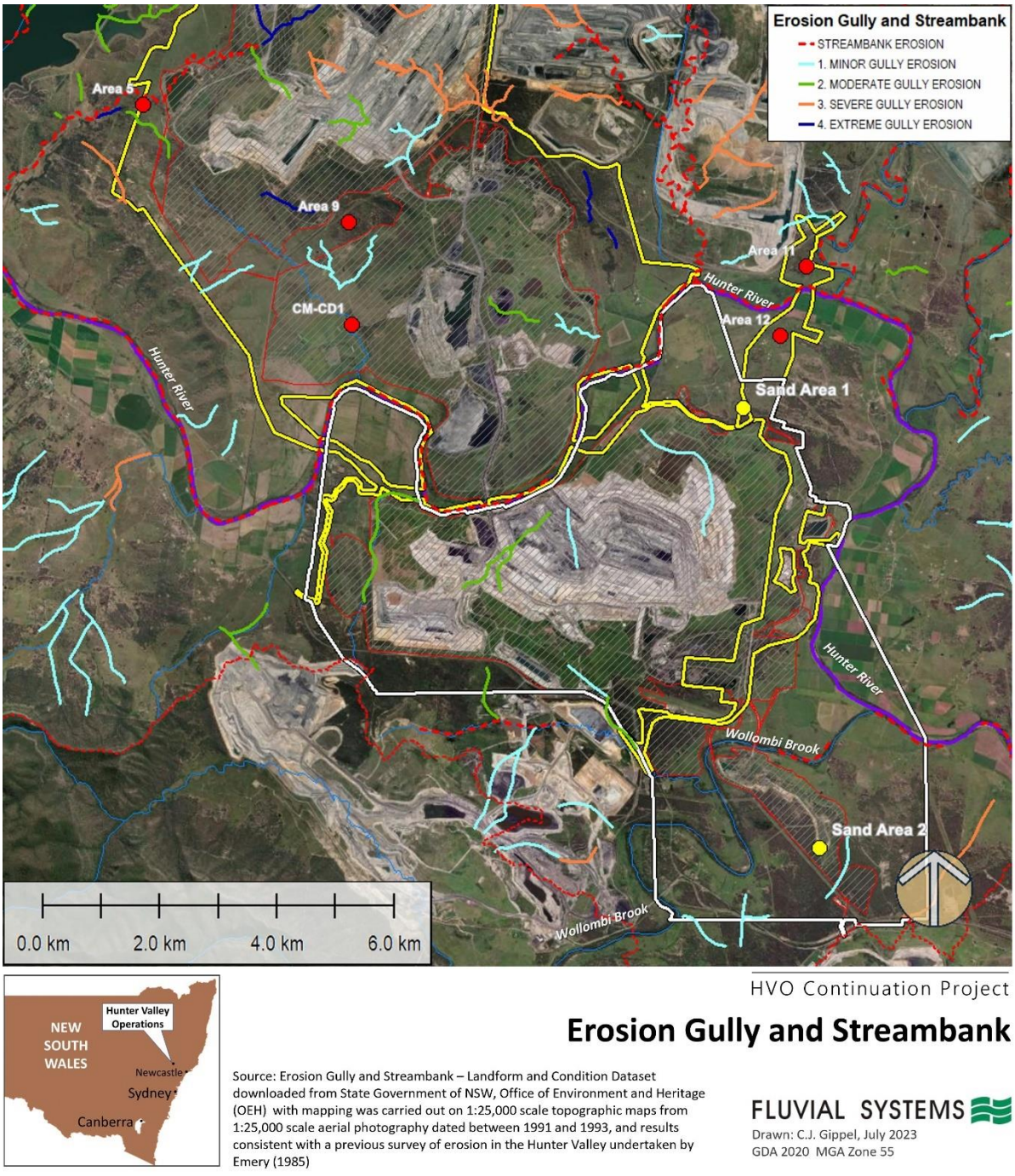

Figure 12. Erosion, gully and streambank, mapped over the detailed area of interest.

4.2.2 River Styles Classification

Ten River Styles were identified and mapped throughout the study area (Figure 13). Only one of the sites was on a classified watercourse. CM-CD1 was located on the riparian area of a stream type known as Cut and Fill, with the watercourse changing to Bank confined, fine-grained just downstream of CM-CD1. Cut and fill type is found in uplands or highlands; generally in low to moderate relief settings at valley widening. This type of channel has passed through repeated cycles of incision and infilling. During the incised phase the channel is compound in shape (i.e., stepped cross-section). During the In-filled phase the whole valley bottom is 'channel' and valley margins are 'banks'. The channel can be present as a very shallow swale if filling is incomplete. At the time of the field inspection, the channel was shallow (not incised).

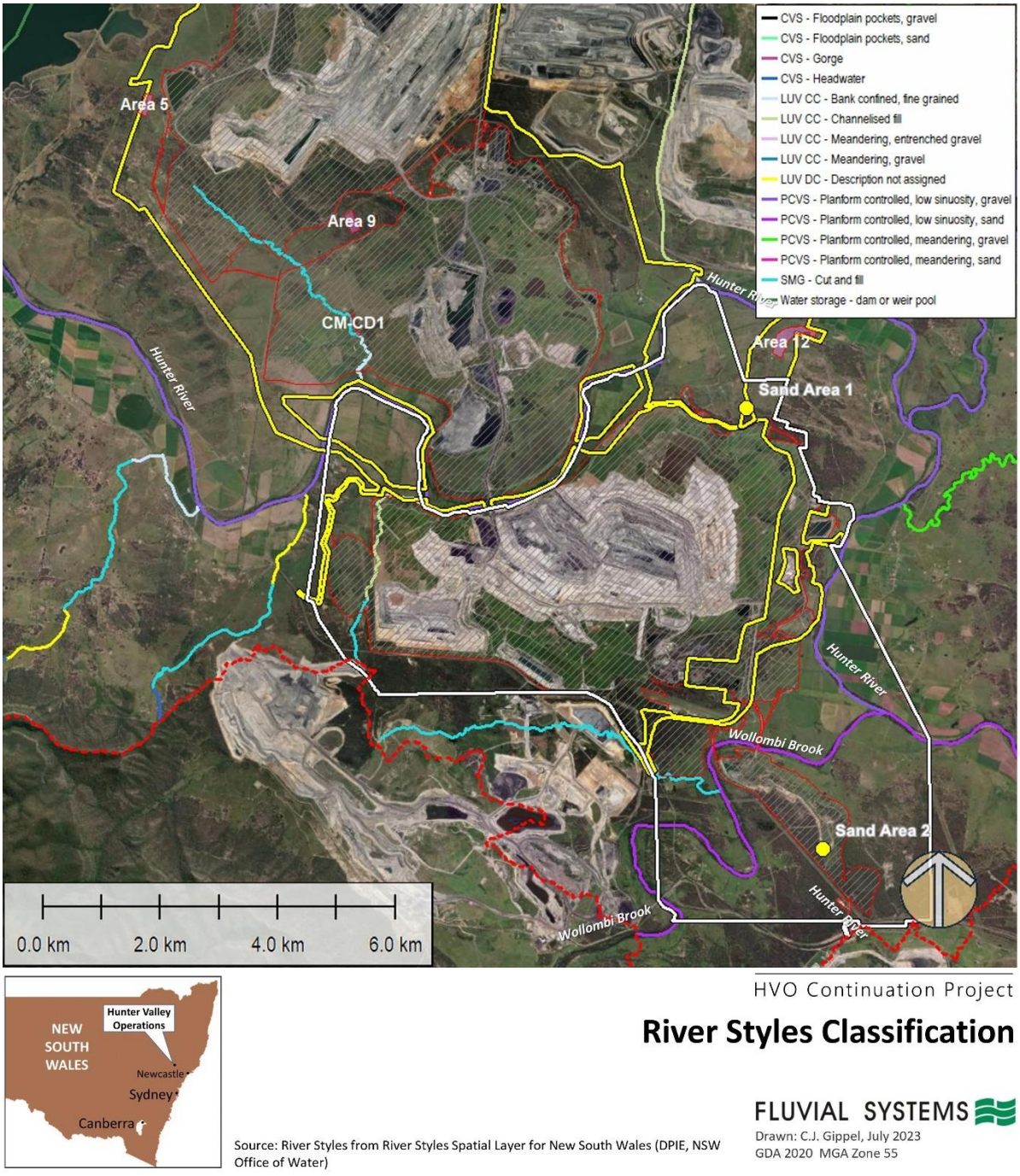

Figure 13. River Styles Classification, mapped over the detailed area of interest.

4.2.3 River Styles Geomorphic Condition

Most of the streams in the study area classified by River Styles were considered to be in poor or moderate geomorphic condition (Figure 14). Poor condition was likely assigned in most cases on the basis that the original riparian forest or woodland was cleared. In general, streams in poor condition would be expected to be eroding at accelerated rates.

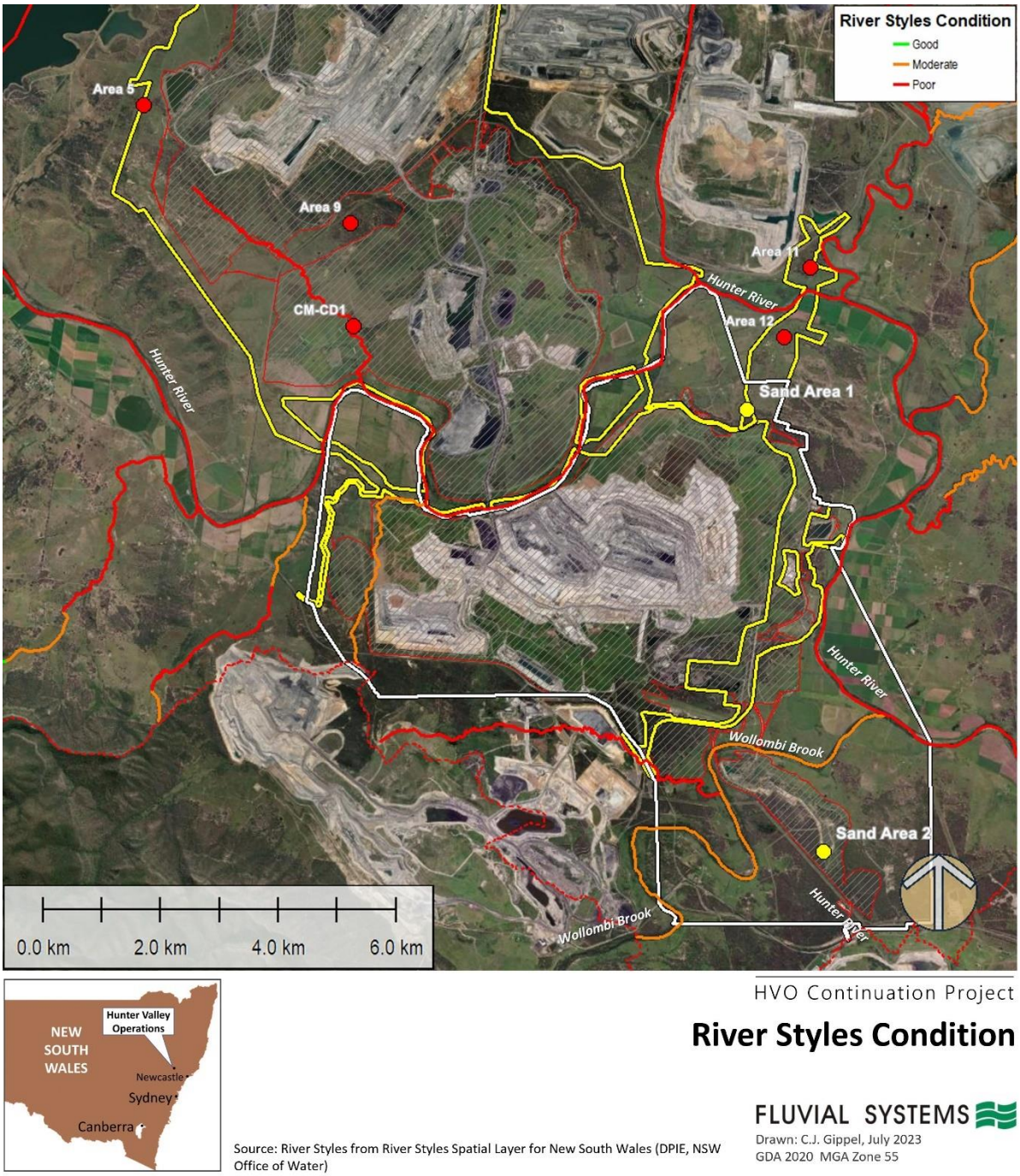

Figure 14. River Styles Condition, mapped over the detailed area of interest.

4.3 Landform Classification

4.3.1 MRVBF

The MRVBF distinguished the floodplain from the slopes, with a value of around 3 separating alluvial floodplain landforms from colluvial slopes (Figure 15). Soils on steeper sloping land with MRVBF values lower than 1 are likely to be residual (formed in situ). The MRVBF map revealed that Area 5, Area 9 and CM-CD1 were located on the MRVBF = 3 isoline, at the interface of hillslope and floodplain landforms. Area 11 and Area 12 were located in areas with MRVBF < 3, consistent with sloping, non-alluvial terrain.

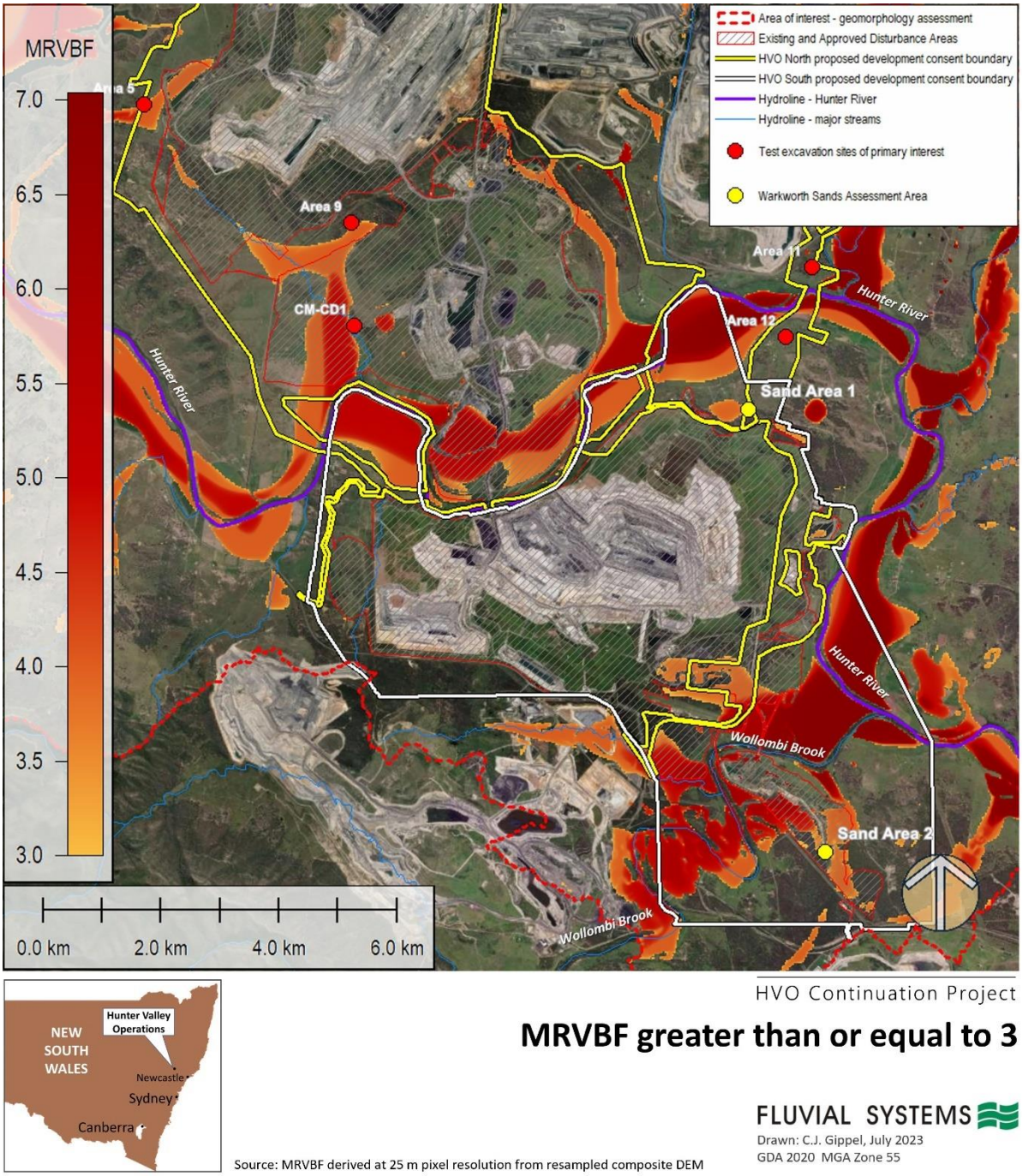

Figure 15. MRVBF (Multiresolution index of valley bottom flatness) exceeding 3.0, representing flat valley bottom landforms (i.e., bench, floodplain and terrace), mapped over the detailed area of interest.

4.3.2 Terrain Surface Classification (TSC)

The Terrain Surface Classification generated the full 16 landform classes over the study area, but only those representing moderate and gentle slopes were relevant to this study (Figure 16). Most of the Hunter River floodplain was classified by TSC as 14) Gentle slope, coarse texture, high convexity and, to a lesser extent, 16) Gentle slope, coarse texture, low convexity. Coarse texture means that the landform has a relatively smooth surface, which was expected. The floodplain of Wollombi Brook was classified as comprising a mosaic of landform classes 10), 12), (both moderate slope) and 14) and 16) (both gentle slope). The floodplain of Wollombi Brook appears to have a more uneven surface, but this was partly an artefact of using SRTM elevation data in that area.

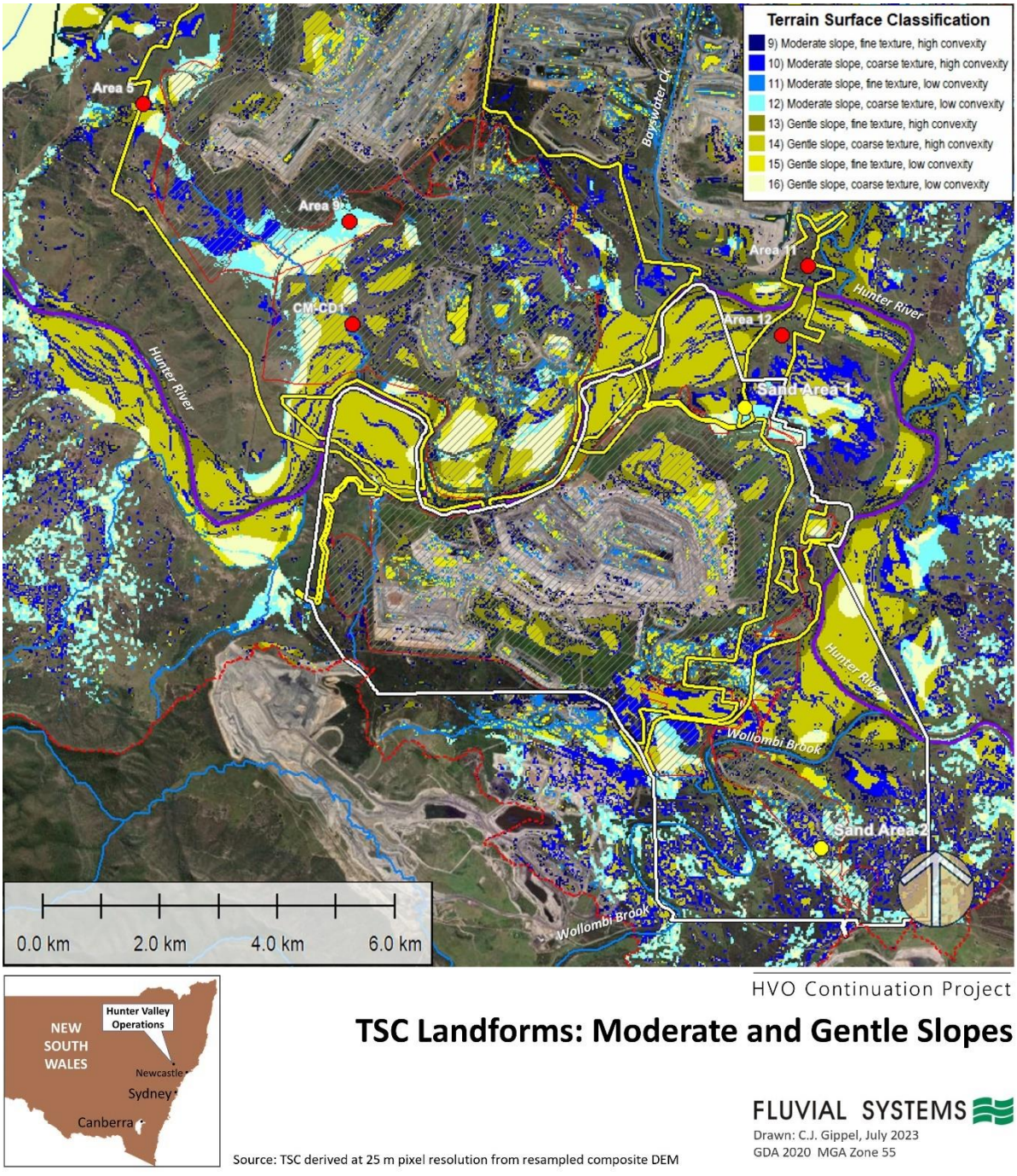

Figure 16. TSC Landforms: Moderate and Gentle Slope Classes, mapped over the detailed area of interest.

The Terrain Surface Classification map revealed that CM-CD1 was located on the upslope edge of an area of land classified 14) Gentle slope, coarse texture, high convexity. Area 9 was with an area of land classified 12) Moderate slope, coarse texture, low convexity and 16) Gentle slope, coarse texture, low convexity. This landform was consistent in shape but varied somewhat in slope. Area 5 was within a gullied area classified as 14) Gentle slope, coarse texture, high convexity and 10) Moderate slope, coarse texture, high convexity. Again, this landform was consistent in shape but varied somewhat in slope (Figure 16). Area 11 and Area 12 were too steep to fall within the Moderate or Gentle slope categories of the TSC classification.

4.4 Summary of geomorphic classification of Sand areas 1 and 2

The areas assessed by MineSoils (2020a) comprised 22 soil sampling points in Sand area 1 (Hunter River area) and 24 in Sand area 2 (Wollombi Brook area). Of the 22 soil sampling points in Sand area 1, 4 were classified Warkworth Sands with high confidence, having sand layer greater than 1.2 m deep; 9 were classified Warkworth Sands possible with low confidence, having fine sands overlying Permian clays, typically bleached lower layers and fine sand layer 0.6 – 1.0 m deep; 5 were classified not Warkworth Sands with low confidence, improbable, similar to the possible classification but fine sand layer 0.4 – 0.6 m deep; and 4 were classified not Warkworth Sands with high confidence, being duplex soils (sodosols, chromosols, kurosols) overlying Permian clays at shallow depth (<0.4 m to clay).

Of the 24 soil sampling points in Sand area 2, 4 were classified Warkworth Sands with high confidence, having sand layer greater than 1.2 m deep; 2 were classified Warkworth Sands possible with low confidence, having fine sands overlying Permian clays, typically bleached lower layers and fine sand layer 0.6 – 1.0 m deep; 3 were classified not Warkworth Sands with low confidence, improbable, similar in character to the possible classification but fine sand layer 0.4 – 0.6 m deep; and 15 were classified not Warkworth Sands with high confidence, being duplex soils (sodosols, chromosols, kurosols) overlying Permian clays at shallow depth (<0.4 m to clay).

The results of MineSoils (2020b) suggested that Sand areas 1 and 2 contained Warkworth sand system but it was discontinuous over both sites, and more widely distributed over Sand area 1 than Sand area 2.

4.5 Summary of geomorphic characteristics of the test pit excavation sites

Selection of the excavation areas was based on field survey by archaeologists, with a preference for undisturbed areas rather than sites possessing specific geomorphological attributes. However, the test excavation areas covered a wide-range of geomorphic settings and included areas highlighted by Heritage NSW as having potential for presence of sub-surface late Pleistocene deposits.

A summary of the geomorphic characteristics of the test pit excavation sites is provided in Table 5. The assessment revealed that each site possessed a unique combination of the selected geomorphic characteristics. The likelihood of finding a significant number of other locations over the study area having geomorphic characteristics that match those of each of the test pit excavation sites would be low. However, other cases of the fundamental geomorphic forms that occur in association with the test excavation areas, such as valley fill, floodplain, interfluve, alluvial fan, colluvial slope and source-bordering dune, are present in the study area and wider region, and in some cases are common.

Table 5. Summary of geomorphic characteristics of the test pit excavation sites. NA means not applicable.

Location	Alluvial and aeolian geological units	ASC Soil Unit	Soil Landscape	Soil Landscape Process	Gully and Streambank Erosion	River Style	River Styles Condition	MRVBF	TSC
CM-CD1	Edge of Alluvial valley deposits (Q_av)	Boundary of Vertisols and Kurosols – Natric	Boundary of Donalds Gully and Disturbed Terrain variant a	Boundary of Transferral and Disturbed Terrain variant a	Downstream of a historical gully	Cut and Fill	Poor	>3	14) Gentle slope, coarse texture, high convexity
Area 5	Edge of Alluvial valley deposits (Q_av)	Wholly within Sodosols	Wholly within Foy Brook	Within Alluvial process, but adjacent to Erosional and Transferral process	Gullys present in the vicinity; Streambank erosion nearby	NA	NA	>3	14) Gentle slope, coarse texture, high convexity, and 10) Moderate slope, coarse texture, high convexity
Area 9	NA	Wholly within Kurosols – Natric	Wholly within Donalds Gully	Wholly within Transferral process	Gullys present in the vicinity	NA	NA	>3	12) Moderate slope, coarse texture, and 16) Gentle slope, coarse texture, low convexity
Area 11	NA	Wholly within Kurosols – Natric	Wholly within Ravensworth	Wholly within Erosional process	Gullys present in the vicinity; Streambank erosion nearby	NA	NA	<3	NA
Area 12	Edge of Alluvial valley deposits (Q_av)	Wholly within Kurosols – Natric	Wholly within Ravensworth	Wholly within Erosional process	Streambank erosion nearby	NA	NA	<3	NA

4.6 Topography and archaeological potential of test pit excavation sites

The local topography of the test pit excavation sites was described based on position in the landscape and information gained from this investigation. The local topography around the test excavation areas are shown on Figure 17, Figure 18, Figure 19, Figure 20 and Figure 21. Descriptions of geomorphic setting of the test pit excavation sites are provided in Table 6. Also included is an opinion, informed by literature review and data collected and derived during this assessment, on potential for sub-surface late-Pleistocene deposits.

Area 9 could have potential for sub-surface late-Pleistocene deposits. At present there is insufficient information available on the history of sedimentation of the alluvial fan on which Site 9 is situated to be able to judge its potential for late-Pleistocene deposits.

Sites CM-CD1 and Area 12 were judged to have high probability of sub-surface late-Pleistocene deposits (Table 6).

Table 6. Description of geomorphic setting of test pit excavation sites, including opinion on potential for sub-surface late-Pleistocene deposits.

Location	Description	Potential for sub-surface late-Pleistocene deposits
CM-CD1	Interface of colluvial slope and Hunter River alluvial plain. The site is within the influence of large floods on the Hunter River. The creek upstream is Cut and Fill River Style. Little is known about the hillslope above the adjacent colluvial slope as it is now disturbed. The slope at the site of the original CM-CD1 pit has a gradient of about 3%, although most of the more recently sampled area (EMM, 2022b) around CM-CD1 varies in slope from around 3 – 10%.	Known to contain artefacts of late-Pleistocene age. The dates established by EMM (2022b) are as follows: Unit 4: Early Holocene period (10,000 years ago); Interface between Units 4 and 5: Early Holocene/late Pleistocene (10,600 years ago); Unit 5: Early Holocene/late Pleistocene (10,000-12,000 years ago) (ie transition between the two periods); and Base of excavation: Late Pleistocene (approximately 16,000 years ago).
Area 5	Gullied valley fill of Parnells Creek. Creek appears to have migrated over the fill in historical times	The high rate and extent of gullying suggests extensive reworking of valley fill sediments, with disturbance of any associated artefacts that might have been present. Whilst gullying could have exposed artefacts that might be present within any areas of undisturbed sediments that might have escaped the reworking process, such areas would likely be uncommon and difficult to identify.
Area 9	Active trunk drainage line on the ridge crest of an alluvial fan. The fan is likely to be thick, having been formed by sediment delivered by a small but highly eroded local catchment. Soil in the test pits comprised a relatively deep (up to 50 cm depth), dry, friable and bleached reddish brown silty loam A-Horizon, overlying a dark reddish orange clay B-Horizon (EMM, 2022b). The transition between soil units was gradual, with the clay content increasing as depth increased. The basal clay unit was usually reached by the end of Spit 5 (50 cm depth), though occasionally as shallow as the end of Spit 1 (10 cm depth) (EMM, 2022b).	The age of the fan is not known but could have been built in a step-wise fashion by episodic large erosion events, or by more gradual deposition. Large episodic events would have been conducive to rapid burial of artefacts (if present on the surface below) by coarse material. The soil in the test pits examined by EMM (2022b) did not contain layered coarse material. Rather, the gradual transition of the soil characteristics with depth suggests gradual deposition of sediment from the local catchment. Sediment age is likely to gradually increase with depth.
Area 11	Interfluve between Bowmans Creek and an unnamed tributary of the Hunter River.	Soils likely developed in-situ from weathered regolith. Low potential for sub-surface late-Pleistocene deposits.
Area 12	Edge of source bordering sand dune eroded by local runoff.	High potential for sub-surface late-Pleistocene deposits.

Area 12 occurs on Warkworth sand system, a distinctive and well-described geomorphological formation comprising two units. Unit 1 manifests as linear sand dunes 1 – 6 m high, generally aligned NW – SE and resting on high river terraces. Unit 2 manifests as readily identifiable long, low linear dunes less than 1 m high, 100 – 200 m apart, up to 800 m long, and also generally aligned NW – SE. The dunes of Unit 1 and Unit 2 are readily identifiable from a LiDAR-derived DEM, except where the surface has been extensively disturbed. Unit 2 is also characterised by thin sand sheets with gentle undulations, reflecting the underlying rock surface. This sheet form of Warkworth sand system is not obvious from examination of a DEM and has been identified primarily

through field soil sampling. The presence of Warkworth Sands Woodland could provide a clue to the distribution of geomorphologically-subtle forms of Warkworth sand system.

Although, among the test excavation sites, site CM-CD1 was unique in terms of the selected geomorphic variables (Table 5), from a wider landscape perspective, an area of colluvium on the margin of a tributary stream is not geomorphically remarkable, and other similar sites would be expected to occur across the region. Such sites, if present, could also possess high potential for sub-surface late-Pleistocene deposits. The readily identifiable geomorphic characteristics of site CM-CD1 were:

- On a tributary of the Hunter River, near the junction.
- At the interface of colluvial slope and Hunter River alluvial plain, marked by the interface of Soil Landscape transferral and alluvial landforms.
- The creek upstream is Cut and Fill River Style, providing a local source of sediment for deposition of alluvium.
- It lies within the influence of large floods on the Hunter River, in a backwater area conducive to sediment deposition.
- The land within the curtilage of the six test pits of the colluvial slope has a mean gradient (and standard deviation) of about 7%±3% (adjacent land less than 2% gradient would be alluvial landform).

Of these, being close to the Hunter River junction and under the influence of its backwater during floods and upstream presence of Cut and Fill River Style might not be important to potential for sub-surface late-Pleistocene deposits. The most important site factors are more likely to be presence of a stable late-Pleistocene alluvial surface overlain by a stable colluvial deposit. The main limitations in identifying locations with these site factors are:

- The age of alluvial landforms cannot be determined by terrain analysis.
- The boundaries of geological and soil units have not necessarily been drawn accurately.
- Available dates for mapped geological units are very broad.
- Colluvial landforms are difficult to distinguish from non-colluvial hillslopes using terrain analysis.

The approach used in this report to identify areas of CM-CD1-type landform across the Project area and more broadly was to apply terrain analysis to identify areas at the interface of alluvial geological units and potential colluvial slope 3 – 10% gradient. The above listed limitations mean that the attempt made in this report to identify areas of CM-CD1-type landform across the Project area and more broadly was uncertain. While the approach used here was able to identify broad areas worthy of targeted field investigation, it was not predictive of the likelihood of presence of sub-surface late-Pleistocene archaeological material at the identified areas.

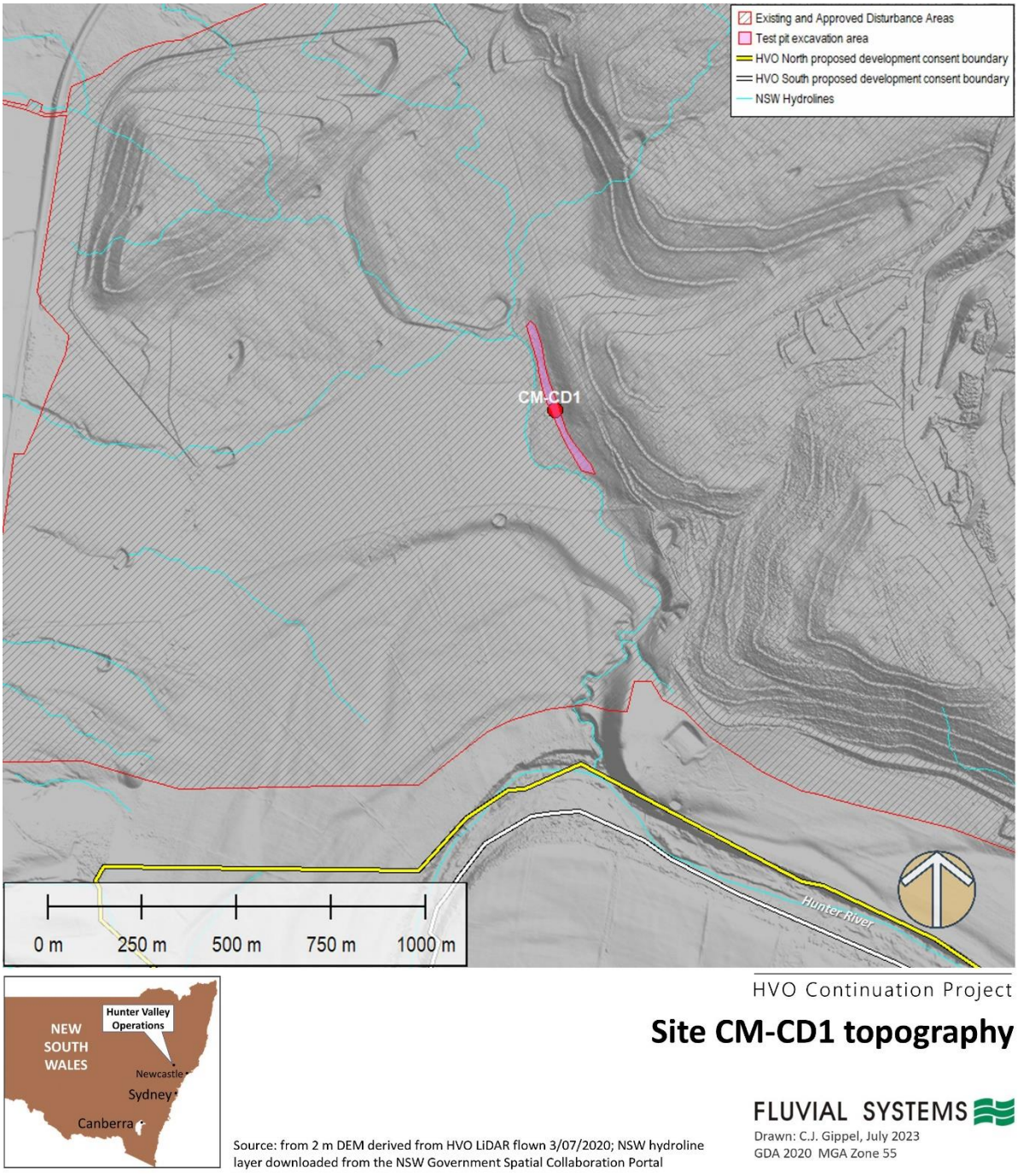

Figure 17. Local topography of site CM-CD1. Shaded area is the curtilage of the six test pits (EMM, 2022b) of the colluvial slope containing the original CM-CD1 site.

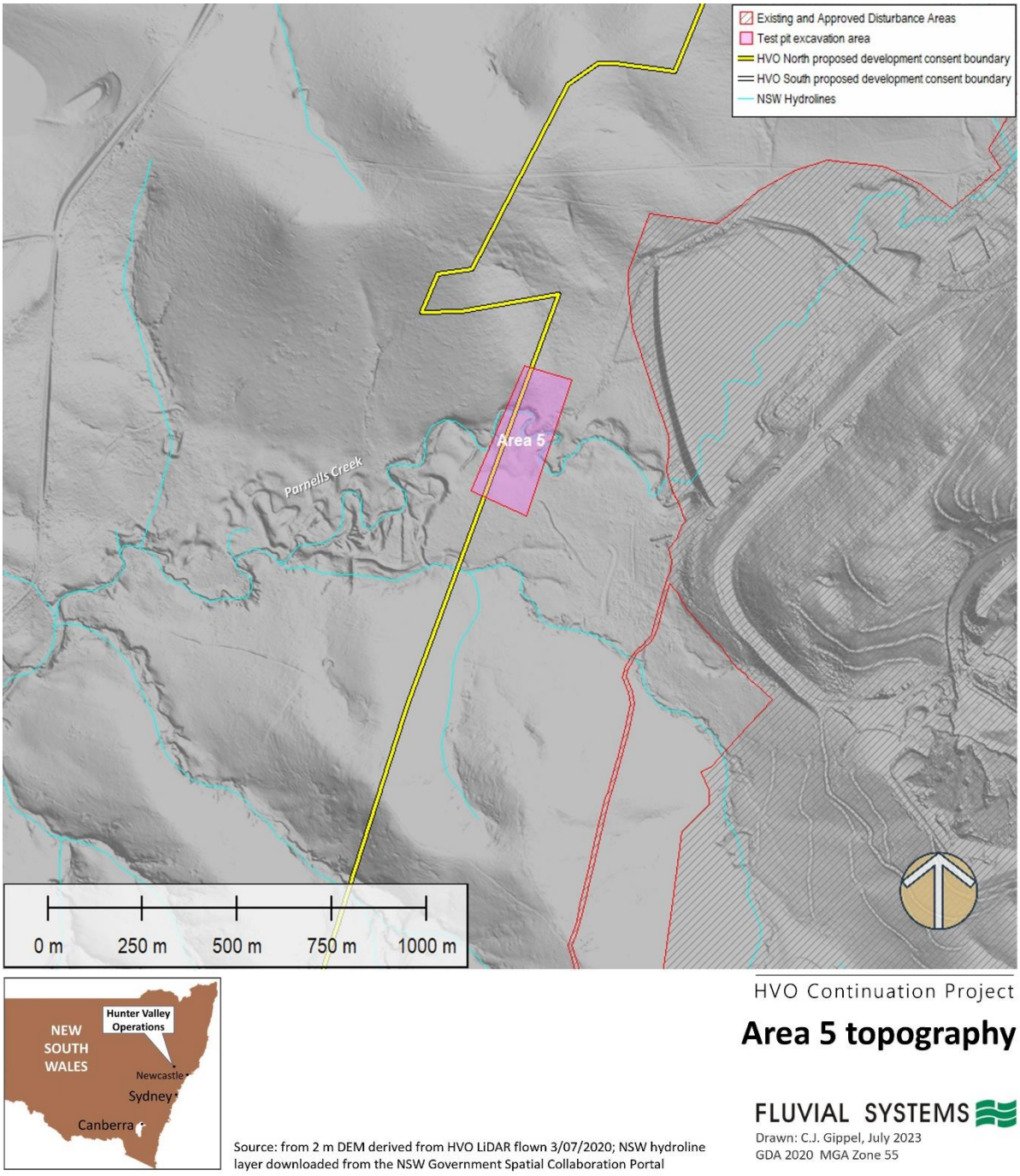

Figure 18. Local topography of Area 5.

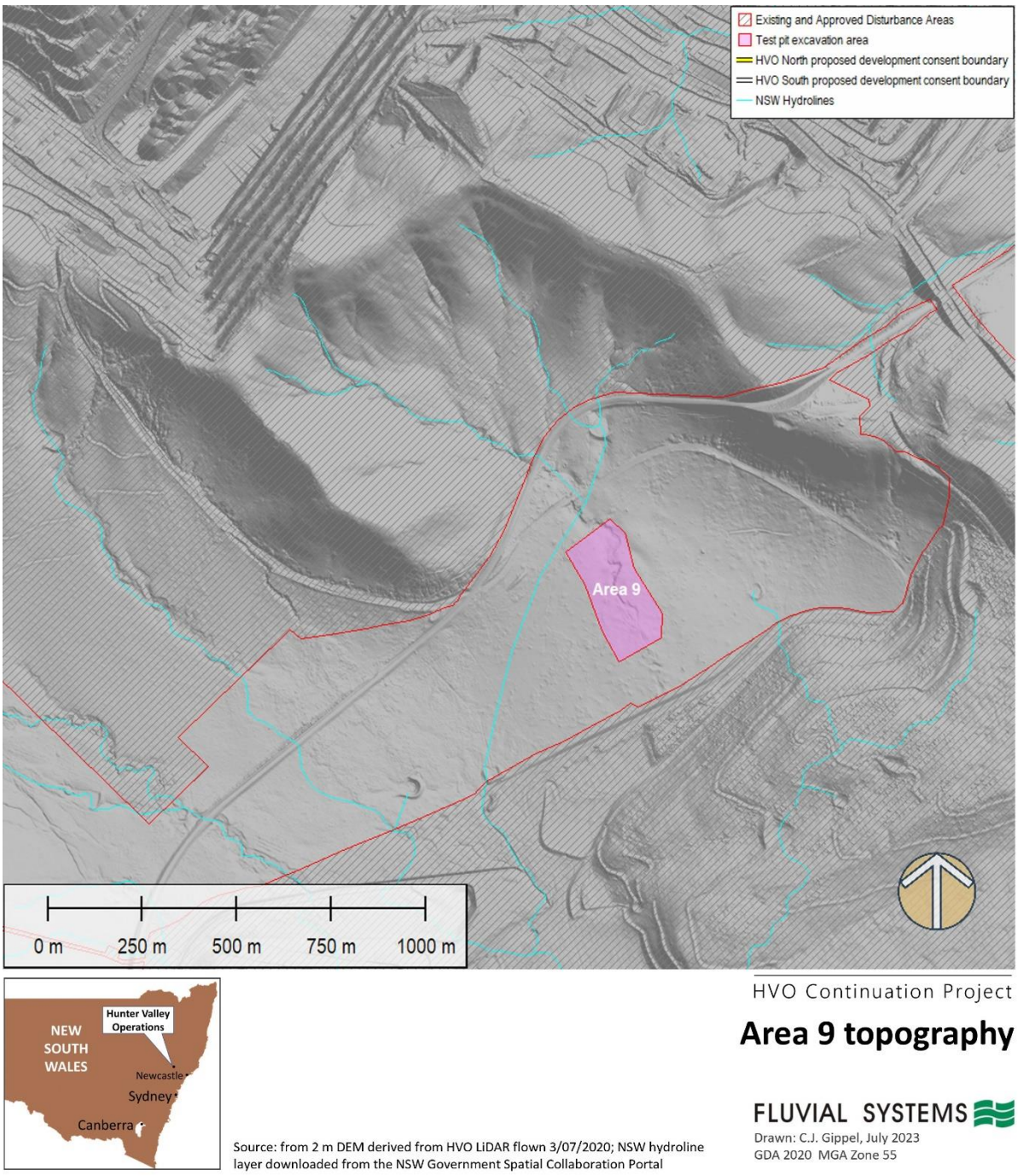

Figure 19. Local topography of Area 9.

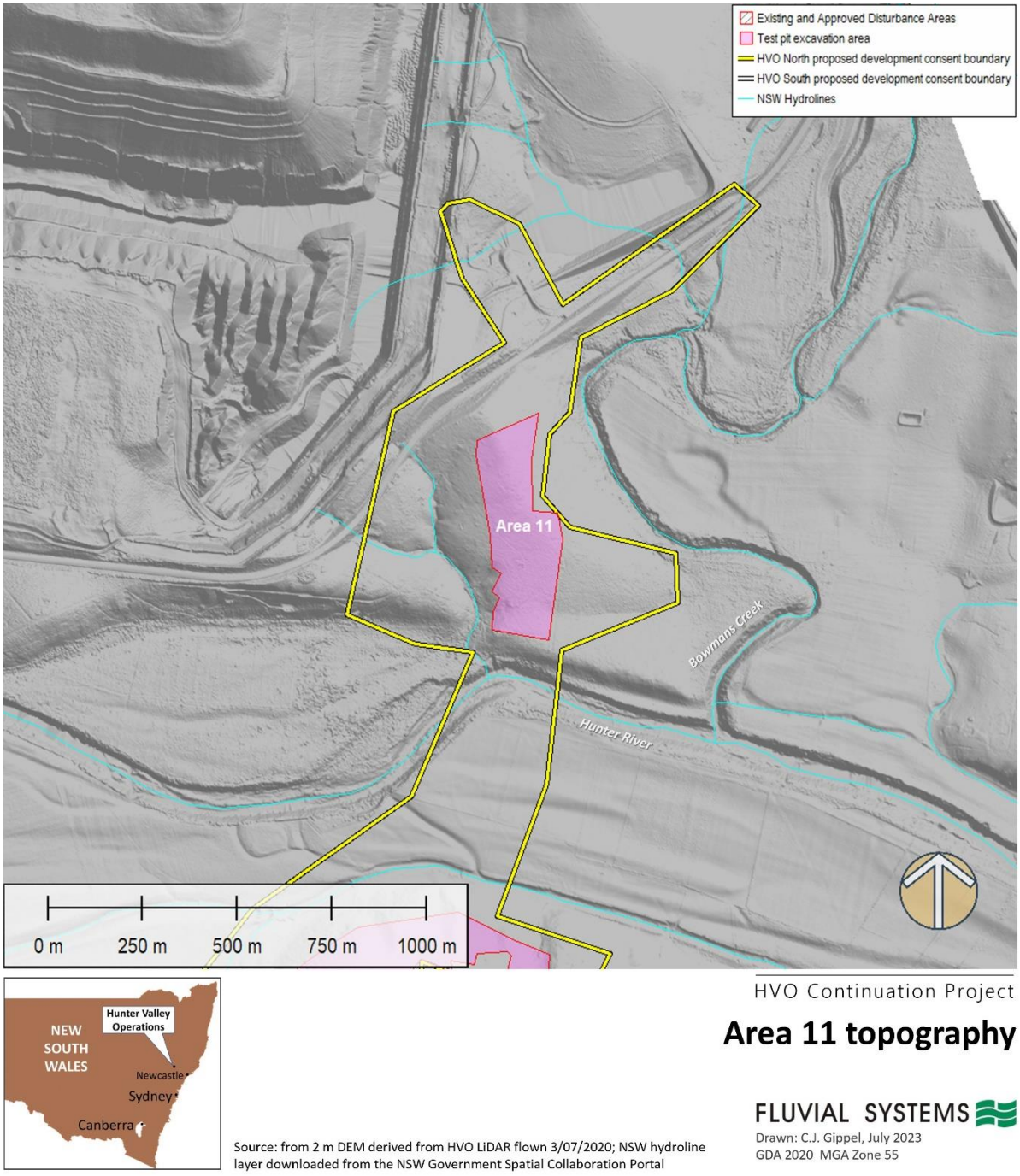

Figure 20. Local topography of Area 11.

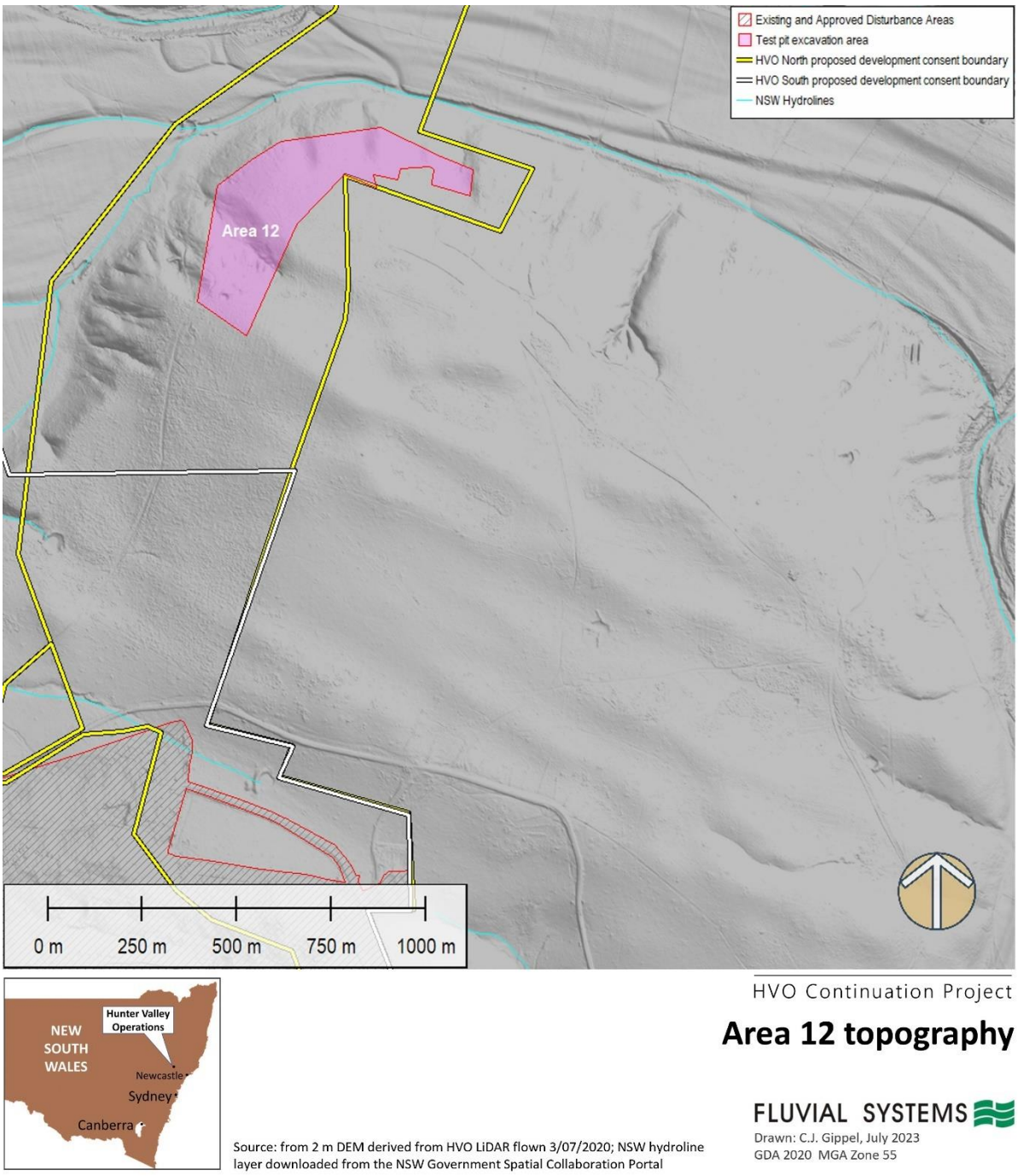

Figure 21. Local topography of Area 12.

4.7 Possible distribution of Warkworth sand system across the Project area, and more broadly

The mapped distribution of Warkworth Soil Landscape was limited to the vicinity of the Hunter River and Wollombi Brook between Camberwell and Singleton (Figure 22). In addition to its occurrence as dunes on a meander bend of the Hunter River adjacent to the Project area, and on a meander bend of Wollombi Brook on the southern extent of the Project area, there is another distinctive dune deposit on the inside of a large meander of the Hunter River upstream of Singleton (Figure 22). In addition, a small area of Warkworth sand was mapped on the floodplain in the Singleton area. In fact, much of the Singleton area floodplain surface is covered by an extensive

NW – SE trending linear dune system (Figure 22). While Warkworth system dunes typically form on high terraces, on the Singleton area floodplain, the low amplitude dunes have developed on the low active floodplain. A small area of Warkworth sand was mapped on the left (western) side of Wollombi Brook (Figure 22). This deposit deserves inspection, as it is unexpectedly located on the upwind side of the sand source. Another somewhat unusual Warkworth sand deposit is mapped east of Wollombi Brook on a ridge up to 60 m higher than the bed of Wollombi Brook.

NSW Seamless Geology maps only a small area of Source-bordering dune CZdds (Warkworth sand) on the meander bend of the Hunter River adjacent to the Project area (Figure 23). A small area of this unit was mapped extending into the Project area (Figure 23), but that land has since been disturbed as a result of approved mining operations. Some known areas of Warkworth sand deposits were classified by NSW Seamless Geology as CZaths Alluvial terrace deposits – high-stand sand facies. This material was characterised medial age Holocene with a range covering Neogene to now. It is possible that some of these areas are alluvial terrace covered by Warkworth sand deposit. It is also possible that some small areas of material classified as CZathc Alluvial terrace deposits – high-stand gravel facies could be covered by Warkworth sand deposit.

The State Vegetation Type layer suggests that the distribution of Warkworth Sand Woodland is very limited over the wider regional area of interest (Figure 24). Mapped Warkworth Sand Woodland occurs on two meanders of Wollombi Brook, the largest of which is not mapped as Warkworth sand system by either NSW Seamless Geology or Soil Landscape layers. This meander deserves inspection as it has potential to be Warkworth sand sheet overlying late-Pleistocene deposits. A small area of Warkworth Sand Woodland occurs north of the intersection between the Golden Highway and Long Point Road, and another small area occurs on low hills within the Singleton Military Area (Figure 24). These areas do not coincide with mapped Warkworth sand system.

Areas of Warkworth sand system associated with Wollombi Brook, and lying within or nearby the Project area, have been identified by Page (1971), AMBS (2002), Scarp Archaeology (2009), Gliganic et al. (2016) and MineSoils (2020b). Areas examined by AMBS (2002) and Scarp Archaeology (2009) have since been disturbed by mining activity. A further site of potential Warkworth sand system was identified in this area by this report on the basis of NW – SE trending dune morphology apparent on the LiDAR-derived DEM (Figure 25). Areas of Warkworth sand system associated with the Hunter River, and lying within the Project area, have been identified by Hiscock et al. (2000), Hughes and Shawcross (2001) and MineSoils (2020a, 2020b) (Figure 26).

Investigation of the distribution of Warkworth sand system across the Project area, and more broadly, using various associated digital data layers revealed considerable disagreement and uncertainty. However, it appears that Warkworth sand system occurs in patches confined to the Hunter River and Wollombi Brook extending from the Project area to Singleton. Warkworth sand can occur in the form of regular NW – SE trending linear dunes, which are readily identified from the LiDAR-derived DEM, and sand sheets, which require field soil survey for identification.

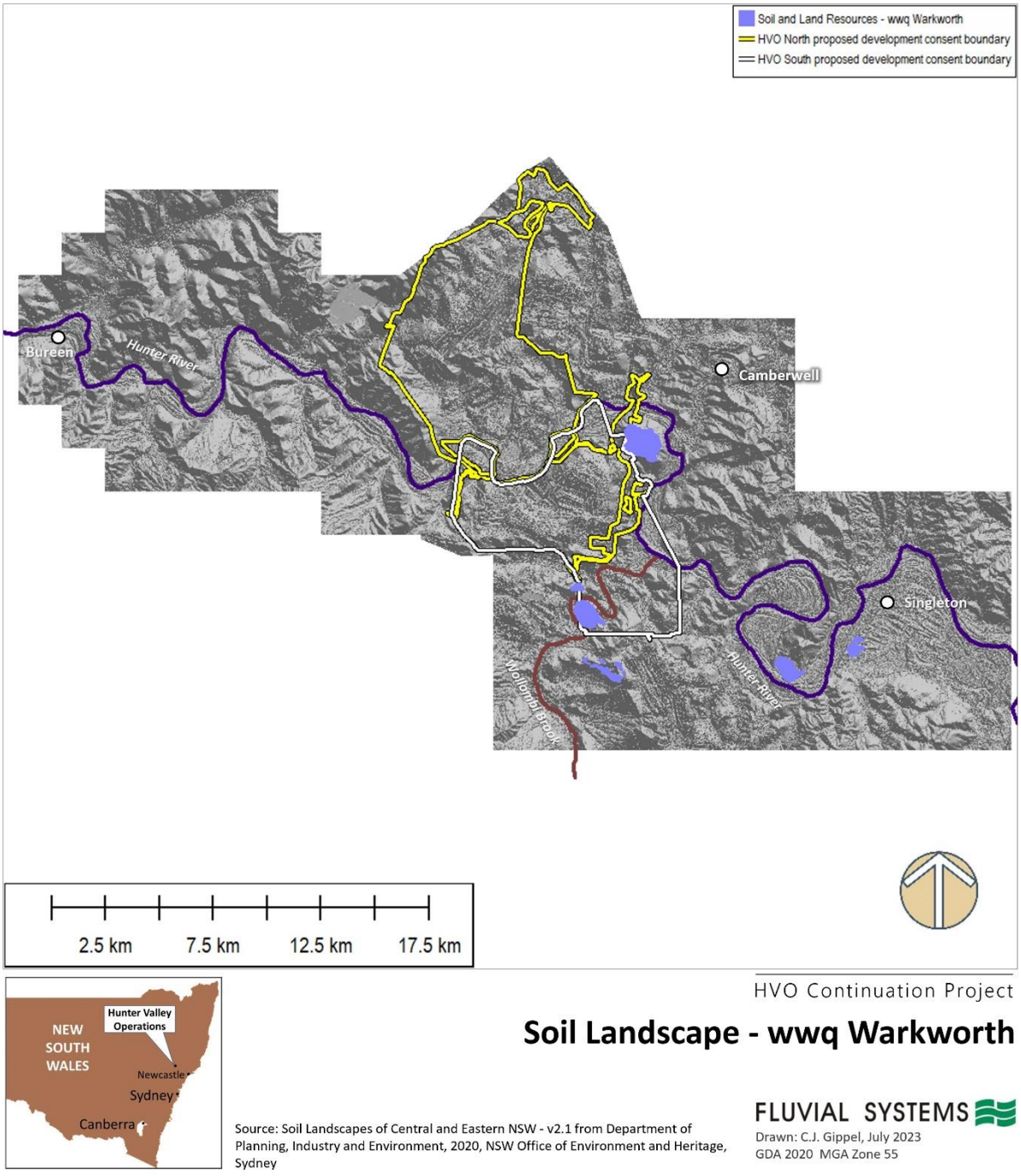

Figure 22. Warkworth Soil Landscape (wwq) mapped over the wider regional area of interest along the Hunter River valley from Bureen to Singleton.

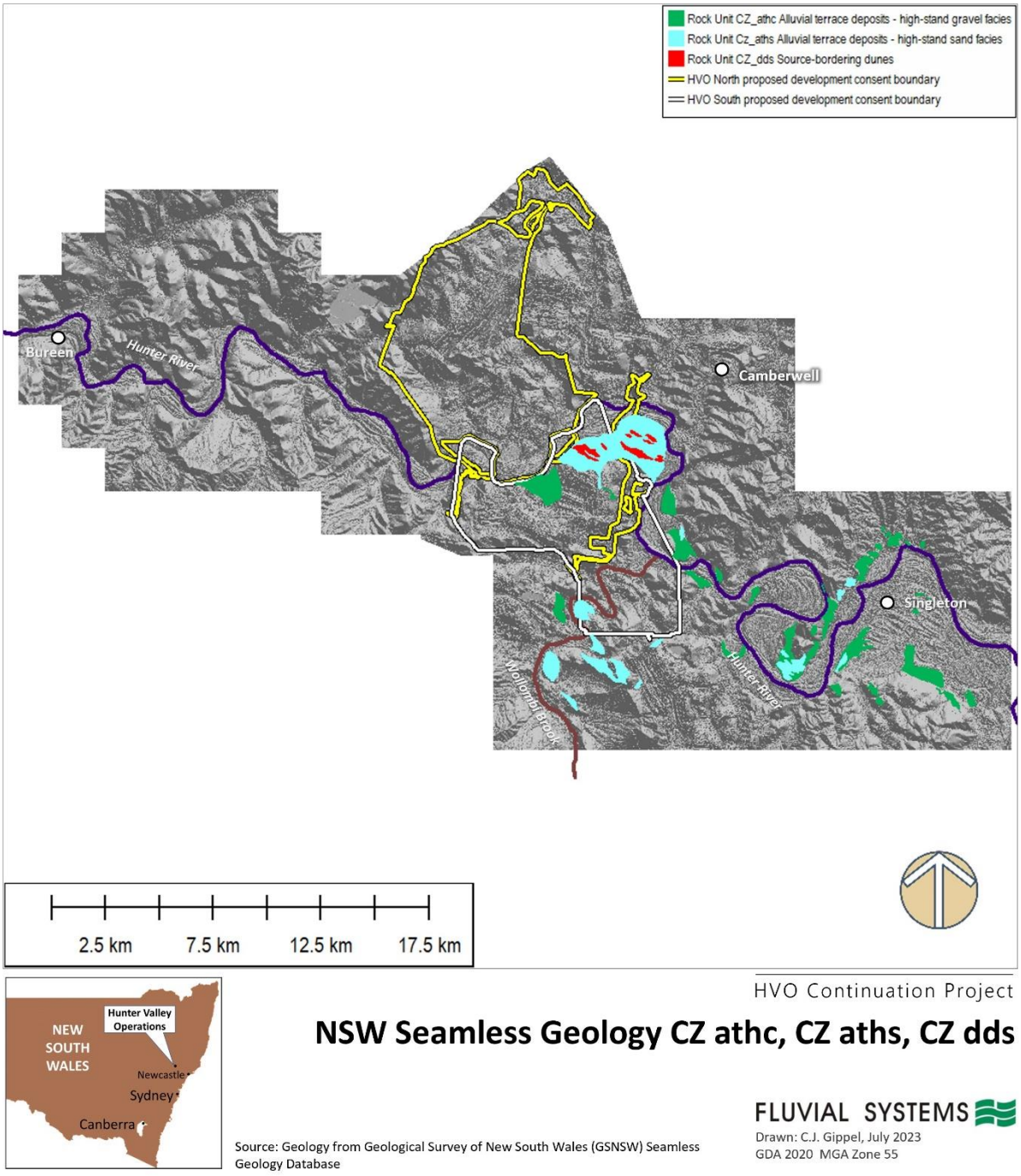

Figure 23. Cenozoic Source-bordering dune units CZdds (Warkworth sand) and alluvial terrace deposits CZaths (sand) and CZathc (gravel) mapped over the wider regional area of interest along the Hunter River valley from Bureen to Singleton.

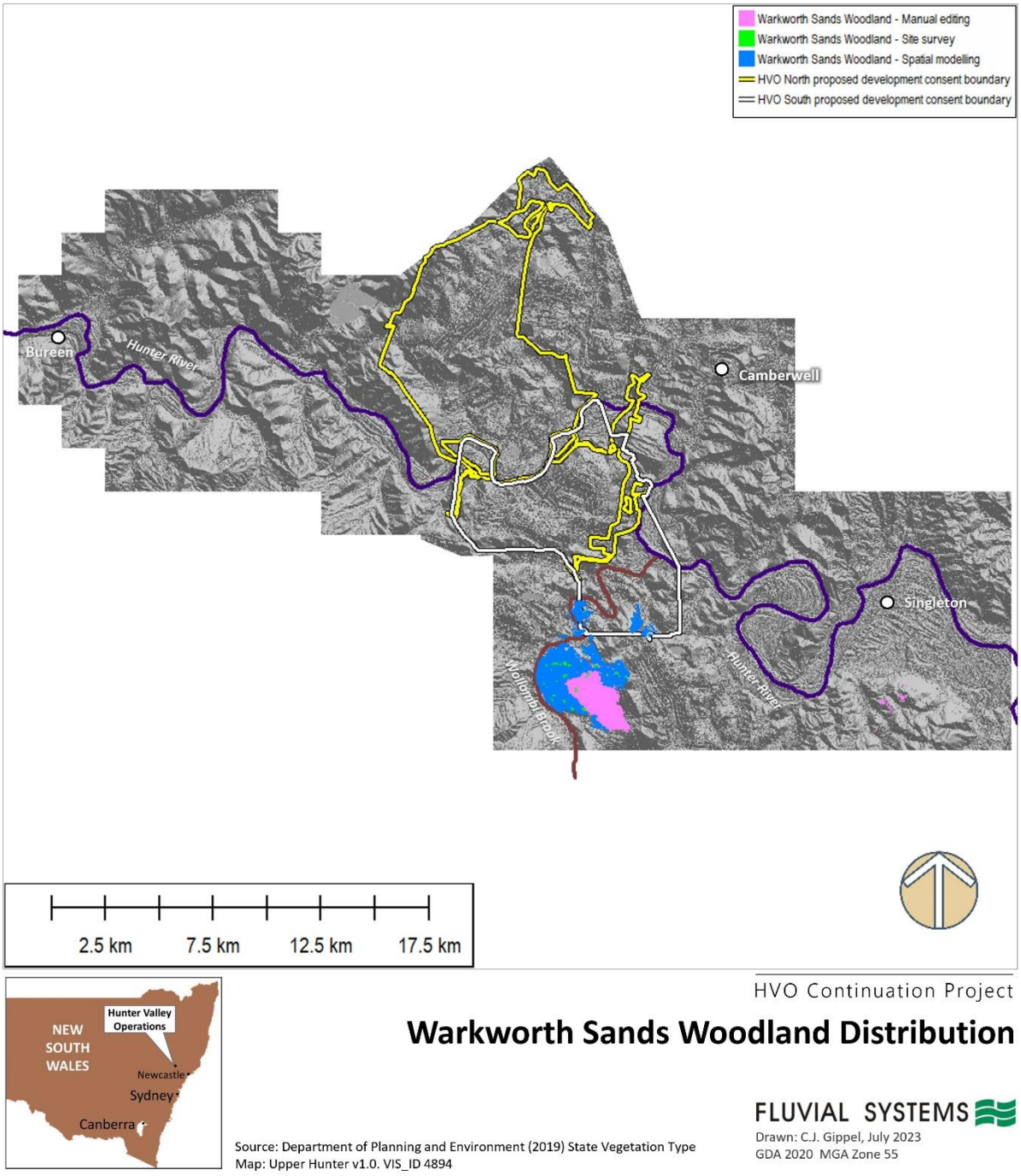

Figure 24. Warkworth Sand Woodland State Vegetation Type mapped over the wider regional area of interest along the Hunter River valley from Bureen to Singleton.

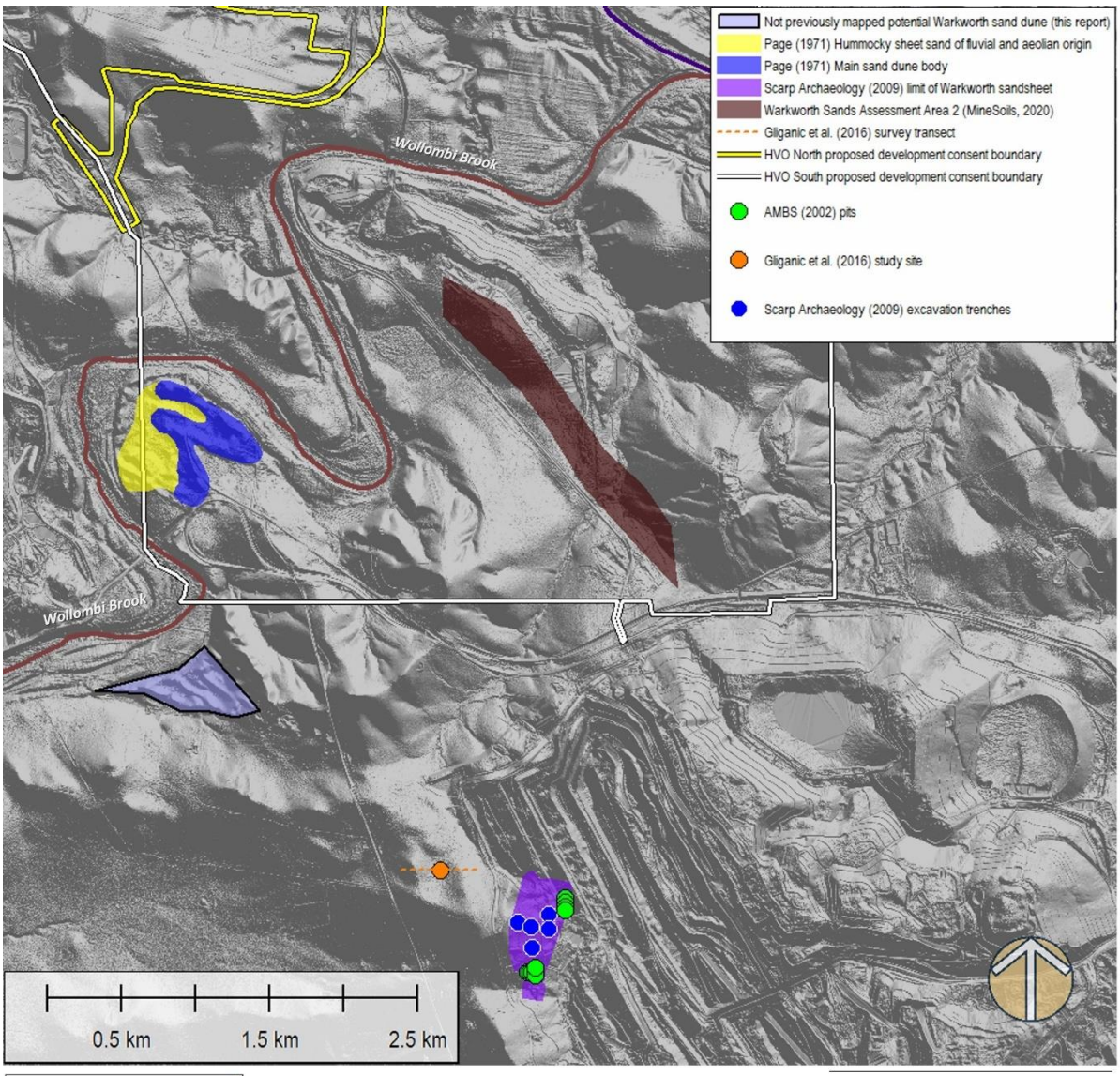

Figure 25. Areas of Warkworth sand associated with Wollombi Brook examined by Page (1971), AMBS (2002), Scarp Archaeology (2009), Gliganic et al. (2016) and MineSoils (2020b). A further site was identified by this report on the basis of NW – SE trending dune morphology apparent on the LiDAR-derived DEM.

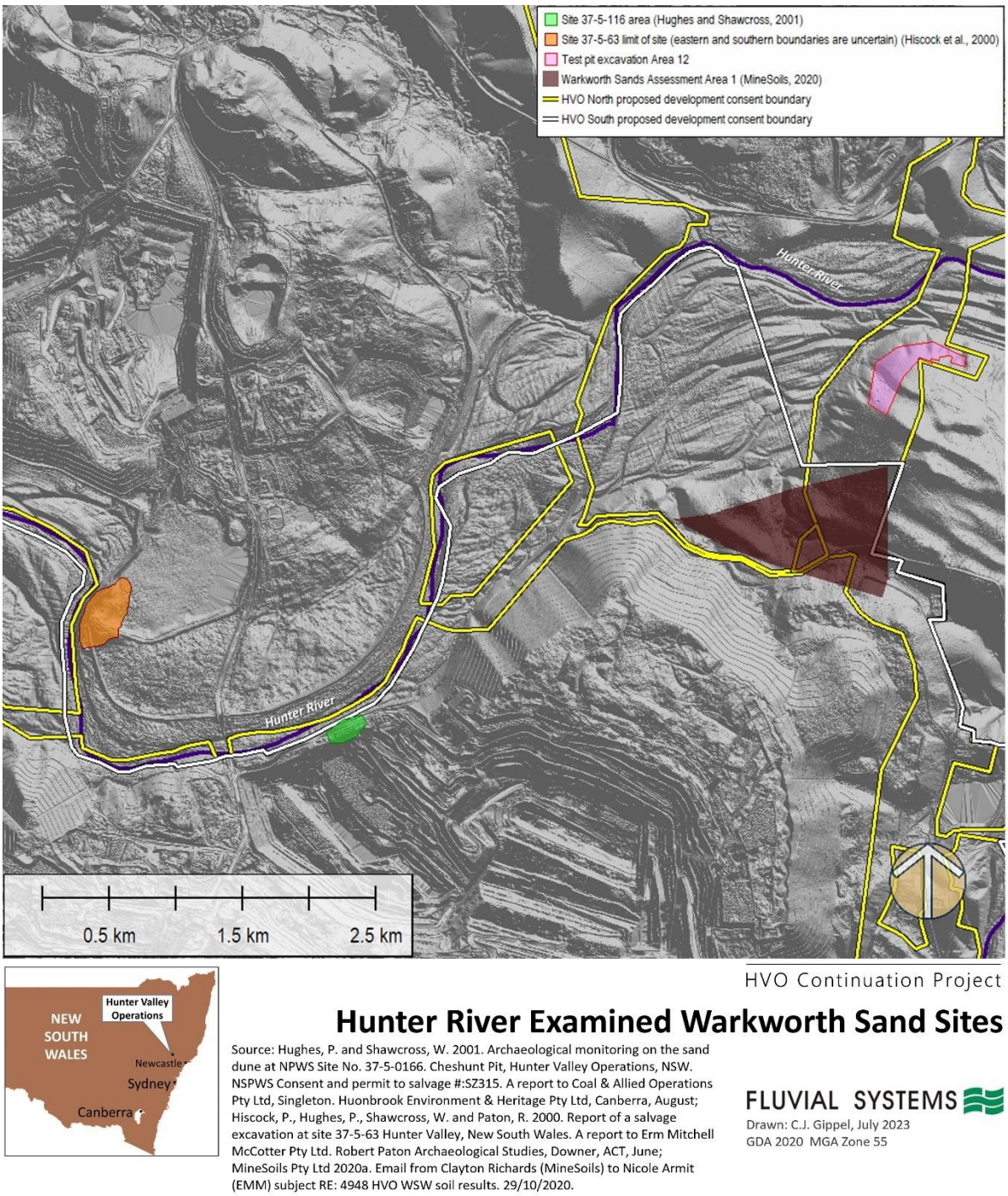

Figure 26. Areas of Warkworth sand associated with the Hunter River examined by Hiscock et al. (2000), Hughes and Shawcross (2001) and MineSoils (2020a, 2020b).

4.8 Possible distribution of CM-CD1-type deposit across the Project area, and more broadly

Most tributaries of the Hunter River over the wider regional area of interest along the Hunter River valley from Bureen to Singleton had reaches of Cut and Fill River Style in their catchment (Figure 27), indicating episodic delivery of abundant sediment to the valleys separated by periods of stability. Bayswater, Bowmans and Glennies creeks were notable exceptions, but Bowmans and Glennies creeks are known to transport sufficient sediment to

build alluvial landforms. Bayswater Creek lacks alluvial landforms in its lower reaches (Figure 28). Alluvial process mapped by Soil and Land Resources (Figure 28) has a narrower distribution than alluvial units mapped by NSW Seamless Geology (Figure 29), so the latter was used to define the presence of alluvial landforms.

Most tributaries of the Hunter River over the wider regional area of interest along the Hunter River valley from Bureen to Singleton had areas of CM-CD1-type landform present (alluvial units adjacent to areas of transferral process with a slope of 3 – 10%) (Figure 29). In detail, significant areas of CM-CD1-type landform was found on Saddlers Creek, Doyles Creek, Appletree and Saltwater Creek (Figure 30). Waterfall Creek and two unnamed right-bank tributaries also have potential for CM-CD1-type landform near where they meet the Hunter River floodplain (Figure 31). Bayswater Creek (Figure 31), Bowmans Creek and Glennies Creek (Figure 32) appear to have low potential for CM-CD1-type landform. Further downstream, and unnamed left-bank tributary and Rixs Creek have potential for CM-CD1-type landform near where they meet the Hunter River floodplain (Figure 32). The potential for CM-CD1-type landform on left-bank tributaries of Wollombi Brook Redbank Creek, Wambo Creek and North Wambo Creek is uncertain because much of the general landform falls within the slope range 3 – 10% (Figure 33). The detail of the CM-CD1 area suggests that CM-CD1-type landform could extend 250 m downstream along the creek, on the same colluvial slope, but not upstream (Figure 34). The method used in this report did not identify any other areas of CM-CD1-type landform within the Project area.

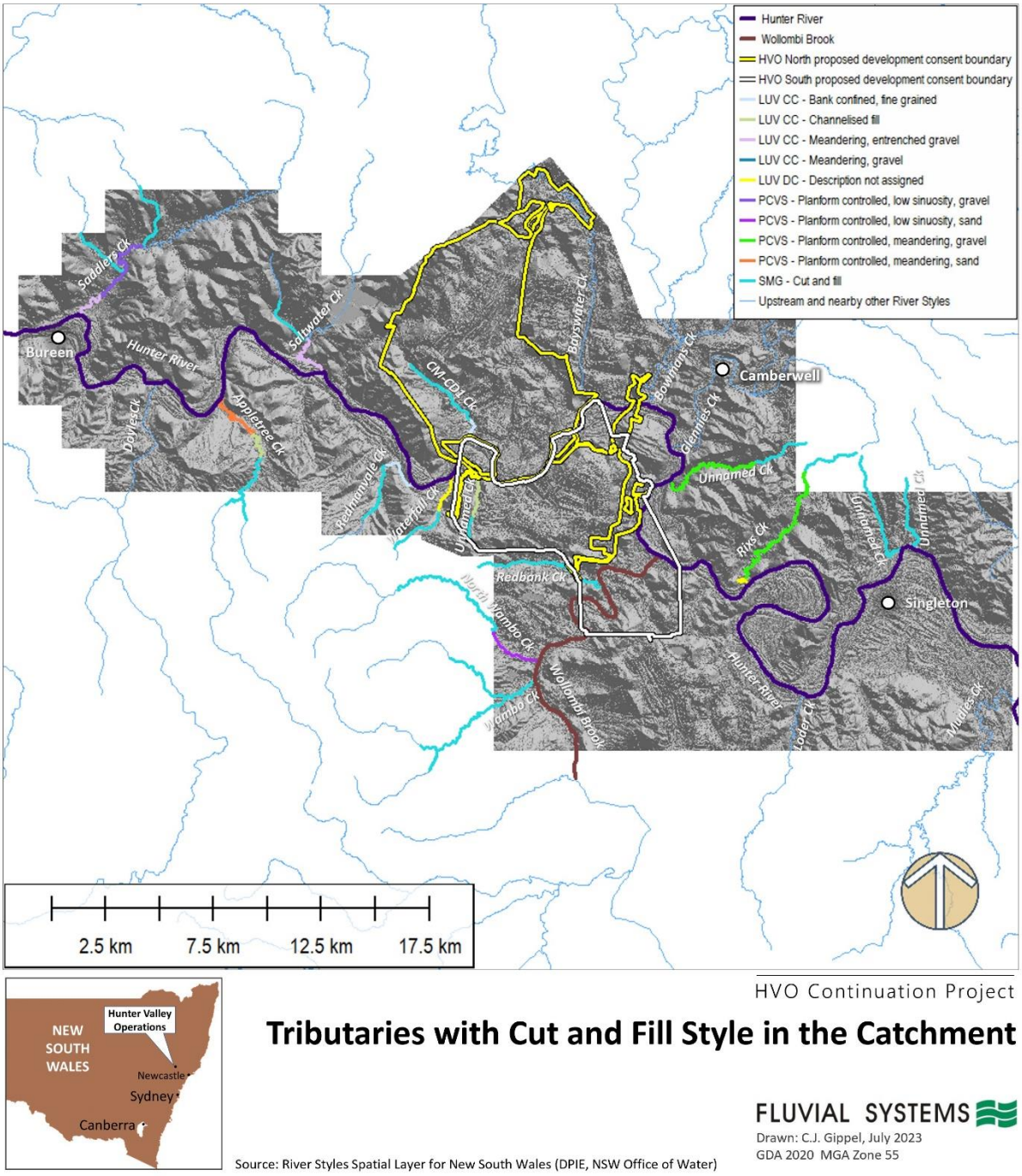

Figure 27. Tributaries of the Hunter River with Cut and Fill River Style present in the catchment, mapped over the wider regional area of interest along the Hunter River valley from Bureen to Singleton.

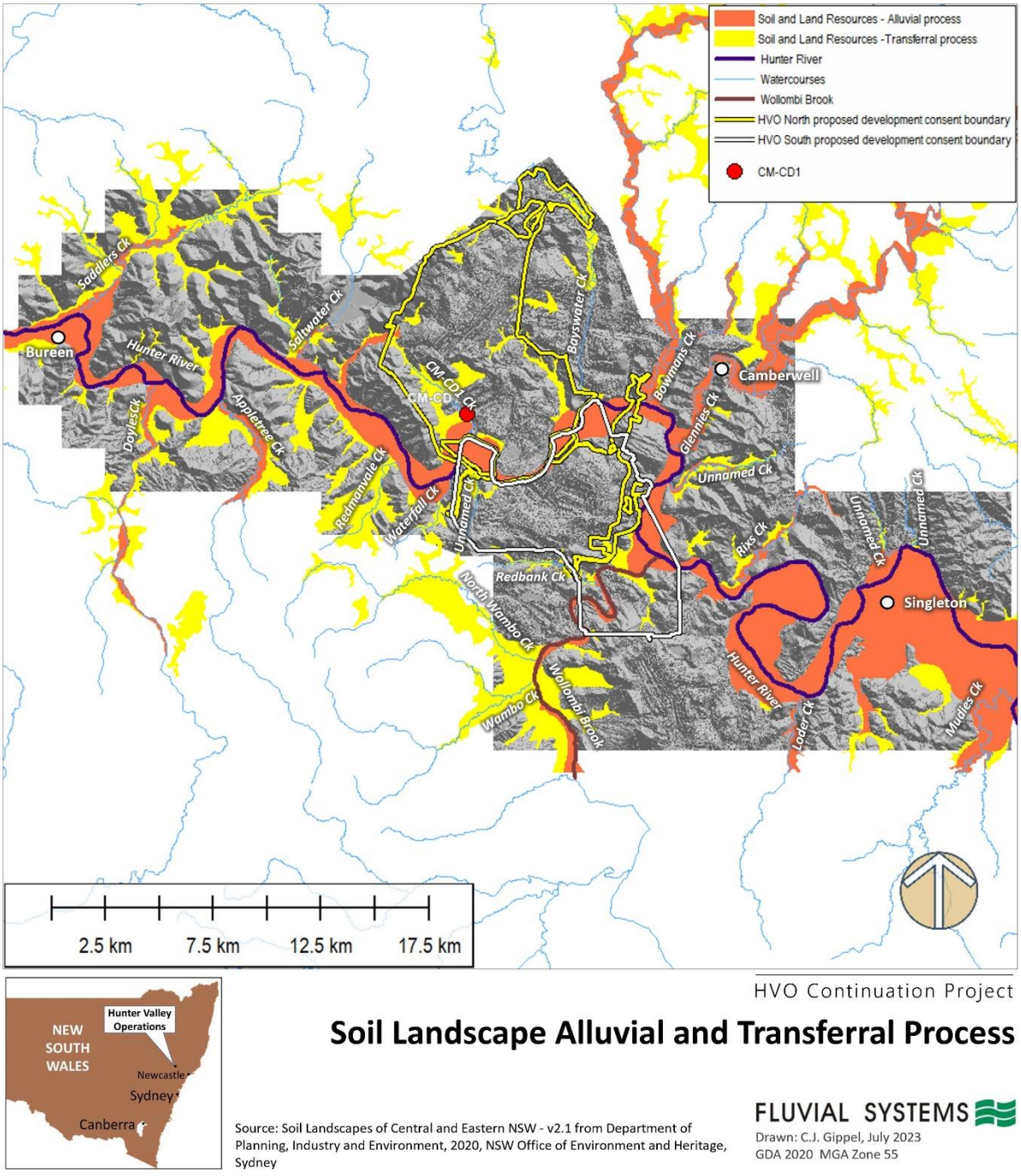

Figure 28. Distribution of Soil Landscape Alluvial and Transferral processes, mapped over the wider regional area of interest along the Hunter River valley from Bureen to Singleton.

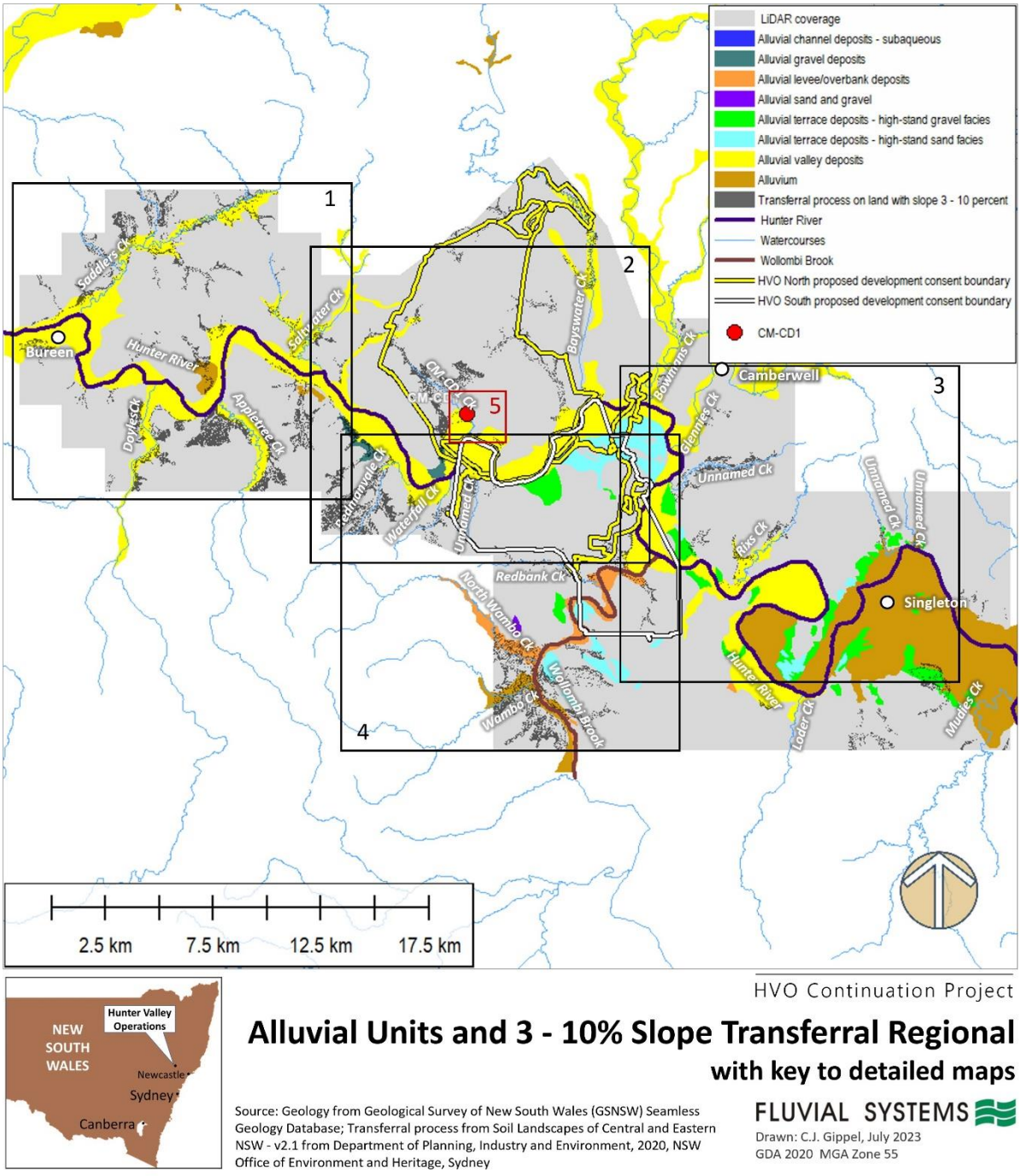

Figure 29. Distribution of NSW Seamless Geology Alluvial Units and Soil Landscape Transferral process cropped to slopes of 3 - 10%, mapped over the wider regional area of interest along the Hunter River valley from Bureen to Singleton. Map key indicates detailed maps of the same variables.

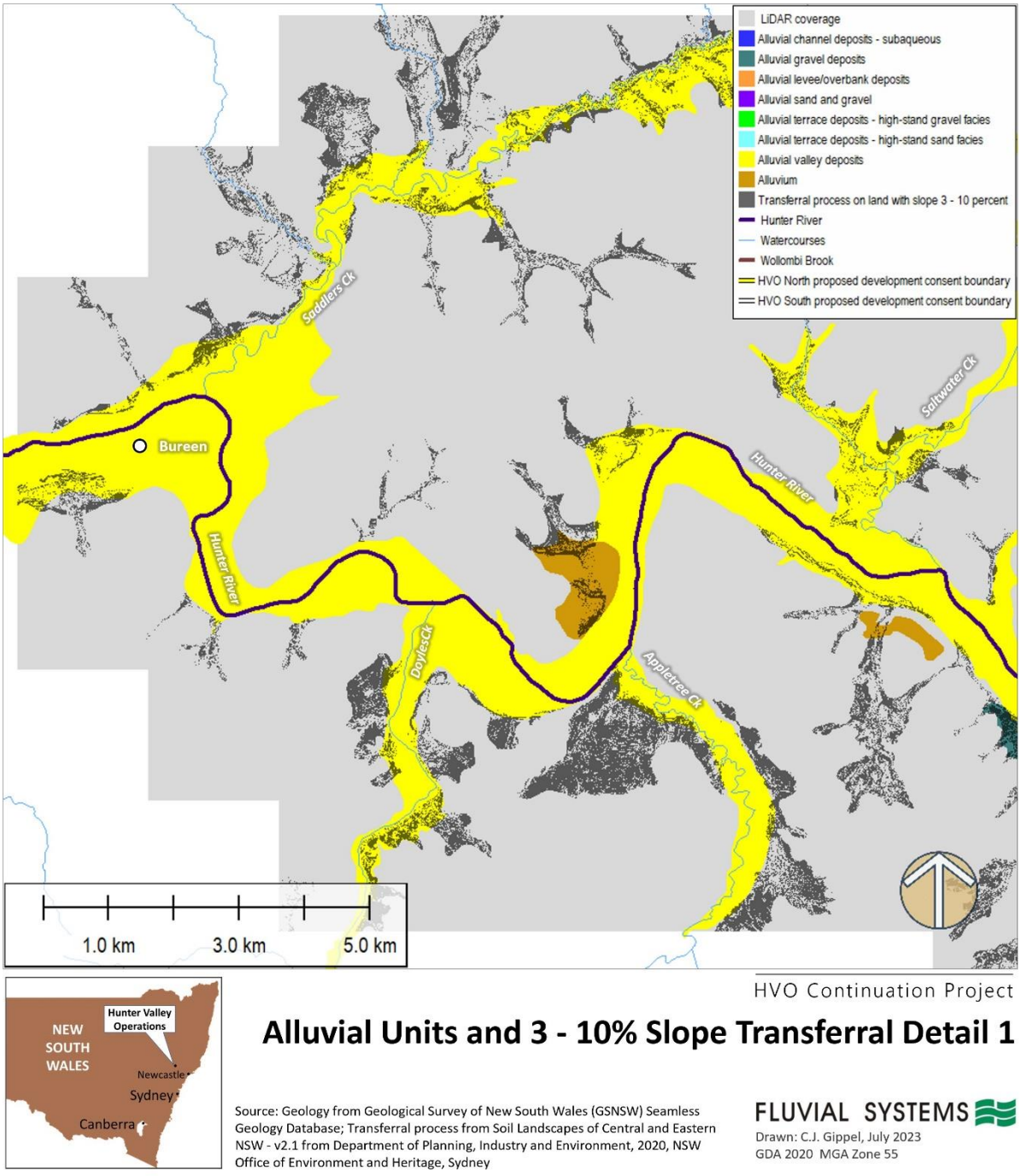

Figure 30. Distribution of NSW Seamless Geology Alluvial Units and Soil Landscape Transferral process cropped to slopes of 3 - 10%, detailed map 1.

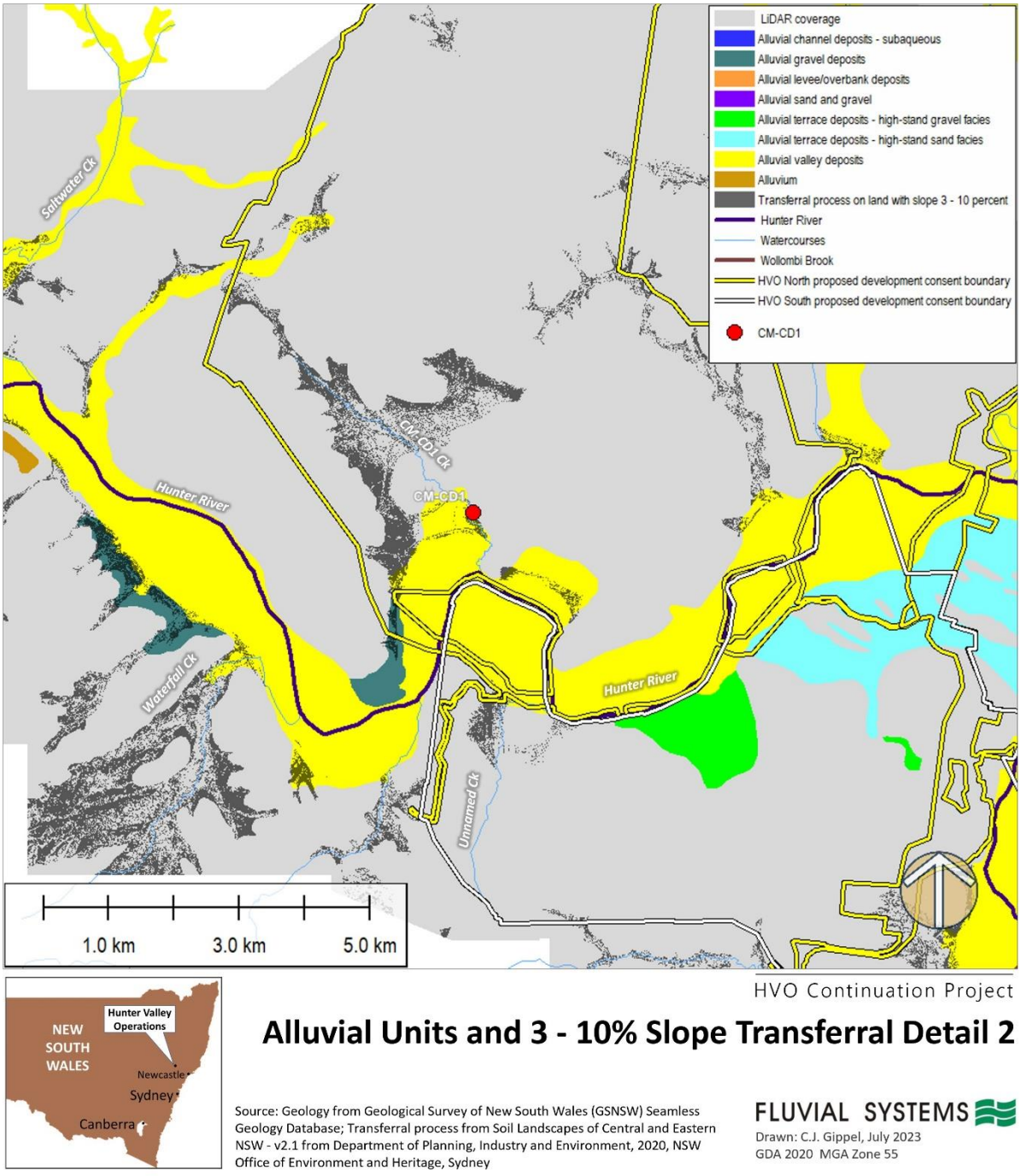

Figure 31. Distribution of NSW Seamless Geology Alluvial Units and Soil Landscape Transferral process cropped to slopes of 3 - 10%, detailed map 2.

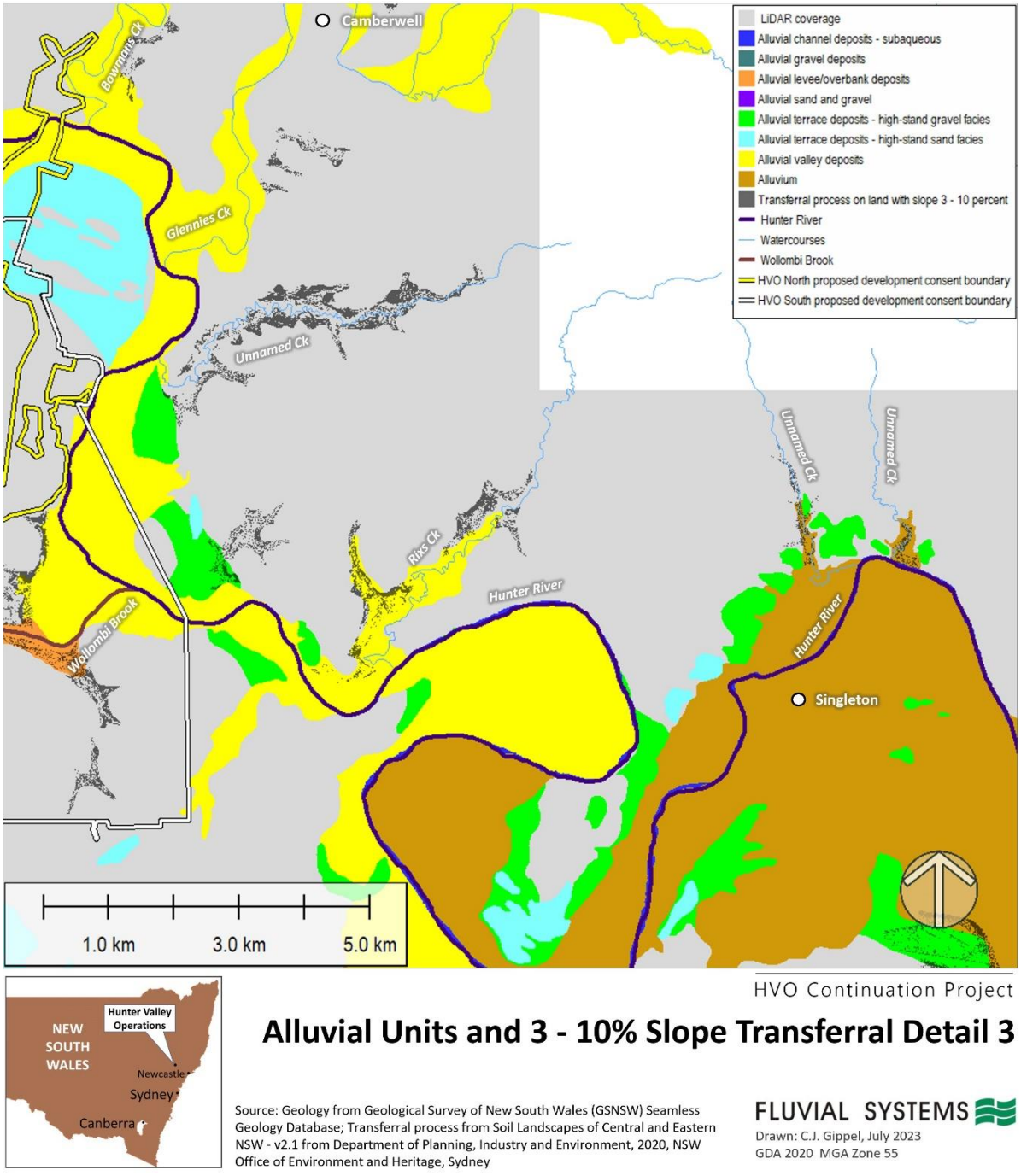

Figure 32. Distribution of NSW Seamless Geology Alluvial Units and Soil Landscape Transferral process cropped to slopes of 3 - 10%, detailed map 3.

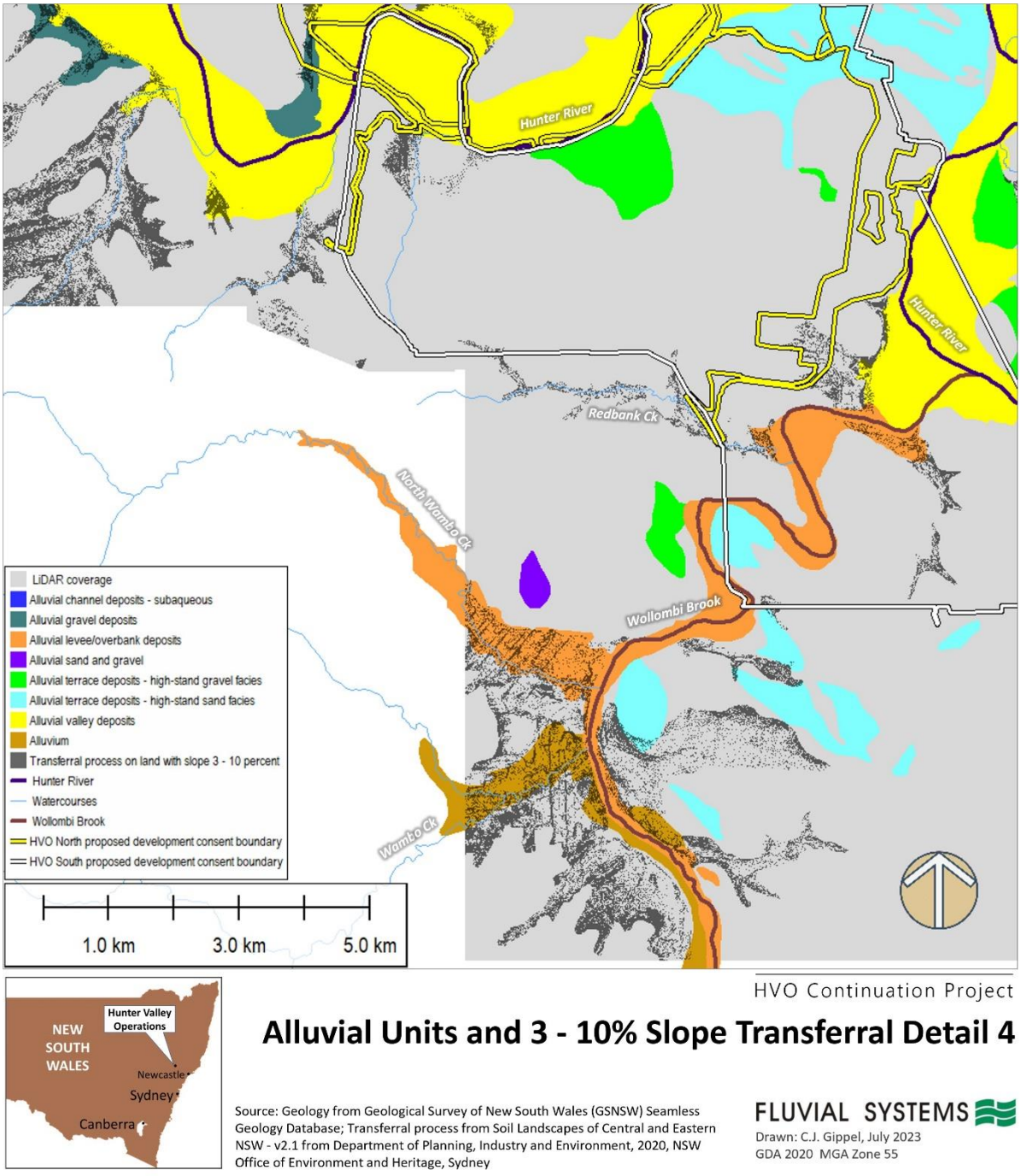

Figure 33. Distribution of NSW Seamless Geology Alluvial Units and Soil Landscape Transferral process cropped to slopes of 3 - 10%, detailed map 4.

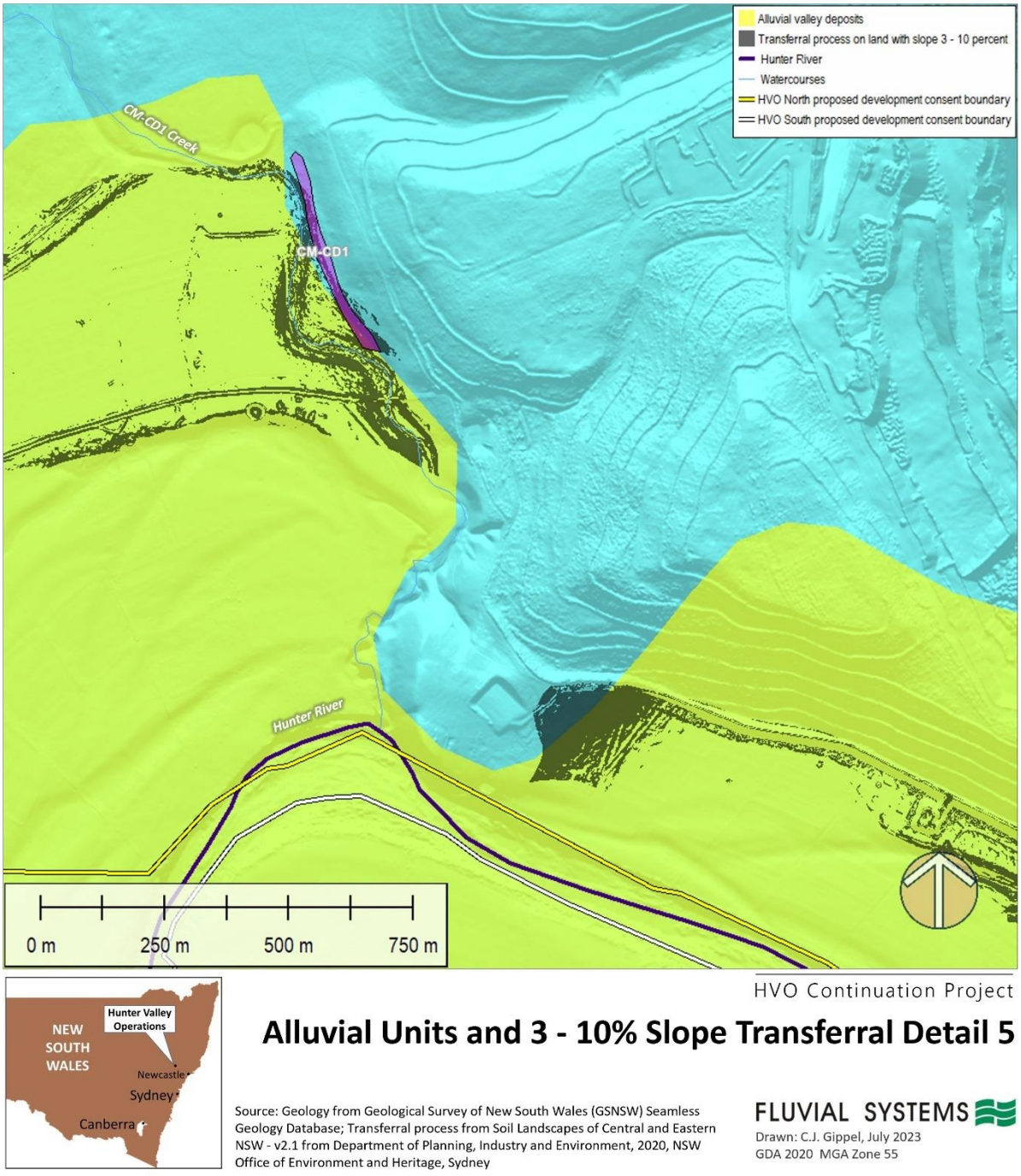

Figure 34. Distribution of NSW Seamless Geology Alluvial Units and Soil Landscape Transferral process cropped to slopes of 3 - 10%, detailed map 5. Shaded area is the curtilage of the six test pits of the colluvial slope sampled by EMM (2022b).

5.0 Conclusion

A review of literature, analysis of terrain data and field inspection was undertaken with the objective of providing an opinion on potential for finding preserved sub-surface evidence of late-Pleistocene Aboriginal occupation in the area of the HVO Continuation Project. It was concluded that the likelihood of finding preserved sub-surface late-Pleistocene deposits was low except for the site CM-CD1, which is known to have such material, and Area 12, which has characteristics similar to other source bordering dunes where such material has previously been found

through excavation and dating. Most of the A horizon sedimentary material on the slopes is probably less than 3,000 years old, so hillslope environments of the study area have low potential for finding sub-surface late-Pleistocene deposits. Area 9 was located on an alluvial fan and could have late-Pleistocene sediment at a, as yet undetermined, depth in the profile.

The regional distribution of Warkworth sand system varied depending on the information source, so there remains considerable uncertainty about its actual distribution. This report identified a previously unmapped area of potential Warkworth sand system on the basis of NW – SE trending dune morphology apparent on the LiDAR-derived DEM. It appears that Warkworth sand system occurs in patches confined to the Hunter River and Wollombi Brook extending from the Project area to Singleton. Warkworth sand can occur in the form of regular NW – SE trending linear dunes, which are readily identified from the LiDAR-derived DEM, and sand sheets, which require field soil survey for identification.

Most tributaries of the Hunter River over the wider regional area of interest along the Hunter River valley from Bureen to Singleton had areas of CM-CD1-type landform present (alluvial units adjacent to areas of transferral process with a slope of 3 – 10%). In detail, significant areas of CM-CD1-type landform was found on Saddlers Creek, Doyles Creek, Appletree and Saltwater Creek. Waterfall Creek and two unnamed right-bank tributaries also have potential for CM-CD1-type landform near where they meet the Hunter River floodplain. Bayswater Creek, Bowmans Creek and Glennies Creek appear to have low potential for CM-CD1-type landform. Further downstream, and unnamed left-bank tributary and Rixs Creek have potential for CM-CD1-type landform near where they meet the Hunter River floodplain. The potential for CM-CD1-type landform on left-bank tributaries of Wollombi Brook Redbank Creek, Wambo Creek and North Wambo Creek is uncertain because much of the general landform falls within the slope range 3 – 10%. The detail of the CM-CD1 area suggests that CM-CD1-type landform could extend 250 m downstream along the creek, on the same colluvial slope, but not upstream. The method used in this report did not identify any other areas of CM-CD1-type landform within the Project area.

This report concludes with responses to the four questions that formed the scope of work (Table 7).

Table 7. Responses to the four questions comprising the scope of this report.

Scope question	Response
What are the characteristics and depositional history of the soil profiles in Areas 5, 9, and 11 (as identified in EMM, 2022, Figure 6.3). Are these likely to be of Pleistocene age? What is their probable distribution across the Project area, and more broadly?	Area 5, not late-Pleistocene. Area 9 could have late-Pleistocene sediment at a, as yet undetermined, depth in the profile. Area 11 appears to be soil formed insitu from weathered regolith underlain by rock. Area 5 reworked valley fill is likely to be common within the Hunter Valley. Area 9 alluvial fan is likely to be common within the Hunter Valley. Area 11 interfluve is likely to be very common within the Hunter Valley.
What are the characteristics and deposition history of the sandy soil profile within Area 12? Are these likely to be of Pleistocene age? What is the probable distribution of this soil profile across the Project area, and more broadly? Is this likely to be part of the Warkworth sand sheet? What is the broader extent of the Warkworth sand system?	The soil profile likely has characteristics and deposition history similar to sites excavated, described and dated nearby on the Warkworth sand system. The maximum area occupied by this system would be limited to undisturbed land in proximity to the Hunter River and Wollombi Brook, in particular in the reach extending from the Project area to Singleton. The extent of the Warkworth sand system was mapped using existing information, but there was considerable uncertainty in the distribution. Knowledge of the full and accurate extent of Warkwoth sand system would require a comprehensive program of field survey and laboratory analysis.
We have demonstrated that the fairly unique CM-CD1 colluvial deposit is of Pleistocene age. Is there likely to be other comparable deposits elsewhere in the Project area or nearby? What is the potential for this deposit to be present more broadly? What are some of the conditions where such deposits might be present to inform future projects in the region?	Areas of CM-CD1-type landform were found in the broader region, but not within the Project area. Site CM-CD1 is situated at the Interface of colluvial slope (at around 3 – 10% gradient) and alluvial plain and is associated with upstream Cut and Fill River Style. The site is within the influence of large floods on the Hunter River. The most important site factors are more likely to be presence of a stable late-Pleistocene alluvial surface overlain by a stable colluvial deposit. The extent of CM-CD1-type deposit was mapped using existing information. Knowledge of the full and accurate extent of CM-CD1-type landform would require a comprehensive program of field survey and laboratory analysis.
General map of the potential extent of Pleistocene deposits (if determined) across the Project area and more broadly.	Maps were produced covering the Project area and beyond that identified the likely distribution of Warkworth sand system and CM-CD1-type landforms, which this report concluded had potential for presence of sub-surface late-Pleistocene deposits. Knowledge of the full and accurate extent of these landforms and associated sub-surface late-Pleistocene deposits, would require a comprehensive program of field survey and laboratory analysis.

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Appendix D
AHIMS data

EMM
creating opportunities

D.1 AHIMS searches

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785072

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0641	ND 4	GDA	56	312146	6413881	Open site	Destroyed	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2114	
37-3-0429	LID28	AGD	56	313278	6414153	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-0451	LID4	GDA	56	313899	6413368	Open site	Partially Destroyed	Artefact : -		100666
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0690	G13, Glendell	GDA	56	314455	6413170	Open site	Destroyed	Artefact : 7		
	Contact T Russell	**Recorders**	Rex Silcox,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcl					**Permits**		
37-2-4876	REA425	GDA	56	310413	6412522	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-0391	Carrington Mine CM 43	AGD	56	312022	6412566	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	Mrs.Angela Besant					**Permits**		
37-3-0052	Liddell Bayswater Creek	AGD	56	312893	6413965	Open site	Valid	Artefact : -	Open Camp Site	138,391,1851,4525,100666,100886
	Contact	**Recorders**	Helen Brayshaw					**Permits**		
37-3-0432	LID22	AGD	56	313672	6414303	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-1631	HVOCP TR300-IF2	GDA	56	313851	6412864	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Morgan (emm consulting) Wilcox,EMM Consulting Pty Ltd - Newcastle					**Permits**		
37-3-0427	LID29	AGD	56	314310	6413400	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1443,2348	
37-3-1126	REA254	GDA	56	312865	6413315	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0640	ND 3	GDA	56	312156	6413821	Open site	Destroyed	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2114	
37-3-0675	Newpac Stockpile OS 2	GDA	56	313091	6412766	Open site	Destroyed	Artefact : 4		99846
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden,A					**Permits**	2385	
37-3-0459	Brayshaw C	GDA	56	313527	6413741	Open site	Valid	Artefact : 2		100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Joel Deacon,Arrow Heritage S					**Permits**		
37-3-0470	Nard 13	AGD	56	313560	6412510	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Iain Stuart					**Permits**	1362,1363	
37-3-0458	Brayshaw D	GDA	56	313689	6413691	Open site	Valid	Artefact : 2		100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Joel Deacon,Arrow Heritage S					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309377.0 - 314760.0, Northings : 6412521.0 - 6415125.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 73

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0434	LID20	AGD	56	313699	6414480	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-1261	REA426	GDA	56	314004	6412647	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-0464	LID32	AGD	56	314400	6412800	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1443,2348	
37-3-0436	LID18	AGD	56	314485	6413799	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-0492	NARDELL N4	AGD	56	313050	6412500	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Ray Fife,Laurie Perry					**Permits**		
37-3-0435	LID19	AGD	56	313018	6414370	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1301	
37-3-0523	Nard 12	AGD	56	313590	6412450	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1414	
37-3-0036	Ravensworth;Ravensworth B;	AGD	56	313744	6412518	Open site	Valid	Artefact : -	Open Camp Site	4525,102217
	Contact	**Recorders**	ASRSYS					**Permits**		
37-3-1630	HVOCP TR300-IF1	GDA	56	313958	6413133	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Morgan (emm consulting) Wilcox,EMM Consulting Pty Ltd - Newcastle					**Permits**		
37-3-0454	LID1	AGD	56	314629	6414731	Open site	Destroyed	Artefact : -		100158,100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1443	
37-3-0638	ND 1	GDA	56	312066	6413881	Open site	Destroyed	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2114	
37-3-0738	Liddell Fines 1	GDA	56	312644	6414339	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					**Permits**	2896	
37-3-0442	LID12	AGD	56	313061	6414317	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1301	
37-3-1127	REA255	GDA	56	313004	6413255	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0054	Liddell-Bayswater Creek	GDA	56	313689	6413691	Open site	Destroyed	Artefact : -	Open Camp Site	138,4525,100886
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785072

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0028	Liddell Bayswater Creek;	GDA	56	313807	6412682	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -	Open Camp Site	165,4525,103364
	Contact	**Recorders**	Ms.Alison Lamond,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage S					**Permits**		
37-3-0561	Nard 9	AGD	56	313834	6412483	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Iain Stuart					**Permits**		
37-3-1210	Ausgrid Newdell 1	GDA	56	313956	6413362	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Nicola Roche					**Permits**	3707	
37-3-0441	LID13	AGD	56	313954	6414442	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-0426	LID30	AGD	56	314045	6413173	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1443,2348	
37-3-0439	LID15	AGD	56	314486	6414563	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-2-0048	Pikes Gully;	AGD	56	309436	6412986	Open site	Valid	Artefact : -	Open Camp Site	4525
	Contact	**Recorders**	ASRSYS					**Permits**		
37-3-0739	LHP1	GDA	56	311960	6414330	Open site	Destroyed	Artefact : 3		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					**Permits**	2896	
37-2-0051	Pikes Gully;	AGD	56	310263	6412818	Open site	Valid	Artefact : -	Open Camp Site	4525,103364
	Contact	**Recorders**	ASRSYS					**Permits**		
37-3-0674	Newpac Stockpile OS 1	GDA	56	312877	6412922	Open site	Destroyed	Artefact : 2		99846
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden,A					**Permits**	2385	
37-3-0055	Liddell;Bayswater Creek;	AGD	56	312800	6414055	Open site	Valid	Artefact : -	Open Camp Site	4525,100666,100886
	Contact	**Recorders**	Helen Brayshaw					**Permits**		
37-3-0669	ND 5	GDA	56	312159	6413888	Open site	Destroyed	Artefact : -		
	Contact T Russell	**Recorders**	ERM - Thornton,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-0677	Newpac Stockpile IF 2	GDA	56	312971	6412892	Open site	Destroyed	Artefact : 1		99846
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden,A					**Permits**	2385	
37-3-0053	Liddell Bayswater Creek.	AGD	56	312893	6413965	Open site	Valid	Artefact : -	Open Camp Site	138,391,4525,100886
	Contact	**Recorders**	Helen Brayshaw					**Permits**		
37-3-0460	Brayshaw B	GDA	56	313387	6413893	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					**Permits**	2883,2884,2896	
37-3-0450	LID5	GDA	56	313698	6413754	Open site	Destroyed	Artefact : -		100666,100886

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309377.0 - 314760.0, Northings : 6412521.0 - 6415125.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 73

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785072

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					**Permits**	2896	
37-3-0522	Nard 11	AGD	56	313675	6412400	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1414	
37-3-0431	LID26	AGD	56	313662	6414180	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-0490	NARDELL -N1	AGD	56	313754	6412440	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ray Fife,Victor Perry,Ms.Alison Lamond					**Permits**		
37-3-0448	LID6 (Duplicate copy 37-3-0449)	GDA	56	313863	6413276	Open site	Destroyed	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Joel Deacon,Arrow Heritage S					**Permits**		
37-3-0433	LID21	AGD	56	313821	6414312	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-0440	LID14	AGD	56	313965	6414721	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-0428	LID31	AGD	56	314256	6413168	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1443,2348	
37-2-2696	B.A.D 2 (Jerrys Plains)	GDA	56	309400	6413700	Open site	Valid	Artefact : -		2683
	Contact	**Recorders**	Doctor.Susan (left ahms) Mcintyre-Tamwoy					**Permits**		
37-3-0489	NARDELL DAM SITE (Nardell/Newpac Archaeological Deposit)	AGD	56	312430	6412350	Open site	Destroyed	Artefact : -		99844
	Contact	**Recorders**	Ray Fife,Victor Perry					**Permits**	2231,2384	
37-2-0176	Lake Liddell;	AGD	56	309700	6414400	Open site	Valid	Artefact : -	Open Camp Site	4525
	Contact	**Recorders**	Len Dyall					**Permits**		
37-2-0610	Ravensworth Open Cut;BAD 2;	AGD	56	309400	6413700	Open site	Valid	Artefact : -	Open Camp Site	2688,4525
	Contact	**Recorders**	Doctor.Susan (left ahms) Mcintyre-Tamwoy					**Permits**		
37-3-0676	Newpac Stockpile IF 1	GDA	56	312793	6413016	Open site	Destroyed	Artefact : 1		99846
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden,A					**Permits**	2385	
37-3-0639	ND 2	GDA	56	312166	6413721	Open site	Destroyed	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2114	
37-3-0443	LID11	AGD	56	313482	6414530	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-3-1167	LIDSE - OS1	GDA	56	313969	6413561	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Nicholas James Harro					**Permits**	3765	
37-3-0438	LID16	AGD	56	314149	6414592	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309377.0 - 314760.0, Northings : 6412521.0 - 6415125.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 73

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785072

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0437	LID17	AGD	56	314478	6413980	Open site	Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	1577	
37-2-1442	Liddell Coal 1;	GDA	56	311924	6414657	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Ms.Jill Ruig,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churc					**Permits**		
37-2-1441	Liddell Coal	GDA	56	311986	6414881	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Ms.Jill Ruig,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churc					**Permits**		
37-3-0678	Newpac Stockpile IF 3	GDA	56	312903	6412819	Open site	Destroyed	Artefact : 1		99846
	Contact S Scanlon	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden,A					**Permits**	2385	
37-3-0461	Brayshaw A	GDA	56	313165	6413887	Open site	Partially Destroyed	Artefact : -		100666,100886
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					**Permits**		
37-3-0449	LID6	AGD	56	313758	6413087	Open site	Valid	Artefact : -		100666
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-5932	LI-AS1-19	GDA	56	310751	6414232	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney					**Permits**		
37-3-0392	Carrington Mine CM 44, same as 37-3-0397	AGD	56	311906	6412591	Open site	Valid	Artefact : -	Isolated Find	103364
	Contact	**Recorders**	Mrs.Angela Besant					**Permits**		
37-3-0397	Carrington Mines CM 44, same as 37-3-0392	AGD	56	311906	6412591	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	ASRSYS					**Permits**		
37-2-0049	Pikes Gully;	AGD	56	310171	6412817	Open site	Valid	Artefact : -	Open Camp Site	4525
	Contact	**Recorders**	ASRSYS					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309377.0 - 314760.0, Northings : 6412521.0 - 6415125.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 73

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785077

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0378	CUM-29;Ravensworth;	GDA	56	312934	6411370	Open site	Valid	Artefact : -	Open Camp Site	3984,104243
Contact	Recorders	Iain Stuart						Permits		
37-3-1245	REA284	GDA	56	312242	6411499	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-0939	REA17	GDA	56	313112	6411446	Open site	Valid	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1364	REA360	GDA	56	313960	6411510	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-1363	REA361	GDA	56	314093	6411404	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-0931	REA7	GDA	56	314103	6412041	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-6486	HVOCP TR20-AS1	GDA	56	308722	6411978	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-3-0336	Rail Facility 1	AGD	56	314600	6411910	Open site	Valid	Artefact : -	Open Camp Site	103364
Contact	Recorders	Mr.Matthew Barber						Permits		
37-3-0339	Cumnock South 2;	GDA	56	312803	6411822	Open site	Valid	Artefact : -	Open Camp Site	104243
Contact	Recorders	Ms.Jill Ruig,Mr.Nicholas James Harrop						Permits		
37-3-0945	REA25	GDA	56	312982	6411346	Open site	Valid	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1365	REA359	GDA	56	313931	6411543	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-0942	REA20	GDA	56	314213	6411498	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-0927	REA3	GDA	56	314506	6412193	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-0341	Rail Facility 2	AGD	56	314450	6412150	Open site	Valid	Artefact : -	Isolated Find	
Contact	Recorders	Mr.Matthew Barber						Permits		
37-2-3915	REA14	GDA	56	311770	6411473	Open site	Partially Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-0937	REA15	GDA	56	312538	6411476	Open site	Valid	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-4879	REA407	GDA	56	311591	6411362	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-2-0924	CUM-38;Ravensworth;	AGD	56	311904	6411290	Open site	Destroyed	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart,Ms.Alison Lamond						Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307105.0 - 314760.0, Northings : 6411344.0 - 6412521.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 78

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785077

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0936	REA12	GDA	56	312888	6411780	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-6143	BAYS AS and PAD11	GDA	56	307483	6411740	Open site	Valid	Artefact : -, Hearth : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova					**Permits**		
37-3-0491	NARDELL N2	AGD	56	314000	6412100	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Ray Fife,Laurie Perry					**Permits**		
37-3-1130	REA258	GDA	56	314332	6411699	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0926	REA2	GDA	56	314754	6412273	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-0912	CUM-23; Ravensworth	GDA	56	311645	6411409	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart,Ms.Alison Lamond,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Soluti					**Permits**		
37-2-6487	HVOCP TR18-AS1	GDA	56	309326	6412136	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-0337	Cumnock South 4	GDA	56	312635	6411619	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	Ms.Jill Ruig,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-0340	Cumnock South 3;	GDA	56	312682	6411811	Open site	Valid	Artefact : -	Open Camp Site	104243
	Contact	**Recorders**	Ms.Jill Ruig					**Permits**		
37-3-0941	REA19	GDA	56	314276	6411580	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1131	REA259	GDA	56	314311	6411700	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1597	BAYS AS and PAD 19	GDA	56	314514	6412094	Closed site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney					**Permits**		
37-2-5061	HVO-1133	GDA	56	311628	6411363	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-6481	HVOCP TR17-IF1	GDA	56	309380	6412181	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Morgan (emm consulting) Wilcox,EMM Consulting Pty Ltd - Newcastle					**Permits**		
37-3-1250	REA440	GDA	56	312907	6411474	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1125	REA253	GDA	56	313835	6411790	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1128	REA256	GDA	56	313859	6412438	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307105.0 - 314760.0, Northings : 6411344.0 - 6412521.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 78

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785077

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1356	REA358	GDA	56	313943	6411620	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1354	REA356	GDA	56	313949	6411699	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1242	REA281	GDA	56	314056	6412003	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-0930	REA6	GDA	56	314073	6412039	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1124	REA252	GDA	56	314239	6411422	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0933	REA9	GDA	56	314316	6411847	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0796	Liddell EW 13	GDA	56	314359	6412006	Open site	Valid	Artefact : 1		101420
	Contact	**Recorders**	Insite Heritage Pty Ltd					**Permits**		
37-3-0797	Liddell EW 14	GDA	56	314371	6411892	Open site	Valid	Artefact : 5		101420
	Contact	**Recorders**	Insite Heritage Pty Ltd,OzArk Environmental and Heritage Management - Dubbo,M					**Permits**		
37-3-0273	Cumnock South	AGD	56	311250	6411300	Open site	Valid	Artefact : -	Open Camp Site	2535,4525
	Contact	**Recorders**	Sue Effenberger					**Permits**	878	
37-2-3914	REA13	GDA	56	311807	6411479	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1350	REA352	GDA	56	313952	6411900	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1129	REA257	GDA	56	314026	6411356	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1243	REA282	GDA	56	314067	6411985	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1123	REA251	GDA	56	314083	6411495	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1246	REA285	GDA	56	314273	6411546	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-2-6482	HVOCP TR18-AS2	GDA	56	309151	6411997	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6140	BAYS AS09	GDA	56	307318	6412247	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova					**Permits**		
37-3-0338	Cumnock South 1;	GDA	56	312760	6411765	Open site	Valid	Artefact : -	Open Camp Site	104243
	Contact	**Recorders**	Ms.Jill Ruig					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307105.0 - 314760.0, Northings : 6411344.0 - 6412521.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 78

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785077

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0934	REA10	GDA	56	313886	6411821	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1226	REA 264	GDA	56	313954	6411639	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1227	REA265	GDA	56	313968	6411619	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1351	REA353	GDA	56	314001	6411501	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-0292	Nard 8; same as 37-3-0560	GDA	56	313998	6412486	Open site	Valid	Artefact : -	Open Camp Site	
Contact	Recorders	Iain Stuart,OzArk Environmental and Heritage Management - Dubbo,Miss.Stephani						Permits		
37-3-1353	REA355	GDA	56	314015	6411728	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-0929	REA5	GDA	56	314065	6412053	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1241	REA280	GDA	56	314079	6412055	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1244	REA283	GDA	56	314088	6411989	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-0940	REA18	GDA	56	314202	6411536	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-0935	REA11	GDA	56	314243	6411762	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1355	REA357	GDA	56	314297	6411681	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-2-6483	HVOCP TR18-AS3	GDA	56	308938	6411837	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-2-0910	CUM-21;Ravensworth;	AGD	56	311080	6411270	Open site	Valid	Artefact : -	Isolated Find	3984
Contact	Recorders	Iain Stuart						Permits		
37-2-6142	BAYS AS and PAD10	GDA	56	307353	6412080	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova						Permits		
37-2-0914	CUM-25;Ravensworth;	GDA	56	311789	6411380	Open site	Valid	Artefact : -	Open Camp Site	3984,104243
Contact	Recorders	Iain Stuart						Permits		
37-3-0938	REA16	GDA	56	312883	6411378	Open site	Valid	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-0493	NARDELL N5	GDA	56	313168	6412512	Open site	Valid	Artefact : -		103364

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307105.0 - 314760.0, Northings : 6411344.0 - 6412521.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 78

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785077

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ray Fife,Victor Perry					**Permits**		
37-3-1352	REA354	GDA	56	313943	6411764	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-0560	Nard 8, same as 37-3-0292	GDA	56	313998	6412486	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Iain Stuart,OzArk Environmental and Heritage Management - Dubbo,Miss.Stephani					**Permits**		
37-3-0932	REA8	GDA	56	314085	6412031	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-6135	BAYS AS and PAD15	GDA	56	309058	6412157	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova					**Permits**		
37-2-0913	CUM-24;Ravensworth;	AGD	56	311080	6411270	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-6484	HVOCP TR20-IF1	GDA	56	308486	6411727	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-0944	REA24	GDA	56	312496	6411348	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307105.0 - 314760.0, Northings : 6411344.0 - 6412521.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 78

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785078

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-0156	Davis Creek	GDA	56	310496	6410361	Open site	Destroyed	Artefact : -	Open Camp Site	91
Contact	Recorders	ASRSYS,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,A						Permits	184	
37-2-0911	CUM-22;Ravensworth;	AGD	56	311120	6411140	Open site	Destroyed	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart						Permits	184	
37-2-3944	REA93	GDA	56	311657	6409271	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3935	REA57	GDA	56	311689	6410045	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3921	REA34	GDA	56	311699	6410925	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3932	REA49	GDA	56	311796	6410128	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3930	REA47	GDA	56	311849	6410126	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-6286	Liddell Jerrys Plains Pipeline AS9	GDA	56	306019	6410557	Open site	Valid	Artefact : -		
Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Ms.Alison Lamond						Permits		
37-2-0558	P11;Plashette;	AGD	56	306150	6410550	Open site	Valid	Artefact : -	Open Camp Site	2238
Contact	Recorders	Margrit Koettig						Permits		
37-2-3928	REA42	GDA	56	311881	6410147	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-0923	CUM-37;Ravensworth; same as 37-2-0922	GDA	56	311875	6411179	Open site	Valid	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart,OzArk Environmental and Heritage Management - Dubbo,Miss.Stephani						Permits		
37-2-3941	REA83	GDA	56	311959	6409401	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3929	REA46	GDA	56	311958	6410194	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-0916	CUM-27;Ravensworth;	AGD	56	311850	6410990	Open site	Valid	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart						Permits		
37-2-0907	CUM-18; Ravensworth	GDA	56	310805	6410342	Open site	Destroyed	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	184	
37-2-0151	Parnells Creek Site G	GDA	56	308406	6409071	Open site	Destroyed	Artefact : -	Open Camp Site	91
Contact	Recorders	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-2013	WPE 7	GDA	56	310910	6408995	Open site	Destroyed	Artefact : -		
Contact	Recorders	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4435	
37-2-2014	WPE 8	GDA	56	311259	6409532	Open site	Destroyed	Artefact : -		
Contact	Recorders	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4435	

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305652.0 - 312077.0, Northings : 6408963.0 - 6411344.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 94

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-3934	REA56	GDA	56	311460	6409957	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3927	REA41	GDA	56	311815	6410626	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-6489	HVOCP TR24-AS2	GDA	56	306314	6409252	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-2-6144	BAYS AS and PAD07	GDA	56	306341	6410671	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova						Permits		
37-2-0915	CUM-26;Ravensworth;	AGD	56	311790	6411010	Open site	Valid	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart						Permits		
37-2-0920	CUM-34;Ravensworth;	AGD	56	311904	6411090	Open site	Destroyed	Artefact : -	Isolated Find	3984
Contact	Recorders	Iain Stuart,Ms.Alison Lamond						Permits		
37-2-3945	REA94	GDA	56	312062	6409301	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-0908	CUM-19; Ravensworth;	GDA	56	310705	6410317	Open site	Destroyed	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow Heritag						Permits	184	
37-2-5316	HVO-1137	GDA	56	311299	6409140	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Helen Selimiotis						Permits		
37-2-3923	REA36	GDA	56	311668	6410746	Open site	Valid	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-3922	REA35	GDA	56	311763	6410801	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-6141	BAYS AS and PAD05	GDA	56	305737	6410932	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova						Permits		
37-2-6490	HVOCP TR24-AS1	GDA	56	306372	6409434	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-2-0922	CUM-36;Ravensworth; same as 37-2-0923	GDA	56	311875	6411179	Open site	Valid	Artefact : -	Open Camp Site	3984
Contact	Recorders	Iain Stuart,OzArk Environmental and Heritage Management - Dubbo,Miss.Stephani						Permits		
37-2-3918	REA26	GDA	56	311875	6411179	Open site	Valid	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-3926	REA40	GDA	56	311509	6410451	Open site	Valid	Modified Tree (Carved or Scarred) : -		102774
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305652.0 - 312077.0, Northings : 6408963.0 - 6411344.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 94

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785078

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-3943	REA92	GDA	56	311630	6409268	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-3917	REA22	GDA	56	311957	6411226	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-0921	CUM-35;Ravensworth;	AGD	56	311900	6410900	Open site	Valid	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**		
37-2-0895	CUM-2; Ravensworth	GDA	56	310466	6409881	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-0896	CUM-3; Ravensworth	GDA	56	311246	6409951	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-4419	REA418	GDA	56	311339	6409283	Open site	Destroyed	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney,Ms.Alison Lamond					**Permits**		
37-2-0901	CUM-12;Ravensworth;	AGD	56	311260	6410430	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-0897	CUM-4;Ravensworth	AGD	56	311294	6409190	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart,Ms.Alison Lamond					**Permits**		
37-2-5315	HVO-1135	GDA	56	311414	6410118	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-0899	CUM-9;Ravensworth	AGD	56	311694	6409390	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart,Ms.Alison Lamond					**Permits**		
37-2-0559	P12; Plashette	GDA	56	306970	6410657	Open site	Valid	Artefact : -	Open Camp Site	2238
	Contact	**Recorders**	Margrit Koettig,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-6290	Liddell Jerrys Plains Pipeline AS5	GDA	56	305769	6410166	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Jacobs Group (Australia) Pty Ltd - Newcastle,Ms.Alison Lamond					**Permits**		
37-2-6485	HVOCP TR22-AS1	GDA	56	306750	6410547	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-3937	REA79	GDA	56	311535	6409595	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-5062	HVO-1134	GDA	56	311597	6411241	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-0900	CUM-10;Ravensworth;	AGD	56	311520	6409660	Open site	Destroyed	Modified Tree (Carved or Scarred) : -	Scarred Tree	3984,102774
	Contact	**Recorders**	Iain Stuart					**Permits**		
37-2-3942	REA91	GDA	56	311637	6409381	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305652.0 - 312077.0, Northings : 6408963.0 - 6411344.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 94

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-3919	REA29	GDA	56	312037	6411132	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-0145	Upper Emu Creek	GDA	56	310606	6409091	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-0905	CUM-16;Ravensworth;	AGD	56	311050	6410280	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-0894	CUM-1; Ravensworth	GDA	56	311206	6409811	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1924	CK10 (Dupliecate copy see 37-0144)	AGD	56	311278	6408965	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Vanessa Hardy,Ms.Alison Lamond					**Permits**		
37-2-3938	REA80	GDA	56	311483	6409517	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-4870	REA286	GDA	56	311647	6410997	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-2-0906	CUM-17;Ravensworth;	AGD	56	310900	6410200	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-3939	REA81	GDA	56	311506	6409506	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-0039	Emu Creek	AGD	56	311449	6408913	Open site	Destroyed	Artefact : -	Open Camp Site	310
	Contact	**Recorders**	Ms.Alison Lamond					**Permits**		
37-2-0917	CUM-28;Ravensworth;	AGD	56	311910	6411060	Open site	Valid	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**		
37-2-0150	Parnells Creek Site H	GDA	56	308646	6409591	Open site	Destroyed	Artefact : -	Open Camp Site	91
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2011	WPE 5	GDA	56	311164	6410157	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4435	
37-2-0904	CUM-15;Ravensworth;	AGD	56	311110	6410310	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-0903	CUM-14;Ravensworth;	AGD	56	311180	6410310	Open site	Destroyed	Artefact : -	Open Camp Site	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-0902	CUM-13;Ravensworth;	AGD	56	311240	6410400	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-4869	RAV Nth IF-1	GDA	56	311376	6410472	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Mr.Ben Churcher					**Permits**		
37-2-3933	REA54	GDA	56	311790	6410100	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305652.0 - 312077.0, Northings : 6408963.0 - 6411344.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 94

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785078

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-3924	REA37	GDA	56	311810	6410752	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-0919	CUM-32;Ravensworth;	AGD	56	311704	6410890	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart,Ms.Alison Lamond					**Permits**		
37-2-0553	P6;Plashette;	AGD	56	305550	6410120	Open site	Valid	Artefact : -	Open Camp Site	2238
	Contact	**Recorders**	Margrit Koettig					**Permits**		
37-2-4873	REA442	GDA	56	311894	6411281	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-2-4881	REA374	GDA	56	312062	6409062	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-2-3916	REA21	GDA	56	312037	6411339	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-2008	WPE 2	GDA	56	310343	6409243	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4005,4435	
37-2-0909	CUM-20;Ravensworth;	AGD	56	310680	6411120	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart					**Permits**	184	
37-2-1966	HEE 3	GDA	56	310623	6409101	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Harry Webber,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-4868	RAV Nth OS - 2	GDA	56	311363	6410549	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Mr.Ben Churcher					**Permits**		
37-2-4878	REA417	GDA	56	311759	6410840	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-2-6287	Liddell Jerrys Plains Pipeline IF7	GDA	56	305853	6410298	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Jacobs Group (Australia) Pty Ltd - Newcastle,Ms.Alison Lamond					**Permits**		
37-2-6488	HVOCP TR21-AS1	GDA	56	306891	6410857	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-3931	REA48	GDA	56	311545	6410113	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-3925	REA39	GDA	56	311558	6410552	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-0918	CUM-31;Ravensworth;	AGD	56	311504	6410690	Open site	Destroyed	Artefact : -	Isolated Find	3984
	Contact	**Recorders**	Iain Stuart,Ms.Alison Lamond					**Permits**		
37-2-5063	HVO-1136	GDA	56	311427	6410034	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-3936	REA63	GDA	56	311436	6409853	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305652.0 - 312077.0, Northings : 6408963.0 - 6411344.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 94

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785078

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-2-6289	Liddell Jerrys Plains Pipeline AS6	GDA	56	305792	6410207	Open site	Valid	Artefact : -		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Ms.Alison Lamond					Permits		
37-2-6288	Liddell Jerrys Plains Pipeline IF8	GDA	56	305983	6410526	Open site	Valid	Artefact : -		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Ms.Alison Lamond					Permits		
37-2-6145	BAYS AS06	GDA	56	306099	6410662	Open site	Valid	Artefact : -		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney,Miss.Alexandra Seifertova					Permits		
37-2-6283	Liddell Jerrys Plains Pipeline AS10	GDA	56	306269	6410876	Open site	Valid	Artefact : -		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Ms.Alison Lamond					Permits		
37-2-4885	REA371	GDA	56	311549	6409527	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond					Permits		
37-2-3940	REA82	GDA	56	312007	6409369	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-2-3920	REA30	GDA	56	312034	6411067	Open site	Valid	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users					Permits		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305652.0 - 312077.0, Northings : 6408963.0 - 6411344.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 94

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785081

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5364	HVO-1787	GDA	56	310539	6407072	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4089	
37-2-5368	HVO-1783	GDA	56	310693	6407067	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050,4089	
37-2-0806	Cum 42	GDA	56	311186	6407178	Open site	Valid	Artefact : -	Open Camp Site	103364
Contact	Recorders	Iain Stuart,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-2010	WPE 4	AGD	56	311061	6408542	Open site	Destroyed	Artefact : -		
Contact	Recorders	Gavin Martin,Mr.Andy Collis						Permits	4435	
37-2-3949	REA110	GDA	56	311297	6408846	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3946	REA107	GDA	56	311329	6408928	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-3959	REA130	GDA	56	311506	6407915	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-2-2712	RW15 (Jerrys Plains)	GDA	56	311704	6407090	Open site	Destroyed	Artefact : 2		
Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton,Mr.Ben Churcher						Permits		
37-2-3960	REA134	GDA	56	311732	6407771	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-2-3961	REA135	GDA	56	311770	6407603	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-2-2716	RW33 (Jerrys Plains)	GDA	56	311804	6407640	Open site	Destroyed	Artefact : 2		
Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton,Mr.Ben Churcher						Permits		
37-2-3965	REA139	GDA	56	311865	6407258	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-2-0551	P4;Plashette;	AGD	56	305360	6408670	Open site	Valid	Artefact : -	Open Camp Site	2238
Contact	Recorders	Margrit Koettig						Permits		
37-2-6492	HVOCP TR27-AS2	GDA	56	305975	6408738	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-2-0157	Parnells Creek Site A	GDA	56	306776	6407911	Open site	Destroyed	Artefact : -	Open Camp Site	91
Contact	Recorders	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-4883	REA294	GDA	56	311625	6408167	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-2-1965	HEE 2	GDA	56	310361	6407791	Open site	Not a Site	Artefact : -, Modified Tree (Carved or Scarred) : -		
Contact	Recorders	Harry Webber,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-2015	WPE 11	GDA	56	310366	6408178	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4435	
37-2-2009	WPE 3	GDA	56	310462	6407749	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4435	
37-2-2717	RW34 (Jerrys Plains)	GDA	56	311504	6407990	Open site	Destroyed	Artefact : 5		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton,Mr.Ben Churcher					**Permits**		
37-2-0277	Saltwater Creek 84;Plashett;	AGD	56	305330	6408530	Open site	Destroyed	Artefact : -	Open Camp Site	1203,1204
	Contact	**Recorders**	Margrit Koettig,Rex Silcox,Phil Hughes					**Permits**	147	
37-2-5122	MP-001	GDA	56	305484	6407289	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050,4435	
37-2-6513	HVOCP TR32-AS1	GDA	56	306364	6408007	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6493	HVOCP TR30-AS1	GDA	56	306407	6408323	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-2714	RW31 (Jerrys Plains)	GDA	56	311110	6407281	Open site	Valid	Artefact : 5		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-2-5065	HVO-1139	GDA	56	311115	6407939	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-5363	HVO-1788	GDA	56	310508	6407061	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-0038	Emu Creek; ART	GDA	56	310811	6408902	Open site	Destroyed	Artefact : -	Open Camp Site	310
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5582	HVO-2070	GDA	56	310676	6407067	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Yancoal Australia Ltd,Yancoal Australia Ltd,Miss.Jessica Blackman,Miss.Jessica Blac					**Permits**		
37-2-5583	HVO-2069	GDA	56	310765	6407102	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Yancoal Australia Ltd,Yancoal Australia Ltd,Miss.Jessica Blackman,Miss.Jessica Blac					**Permits**		
37-2-2016	WPE 9	AGD	56	311043	6408431	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Gavin Martin,Mr.Andy Collis					**Permits**	4435	
37-2-2715	RW32 (Jerrys Plains)	GDA	56	311204	6407139	Open site	Valid	Artefact : 6		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-2-4872	REA292	GDA	56	311240	6408520	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-2-3951	REA112	GDA	56	311276	6408814	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-0807	Cum 43;	GDA	56	311362	6407057	Open site	Valid	Artefact : -	Open Camp Site	103364,104243

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785081

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Iain Stuart					Permits		
37-2-3955	REA116	GDA	56	311722	6408937	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-2-6497	HVOCP TR47-AS2	GDA	56	305258	6407340	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-2-5332	HVO-951	GDA	56	305487	6407533	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Mr					Permits	4050	
37-2-0144	Lower Emu Creek;	GDA	56	311069	6408809	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	Recorders	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-0155	Parnells Creek Site C	GDA	56	307506	6408171	Open site	Destroyed	Artefact : -	Open Camp Site	91
	Contact	Recorders	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-0154	Parnells Creek Site D	GDA	56	307606	6408191	Open site	Destroyed	Artefact : -	Open Camp Site	91
	Contact	Recorders	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-5584	HVO-2068	GDA	56	310577	6407014	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Yancoal Australia Ltd,Yancoal Australia Ltd,Miss.Jessica Blackman,Miss.Jessica Blac					Permits		
37-2-2012	WPE 6	GDA	56	310756	6407374	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Gavin Martin,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	4435	
37-2-2007	WPE1	AGD	56	310847	6406992	Open site	Destroyed	Artefact : 10		
	Contact	Recorders	Gavin Martin,Mr.Andy Collis					Permits	2086,2863,4435	
37-2-3964	REA138	GDA	56	311220	6407365	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-2-4871	REA290	GDA	56	311251	6408637	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond					Permits		
37-2-1925	CK11 (Duplicate see 37-2-0039)	AGD	56	311315	6408728	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Vanessa Hardy					Permits		
37-2-4882	REA375	GDA	56	311484	6408742	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski					Permits		
37-2-3953	REA114	GDA	56	311487	6408797	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-2-3957	REA128	GDA	56	311670	6408153	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users					Permits		
37-2-4877	REA419	GDA	56	311742	6407285	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond					Permits		
37-2-3954	REA115	GDA	56	311740	6408960	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-2-0549	P2;Plashette;	AGD	56	305580	6408500	Open site	Valid	Artefact : -	Open Camp Site	2238

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Margrit Koettig					**Permits**		
37-2-1926	CK23	AGD	56	310970	6406851	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Ms.Vanessa Hardy					**Permits**		
37-2-3948	REA109	GDA	56	311361	6408870	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-0279	Saltwater Crk 86;Plashett;	AGD	56	305230	6408370	Open site	Valid	Artefact : -	Open Camp Site	1203,1204
	Contact	**Recorders**	Margrit Koettig,Rex Silcox					**Permits**	147	
37-2-5053	HVO-986	GDA	56	305166	6408312	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-2-0548	P1;Plashette;	AGD	56	305100	6408100	Open site	Valid	Artefact : -	Open Camp Site	2238
	Contact	**Recorders**	Margrit Koettig					**Permits**		
37-2-5248	HVO-936	GDA	56	305552	6407000	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-0278	Saltwater Creek 85;	AGD	56	305450	6408430	Open site	Valid	Artefact : -	Open Camp Site	1203,1204
	Contact	**Recorders**	Margrit Koettig,Rex Silcox,Phil Hughes					**Permits**	147	
37-2-5331	HVO-963	GDA	56	305596	6407417	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-1-0399	Site K	GDA	56	309896	6407661	Open site	Destroyed	Artefact : -	Shelter with Deposit	100967
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-2-5365	HVO-1786	GDA	56	310635	6407105	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-5366	HVO-1785	GDA	56	310896	6407144	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-2710	RW13 (Jerrys Plains)	GDA	56	311304	6407089	Open site	Valid	Artefact : 30		103364
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-2-0149	Parnells Creek Site B	GDA	56	307276	6408181	Open site	Destroyed	Artefact : -	Open Camp Site	91
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-3956	REA117	GDA	56	311750	6408913	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-2720	RW44 (IF)	GDA	56	311804	6408813	Open site	Destroyed	Artefact : 6		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton,Ms.Alison Lamond					**Permits**		
37-2-5273	HVO-955	GDA	56	305508	6407481	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-6499	HVOCP TR32-AS2	GDA	56	306283	6407990	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785081

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6496	HVOCP TR47-IF1	GDA	56	305200	6407062	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5247	HVO-935	GDA	56	305553	6407047	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5375	HVO-1774	GDA	56	305624	6407056	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-1964	HEE 1	GDA	56	310506	6407191	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Harry Webber,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5369	HVO-1782	GDA	56	310682	6407025	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**		
37-2-1967	HEE 4	GDA	56	310904	6408355	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Harry Webber,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2017	WPE 10	AGD	56	311062	6408666	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Gavin Martin,Mr.Andy Collis					**Permits**	4435	
37-2-5064	HVO-1138	GDA	56	311250	6408873	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-1927	CK22 (Duplicate copy see 37-2-0807)	AGD	56	311201	6406815	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Vanessa Hardy					**Permits**		
37-2-2718	RW35 (Jerrys Plains)	GDA	56	311304	6408240	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton,Ms.Alison Lamond					**Permits**		
37-2-3947	REA108	GDA	56	311327	6408885	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-0804	Cum 40;	AGD	56	311304	6407290	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Iain Stuart,Mr.Ben Churcher					**Permits**		
37-2-3963	REA137	GDA	56	311859	6407511	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		
37-2-0552	P5;Plashette;	AGD	56	304920	6408030	Open site	Valid	Artefact : -	Open Camp Site	2238
	Contact	**Recorders**	Margrit Koettig					**Permits**		
37-2-6491	HVOCP TR27-AS1	GDA	56	306055	6408799	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-4884	REA295	GDA	56	311643	6408139	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-2-3958	REA129	GDA	56	311380	6408078	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		
37-2-2711	RW14 (Jerrys Plains)	GDA	56	311404	6407139	Open site	Valid	Artefact : 5		103364

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785081

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-2-6514	HVOCP TR47-AS3	GDA	56	305305	6407379	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-0189	Ponds Creek	GDA	56	304905	6407289	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-0153	Parnells Creek Site F	GDA	56	307606	6408191	Open site	Destroyed	Artefact : -	Open Camp Site	91
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-0280	Howick Liddell J	GDA	56	308306	6407611	Open site	Destroyed	Artefact : -	Open Camp Site	1203,1204
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Sol					**Permits**	147,148	
37-2-5361	HVO-1790	GDA	56	310551	6407017	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-5367	HVO-1784	GDA	56	310892	6407128	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-2719	RW37 (Jerry Plains)	GDA	56	311204	6407390	Open site	Destroyed	Artefact : 11		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton,Mr.Ben Churcher					**Permits**		
37-2-3962	REA136	GDA	56	311237	6407465	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-3950	REA111	GDA	56	311306	6408838	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-3952	REA113	GDA	56	311430	6408821	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-2-5272	HVO-952	GDA	56	305467	6407476	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-0561	T/L2;Plashette;	AGD	56	305380	6408730	Open site	Valid	Artefact : -	Open Camp Site	2238
	Contact	**Recorders**	Margrit Koettig					**Permits**		
37-2-6494	HVOCP TR31-AS1	GDA	56	306396	6408043	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-0523	Site L	GDA	56	310116	6407581	Open site	Destroyed	Artefact : -	Open Camp Site	1617,100967
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-2-2713	RW30 (Jerrys Plains)	GDA	56	311102	6407231	Open site	Valid	Artefact : 10		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-2-5362	HVO-1789	GDA	56	310479	6407008	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-5354	HVO-1718	GDA	56	305336	6407021	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-0152	Parnells Creek Site E	GDA	56	307446	6408391	Open site	Destroyed	Artefact : -	Open Camp Site	91

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785081

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-4874	REA433	GDA	56	311734	6407117	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-2-0805	Cum 41;	GDA	56	311069	6407236	Open site	Valid	Artefact : -	Open Camp Site	103364
	Contact	**Recorders**	Iain Stuart					**Permits**		
37-2-2721	RW60 (Jerrys Plains)	GDA	56	311155	6407188	Open site	Valid	Artefact : 5		103364
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304820.0 - 312077.0, Northings : 6407000.0 - 6408963.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 109

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786300

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5121	MP-020	GDA	56	305667	6406425	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H	Permits							
37-2-5259	HVO-840	GDA	56	305867	6406627	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Mr	Permits	4050						
37-2-5339	HVO-1758	GDA	56	306095	6406333	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M	Permits	4050						
37-2-6532	HVOCP TR129-AS1	GDA	56	308726	6406479	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel	Permits							
37-2-0779	HC-3	GDA	56	305305	6406339	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5245	HVO-914	GDA	56	305394	6406304	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						
37-2-5105	MP-004	GDA	56	305404	6406779	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H	Permits	4050						
37-2-5109	MP-008	GDA	56	305464	6406650	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H	Permits	4050						
37-2-6495	HVOCP TR47-AS1	GDA	56	305029	6406719	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel	Permits							
37-2-5120	MP-019	GDA	56	305603	6406453	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H	Permits	4050						
37-2-5348	HVO-1730	GDA	56	305608	6406612	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H	Permits	4050						
37-2-5131	MP-030	GDA	56	305780	6406260	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H	Permits	4050						
37-2-5180	HVO-811	GDA	56	306032	6406246	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia H	Permits	4050						
37-2-5271	HVO-978	GDA	56	305289	6406916	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						
37-2-5269	HVO-930	GDA	56	305326	6406717	Open site	Not a Site	Modified Tree (Carved or Scarred) : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						
37-2-5246	HVO-931	GDA	56	305451	6406943	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						
37-2-5251	HVO-939	GDA	56	305493	6406950	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 309055.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 80

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786300

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5108	MP-007	GDA	56	305733	6406721	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel					**Permits**	4050,4435	
37-2-5123	MP-022	GDA	56	305850	6406405	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5132	MP-031	GDA	56	305874	6406216	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5106	MP-005	GDA	56	305471	6406779	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-6503	HVOCP TR50-AS1	GDA	56	305009	6406257	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6504	HVOCP TR49-IF3	GDA	56	305146	6406604	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5262	HVO-894	GDA	56	305269	6406274	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5250	HVO-938	GDA	56	305553	6406931	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-0526	Site O	GDA	56	308966	6406811	Open site	Destroyed	Artefact : -	Open Camp Site	1617,100967
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-2-5249	HVO-937	GDA	56	305505	6406986	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5265	HVO-876	GDA	56	305848	6406715	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5260	HVO-839	GDA	56	305879	6406511	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**		
37-2-5378	HVO-1770	GDA	56	306034	6406427	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5261	HVO-897	GDA	56	305384	6406468	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5103	MP-002	GDA	56	305415	6406992	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-6502	HVOCP TR50-AS2	GDA	56	305056	6406218	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5107	MP-006	GDA	56	305221	6406755	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5248	HVO-936	GDA	56	305552	6407000	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 309055.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 80

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5142	MP-021	GDA	56	305577	6406394	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5119	MP-018	GDA	56	305486	6406435	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5253	HVO-837	GDA	56	305740	6406351	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5345	HVO-1735	GDA	56	305740	6406407	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-0777	HC-1	GDA	56	305798	6406475	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5356	HVO-1715	GDA	56	305857	6406676	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5182	HVO-815	GDA	56	305929	6406371	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5124	MP-023	GDA	56	306025	6406466	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-0527	Site P	GDA	56	308596	6406341	Open site	Destroyed	Artefact : -	Open Camp Site	1617,100967
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Sol					**Permits**	2804,4435	
37-2-5252	HVO-949	GDA	56	305321	6406572	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5115	MP-014	GDA	56	305407	6406533	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5111	MP-010	GDA	56	305208	6406539	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5113	MP-012	GDA	56	305227	6406434	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5333	HVO-893	GDA	56	305254	6406206	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Rio Tinto Coal Australia (RTCA) Pty Li					**Permits**	4050	
37-2-5242	HVO-907	GDA	56	305557	6406675	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5118	MP-017	GDA	56	305597	6406500	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5346	HVO-1732	GDA	56	305526	6406648	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5277	HVO-841	GDA	56	305919	6406488	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 309055.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 80

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786300

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5341	HVO-1754	GDA	56	305977	6406242	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					Permits	4050	
37-2-5373	HVO-1776	GDA	56	306189	6406439	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					Permits	4050	
37-2-5126	MP-025	GDA	56	305326	6406243	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					Permits	4050	
37-2-5357	HVO-1714	GDA	56	305360	6406792	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					Permits	4050	
37-2-5244	HVO-913	GDA	56	305461	6406345	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5104	MP-003	GDA	56	305461	6406841	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					Permits	4050	
37-2-6501	HVOCP TR50-IF1	GDA	56	305001	6406538	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-2-5355	HVO-1716	GDA	56	305572	6406730	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					Permits	4050	
37-2-5264	HVO-886	GDA	56	305607	6406304	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-6530	HVOCP TR118-IF1	GDA	56	308084	6406302	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-2-5125	MP-024	GDA	56	305486	6406298	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					Permits		
37-2-5243	HVO-910	GDA	56	305491	6406518	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-0778	HC-2	GDA	56	305821	6406335	Open site	Destroyed	Artefact : -		Open Camp Site
	Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	4050	
37-2-5336	HVO-842	GDA	56	305929	6406446	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5151	HVO-782	GDA	56	306134	6406252	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Rio Tinto Coal Australia (RTCA) Pty Li					Permits		
37-2-6516	HVOCP TR49-AS2	GDA	56	305169	6406216	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-2-5110	MP-009	GDA	56	305188	6406591	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel					Permits	4050	
37-2-5347	HVO-1731	GDA	56	305552	6406632	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 309055.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786300

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					Permits	4050	
37-2-5117	MP-016	GDA	56	305615	6406567	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					Permits	4050	
37-2-5383	HVO-1761	GDA	56	305501	6406232	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					Permits	4050	
37-2-5335	HVO-878	GDA	56	305753	6406555	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5181	HVO-814	GDA	56	306011	6406377	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5270	HVO-950	GDA	56	305282	6406477	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5114	MP-013	GDA	56	305374	6406616	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					Permits	4050	
37-2-5112	MP-011	GDA	56	305182	6406454	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					Permits	4050	
37-2-5257	HVO-867	GDA	56	305555	6406513	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5116	MP-015	GDA	56	305557	6406591	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					Permits	4050	

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 309055.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 80

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786304

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0790	RW55 (Camberwell)	GDA	56	313049	6406220	Open site	Destroyed	Artefact : 3		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton,Mr.Ben Churcher					**Permits**		
37-2-2316	RW Ridge Crest Locus B	GDA	56	311381	6406576	Open site	Destroyed	Artefact : 37		
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-2-5054	HVO-1126	GDA	56	311014	6406974	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-3-0712	RW Bayswater Tributary Locus D	GDA	56	312976	6406611	Open site	Destroyed	Artefact : 1		102220
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-3-0792	RW57 (Camberwell)	GDA	56	313044	6406339	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-3-1292	REA382	GDA	56	313350	6406240	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1293	REA381	GDA	56	313545	6406283	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-2-0525	Site N	GDA	56	309306	6406801	Open site	Destroyed	Artefact : -	Open Camp Site	1617,100967
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-2-5060	HVO-1132	GDA	56	311223	6406874	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-2-5058	HVO-1130	GDA	56	311104	6406973	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-3-1020	REA148	GDA	56	312197	6406206	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-0723	RW Ridge Crest Locus C	GDA	56	312486	6406263	Open site	Destroyed	Artefact : 2		
	Contact Gerry Saals	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-2-5055	HVO-1127	GDA	56	310950	6406621	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-2-1951	CK21	GDA	56	311791	6406577	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Ms.Vanessa Hardy,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow					**Permits**		
37-2-4880	REA299	GDA	56	311987	6406574	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-2-2315	RW Ridge Crest Locus A	AGD	56	311887	6406688	Open site	Destroyed	Artefact : 38		
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-3-0789	RW54 (Camberwell)	GDA	56	312206	6406278	Open site	Valid	Artefact : 30		103364
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,RPS AAP Consulting Pty I					**Permits**		
37-3-1286	REA396	GDA	56	312238	6406335	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309055.0 - 313570.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 40

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786304

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0724	RW Spur 1 Locus B	GDA	56	313300	6406230	Open site	Destroyed	Artefact : 3		102220
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-2-0147	Farrells Creek Site Q	GDA	56	309546	6406321	Open site	Destroyed	Artefact : -	Open Camp Site	391,100967
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-3-1022	REA150	GDA	56	313421	6406304	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		
37-3-0714	RW Bayswater Tributary Locus A	GDA	56	313042	6406547	Open site	Destroyed	Artefact : 3		102220
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-3-0715	RW Bayswater Tributary Locus B	GDA	56	313199	6406654	Open site	Destroyed	Artefact : 3		102220
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-2-5360	HVO-1791	GDA	56	310550	6406978	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-0524	Site M	GDA	56	309226	6406791	Open site	Destroyed	Artefact : -	Open Camp Site	1617,100967
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-3-1019	REA147	GDA	56	312218	6406328	Open site	Partially Destroyed	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0713	RW Bayswater Tributary Locus E	GDA	56	313067	6406411	Open site	Destroyed	Artefact : 2		102220
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-3-1023	REA151	GDA	56	313518	6406234	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-5384	HVO-1780	GDA	56	310549	6406894	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-5056	HVO-1128	GDA	56	310919	6406628	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-2-5057	HVO-1129	GDA	56	311010	6406425	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-2-5059	HVO-1131	GDA	56	311129	6406977	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5370	HVO-1781	GDA	56	310514	6406864	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4089	
37-2-2317	RW Slope 1 Locus A	GDA	56	311884	6406388	Open site	Destroyed	Artefact : 2		
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-2-0148	Farrells Creek Site R	GDA	56	309986	6406571	Open site	Destroyed	Artefact : -	Open Camp Site	391,100967
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2804,4435	
37-2-2318	RW Slope 1 Locus B	GDA	56	311976	6406331	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309055.0 - 313570.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 40

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786304

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-4875	REA430	GDA	56	312099	6406435	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1118	REA246	GDA	56	312804	6406298	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1613	HVOCP TR168-AS1	GDA	56	312574	6406233	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1291	REA383	GDA	56	313399	6406240	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 29/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 309055.0 - 313570.0, Northings : 6406200.0 - 6407000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 40

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5254	HVO-849	GDA	56	305693	6406016	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Rio Tinto Coal Australia (RTCA) Pty Li					**Permits**	4050	
37-2-5255	HVO-848	GDA	56	305759	6406177	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5223	MP-046	GDA	56	305862	6405882	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5154	HVO-786	GDA	56	305918	6405918	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5239	MP-043	GDA	56	305983	6405615	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**		
37-2-0783	HC-7	GDA	56	306025	6405681	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5225	MP-048	GDA	56	306147	6405857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5309	HVO-740	GDA	56	306169	6405720	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5288	HVO-674	GDA	56	306295	6405765	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5204	MP-068	GDA	56	306902	6405791	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5159	HVO-506	GDA	56	307132	6405798	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5128	MP-027	GDA	56	305523	6406187	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5224	MP-047	GDA	56	305992	6405834	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5153	HVO-785	GDA	56	306062	6406018	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5287	HVO-673	GDA	56	306347	6405737	Open site	Destroyed	Artefact : -		104207
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5292	HVO-680	GDA	56	306567	6405924	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5203	MP-067	GDA	56	306943	6405618	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5206	MP-070	GDA	56	306979	6405937	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-0780	HC-4	GDA	56	305446	6405865	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5129	MP-028	GDA	56	305604	6406075	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5175	HVO-619	GDA	56	307464	6405706	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5352	HVO-1721	GDA	56	305517	6405908	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5130	MP-029	GDA	56	305701	6406170	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5241	MP-045	GDA	56	305805	6405857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5183	HVO-820	GDA	56	305858	6406061	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5150	HVO-783	GDA	56	306134	6406172	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5310	HVO-741	GDA	56	306230	6405714	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5313	HVO-746	GDA	56	306298	6405943	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5300	HVO-718	GDA	56	306519	6405683	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5299	HVO-716	GDA	56	306818	6405994	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage So					**Permits**	4050	
37-2-5380	HVO-1768	GDA	56	307105	6405618	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5164	HVO-511	GDA	56	307162	6405999	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5163	HVO-510	GDA	56	307163	6406075	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5149	HVO-780	GDA	56	306069	6405873	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5308	HVO-739	GDA	56	306180	6405685	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5307	HVO-738	GDA	56	306190	6405622	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5376	HVO-1773	GDA	56	306258	6405834	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5374	HVO-1755	GDA	56	306283	6406138	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5226	MP-049	GDA	56	306379	6405853	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5298	HVO-715	GDA	56	306758	6405918	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5349	HVO-1729	GDA	56	306918	6405717	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I						Permits	4050	
37-2-5133	MP-032	GDA	56	305343	6405765	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I						Permits	4050	
37-2-5258	HVO-850	GDA	56	305362	6405806	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5256	HVO-857	GDA	56	305392	6406162	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits		
37-2-5166	HVO-556	GDA	56	307316	6405715	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5334	HVO-890	GDA	56	305523	6406116	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5218	HVO-810	GDA	56	306021	6406160	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5145	HVO-750	GDA	56	306068	6405731	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I						Permits	4050	
37-2-5152	HVO-784	GDA	56	306081	6406112	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I						Permits	4050	
37-2-5148	HVO-778	GDA	56	306107	6405871	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I						Permits	4050	
37-2-5344	HVO-1736	GDA	56	306152	6405768	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5290	HVO-676	GDA	56	306328	6405800	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5099	HVO-448	GDA	56	306858	6405777	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5353	HVO-1719	GDA	56	305343	6406045	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I						Permits	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5263	HVO-892	GDA	56	305241	6406072	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-0795	HC-19	GDA	56	307315	6405679	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5597	HVO-2062	GDA	56	304603	6405910	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Yancoal Australia Ltd,Miss.Jessica Blackman					**Permits**		
37-2-5596	HVO-2063	GDA	56	304677	6405979	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Yancoal Australia Ltd,Miss.Jessica Blackman					**Permits**		
37-2-5350	HVO-1728	GDA	56	307080	6405944	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5372	HVO-1777	GDA	56	307119	6406198	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5160	HVO-507	GDA	56	307202	6405902	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5161	HVO-508	GDA	56	307251	6406116	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5184	HVO-821	GDA	56	305671	6405844	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5155	HVO-789	GDA	56	305891	6405822	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5314	HVO-748	GDA	56	306192	6405867	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5311	HVO-744	GDA	56	306248	6405794	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5328	HVO-747	GDA	56	306283	6406061	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5289	HVO-675	GDA	56	306360	6405778	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5291	HVO-679	GDA	56	306569	6406034	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5326	HVO-717	GDA	56	306736	6406142	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5100	HVO-454	GDA	56	306974	6405833	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5127	MP-026	GDA	56	305445	6406148	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-6500	HVOCP TR51-AS1	GDA	56	304953	6405885	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-2-5168	HVO-558	GDA	56	307380	6405807	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5371	HVO-1778	GDA	56	307428	6406099	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	
37-2-5275	HVO-503	GDA	56	307021	6405601	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5169	HVO-559	GDA	56	307299	6405952	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5359	HVO-1720	GDA	56	305522	6406074	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	
37-2-0782	HC-6	GDA	56	305764	6405799	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5240	MP-044	GDA	56	305861	6405694	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	
37-2-5377	HVO-1772	GDA	56	306174	6406077	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5312	HVO-745	GDA	56	306199	6405825	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5285	HVO-660	GDA	56	306260	6405619	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5294	HVO-682	GDA	56	306439	6405742	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5276	HVO-512	GDA	56	306951	6405674	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5101	HVO-458	GDA	56	307002	6405979	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5595	HVO-2064	GDA	56	304729	6405891	Open site	Valid	Artefact : -		
Contact	Recorders	Yancoal Australia Ltd,Miss.Jessica Blackman						Permits		
37-2-5187	HVO-828	GDA	56	305563	6406026	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5167	HVO-557	GDA	56	307371	6405769	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5379	HVO-1769	GDA	56	307405	6405834	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5162	HVO-509	GDA	56	307220	6406103	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-0785	HC-9	GDA	56	305735	6405659	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-0781	HC-5	GDA	56	305955	6406039	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5340	HVO-1757	GDA	56	306025	6406198	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5227	MP-050	GDA	56	306226	6405754	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5319	HVO-664	GDA	56	306255	6405661	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I					**Permits**	4050	
37-2-5286	HVO-672	GDA	56	306331	6405697	Open site	Destroyed	Artefact : -		104207
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5293	HVO-681	GDA	56	306493	6405823	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5317	HVO-714	GDA	56	306737	6405801	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5201	MP-065	GDA	56	306741	6405630	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5102	HVO-459	GDA	56	306857	6405881	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5098	HVO-447	GDA	56	306864	6405620	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5205	MP-069	GDA	56	306918	6405857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5297	HVO-713	GDA	56	306647	6405670	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-6498	HVOCP TR51-IF1	GDA	56	305022	6405832	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5188	HVO-829	GDA	56	305609	6405989	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5254	HVO-849	GDA	56	305693	6406016	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Rio Tinto Coal Australia (RTCA) Pty Li					**Permits**	4050	
37-2-5255	HVO-848	GDA	56	305759	6406177	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5223	MP-046	GDA	56	305862	6405882	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5154	HVO-786	GDA	56	305918	6405918	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5239	MP-043	GDA	56	305983	6405615	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**		
37-2-0783	HC-7	GDA	56	306025	6405681	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5225	MP-048	GDA	56	306147	6405857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5309	HVO-740	GDA	56	306169	6405720	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5288	HVO-674	GDA	56	306295	6405765	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5204	MP-068	GDA	56	306902	6405791	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5159	HVO-506	GDA	56	307132	6405798	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5128	MP-027	GDA	56	305523	6406187	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5224	MP-047	GDA	56	305992	6405834	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5153	HVO-785	GDA	56	306062	6406018	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5287	HVO-673	GDA	56	306347	6405737	Open site	Destroyed	Artefact : -		104207
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5292	HVO-680	GDA	56	306567	6405924	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5203	MP-067	GDA	56	306943	6405618	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5206	MP-070	GDA	56	306979	6405937	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-0780	HC-4	GDA	56	305446	6405865	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5129	MP-028	GDA	56	305604	6406075	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5175	HVO-619	GDA	56	307464	6405706	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5352	HVO-1721	GDA	56	305517	6405908	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5130	MP-029	GDA	56	305701	6406170	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5241	MP-045	GDA	56	305805	6405857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5183	HVO-820	GDA	56	305858	6406061	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5150	HVO-783	GDA	56	306134	6406172	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5310	HVO-741	GDA	56	306230	6405714	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5313	HVO-746	GDA	56	306298	6405943	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5300	HVO-718	GDA	56	306519	6405683	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5299	HVO-716	GDA	56	306818	6405994	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage So					**Permits**	4050	
37-2-5380	HVO-1768	GDA	56	307105	6405618	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5164	HVO-511	GDA	56	307162	6405999	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5163	HVO-510	GDA	56	307163	6406075	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5149	HVO-780	GDA	56	306069	6405873	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5308	HVO-739	GDA	56	306180	6405685	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5307	HVO-738	GDA	56	306190	6405622	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5376	HVO-1773	GDA	56	306258	6405834	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5374	HVO-1755	GDA	56	306283	6406138	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5226	MP-049	GDA	56	306379	6405853	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5298	HVO-715	GDA	56	306758	6405918	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5349	HVO-1729	GDA	56	306918	6405717	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I						Permits	4050	
37-2-5133	MP-032	GDA	56	305343	6405765	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I						Permits	4050	
37-2-5258	HVO-850	GDA	56	305362	6405806	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5256	HVO-857	GDA	56	305392	6406162	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits		
37-2-5166	HVO-556	GDA	56	307316	6405715	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5334	HVO-890	GDA	56	305523	6406116	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5218	HVO-810	GDA	56	306021	6406160	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5145	HVO-750	GDA	56	306068	6405731	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I						Permits	4050	
37-2-5152	HVO-784	GDA	56	306081	6406112	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I						Permits	4050	
37-2-5148	HVO-778	GDA	56	306107	6405871	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I						Permits	4050	
37-2-5344	HVO-1736	GDA	56	306152	6405768	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5290	HVO-676	GDA	56	306328	6405800	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5099	HVO-448	GDA	56	306858	6405777	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5353	HVO-1719	GDA	56	305343	6406045	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I						Permits	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5263	HVO-892	GDA	56	305241	6406072	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-0795	HC-19	GDA	56	307315	6405679	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5597	HVO-2062	GDA	56	304603	6405910	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Yancoal Australia Ltd,Miss.Jessica Blackman					**Permits**		
37-2-5596	HVO-2063	GDA	56	304677	6405979	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Yancoal Australia Ltd,Miss.Jessica Blackman					**Permits**		
37-2-5350	HVO-1728	GDA	56	307080	6405944	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5372	HVO-1777	GDA	56	307119	6406198	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5160	HVO-507	GDA	56	307202	6405902	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5161	HVO-508	GDA	56	307251	6406116	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5184	HVO-821	GDA	56	305671	6405844	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5155	HVO-789	GDA	56	305891	6405822	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5314	HVO-748	GDA	56	306192	6405867	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5311	HVO-744	GDA	56	306248	6405794	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5328	HVO-747	GDA	56	306283	6406061	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5289	HVO-675	GDA	56	306360	6405778	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5291	HVO-679	GDA	56	306569	6406034	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5326	HVO-717	GDA	56	306736	6406142	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5100	HVO-454	GDA	56	306974	6405833	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5127	MP-026	GDA	56	305445	6406148	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-6500	HVOCP TR51-AS1	GDA	56	304953	6405885	Open site	Valid	Artefact : -		
Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						Permits		
37-2-5168	HVO-558	GDA	56	307380	6405807	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5371	HVO-1778	GDA	56	307428	6406099	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	
37-2-5275	HVO-503	GDA	56	307021	6405601	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5169	HVO-559	GDA	56	307299	6405952	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5359	HVO-1720	GDA	56	305522	6406074	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	
37-2-0782	HC-6	GDA	56	305764	6405799	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5240	MP-044	GDA	56	305861	6405694	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	
37-2-5377	HVO-1772	GDA	56	306174	6406077	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M						Permits	4050	
37-2-5312	HVO-745	GDA	56	306199	6405825	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5285	HVO-660	GDA	56	306260	6405619	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5294	HVO-682	GDA	56	306439	6405742	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M						Permits	4050	
37-2-5276	HVO-512	GDA	56	306951	6405674	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5101	HVO-458	GDA	56	307002	6405979	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5595	HVO-2064	GDA	56	304729	6405891	Open site	Valid	Artefact : -		
Contact	Recorders	Yancoal Australia Ltd,Miss.Jessica Blackman						Permits		
37-2-5187	HVO-828	GDA	56	305563	6406026	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar						Permits	4050	
37-2-5167	HVO-557	GDA	56	307371	6405769	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5379	HVO-1769	GDA	56	307405	6405834	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						Permits	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5162	HVO-509	GDA	56	307220	6406103	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-0785	HC-9	GDA	56	305735	6405659	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-0781	HC-5	GDA	56	305955	6406039	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5340	HVO-1757	GDA	56	306025	6406198	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5227	MP-050	GDA	56	306226	6405754	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5319	HVO-664	GDA	56	306255	6405661	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia I					**Permits**	4050	
37-2-5286	HVO-672	GDA	56	306331	6405697	Open site	Destroyed	Artefact : -		104207
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5293	HVO-681	GDA	56	306493	6405823	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5317	HVO-714	GDA	56	306737	6405801	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5201	MP-065	GDA	56	306741	6405630	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5102	HVO-459	GDA	56	306857	6405881	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5098	HVO-447	GDA	56	306864	6405620	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5205	MP-069	GDA	56	306918	6405857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5297	HVO-713	GDA	56	306647	6405670	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-6498	HVOCP TR51-IF1	GDA	56	305022	6405832	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5188	HVO-829	GDA	56	305609	6405989	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786815

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304540.0 - 307690.0, Northings : 6405600.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 106

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786834

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5209	MP-073	GDA	56	307022	6405400	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5337	HVO-535	GDA	56	307050	6405226	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia L					**Permits**	4050	
37-2-5207	MP-071	GDA	56	307051	6405572	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5165	HVO-545	GDA	56	307266	6405533	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5214	MP-078	GDA	56	307289	6405583	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5338	HVO-799	GDA	56	305713	6405248	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-6505	HVOCP TR49-IF2	GDA	56	305717	6405193	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5136	MP-035	GDA	56	305740	6405452	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5137	MP-036	GDA	56	305806	6405358	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow H					**Permits**	4050	
37-2-5279	HVO-633	GDA	56	305918	6404895	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode					**Permits**	4050	
37-2-5143	HVO-755	GDA	56	305991	6405483	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5303	HVO-731	GDA	56	306034	6405300	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage So					**Permits**	4050	
37-2-5318	HVO-697	GDA	56	306209	6405292	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5296	HVO-696	GDA	56	306249	6405356	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5144	HVO-766	GDA	56	306335	6405246	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5089	HVO-310	GDA	56	306559	6405142	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,Mi					**Permits**	4050	
37-2-0792	HC-16	GDA	56	306865	6405189	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5210	MP-074	GDA	56	306927	6405323	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786834

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5084	HVO-245	GDA	56	307371	6405105	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Jackie Marsh					Permits		
37-2-5189	MP-082	GDA	56	307421	6405008	Open site	Valid	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					Permits		
37-2-5190	MP-083	GDA	56	307515	6404972	Open site	Valid	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					Permits		
37-2-5080	HVO-225	GDA	56	307175	6405038	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Jackie Marsh					Permits		
37-2-5156	HVO-793	GDA	56	305750	6405538	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					Permits	4050	
37-2-5237	MP-041	GDA	56	305955	6405325	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					Permits	4050	
37-2-0789	HC-13	GDA	56	306115	6405249	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact		Recorders	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					Permits	4050	
37-2-5322	HVO-972	GDA	56	306260	6405127	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Mr					Permits	4050	
37-2-5231	MP-054	GDA	56	306343	6405367	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					Permits	4050	
37-2-5200	MP-064	GDA	56	306746	6405498	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					Permits	4050	
37-2-5157	HVO-463	GDA	56	306712	6405567	Open site	Destroyed	Artefact : -		
Contact		Recorders	Ms.Jackie Marsh,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,Mi					Permits	4050	
37-2-5078	HVO-194	GDA	56	307643	6404879	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Jackie Marsh					Permits		
37-2-5082	HVO-239	GDA	56	307324	6405180	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Jackie Marsh					Permits		
37-2-5083	HVO-244	GDA	56	307345	6405063	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Jackie Marsh					Permits		
37-2-0794	HC-18	GDA	56	307041	6405080	Open site	Partially Destroyed	Artefact : -	Open Camp Site	
Contact		Recorders	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					Permits	4050	
37-2-5213	MP-077	GDA	56	307200	6405584	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel					Permits	4050	
37-2-5140	MP-039	GDA	56	306060	6405185	Open site	Destroyed	Artefact : -		
Contact		Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					Permits	4050	
37-2-5306	HVO-736	GDA	56	306167	6405550	Open site	Destroyed	Artefact : -		
Contact		Recorders	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5320	HVO-656	GDA	56	306219	6405495	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia l	Permits	4050						
37-2-5591	HVO-2099	GDA	56	306303	6405300	Open site	Destroyed	Artefact : -		
Contact	Recorders	Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,Miss.Jessica Blackm	Permits							
37-2-0790	HC-14	GDA	56	306329	6405211	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5230	MP-053	GDA	56	306331	6405471	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M	Permits	4050						
37-2-5235	MP-058	GDA	56	306470	6405107	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M	Permits	4050						
37-2-5158	HVO-502	GDA	56	306957	6405488	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5081	HVO-238	GDA	56	307590	6405004	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh	Permits							
37-2-5325	HVO-610	GDA	56	307363	6405573	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						
37-2-5174	HVO-612	GDA	56	307401	6405510	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5343	HVO-1740	GDA	56	307177	6405177	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow l	Permits	4050						
37-2-5194	MP-086	GDA	56	307207	6404881	Open site	Valid	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon	Permits							
37-2-5172	HVO-606	GDA	56	307223	6405342	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5135	MP-034	GDA	56	305671	6405382	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow l	Permits	4050						
37-2-5185	HVO-826	GDA	56	305676	6405544	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar	Permits	4050						
37-2-0786	HC-10	GDA	56	305874	6405260	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrc	Permits	4050						
37-2-5304	HVO-732	GDA	56	306011	6405339	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5305	HVO-734	GDA	56	306091	6405453	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions	Permits	4050						
37-2-5238	MP-042	GDA	56	306137	6405384	Open site	Destroyed	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow l	Permits	4050						

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786834

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5330	HVO-967	GDA	56	306251	6405034	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5301	HVO-724	GDA	56	306345	6405419	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5236	MP-059	GDA	56	306610	6405237	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-5096	HVO-368	GDA	56	306659	6404986	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,Mi					**Permits**	4050	
37-2-5221	MP-061	GDA	56	306700	6405327	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-6512	HVOCP TR49-AS1	GDA	56	305619	6405258	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5077	HVO-181	GDA	56	307746	6405260	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh					**Permits**		
37-2-5173	HVO-609	GDA	56	307410	6405556	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5171	HVO-605	GDA	56	307220	6405380	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5358	HVO-1724	GDA	56	305841	6405502	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5147	HVO-756	GDA	56	305939	6405496	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5329	HVO-735	GDA	56	306123	6405529	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5280	HVO-638	GDA	56	306158	6405095	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5281	HVO-639	GDA	56	306166	6405095	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.John Good,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5302	HVO-728	GDA	56	306302	6405348	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5232	MP-055	GDA	56	306486	6405509	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-5179	MP-094	GDA	56	306599	6404973	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-0793	HC-17	GDA	56	306815	6405349	Open site	Destroyed	Artefact : -	Open Camp Site	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786834

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050,4435	
37-2-5186	HVO-827	GDA	56	305485	6405597	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5134	MP-033	GDA	56	305596	6405412	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-0796	HC 20;	GDA	56	307625	6405279	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon					**Permits**		
37-2-5138	MP-037	GDA	56	305903	6405119	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5139	MP-038	GDA	56	305992	6405124	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-0784	HC-8	GDA	56	306045	6405419	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5228	MP-051	GDA	56	306273	6405577	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5234	MP-057	GDA	56	306502	6405325	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5097	HVO-445	GDA	56	306765	6405559	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,Mi					**Permits**	4050	
37-2-5211	MP-075	GDA	56	306928	6405240	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5351	HVO-1725	GDA	56	306713	6405123	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5215	MP-079	GDA	56	307432	6405452	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-5085	HVO-246	GDA	56	307459	6405053	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh					**Permits**		
37-2-0787	HC-11	GDA	56	305955	6405209	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5146	HVO-754	GDA	56	306046	6405518	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5282	HVO-640	GDA	56	306171	6405092	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5295	HVO-695	GDA	56	306259	6405424	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-0788	HC-12	GDA	56	306415	6405209	Open site	Destroyed	Artefact : -	Open Camp Site	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786834

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050	
37-2-5202	MP-066	GDA	56	306870	6405526	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-5381	HVO-1767	GDA	56	307014	6405514	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5219	MP-063	GDA	56	306679	6405509	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-5278	HVO-611	GDA	56	307318	6405494	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Rio Tinto Coal Australia (RTCA) Pty Li					**Permits**	4050	
37-2-5216	MP-080	GDA	56	307371	6405405	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-5212	MP-076	GDA	56	307090	6405275	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-5382	HVO-1766	GDA	56	307093	6405560	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5217	MP-081	GDA	56	307234	6405081	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-5141	MP-040	GDA	56	306034	6405247	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-5321	HVO-652	GDA	56	306068	6405314	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5283	HVO-651	GDA	56	306071	6405251	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5327	HVO-737	GDA	56	306122	6405586	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-5284	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Destroyed			
	Contact	**Recorders**	Ms.Gillian Goode,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,M					**Permits**	4050	
37-2-5229	MP-052	GDA	56	306351	6405587	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-5233	MP-056	GDA	56	306457	6405268	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	
37-2-0791	HC-15	GDA	56	306505	6405009	Open site	Partially Destroyed	Artefact : -		Open Camp Site
	Contact	**Recorders**	Noeleen Curran,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Herita					**Permits**	4050,4435	
37-2-5222	MP-060	GDA	56	306567	6405327	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,N					**Permits**	4050	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786834

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5274	HVO-489	GDA	56	306791	6405227	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5208	MP-072	GDA	56	306927	6405409	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	
37-2-5170	HVO-567	GDA	56	306994	6405227	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Yancoal Australia Ltd,Mr.Joel Deacon,Arrow Heritage Solutions,Mi					**Permits**	4050	
37-2-5079	HVO-222	GDA	56	307025	6404955	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5220	MP-062	GDA	56	306691	6405399	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Yancoal Australia Ltd,Mr.Joel Deacon,M					**Permits**	4050	

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 304910.0 - 307875.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 112

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786843

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-6507	HVOCP TR104-AS1	GDA	56	308789	6405429	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6520	HVOCP TR110-AS1	GDA	56	309181	6405454	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6517	HVOCP TR104-AS2	GDA	56	308707	6405420	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-1865	CM 58 & HC24	GDA	56	307906	6405291	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutio					**Permits**		
37-2-1866	CM 57 & HC21	GDA	56	307886	6404991	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutio					**Permits**		
37-2-6508	HVOCP TR103-AS1	GDA	56	308687	6405440	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6521	HVOCP TR114-AS1	GDA	56	308305	6405346	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-1871	CM 63 & HC25	GDA	56	308506	6405591	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutio					**Permits**		
37-2-1890	cm52	GDA	56	310000	6405000	Open site	Not a Site	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-6509	HVOCP TR103-IF1	GDA	56	308638	6405456	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6518	HVOCP TR104-IF2	GDA	56	308663	6405382	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-1872	HC100 & HC23	GDA	56	308306	6405591	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutio					**Permits**		
37-2-6525	HVOCP TR116-IF1	GDA	56	308383	6405584	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-6522	HVOCP TR115-AS1	GDA	56	308445	6405439	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
33-2-0031	HVOCP TR104-IF1	GDA	56	308632	6405310	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,EMM Consulting - St Leonards - In					**Permits**		
37-2-1867	CM 59 & HC24	GDA	56	308806	6405291	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutio					**Permits**		
37-2-0802	HC 26;	GDA	56	309296	6405391	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon					**Permits**		
37-2-0799	HC 23;	GDA	56	308696	6405541	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon					**Permits**		

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307875.0 - 310840.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 20

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786843

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-6519	HVOCP TR105-AS1	GDA	56	308809	6405272	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-1884	HC101	GDA	56	308870	6405565	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutio					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307875.0 - 310840.0, Northings : 6404875.0 - 6405600.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 20

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785090

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1064	REA192	GDA	56	312948	6405229	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1217	RAV Nth OS-1	GDA	56	312984	6405666	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Mr.Ben Churcher						Permits		
37-3-1081	REA209	GDA	56	313319	6404942	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1044	REA172	GDA	56	313363	6405723	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1021	REA149	GDA	56	312370	6406116	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1320	REA320	GDA	56	313101	6405686	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1077	REA205	GDA	56	313178	6405121	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1279	REA388	GDA	56	313242	6405250	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-1031	REA159	GDA	56	313649	6406040	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1366	RAV NTH OS-3	GDA	56	313701	6404999	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Mr.Ben Churcher						Permits		
37-3-1310	REA308	GDA	56	312262	6406103	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1055	REA183	GDA	56	312817	6405496	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1324	REA323	GDA	56	312832	6405593	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1047	REA175	GDA	56	312844	6405639	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1322	REA321	GDA	56	313385	6405659	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1067	REA195	GDA	56	313310	6405177	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1073	REA201	GDA	56	312956	6405191	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1043	REA171	GDA	56	313005	6405721	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,OzArk Environmental and Herita						Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785090

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1276	REA402	GDA	56	313162	6405151	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-0784	RW49 (Camberwell)	GDA	56	313222	6405069	Open site	Valid	Artefact : 6		103364
Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton						Permits		
37-3-1117	REA245	GDA	56	313234	6405311	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1336	REA336	GDA	56	313642	6405247	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-0180	N 7;	AGD	56	313600	6405120	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
Contact	Recorders	Elizabeth Rich						Permits	219	
37-3-0185	N 12;	AGD	56	313714	6405790	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
Contact	Recorders	Elizabeth Rich,Mr.Ben Churcher						Permits		
37-3-1058	REA186	GDA	56	313424	6405407	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1029	REA157	GDA	56	313452	6406046	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1025	REA153	GDA	56	313468	6406152	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,OzArk Environmental and Herita						Permits		
37-3-1326	REA325	GDA	56	312960	6405643	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-1338	REA338	GDA	56	312968	6405248	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1314	REA310	GDA	56	313304	6405871	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1275	REA403	GDA	56	313114	6405130	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1274	REA404	GDA	56	313126	6405100	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1341	REA341	GDA	56	313187	6405201	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-0785	RW50 (Camberwell)	GDA	56	313254	6405039	Open site	Valid	Artefact : 25		
Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton						Permits		
37-3-1323	REA322	GDA	56	313520	6405642	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-0181	N 8;	AGD	56	313470	6405350	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
Contact	Recorders	Elizabeth Rich						Permits	219	

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785090

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1333	REA333	GDA	56	313710	6405320	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-1034	REA162	GDA	56	312146	6406042	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1036	REA164	GDA	56	312846	6405982	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1040	REA168	GDA	56	312852	6405798	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1024	REA152	GDA	56	313397	6406193	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1052	REA180	GDA	56	313411	6405562	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1061	REA189	GDA	56	313438	6405367	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1340	REA340	GDA	56	312983	6405201	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1319	REA319	GDA	56	313076	6405724	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-0788	RW53 (IF) (Camberwell)	GDA	56	312387	6406089	Open site	Valid	Artefact : -		103364
Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton						Permits		
37-3-1045	REA173	GDA	56	313572	6405685	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1331	REA331	GDA	56	313579	6405412	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1329	REA328	GDA	56	313591	6405573	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1289	REA386	GDA	56	313616	6406165	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1028	REA156	GDA	56	313706	6406042	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1053	REA181	GDA	56	312706	6405567	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1046	REA174	GDA	56	312858	6405686	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1049	REA177	GDA	56	312876	6405615	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1037	REA165	GDA	56	312587	6405855	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1258	REA431	GDA	56	313453	6406169	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1065	REA193	GDA	56	313067	6405268	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1078	REA206	GDA	56	313522	6405134	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1335	REA335	GDA	56	313591	6405253	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1082	REA210	GDA	56	313608	6404880	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1332	REA332	GDA	56	313635	6405379	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1030	REA158	GDA	56	313634	6405953	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		
37-3-1308	REA313	GDA	56	313641	6405786	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher,Ms.Nad					**Permits**		
37-3-1267	REA415	GDA	56	313786	6405010	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1033	REA161	GDA	56	313781	6405886	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		
37-3-1048	REA176	GDA	56	312766	6405626	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1288	REA385	GDA	56	313392	6406131	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1309	REA309	GDA	56	313433	6405952	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1330	REA329	GDA	56	313471	6405525	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1328	REA327	GDA	56	313471	6405566	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1066	REA194	GDA	56	313484	6405258	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1317	REA317	GDA	56	312905	6405695	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785090

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1290	REA387	GDA	56	312949	6405409	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1060	REA188	GDA	56	312978	6405381	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1074	REA202	GDA	56	313027	6405123	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1075	REA203	GDA	56	313078	6405132	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-0791	RW56 (Camberwell)	GDA	56	313064	6406089	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton,Mr.Ben Churcher					**Permits**		
37-3-1079	REA207	GDA	56	313235	6405038	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1342	REA342	GDA	56	313268	6405144	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1080	REA208	GDA	56	313561	6404998	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1334	REA334	GDA	56	313760	6405279	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1062	REA190	GDA	56	312680	6405314	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1327	REA326	GDA	56	313407	6405589	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1315	REA315	GDA	56	313406	6405732	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1056	REA184	GDA	56	312901	6405476	Open site	Destroyed	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		
37-3-1313	REA311	GDA	56	313334	6405807	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1035	REA163	GDA	56	312324	6405974	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1057	REA185	GDA	56	313187	6405394	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0725	RW Spur Crest 1 Locus A	GDA	56	313220	6406135	Open site	Destroyed	Artefact : 1		102220
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2307	
37-3-1026	REA154	GDA	56	313539	6406138	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785090

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1039	REA167	GDA	56	313545	6405891	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1041	REA169	GDA	56	313594	6405770	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1027	REA155	GDA	56	313655	6406116	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1218	RW51	GDA	56	312660	6405367	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1063	REA191	GDA	56	312722	6405285	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1325	REA324	GDA	56	312774	6405570	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1278	REA397	GDA	56	312817	6405876	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1054	REA182	GDA	56	312825	6405560	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1316	REA316	GDA	56	312876	6405747	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-1051	REA179	GDA	56	313495	6405612	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-1042	REA170	GDA	56	312929	6405706	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1277	REA401	GDA	56	312957	6405612	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski,Ms.Alison Lamond						Permits		
37-3-1337	REA337	GDA	56	312975	6405267	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1339	REA339	GDA	56	312987	6405245	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Nadia Zakrzewski						Permits		
37-3-1318	REA318	GDA	56	312998	6405714	Open site	Destroyed	Artefact : -		
Contact	Recorders	Mr.Ben Churcher,Ms.Nadia Zakrzewski						Permits		
37-3-1050	REA178	GDA	56	313074	6405561	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond						Permits		
37-3-1038	REA166	GDA	56	313360	6405885	Open site	Destroyed	Artefact : -		
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher						Permits		
37-3-0787	RW52 (Camberwell)	GDA	56	312354	6406039	Open site	Valid	Artefact : 1		103364
Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton						Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785090

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1260	REA427	GDA	56	313516	6406055	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher,Ms.Nad					**Permits**		
37-3-1321	REA314	GDA	56	313646	6405748	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1307	REA312	GDA	56	313696	6405817	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Ms.Nadia Zakrzewski					**Permits**		
37-3-1076	REA204	GDA	56	312702	6405068	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1032	REA160	GDA	56	313477	6406108	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 310840.0 - 313860.0, Northings : 6404875.0 - 6406200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 113

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785093

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5191	MP-084	GDA	56	307607	6404643	Open site	Valid	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon						Permits		
37-3-1105	REA233	GDA	56	313192	6403872	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-0797	HC 21	GDA	56	307956	6404591	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Noeleen Curran,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-1529	CM 26	GDA	56	308183	6403931	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-1505	Carrington Mine CM 2	AGD	56	308763	6403428	Open site	Valid	Artefact : -	Open Camp Site	100427
Contact	Recorders	Liam Dagg,Paul Rheinberger						Permits		
37-2-1542	Carrington Mine CM 39	GDA	56	309023	6403722	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-1863	CM14	GDA	56	310222	6403759	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-5178	MP-089	GDA	56	307097	6404782	Open site	Valid	Artefact : -		
Contact	Recorders	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon						Permits		
37-2-5093	HVO-352	GDA	56	307205	6404726	Open site	Valid	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh						Permits		
37-2-5074	HVO-153	GDA	56	306308	6404757	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-5094	HVO-366	GDA	56	306778	6404872	Open site	Destroyed	Artefact : -		
Contact	Recorders	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions						Permits	4050	
37-2-1527	CM 24	GDA	56	309676	6404349	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-3-1089	REA217	GDA	56	312750	6404654	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1083	REA211	GDA	56	312920	6404797	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-3-1102	REA230	GDA	56	313050	6404258	Open site	Valid	Artefact : -		103364
Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users						Permits		
37-2-1534	CM 31	GDA	56	308163	6403966	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-1512	CM 9	GDA	56	309038	6404212	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		
37-2-1888	cm50	GDA	56	309600	6404600	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	Recorders	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions						Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305535.0 - 313860.0, Northings : 6403375.0 - 6404875.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-1517	CM 14	GDA	56	310222	6403759	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-5176	MP-095	GDA	56	306468	6404788	Open site	Destroyed	Artefact : -		
Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow						**Permits**	4050	
37-2-5324	HVO-369	GDA	56	306562	6404394	Open site	Valid	Artefact : -		
Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett						**Permits**		
37-2-5086	HVO-271	GDA	56	307016	6404658	Open site	Valid	Artefact : -		
Contact	**Recorders**	Ms.Jackie Marsh						**Permits**		
37-2-1864	CM54	GDA	56	309700	6404400	Open site	Destroyed	Artefact : -	Open Camp Site	97947
Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-1514	CM 11	GDA	56	309747	6403470	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-1507	CM 4	GDA	56	308721	6403786	Open site	Destroyed	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-3-1103	REA231	GDA	56	313051	6404196	Open site	Valid	Artefact : -		103364
Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users						**Permits**		
37-3-0016	Camberwell;Oaklands 2; same as 37-3-0011	AGD	56	313272	6403546	Open site	Valid	Artefact : -	Open Camp Site	
Contact	**Recorders**	ASRSYS						**Permits**		
37-3-1106	REA234	GDA	56	313408	6403861	Open site	Valid	Artefact : -		103364
Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users						**Permits**		
37-3-0782	RW47 (Camberwell)	GDA	56	313604	6404639	Open site	Valid	Artefact : 12		103364
Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton						**Permits**		
37-3-0783	RW48 (Camberwell)	GDA	56	313654	6404639	Open site	Valid	Artefact : 24		103364
Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton						**Permits**		
37-2-1538	CM 35	GDA	56	307917	6404011	Open site	Destroyed	Artefact : -	Isolated Find	
Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-1523	CM 20	GDA	56	308516	6403811	Open site	Destroyed	Artefact : -	Isolated Find	
Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-1524	CM 21	GDA	56	309116	6404339	Open site	Destroyed	Artefact : -	Open Camp Site	
Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-1887	CM49	GDA	56	309586	6403531	Open site	Destroyed	Artefact : -	Isolated Find	
Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-2-5091	HVO-350	GDA	56	307450	6404631	Open site	Valid	Artefact : -		
Contact	**Recorders**	Ms.Jackie Marsh						**Permits**		
37-2-5196	MP-090	GDA	56	307058	6404699	Open site	Valid	Artefact : -		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-5195	MP-088	GDA	56	307119	6404686	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-5088	HVO-281	GDA	56	307182	6404470	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh					**Permits**		
37-2-5342	HVO-1747	GDA	56	306342	6404843	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-5268	HVO-152	GDA	56	306515	6404703	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**		
37-2-5076	HVO-162	GDA	56	306640	6404529	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5197	MP-091	GDA	56	306995	6404733	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-1516	CM 13	GDA	56	310227	6403494	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1526	CM 23	GDA	56	309247	6404306	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1513	CM 10	GDA	56	309677	6403764	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1511	CM 8	GDA	56	308644	6404165	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1518	CM 15	GDA	56	308722	6404261	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-6511	HVOCP TR55-IF1	GDA	56	306731	6404108	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1614	HVOCP TR176-AS1	GDA	56	313451	6404109	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-0011	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Destroyed			102220,103364
	Contact	**Recorders**	Len Dyall,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1540	CM 37	GDA	56	307663	6403966	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1104	REA232	GDA	56	313273	6404040	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1084	REA212	GDA	56	313259	6404862	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1093	REA221	GDA	56	313672	6404651	Open site	Valid	Artefact : -		103364

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-1522	Carrington Mine CM 19	AGD	56	308400	6403240	Open site	Valid	Artefact : -	Isolated Find	100427
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger					**Permits**		
37-2-1877	CM-CD1	AGD	56	308720	6403350	Closed site	Valid	Artefact : -	Shelter with Deposit	100427
	Contact	**Recorders**	Phil Hughes					**Permits**		
37-2-1530	CM 27	GDA	56	308992	6403491	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1528	CM 25	GDA	56	309130	6404134	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5323	HVO-346	GDA	56	307512	6404741	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett					**Permits**		
37-2-5092	HVO-351	GDA	56	307246	6404737	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh					**Permits**		
37-2-5198	MP-092	GDA	56	306944	6404708	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-1889	cm51	GDA	56	309800	6404800	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1545	Carrington Mine CM 42	GDA	56	308576	6404364	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1091	REA219	GDA	56	313347	6404574	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-1536	CM 33	GDA	56	307880	6403580	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-0033	Farrells Creek	GDA	56	313273	6404041	Open site	Valid	Artefact : -	Open Camp Site	102220,103364
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie R					**Permits**		
37-2-1537	CM 34	GDA	56	307928	6403671	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1533	CM 30	GDA	56	308058	6403926	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-6510	HVOCP TR100-AS1	GDA	56	308151	6404680	Closed site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-1519	CM 16	GDA	56	308406	6404071	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5192	MP-085	GDA	56	307438	6404725	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785093

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-5090	HVO-341	GDA	56	307273	6404850	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh					**Permits**		
37-2-5266	HVO-159	GDA	56	306024	6404830	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Mr.Joel Deacon,Ar					**Permits**	4050	
37-2-6515	HVOCP TR49-IF1	GDA	56	306042	6404711	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-5075	HVO-161	GDA	56	306215	6404701	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4050	
37-2-5177	MP-096	GDA	56	306291	6404812	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow I					**Permits**	4050	
37-2-1885	CM47	GDA	56	309471	6403429	Open site	Destroyed	Stone Quarry : -, Artefact : -	Quarry	
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1860	CM45	GDA	56	310280	6403800	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5095	HVO-367	GDA	56	306703	6404871	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1107	REA235	GDA	56	313451	6403926	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-0285	MD 1;	AGD	56	313010	6403920	Open site	Valid	Artefact : -	Open Camp Site	102220,103364
	Contact	**Recorders**	Noeleen Curran					**Permits**		
37-3-0673	Farrells Creek # 1 (Duplicate copy see 37-3-0644)	AGD	56	313153	6404043	Open site	Valid	Artefact : -		101090,102220
	Contact Searle	**Recorders**	Janice Wilson					**Permits**		
37-2-0798	HC 22;	GDA	56	308416	6404811	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon					**Permits**		
37-2-1521	CM 18	GDA	56	308496	6404111	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5193	MP-087	GDA	56	307035	6404375	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		
37-2-1509	CM 6	GDA	56	308711	6404056	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-0286	MD2;	GDA	56	312879	6404099	Open site	Valid	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-0781	RW46 (Camberwell)	GDA	56	313506	6404197	Open site	Valid	Artefact : 56		103364
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		

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37-3-0288	MD 4;	AGD	56	312910	6404410	Open site	Valid	Artefact : -	Open Camp Site	102220,103364
	Contact	**Recorders**	Noeleen Curran					**Permits**		
37-2-1876	CM56	GDA	56	307806	6403691	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-6506	HVOCP TR75-IF1	GDA	56	307956	6403401	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-2-1539	CM 36	GDA	56	307982	6403987	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1086	REA214	GDA	56	313816	6404822	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-1520	CM 17	GDA	56	308456	6404101	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1508	Carrington Mine CM 5	AGD	56	308775	6403898	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger					**Permits**		
37-2-5087	HVO-280	GDA	56	307295	6404616	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Jackie Marsh					**Permits**		
37-2-1861	CM13	GDA	56	310227	6403494	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1510	CM 7	GDA	56	308681	6404120	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1506	Carrington Mine CM 3	AGD	56	308682	6403496	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger					**Permits**		
37-3-0793	RW58 (Camberwell)	GDA	56	313480	6403870	Open site	Valid	Artefact : 3		103364
	Contact	**Recorders**	RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-3-0035	Lemington A	GDA	56	312058	6403440	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1090	REA218	GDA	56	312990	6404538	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-0287	MD 3	GDA	56	313071	6404169	Open site	Valid	Artefact : -	Open Camp Site	102220,103364
	Contact	**Recorders**	Noeleen Curran,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1875	CM55	GDA	56	307776	6403429	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-0034	Lemington B	GDA	56	312484	6403462	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305535.0 - 313860.0, Northings : 6403375.0 - 6404875.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785093

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0644	Farrells Creek 1	AGD	56	313153	6404043	Open site	Destroyed	Artefact : 1000		102220,103364
	Contact Searle	**Recorders**	Janice Wilson					**Permits**		
37-3-1092	REA220	GDA	56	313660	6404698	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-2-1541	CM 38	GDA	56	308257	6404027	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1543	Carrington Mine CM 40	GDA	56	308991	6403521	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1531	CM 28	GDA	56	308998	6403461	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1525	CM 22	GDA	56	309136	6404314	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-5267	HVO-160	GDA	56	306076	6404745	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett,Yancoal Australia					**Permits**	4050	
37-2-5199	MP-093	GDA	56	306555	6404791	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon,Mr.Joel Deacon,Arrow					**Permits**	4050	
37-2-1544	Carrington Mine CM 41	AGD	56	308681	6403556	Open site	Valid	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 305535.0 - 313860.0, Northings : 6403375.0 - 6404875.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785094

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0182	N 9;	AGD	56	313900	6405370	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
	Contact	**Recorders**	Elizabeth Rich					**Permits**	219	
37-3-0133	Godwin's Survey 49;	AGD	56	314250	6405500	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-1348	REA348	GDA	56	315113	6404245	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-0119	Godwin's Survey 21;	AGD	56	315250	6404400	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-1097	REA225	GDA	56	315643	6404403	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1085	REA213	GDA	56	316072	6404179	Open site	Valid	Modified Tree (Carved or Scarred) : -		102774,103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1101	REA229	GDA	56	316217	6404490	Open site	Destroyed	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0833	Narama Extended 20	GDA	56	316208	6405134	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-1624	HVOCP TR203-AS1	GDA	56	316256	6403549	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1088	REA216	GDA	56	316388	6404919	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-0832	Narama Extended 19	GDA	56	316465	6405222	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell					**Permits**	3339,3355	
37-3-0116	Godwin's Survey 13;	AGD	56	315200	6405300	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-0017	Camberwell;Bowmans Creek;	AGD	56	316904	6404894	Open site	Valid	Artefact : -	Open Camp Site	98163,100761,102220
	Contact	**Recorders**	ASRSYS					**Permits**		
37-3-1628	HVOCP TR178-ST1	GDA	56	313986	6403858	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-0175	N 2;	AGD	56	313930	6404520	Open site	Valid	Artefact : -	Open Camp Site	1950,102220
	Contact	**Recorders**	Elizabeth Rich					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313860.0 - 317510.0, Northings : 6403375.0 - 6405700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785094

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1157	Bowmans Creek Terrace Site	GDA	56	317320	6405520	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mrs.Angela Besant,Insite Heritage Pty Ltd					**Permits**		
37-3-0178	N 5;	AGD	56	314220	6405040	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
	Contact	**Recorders**	Elizabeth Rich					**Permits**	219	
37-3-0110	Godwin's Survey 1;	AGD	56	314700	6404600	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-1343	REA343	GDA	56	314993	6404351	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1096	REA224	GDA	56	315134	6404425	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1116	REA244	GDA	56	316066	6404202	Open site	Not a Site	Modified Tree (Carved or Scarred) : -		102774,103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1098	REA226	GDA	56	316083	6404440	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1580	Ravensworth Open Cut OS-2	GDA	56	316160	6404494	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					**Permits**		
37-3-1114	REA242	GDA	56	316207	6404367	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1256	REA434	GDA	56	316469	6404600	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Alison Lamond					**Permits**		
37-3-1634	HVOCP TR189-AS2	GDA	56	316531	6404780	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Morgan (emm consulting) Wilcox,EMM Consulting Pty Ltd - Newcastle					**Permits**		
37-3-0839	Narama Extended 26	GDA	56	316541	6405558	Open site	Valid	Artefact : 1		101826,103364
	Contact	**Recorders**	Ms.Meaghan Russell					**Permits**		
37-3-1622	HVOCP TR197-AS1	GDA	56	316887	6404450	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1070	REA198	GDA	56	316967	6405262	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1059	REA187	GDA	56	317349	6405551	Open site	Destroyed	Artefact : -		102617
	Contact	**Recorders**	Mrs.Angela Besant,Umwelt (Australia) Pty Limited - Individual users,Insite Heritag					**Permits**	3428	
37-3-0843	Narama Extended 30	GDA	56	317398	6405687	Open site	Destroyed	Artefact : 1		101826,104465
	Contact	**Recorders**	Ms.Meaghan Russell,Ms.Alison Lamond					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313860.0 - 317510.0, Northings : 6403375.0 - 6405700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785094

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1346	REA346	GDA	56	314897	6404261	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-0117	Godwin's survey 18;	AGD	56	314800	6404950	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-1344	REA344	GDA	56	315029	6404384	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1110	REA238	GDA	56	315167	6404297	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-0002	Bayswater Creek;	GDA	56	315177	6405325	Open site	Valid	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie R					**Permits**		
37-3-0118	Godwin's survey 20;	AGD	56	315500	6404550	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-1111	REA239	GDA	56	315617	6404337	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1113	REA241	GDA	56	316197	6404407	Open site	Destroyed	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1312	REA306	GDA	56	316217	6404414	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-0836	Narama Extended 23	GDA	56	316418	6405598	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-0851	Narama Extended 39	GDA	56	316278	6405229	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-1099	REA227	GDA	56	316325	6404608	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1100	REA228	GDA	56	316344	6404617	Open site	Destroyed	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1072	REA200	GDA	56	316828	6405176	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-1367	RAV NTH OS-4	GDA	56	313961	6404849	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Ben Churcher,Mr.Ben Churcher					**Permits**		
37-3-0179	N 6;	AGD	56	313900	6405080	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
	Contact	**Recorders**	Elizabeth Rich					**Permits**	219	
37-3-1068	REA196	GDA	56	317109	6405344	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313860.0 - 317510.0, Northings : 6403375.0 - 6405700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1095	REA223	GDA	56	314832	6404331	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1109	REA237	GDA	56	315059	6404228	Open site	Valid	Artefact : -		103364
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**		
37-3-1283	REA393	GDA	56	315193	6404475	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1282	REA392	GDA	56	315226	6404465	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-0855	Narama Extended 43	GDA	56	315960	6404569	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3355	
37-3-1112	REA240	GDA	56	316086	6404364	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		
37-3-0815	Narama Extended 2	GDA	56	316184	6404820	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-1273	REA405	GDA	56	316432	6404711	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1618	HVOCP TR195-AS1	GDA	56	316522	6404390	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-0818	Narama Extended 5	GDA	56	316547	6405115	Open site	Valid	Artefact : 1		101826,103364
	Contact	**Recorders**	Ms.Meaghan Russell					**Permits**		
37-3-1621	HVOCP TR196-AS2	GDA	56	316680	6404574	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-0817	Narama Extended 4	GDA	56	316274	6404978	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-0740	RW59 (Singleton), same as 37-3-0794	GDA	56	313908	6403962	Open site	Valid	Artefact : 16		
	Contact	**Recorders**	Margaret Roscoe					**Permits**		
37-3-0826	Narama Extended 13	GDA	56	316870	6405296	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-0824	Narama Extended 11	GDA	56	316867	6405530	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-1281	REA390	GDA	56	316899	6405251	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1087	REA215	GDA	56	313930	6404755	Open site	Valid	Artefact : -		103364

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313860.0 - 317510.0, Northings : 6403375.0 - 6405700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785094

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users					Permits		
37-3-0115	Godwin's Survey 12;	AGD	56	315300	6405300	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	Recorders	Mr.Luke Godwin					Permits	219	
37-3-1581	Ravensworth Open Cut OS-3	GDA	56	316182	6404462	Open site	Valid	Artefact : -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					Permits		
37-3-1629	HVOCP TR212-ST1	GDA	56	316262	6403511	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-3-0825	Narama Extended 12	GDA	56	316748	6405629	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
	Contact	Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	
37-3-0820	Narama Extended 7	GDA	56	316269	6405353	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	
37-3-1617	HVOCP TR192-AS1	GDA	56	316328	6404438	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-3-0848	Narama Extended 36	GDA	56	316995	6405693	Open site	Valid	Artefact : 1		101826,103364
	Contact	Recorders	Ms.Meaghan Russell					Permits		
37-3-0794	RW59 (Camberwell), same as 37-3-0740	GDA	56	313908	6403962	Open site	Valid	Artefact : 16		
	Contact	Recorders	RPS AAP Consulting Pty Ltd - Hamilton					Permits		
37-3-0799	LW2.1	GDA	56	317450	6404979	Open site	Partially Destroyed	Artefact : 11		101733,102617,104465
	Contact	Recorders	Insite Heritage Pty Ltd,Ms.Elizabeth Wyatt					Permits	3428	
37-3-0114	Godwin's Survey 7;	AGD	56	315500	6405400	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	Recorders	Mr.Luke Godwin					Permits	219	
37-3-1115	REA243	GDA	56	316165	6404358	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-3-1582	Ravensworth Open Cut OS-4	GDA	56	316221	6404425	Open site	Valid	Artefact : -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					Permits		
37-3-0827	Narama Extended 14	GDA	56	316214	6404893	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	
37-3-0852	Narama Extended 40	GDA	56	316210	6405216	Open site	Destroyed	Artefact : 1		101826,102248,103808
	Contact	Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3355	
37-3-0835	Narama Extended 22	GDA	56	316387	6405568	Open site	Destroyed	Artefact : 1		101826,102248,103808

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313860.0 - 317510.0, Northings : 6403375.0 - 6405700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-1392	HVO-1603	GDA	56	316497	6403406	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1615	HVOCP T189-AS1	GDA	56	316609	6404641	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1236	REA274	GDA	56	316659	6405129	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1620	HVOCP TR196-AS1	GDA	56	316694	6404519	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1280	REA389	GDA	56	316781	6405233	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski,Ms.Alison Lamond					**Permits**		
37-3-1641	HROA2	GDA	56	316812	6404179	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Insite Heritage Pty Ltd,Ms.Elizabeth Wyatt					**Permits**		
37-3-0823	Narama Extended 10	GDA	56	316980	6405630	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-0131	Godwin's Survey 45;	AGD	56	314300	6405300	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-0111	Godwin's Survey 2;	AGD	56	314800	6404800	Open site	Destroyed	Artefact : -	Open Camp Site	1918,1950,102220
	Contact	**Recorders**	Mr.Luke Godwin					**Permits**	219	
37-3-1347	REA347	GDA	56	314969	6404226	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1303	REA300	GDA	56	316243	6404376	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-1583	Ravensworth Open Cut OS-5	GDA	56	316408	6404561	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					**Permits**		
37-3-1272	REA406	GDA	56	316449	6404654	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Nadia Zakrzewski					**Permits**		
37-3-0837	Narama Extended 24	GDA	56	316462	6405537	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
	Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					**Permits**	3339,3355	
37-3-1616	HVOCP TR190-IF1	GDA	56	316500	6404706	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1121	REA249	GDA	56	316509	6404940	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					**Permits**		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785094

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-0819	Narama Extended 6	GDA	56	316559	6405188	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
Contact		Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	
37-3-1640	WBC 2	GDA	56	316934	6405154	Open site	Valid	Artefact : -		
Contact		Recorders	Insite Heritage Pty Ltd,Ms.Elizabeth Wyatt					Permits		
37-3-1071	REA199	GDA	56	316933	6405213	Open site	Destroyed	Artefact : -		
Contact		Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-3-1639	WBC 1	GDA	56	316975	6405162	Open site	Valid	Artefact : -		
Contact		Recorders	Insite Heritage Pty Ltd,Ms.Elizabeth Wyatt					Permits		
37-3-0174	N 1;	AGD	56	313900	6404330	Open site	Valid	Artefact : -	Open Camp Site	1950,102220
Contact		Recorders	Elizabeth Rich					Permits		
37-3-1094	REA222	GDA	56	314270	6404446	Open site	Destroyed	Artefact : -		
Contact		Recorders	Umwelt (Australia) Pty Limited - Individual users,Mr.Ben Churcher					Permits		
37-3-0177	N 4;	AGD	56	314380	6405200	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
Contact		Recorders	Elizabeth Rich					Permits	219	
37-3-0176	N 3;	AGD	56	314500	6405000	Open site	Destroyed	Artefact : -	Open Camp Site	1950,102220
Contact		Recorders	Elizabeth Rich					Permits	219	
37-3-1345	REA345	GDA	56	314949	6404303	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Nadia Zakrzewski					Permits		
37-3-1119	REA247	GDA	56	315974	6404445	Open site	Destroyed	Artefact : -		
Contact		Recorders	Umwelt (Australia) Pty Limited - Individual users,Ms.Alison Lamond					Permits		
37-3-1627	HVOCP TR213-AS2	GDA	56	316014	6403379	Open site	Valid	Artefact : -		
Contact		Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-3-0838	Narama Extended 25	GDA	56	316422	6405430	Open site	Destroyed	Artefact : 1		101826,102248,103808
Contact		Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	
37-3-0834	Narama Extended 21	GDA	56	316515	6405416	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
Contact		Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	
37-3-1619	HVOCP TR195-AS2	GDA	56	316556	6404357	Open site	Valid	Artefact : -		
Contact		Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-3-1636	HROA1	GDA	56	316709	6404836	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Elizabeth Wyatt,Stratum Archaeology					Permits		
37-3-1120	REA248	GDA	56	315337	6404508	Open site	Destroyed	Artefact : -		
Contact		Recorders	Umwelt (Australia) Pty Limited - Individual users					Permits		
37-3-0849	Narama Extended 37	GDA	56	317060	6405642	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
Contact		Recorders	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren					Permits	3339,3355	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785094

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1069	REA197	GDA	56	317082	6405289	Open site	Valid	Artefact : -		103364
Contact		Recorders	Umwelt (Australia) Pty Limited - Individual users					Permits		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313860.0 - 317510.0, Northings : 6403375.0 - 6405700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 114

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785095

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-3-1610	2010-ARCH-05	GDA	56	317443	6403099	Open site	Valid	Artefact : -		
Contact		Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3003	HVO-1677	GDA	56	314822	6402393	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-6-3016	HVO-1664	GDA	56	315243	6402532	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact		Recorders	Ms.Helen Selimiotis,Ms.Georgia Bennett					Permits	4435	
37-6-3022	HVO-1658	GDA	56	315254	6402237	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-6-2999	HVO-1681	GDA	56	315252	6402555	Open site	Destroyed	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis,Ms.Georgia Bennett					Permits	4435	
37-6-3028	HVO-1651	GDA	56	315284	6402202	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1625	HVOCP TR211-AS2	GDA	56	316022	6403088	Open site	Valid	Artefact : -		
Contact		Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-3-1378	HVO-1566	GDA	56	316676	6403224	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
33-3-0009	HVO-1569	GDA	56	316730	6403213	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-2-2080	C3 Carrington	GDA	56	310141	6402931	Open site	Destroyed	Artefact : -, Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	2547,2863	
37-3-1608	2010-ARCH-03	GDA	56	317151	6403213	Open site	Valid	Artefact : -		
Contact		Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3309	HVO-1191	GDA	56	317233	6402582	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-6-3005	HVO-1675	GDA	56	314468	6402310	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1603	2010-ARCH-06	GDA	56	317485	6402974	Open site	Valid	Artefact : -		
Contact		Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-2083	C8 Carrington	GDA	56	309107	6402956	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785095

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2547,2863,4435	
37-2-1532	CM 29	GDA	56	309350	6403318	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Liam Dagg,Paul Rheinberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3002	HVO-1678	GDA	56	315041	6402477	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3018	HVO-1662	GDA	56	315241	6402521	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-3-1377	HVO-1565	GDA	56	316670	6403204	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-1874	CM49;	GDA	56	309480	6403340	Open site	Destroyed	Artefact : -	Isolated Find	97947
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0128	Jerrys Plains 10	GDA	56	312056	6402591	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3	
37-3-1390	HVO-1579	GDA	56	316864	6403157	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1391	HVO-1580	GDA	56	317064	6402956	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1372	HVO-1190	GDA	56	317093	6402674	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-2754	1121 (Doyles Creek)	GDA	56	307609	6402857	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd					**Permits**		
37-6-3307	HVO-1186	GDA	56	316911	6402594	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3034	HVO-1645	GDA	56	314133	6402388	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3310	HVO-1192	GDA	56	317221	6402586	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2995	HVO-1685	GDA	56	314490	6402455	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-2267	C 2	GDA	56	309096	6402778	Open site	Destroyed	Artefact : 8		
	Contact Searle	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785095

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-2079	C2 Carrington	GDA	56	309096	6402778	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2547,2863	
37-5-0504	C6 Old Lemington Road	GDA	56	309163	6402496	Open site	Destroyed	Artefact : 2		
	Contact Searle	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2081	C6 Carrington	AGD	56	309061	6402309	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Aara Welz,Mr.Andy Collis					**Permits**		
37-6-3000	HVO-1680	GDA	56	315061	6402488	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3014	HVO-1666	GDA	56	315250	6402543	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-4115	HVOCP TR221-AS1	GDA	56	315543	6402457	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-6-2997	HVO-1683	GDA	56	315362	6402584	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3035	HVO-1644	GDA	56	314124	6402391	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1605	2010-ARCH-08	GDA	56	317151	6402981	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1609	2010-ARCH-04	GDA	56	317290	6403158	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-2993	HVO-1687	GDA	56	314433	6402345	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2992	HVO-1688	GDA	56	314450	6402320	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-5859	HVO-2136	GDA	56	309091	6402558	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2129	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Destroyed			
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-2268	C10	GDA	56	309147	6403172	Open site	Destroyed	Artefact : 3		
	Contact Searle	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3017	HVO-1663	GDA	56	315242	6402523	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-3015	HVO-1665	GDA	56	315244	6402544	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-3013	HVO-1667	GDA	56	315272	6402553	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-5-0127	Jerrys Plains 6	GDA	56	311396	6402221	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3	
37-3-1384	HVO-1573	GDA	56	316754	6403142	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1385	HVO-1574	GDA	56	316764	6403145	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-2363	C3 Old Lemington Road	GDA	56	310141	6402931	Open site	Destroyed	Modified Tree (Carved or Scarred) : 1, Artefact : -		
	Contact Searle	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1886	cm 48	GDA	56	310306	6402881	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0499	C4	GDA	56	310365	6402406	Open site	Destroyed	Artefact : 5		
	Contact Searle	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0494	C4 Carrington	GDA	56	310365	6402406	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2547,2863,4435	
37-6-2998	HVO-1682	GDA	56	315349	6402594	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3306	HVO-1185	GDA	56	316905	6402618	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3033	HVO-1646	GDA	56	314175	6402404	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785095

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3032	HVO-1647	GDA	56	314181	6402399	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3311	HVO-1193	GDA	56	317204	6402598	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2994	HVO-1686	GDA	56	314424	6402378	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1611	HVO-1590	GDA	56	317416	6403020	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2364	C8 Old Lemington Road	GDA	56	309107	6402956	Open site	Destroyed	Artefact : 18		
	Contact Searle	**Recorders**	South East Archaeology,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2085	C10 Carrington	GDA	56	309147	6403172	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2547,2863,4435	
37-6-3021	HVO-1659	GDA	56	315334	6402365	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1369	HVO-1183	GDA	56	316601	6402855	Open site	Valid	Artefact : -, Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1376	HVO-1564	GDA	56	316673	6403203	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1379	HVO-1567	GDA	56	316692	6403215	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1381	HVO-1570	GDA	56	316741	6403210	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-1862	CM12	GDA	56	310202	6403219	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-2755	1122 (Doyles Creek)	GDA	56	307628	6402864	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd					**Permits**		
37-2-2756	1123 (Doyles Crekk)	GDA	56	307801	6402659	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd					**Permits**		
37-3-1612	HVO-1591	GDA	56	317148	6403116	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-3-1606	2010-ARCH-01	GDA	56	317246	6403275	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-2758	1125 (Doyles Creek)	GDA	56	308924	6402672	Open site	Valid	Artefact : 1		
Contact		Recorders	MCH - McCardle Cultural Heritage Pty Ltd					Permits		
37-6-3001	HVO-1679	GDA	56	315051	6402476	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1393	HVO-1604	GDA	56	316652	6403273	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1380	HVO-1568	GDA	56	316729	6403211	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1383	HVO-1572	GDA	56	316749	6403173	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-2-1963	CM46	GDA	56	309766	6402894	Open site	Destroyed	Artefact : -		100427
Contact		Recorders	Harry Webber,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	2547,2863,4435	
37-3-1389	HVO-1578	GDA	56	316858	6403156	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1370	HVO-1188	GDA	56	316896	6402644	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-3-1604	2010-ARCH-07	GDA	56	317043	6403011	Open site	Valid	Artefact : -		
Contact		Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-2757	1124 (Doyles Creeks)	GDA	56	307682	6402975	Open site	Valid	Artefact : 2		
Contact		Recorders	MCH - McCardle Cultural Heritage Pty Ltd					Permits		
37-6-3308	HVO-1187	GDA	56	316920	6402552	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-6-3418	HVO-1141	GDA	56	316924	6402525	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Helen Selimiotis					Permits		
37-5-0505	C7 Old Lemington Road	GDA	56	309009	6402613	Open site	Destroyed	Artefact : -		
Contact	Searle	Recorders	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-2082	C7 Carrington	GDA	56	309009	6402613	Open site	Valid	Artefact : -		
Contact		Recorders	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-2078	C1 Carrington	GDA	56	309089	6402806	Open site	Destroyed	Artefact : -		
Contact		Recorders	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	2547,2863	
37-2-2084	C9 Carrington	GDA	56	309190	6403022	Open site	Destroyed	Artefact : -		
Contact		Recorders	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	2547,2863,4435	
37-6-3019	HVO-1661	GDA	56	315248	6402513	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785095

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Ms.Helen Selimiotis,Ms.Georgia Bennett					Permits	4435	
37-6-3020	HVO-1660	GDA	56	315288	6402216	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-2996	HVO-1684	GDA	56	315441	6402482	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-3-1626	HVOCP TR213-AS1	GDA	56	315940	6403295	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					Permits		
37-3-1635	HVOCP TR216-ST1	GDA	56	315951	6402839	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Ms.Morgan (emm consulting) Wilcox,EMM Consulting Pty Ltd - Newcastle					Permits		
37-3-1373	HVO-1561	GDA	56	316671	6403198	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-3-1375	HVO-1563	GDA	56	316672	6403216	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-2-1873	CM48	GDA	56	310200	6402690	Open site	Destroyed	Artefact : -	Open Camp Site	97947
	Contact	Recorders	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-5-0061	The Mitchell Line	GDA	56	310556	6402811	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	Recorders	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-1535	Carrington Mine CM 32	AGD	56	307758	6403174	Open site	Valid	Artefact : -	Open Camp Site	100427
	Contact	Recorders	Liam Dagg,Paul Rheinberger					Permits		
37-6-3417	HVO-1140	GDA	56	316924	6402522	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-3-1607	2010-ARCH-02	GDA	56	317371	6403205	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3004	HVO-1676	GDA	56	314455	6402326	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-2-1504	Carrington Mine CM 1	AGD	56	308853	6403098	Open site	Valid	Artefact : -	Open Camp Site	100427
	Contact	Recorders	Liam Dagg,Paul Rheinberger					Permits	2091	
37-2-5860	HVO-2137	GDA	56	309054	6402577	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-2-5858	HVO-2135	GDA	56	309145	6402553	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785095

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-2269	C9	GDA	56	309190	6403022	Open site	Destroyed	Artefact : 11		
	Contact Searle	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3012	HVO-1668	GDA	56	315308	6402567	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-3-1623	HVOCP TR211-AS1	GDA	56	316100	6403202	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-3-1374	HVO-1562	GDA	56	316673	6403207	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1382	HVO-1571	GDA	56	316732	6403166	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1386	HVO-1575	GDA	56	316742	6403128	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1387	HVO-1576	GDA	56	316752	6403122	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-3-1388	HVO-1577	GDA	56	316816	6403118	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-2-1962	CARRINGTON MINE 45	GDA	56	310098	6402899	Open site	Destroyed	Artefact : -		100427
	Contact	**Recorders**	Harry Webber,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	2547,2863,4435	
37-3-1371	HVO-1189	GDA	56	316896	6402658	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 306560.0 - 317510.0, Northings : 6402200.0 - 6403375.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785096

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-5-0257	HVS 33	GDA	56	312606	6400671	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0255	HVS 31	GDA	56	313636	6401831	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0569	Lemington 12;LC 12;Lemington Coal Mine;	GDA	56	313856	6400941	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-3036	HVO-1505	GDA	56	313963	6402189	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-4030	2010-ARCH-12	GDA	56	317311	6400740	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0567	982 Barellan Open Site	GDA	56	309202	6400403	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow He					**Permits**		
37-5-0042	Malabar Site C	GDA	56	309256	6399791	Open site	Destroyed	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3024	HVO-1656	GDA	56	314657	6402076	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3029	HVO-1650	GDA	56	315442	6402075	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-5-0171	Barellan	GDA	56	309339	6400568	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0229	HVS 5	GDA	56	309850	6400379	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Georgia Bennett,Mr.Joel Deacon,Mr.Joel Dea					**Permits**	4435	
37-5-0123	Jerrys Plains 4	GDA	56	311496	6402171	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3	
37-5-0263	HVS 39	GDA	56	313396	6400771	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0264	HVS 40	GDA	56	313606	6401391	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3039	HVO-1502	GDA	56	313752	6402109	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-0570	Lemington 11;LC 11;Lemington Coal Mine;	GDA	56	313806	6400591	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-4027	2010-ARCH-09	GDA	56	316952	6400892	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307035.0 - 317510.0, Northings : 6399700.0 - 6402200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785096

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-0580	BBC 4	GDA	56	314106	6401351	Open site	Destroyed	Artefact : -	Open Camp Site	104,124,2276,102220
	Contact	Recorders	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	373	
37-6-3010	HVO-1670	GDA	56	314557	6402078	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-5-0566	HVO-981	GDA	56	309275	6400482	Open site	Destroyed	Artefact : 1		
	Contact	Recorders	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3025	HVO-1655	GDA	56	314685	6402039	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-5-0228	HVS 4	GDA	56	309938	6400426	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	Recorders	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage					Permits	4435	
37-5-0571	PAD 1 (Doyles Creek)	GDA	56	310000	6400500	Open site	Valid	Potential Archaeological Deposit (PAD) : 1, Artefact : -		102567
	Contact	Recorders	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel D					Permits		
37-5-0063	Malabar Site O; Maryville	GDA	56	310002	6401345	Open site	Destroyed	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	2691,4416,97532
	Contact	Recorders	Ms.Laila Haglund,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow H					Permits	463,522,622,623,710,981	
37-6-3030	HVO-1649	GDA	56	315460	6402077	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-5-0226	HVS 2	GDA	56	309774	6400371	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	Recorders	ERM Australia Pty Ltd- Sydney CBD,Ms.Georgia Bennett,Mr.Joel Deacon,Mr.Joel Dea					Permits	4435	
37-6-0571	Lemington 10;LC 10;Lemington Coal Mine;	GDA	56	313806	6399891	Open site	Destroyed	Artefact : -	Open Camp Site	2276
	Contact	Recorders	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					Permits	373	
37-6-3040	HVO-1501	GDA	56	313767	6402106	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis,Ms.Georgia Bennett					Permits	4435	
37-6-0582	BBC9	GDA	56	313876	6401221	Open site	Destroyed	Artefact : -	Open Camp Site	104,124,2276,102220
	Contact	Recorders	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3043	HVO-1498	GDA	56	313889	6402169	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis,Ms.Georgia Bennett					Permits	4435	
37-6-0263	BBC 2;Jerrys Plains;Lemington Coal Mine;	AGD	56	313840	6400570	Open site	Destroyed	Artefact : -	Open Camp Site	105,2276,102220
	Contact	Recorders	Helen Brayshaw					Permits	373	
37-6-4028	2010-ARCH-10	GDA	56	316962	6400737	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307035.0 - 317510.0, Northings : 6399700.0 - 6402200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3423	HVO-1167	GDA	56	316988	6400568	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0573	LC7	GDA	56	314456	6401341	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-3006	HVO-1674	GDA	56	314557	6402073	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-5-0568	HVO-983	GDA	56	309150	6400709	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3023	HVO-1657	GDA	56	314691	6402124	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3027	HVO-1652	GDA	56	315472	6402106	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-5-0131	Jerrys Plains 7	GDA	56	310916	6401521	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-4117	HVOCP TR223-IF1	GDA	56	316244	6401644	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-5-0124	Jerrys Plains 3	GDA	56	311796	6402111	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3	
37-5-0495	C5 Carrington	AGD	56	310093	6401752	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Aara Welz,Mr.Andy Collis					**Permits**		
37-5-0234	HVS 10	GDA	56	309646	6399811	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0227	HVS 3	GDA	56	309805	6400470	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Georgia Bennett,Mr.Joel Deacon,Mr.Joel Dea					**Permits**	4435	
37-6-0168	Archerfield Archerfield site K	GDA	56	312972	6400982	Open site	Destroyed	Artefact : -	Open Camp Site	148,102220
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0258	HVS 34	GDA	56	312556	6400411	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0264	BBC 6;Jerrys Plains;	GDA	56	313866	6399731	Open site	Destroyed	Artefact : -	Open Camp Site	105
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-0262	BBC 1 Jerrys Plains Lemington Mine	AGD	56	313760	6400360	Open site	Destroyed	Artefact : -	Open Camp Site	105,2276,102220
	Contact	**Recorders**	Helen Brayshaw					**Permits**	373	
37-6-3041	HVO-1500	GDA	56	313876	6402185	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-0575	LC5	GDA	56	314206	6401341	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-0574	LC6	GDA	56	314256	6401291	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-0576	LC4	GDA	56	314306	6401391	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-5-0946	HVOCP TR89-AS1	GDA	56	309029	6400880	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-6-3011	HVO-1669	GDA	56	314482	6402165	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0572	LC 9	GDA	56	314606	6401641	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-5-0261	HVS 37	AGD	56	314500	6401900	Open site	Valid	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**		
37-6-0265	BBC 7	GDA	56	314856	6400240	Open site	Destroyed	Artefact : -	Open Camp Site	105,2276,102220
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-5-0690	HVO-1707	GDA	56	310883	6400395	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon					**Permits**		
37-5-0047	Malabar Site H Burnham Wood	GDA	56	311062	6400324	Open site	Valid	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0057	Jerrys Plains 5	GDA	56	311636	6402021	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3	
37-5-0259	HVS 35	GDA	56	312806	6400241	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0937	HV 51	GDA	56	310151	6400507	Open site	Destroyed	Artefact : -	Open Camp Site	97857,102220
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0497	C5	GDA	56	310198	6401941	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Aara Welz,Mr.Andy Collis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0230	HVS 6	GDA	56	309749	6400280	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Georgia Bennett,Mr.Joel Deacon,Mr.Joel Dea					**Permits**	4435	
37-5-0060	Malabar Site N; Hunterview	GDA	56	309782	6400283	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0265	HVS 41	GDA	56	313596	6401151	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0936	HV 49	GDA	56	313708	6400698	Open site	Destroyed	Artefact : -	Open Camp Site	97857,102220
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3042	HVO-1499	GDA	56	313888	6402162	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785096

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3044	HVO-1497	GDA	56	313904	6402168	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-3045	HVO-1496	GDA	56	313917	6402164	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Doctor.David Cameron,Ms.Georgia Bennett					**Permits**	4435	
37-5-0565	HVO-980	GDA	56	309195	6400165	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-2991	HVO-1654	GDA	56	314719	6402020	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-5-0062	Malabar; Hunterview; Site M	GDA	56	310910	6400441	Open site	Valid	Grinding Groove : -, Artefact : -	Axe Grinding Groove	391
	Contact	**Recorders**	Ms.Laila Haglund,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-4064	HVO-1143	GDA	56	316836	6401492	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0940	2016-BAR_01	GDA	56	309559	6400552	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow Hei					**Permits**		
37-5-0233	HVS 9	GDA	56	309786	6399881	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0126	Jerrys Plains 2	GDA	56	311706	6401691	Open site	Destroyed	Artefact : -	Open Camp Site	869,2691
	Contact	**Recorders**	Helen Brayshaw,Elizabeth Rich,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3,522	
37-5-0569	HVO-984	GDA	56	308653	6400128	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3420	HVO-1144	GDA	56	316898	6400712	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4029	2010-ARCH-11	GDA	56	317158	6400864	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0169	Archerfield Archerfield site L	GDA	56	313266	6401333	Open site	Destroyed	Artefact : -	Open Camp Site	148,102220
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0577	LC3	GDA	56	313806	6401391	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-3038	HVO-1503	GDA	56	313914	6402192	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett					**Permits**	4435	
37-6-0578	LC2	GDA	56	313956	6401441	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785096

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-0581	BBC5	GDA	56	313956	6401541	Open site	Destroyed	Artefact : -	Open Camp Site	104,124,2276,102220
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-6-3421	HVO-1155	GDA	56	316966	6400804	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4061	HVO-1164	GDA	56	316975	6400911	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3422	HVO-1165	GDA	56	317039	6400839	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3008	HVO-1672	GDA	56	314571	6402061	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0566	Lemington 8;LC 8;LEMINGTON MINE;	GDA	56	314606	6400991	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	348,373	
37-5-0572	PAD 2 982 Barellan Open Site	GDA	56	309202	6400403	Open site	Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : -		102567
	Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0235	HVS 11	GDA	56	309456	6399731	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0225	HVS 1	GDA	56	309566	6400435	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Georgia Bennett,Mr.Joel Deacon,Mr.Joel Dea					**Permits**	4435	
37-5-0125	Jerrys Plains 1	GDA	56	311136	6401821	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0130	Jerrys Plains 8	GDA	56	310596	6401781	Open site	Destroyed	Artefact : -	Open Camp Site	869
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3	
37-6-4063	HVO-1142	GDA	56	316355	6401812	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3031	HVO-1648	GDA	56	315370	6401838	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-5-0260	HVS 36	GDA	56	313006	6401471	Open site	Destroyed	Artefact : -	Open Camp Site	102220
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1618	Cheshunt	AGD	56	313125	6401208	Open site	Destroyed	Artefact : 144		99956,100051,102220
	Contact Searle	**Recorders**	Ms.Aara Welz,Mr.Andy Collis					**Permits**	2488,2491,2863,4435	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-0935	HV 48	GDA	56	313740	6400810	Open site	Destroyed	Artefact : -	Open Camp Site	97857,102220
Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-6-3037	HVO-1504	GDA	56	313921	6402195	Open site	Destroyed	Artefact : -		
Contact	**Recorders**	Ms.Helen Selimiotis,Ms.Georgia Bennett						**Permits**	4435	
37-6-2166	Narama Extended 32	GDA	56	316998	6401614	Open site	Partially Destroyed	Artefact : 1		101826,102248,103808
Contact	**Recorders**	Ms.Meaghan Russell,AECOM Australia Pty Ltd - Sydney,Andrew McLaren						**Permits**	3339,3355	
37-6-3007	HVO-1673	GDA	56	314582	6402069	Open site	Valid	Artefact : -		
Contact	**Recorders**	Ms.Helen Selimiotis						**Permits**		
37-6-3009	HVO-1671	GDA	56	314591	6402039	Open site	Valid	Artefact : -		
Contact	**Recorders**	Ms.Helen Selimiotis						**Permits**		
37-6-3026	HVO-1653	GDA	56	314734	6402018	Open site	Valid	Artefact : -		
Contact	**Recorders**	Ms.Helen Selimiotis						**Permits**		
37-6-0166	Malabar Burnham Wood Site I	GDA	56	312316	6400857	Open site	Valid	Artefact : -	Open Camp Site	148,98194
Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-6-4118	HVOCP TR247-AS1	GDA	56	317071	6400268	Open site	Valid	Artefact : -		
Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel						**Permits**		
37-6-4031	2010-ARCH-13	GDA	56	317170	6400688	Open site	Valid	Artefact : -		
Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-5-0256	HVS 32	GDA	56	313606	6400991	Open site	Destroyed	Artefact : -	Open Camp Site	102220
Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-6-0568	Lemington 1;LC 1;Lemington Coal Mine;	GDA	56	314006	6401541	Open site	Destroyed	Artefact : -	Open Camp Site	2276,102220
Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**	373	
37-6-0579	BBC 3	GDA	56	314096	6401181	Open site	Destroyed	Artefact : -	Open Camp Site	104,124,2276,102220
Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**	373	
37-5-0570	HVO-985	GDA	56	309009	6400745	Open site	Valid	Artefact : 1		
Contact	**Recorders**	MCH - McCardle Cultural Heritage Pty Ltd,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-6-0266	BBC 8;Jerrys Plains;Lemington Coal Mine;	GDA	56	314955	6400739	Open site	Destroyed	Artefact : -	Open Camp Site	105,2276,102220
Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-5-0129	Jerrys Plains 9	GDA	56	310526	6401681	Open site	Destroyed	Artefact : -	Open Camp Site	869
Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**	3	
37-6-4062	HVO-1145	GDA	56	316878	6400753	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions						**Permits**		
37-6-3419	HVO-1147	GDA	56	316918	6401195	Open site	Valid	Artefact : -		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785096

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4114	HVOCP TR250-AS1	GDA	56	317179	6400291	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307035.0 - 317510.0, Northings : 6399700.0 - 6402200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-1770	HVO-139	GDA	56	313367	6397778	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Gillian Goode,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0705	United Open Site 2 (United OS-2)	GDA	56	308228	6398037	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo					**Permits**		
37-5-0266	HVS 42	AGD	56	308400	6397710	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**	2222	
37-5-0246	HVS 22	GDA	56	309266	6398591	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0544	HVO21	GDA	56	309296	6399324	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0537	HVO-14	GDA	56	309319	6399239	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0276	HV 55	GDA	56	310758	6398285	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-4116	HVOCP TR296-IF1	GDA	56	316179	6398060	Open site	Valid	Artefact : -		
	Contact	**Recorders**	EMM Consulting - St Leonards - Individual users,Ms.Pamela Chauvel					**Permits**		
37-5-0525	HVO-2	GDA	56	310254	6398125	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0534	HVO-11	GDA	56	309786	6398673	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0280	HV 59	GDA	56	310424	6398580	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0449	Wambo site 268	AGD	56	307693	6397845	Open site	Valid	Artefact : 113		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0809	Wambo 444EX10/A	GDA	56	308997	6398595	Open site	Valid	Artefact : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-5-0545	HVO22	GDA	56	309314	6399318	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132	
37-5-0237	HVS 17	GDA	56	309400	6398500	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0247	HVS 23	GDA	56	309466	6398681	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0277	HV 56	GDA	56	310758	6397991	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0454	Wambo site 263	AGD	56	307534	6397698	Open site	Valid	Artefact : 14		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307540.0 - 318200.0, Northings : 6397700.0 - 6399700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 103

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-5-0535	HVO-12	GDA	56	309640	6398213	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0274	HV 53	GDA	56	310541	6398626	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0447	Wambo site 270	AGD	56	307760	6397936	Open site	Valid	Artefact : 4		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-6-0167	Hobden Gully	GDA	56	312656	6399291	Open site	Destroyed	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0041	Malabar Malabar Site B	AGD	56	308250	6398600	Open site	Valid	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS					**Permits**		
37-5-0242	HVS 18	GDA	56	308459	6398714	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0538	HVO-15	GDA	56	309306	6399234	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-6-0113	Wollombi Brook;Warkworth;	GDA	56	315038	6398097	Open site	Destroyed	Modified Tree (Carved or Scarred) : -, Artefact : -	Carved Tree	
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3244	HVO-45	GDA	56	315850	6398086	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-5-0046	Malabar Site G	GDA	56	310906	6399151	Open site	Destroyed	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0808	Wambo 444EX06/A	GDA	56	307611	6399413	Open site	Valid	Artefact : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-5-0528	HVO-5	GDA	56	310177	6398339	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0279	HV 58	GDA	56	310308	6398324	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0241	HVS 16	GDA	56	309566	6398901	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0275	HV 54	GDA	56	310645	6398548	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0249	HVS 25	GDA	56	311026	6398051	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0704	United Open Site-1 (United OS-1)	GDA	56	307834	6398781	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0446	Wambo site 271	AGD	56	307770	6398041	Open site	Valid	Artefact : 5		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307540.0 - 318200.0, Northings : 6397700.0 - 6399700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 103

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0388	Wambo site 273(duplicate copy of 37-5-0390)	AGD	56	307863	6398128	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-6-0567	Lemington 13;LC 13;Lemington Mine;	GDA	56	313756	6399691	Open site	Destroyed	Artefact : -	Open Camp Site	2276
	Contact	**Recorders**	Pam Dean-Jones,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	373	
37-5-0669	Wambo Site 328	GDA	56	308993	6397716	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Peter Kuskie,South East Archaeology,OzArk Environmental and Heritage Manag					**Permits**		
37-5-0543	HVO-20	GDA	56	309296	6399308	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0539	HVO-16	GDA	56	309306	6399260	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0546	HVO23	GDA	56	309309	6399308	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132	
37-5-0536	HVO-13	GDA	56	309312	6399238	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-2-2683	HV 65	GDA	56	310087	6399485	Open site	Destroyed	Artefact : -		97857
	Contact	**Recorders**	Junburra Aboriginal Consultancy Services,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0526	HVO-3	GDA	56	310227	6398185	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0282	HV 61	GDA	56	309606	6398591	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0278	HV 57	GDA	56	310559	6397987	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0045	Malabar Site F	GDA	56	310665	6398511	Open site	Destroyed	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0391	Wambo site 274	AGD	56	307828	6398128	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-5-0697	United Isolated Find-4 (United IF-4)	GDA	56	308042	6398409	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden					**Permits**		
37-5-0560	Wambo PAD S	GDA	56	308104	6398031	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	**Recorders**	Ms.Gillian Goode					**Permits**		
37-5-0345	Wambo site 201	AGD	56	308499	6397560	Open site	Valid	Artefact : 5		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-2-1959	HVS 65	GDA	56	310087	6399485	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307540.0 - 318200.0, Northings : 6397700.0 - 6399700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 103

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-5-0939	HVO-1120	GDA	56	310154	6398238	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow He					**Permits**		
37-5-0524	HVO-1	GDA	56	310288	6398191	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0231	HVS 7	GDA	56	310286	6399331	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0243	HVS 19	AGD	56	308640	6398270	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**		
37-5-0343	Wambo 202	GDA	56	308850	6397962	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White,OzArk Environmental and Heritage Management - Dubbo,Miss.					**Permits**		
37-5-0043	Malabar Site D	GDA	56	310606	6398941	Open site	Destroyed	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0046	Curlewis; AFT	GDA	56	316396	6398854	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0254	HVS 30	GDA	56	313826	6399241	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0346	Wambo site 200	AGD	56	308536	6397660	Open site	Valid	Artefact : 4		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-5-0244	HVS 20	GDA	56	309063	6398553	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-2-1918	HV 68	GDA	56	309167	6399275	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0542	HVO-19	GDA	56	309300	6399300	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0236	HVS 12	GDA	56	309406	6399591	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3302	HVO-106	GDA	56	315145	6397826	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3301	HVO-105	GDA	56	315151	6397842	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-5-0253	HVS Site 29	GDA	56	311389	6397724	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,ERM Australia Pty Ltd- Sy					**Permits**		
37-5-0333	Wambo site 262	AGD	56	307542	6397528	Open site	Valid	Artefact : 5		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0452	Wambo site 264	AGD	56	307575	6397700	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-5-0287	HV 67	GDA	56	310195	6398227	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0584	United IF1	GDA	56	311198	6397766	Open site	Valid	Artefact : 1		102567
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,Doctor.Darran Jordan					**Permits**		
37-5-0533	HVO-10	GDA	56	309848	6398087	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0641	Wambo Site 312	GDA	56	307705	6397990	Open site	Not a Site	Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Echuca Victoria					**Permits**		
37-5-0450	Wambo site 267	AGD	56	307700	6397783	Open site	Valid	Artefact : 3		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0390	Wambo site 273 (duplicate copy of 37-5-0388)	AGD	56	307863	6398128	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-5-0262	HVS 38	GDA	56	312575	6399609	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0387	Wambo site 272	AGD	56	307921	6398129	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-6-0938	Site 1;;	GDA	56	314106	6399191	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	Unknown Author,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0245	HVS 21	GDA	56	309076	6398331	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0541	HVO-18	GDA	56	309308	6399287	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0239	HVS 14	GDA	56	309726	6399211	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0232	HVS 8	GDA	56	309966	6399461	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0238	HVS 13	GDA	56	309636	6399411	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0240	HVS 15	GDA	56	309646	6399001	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0248	HVS 24	GDA	56	311146	6397981	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0531	HVO-8	GDA	56	309878	6398517	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0530	HVO-7	GDA	56	309893	6398505	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307540.0 - 318200.0, Northings : 6397700.0 - 6399700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 103

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0532	HVO-9	GDA	56	309924	6398189	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0451	Wambo site 266	AGD	56	307659	6397752	Open site	Valid	Artefact : 11		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0448	Wambo site 269	AGD	56	307740	6397903	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0335	Wambo site 265	AGD	56	307972	6397740	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-5-0547	HVO24	GDA	56	309221	6398053	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0540	HVO-17	GDA	56	309303	6399272	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0281	HV 60	GDA	56	309700	6398497	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3245	HVO-46	GDA	56	315825	6398177	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-5-0044	Malabar Site E	GDA	56	310676	6398801	Open site	Destroyed	Artefact : -	Open Camp Site	148
	Contact	**Recorders**	ASRSYS,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0250	HVS 26	GDA	56	310926	6398140	Open site	Destroyed	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0529	HVO-6	GDA	56	310142	6398353	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0527	HVO-4	GDA	56	310217	6398192	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	3132,4435	
37-5-0914	TGOS1	GDA	56	311258	6397795	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0283	HV 62	GDA	56	309936	6398571	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 307540.0 - 318200.0, Northings : 6397700.0 - 6399700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 103

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786858

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3590	United Isolated Find 20 (United IF-20)	GDA	56	313145	6396866	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3587	United Isolated Find 17 (United IF-17)	GDA	56	312703	6397015	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0267	HVS 43	AGD	56	308870	6397440	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**	2222	
37-5-0433	Wambo site 186	GDA	56	309480	6397105	Open site	Destroyed	Artefact : 7		
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-6-1769	HVO-138	GDA	56	313627	6397419	Open site	Destroyed	Artefact : 3		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Ms.Georgia Bennett,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heri					**Permits**	4435	
37-6-3591	United Isolated Find 21 (United IF-21)	GDA	56	313267	6396982	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1768	HVO-137	GDA	56	313352	6397438	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Yancoal Australia Ltd,Mr.Joel Deacon,Mr.Joel Deacon,Arrow He					**Permits**		
37-5-0468	Wambo site 193	AGD	56	308841	6397093	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0467	Wambo site 194	AGD	56	308840	6397158	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0470	Wambo site 191	AGD	56	308925	6396833	Open site	Valid	Artefact : 1		102590
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0290	UC1/3	GDA	56	311957	6397062	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Matthew Barber,Miss					**Permits**		
37-5-0435	Wambo site 184	GDA	56	309561	6397098	Open site	Destroyed	Artefact : 3		
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-5-0708	United Open Site 5 (United OS-5)	GDA	56	309931	6397262	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-5-0348	Wambo site 199	AGD	56	308698	6397499	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund					**Permits**	2222	
37-6-1772	HVO-141	GDA	56	313624	6397228	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,Miss.Ste					**Permits**		
37-5-0698	United Isolated Find-7 (United IF-7)	GDA	56	309192	6396998	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden					**Permits**		
37-5-0706	United Open Site 3 (United OS-3)	GDA	56	309228	6397244	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-5-0271	HVS 47	AGD	56	309570	6397155	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**		

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 308675.0 - 313852.5, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 44

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786858

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-5-0272	HV 50	GDA	56	312901	6397466	Open site	Destroyed	Artefact : -	Open Camp Site	97857
	Contact	**Recorders**	Victor Perry,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3586	United Isolated Find 16 (United IF-16)	GDA	56	312478	6397253	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3607	United Open Site 14 (United OS-14)	GDA	56	313027	6396942	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-5-0465	Wambo site 196	AGD	56	308573	6397278	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0268	HVS 44	AGD	56	308930	6397280	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**	2222	
37-5-0324	Wambo site 183	GDA	56	310069	6397078	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-5-0252	HVS 28	GDA	56	310995	6397475	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0709	United OS-6	GDA	56	310432	6397137	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-5-0111	Red bank Creek 14	AGD	56	311550	6396750	Open site	Destroyed	Artefact : -	Open Camp Site	491
	Contact	**Recorders**	Margrit Koettig					**Permits**		
37-5-0251	HVS 27	GDA	56	311351	6397356	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0430	Wambo site 188	GDA	56	309369	6397087	Open site	Destroyed	Artefact : 1		102590
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-5-0270	HVS 46	AGD	56	309260	6397240	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**		
37-5-0469	Wambo site 192	AGD	56	308834	6396992	Open site	Valid	Artefact : 3		102590
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-5-0429	Wambo site 189	GDA	56	309356	6397068	Open site	Destroyed	Artefact : 3		102590
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-5-0432	Wambo site 187	GDA	56	309433	6397085	Open site	Destroyed	Artefact : -		102590
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-5-0691	United Artefact Reburial	GDA	56	310790	6397021	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0700	United Isolated Find-9 (United IF-9)	GDA	56	310119	6397274	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0349	Wambo site 190	GDA	56	309204	6397081	Open site	Destroyed	Artefact : 4		102590
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,OzArk I					**Permits**	2222	

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 308675.0 - 313852.5, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 44

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786858

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-5-0269	HVS 45	AGD	56	309170	6397200	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD					**Permits**		
37-5-0699	United Isolated Find-8 (United IF-8)	GDA	56	309356	6397070	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0707	United Open Site 4 (United OS-4)	GDA	56	309411	6397262	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-5-0434	Wambo site 185	GDA	56	309534	6397094	Open site	Destroyed	Artefact : 2		
	Contact	**Recorders**	Ms.Laila Haglund,OzArk Environmental and Heritage Management - Dubbo,Miss.St					**Permits**	2222	
37-5-0703	United Isolated Find 15 (United -IF-15)	GDA	56	312184	6397195	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-5-0466	Wambo site 195	AGD	56	308726	6397212	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2222	
37-6-3589	United Isolated Find 19 (United IF-19)	GDA	56	312734	6396857	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1916	United Collieries 16 (Singleton)	GDA	56	312749	6397019	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Ben Churcher					**Permits**	3141	

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 308675.0 - 313852.5, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 44

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786863

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-1749	HVO-118	GDA	56	314800	6397356	Open site	Valid	Artefact : 7		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0880	PK11	GDA	56	314820	6396851	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Peter Kuskie,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3289	HVO-93	GDA	56	315369	6397407	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3290	HVO-94	GDA	56	315376	6397437	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3228	HVO-29	GDA	56	315754	6397000	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3234	HVO-35	GDA	56	315817	6397309	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3304	HVO-108	GDA	56	315573	6397416	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0713	WB10	GDA	56	315576	6397361	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-3249	HVO-50	GDA	56	315652	6397456	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3255	HVO-56	GDA	56	315683	6397497	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3239	HVO-40	GDA	56	315718	6397326	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0879	PK7	GDA	56	314183	6397071	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Peter Kuskie,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-5-0170	Gliding club 1	GDA	56	314485	6396912	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Elizabeth Apps,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1748	HVO-117	GDA	56	314888	6397243	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3299	HVO-103	GDA	56	315095	6397336	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3281	HVO-84	GDA	56	315287	6397404	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3287	HVO-91	GDA	56	315325	6397320	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3288	HVO-92	GDA	56	315364	6397382	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313852.5 - 319030.0, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 77

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786863

SiteID	SiteName		Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-1765	HVO-134		GDA	56	316178	6397239	Open site	Valid	Artefact : 1		
	Contact	Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3257	HVO-58		GDA	56	315721	6397548	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1742	HVO-111		GDA	56	314978	6397136	Open site	Valid	Artefact : 1		
	Contact	Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3298	HVO-102		GDA	56	315088	6397501	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3279	HVO-87		GDA	56	315326	6397398	Open site	Valid	Artefact : -		
	Contact		**Recorders**	Willana Associates					**Permits**		
37-6-3291	HVO-95		GDA	56	315408	6397456	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3252	HVO-53		GDA	56	315754	6397446	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1767	HVO-136		GDA	56	316309	6397298	Open site	Valid	Artefact : 3		
	Contact	Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3297	HVO-101		GDA	56	315444	6397591	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3254	HVO-55		GDA	56	315727	6397487	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0876	PK3		GDA	56	314141	6397025	Open site	Valid	Artefact : -	Open Camp Site	
	Contact		**Recorders**	Mr.Peter Kuskie,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1746	HVO-115		GDA	56	315039	6397232	Open site	Valid	Artefact : 1		
	Contact	Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1745	HVO-114		GDA	56	315138	6397243	Open site	Valid	Artefact : 1		
	Contact	Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1744	HVO-113		GDA	56	315192	6397224	Open site	Valid	Artefact : 1		
	Contact	Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3283	HVO-86		GDA	56	315318	6397397	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3295	HVO-99		GDA	56	315372	6397502	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3293	HVO-97		GDA	56	315412	6397482	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3242	HVO-43		GDA	56	315752	6397371	Open site	Valid	Artefact : -		
	Contact		**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313852.5 - 319030.0, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 77

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786863

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3243	HVO-44	GDA	56	315775	6397490	Open site	Not a Site	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3303	HVO-107	GDA	56	315548	6397450	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3305	HVO-109	GDA	56	315626	6397403	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3248	HVO-49	GDA	56	315632	6397462	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3241	HVO-42	GDA	56	315696	6397401	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3240	HVO-41	GDA	56	315706	6397374	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-1743	HVO-112	GDA	56	314222	6397398	Open site	Valid	Artefact : 1		
Contact	Searle	Recorders	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3292	HVO-96	GDA	56	315409	6397465	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3227	HVO-28	GDA	56	315746	6396991	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3253	HVO-54	GDA	56	315743	6397459	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3226	HVO-27	GDA	56	315764	6396987	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3232	HVO-33	GDA	56	315909	6397230	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3233	HVO-34	GDA	56	315920	6397229	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3878	HVO-2134	GDA	56	316308	6397366	Open site	Valid	Artefact : -		
Contact		Recorders	Yancoal Australia Ltd,Miss.Jessica Blackman					Permits		
37-6-3285	HVO-89	GDA	56	315320	6397372	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3294	HVO-98	GDA	56	315404	6397494	Open site	Valid	Artefact : -		
Contact		Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-1766	HVO-135	GDA	56	316245	6397476	Open site	Valid	Artefact : 6		
Contact	Searle	Recorders	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3256	HVO-57	GDA	56	315718	6397508	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313852.5 - 319030.0, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 77

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786863

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0878	PK10	AGD	56	314000	6397130	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Peter Kuskie					**Permits**		
37-6-1747	HVO-116	GDA	56	314905	6397252	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1741	HVO-110	GDA	56	315133	6396971	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3296	HVO-100	GDA	56	315405	6397522	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3230	HVO-31	GDA	56	315849	6397229	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0253	Rixs Creek	AGD	56	316300	6397320	Open site	Valid	Artefact : -	Open Camp Site	171
	Contact	**Recorders**	ASRSYS					**Permits**		
37-6-3247	HVO-48	GDA	56	315640	6397478	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3251	HVO-52	GDA	56	315694	6397419	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3238	HVO-39	GDA	56	315722	6397281	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3229	HVO-30	GDA	56	315738	6397005	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0875	PK4	AGD	56	314300	6396900	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Peter Kuskie					**Permits**		
37-6-4196	HVO-2141	GDA	56	315136	6397492	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3300	HVO-104	GDA	56	315183	6397485	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3282	HVO-85	GDA	56	315308	6397399	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3286	HVO-90	GDA	56	315315	6397356	Open site	Valid	Artefact : -		104464
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3284	HVO-88	GDA	56	315322	6397379	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3225	HVO-26	GDA	56	315752	6396981	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3231	HVO-32	GDA	56	315845	6397251	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313852.5 - 319030.0, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 77

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 786863

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3246	HVO-47	GDA	56	315648	6397487	Open site	Valid	Artefact : -		
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3236	HVO-37	GDA	56	315663	6397107	Open site	Valid	Artefact : -		
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3235	HVO-36	GDA	56	315696	6397131	Open site	Valid	Artefact : -		
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3250	HVO-51	GDA	56	315704	6397424	Open site	Valid	Artefact : -		
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney					Permits		
37-6-3237	HVO-38	GDA	56	315729	6397266	Open site	Valid	Artefact : -		
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney					Permits		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 30/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313852.5 - 319030.0, Northings : 6396850.0 - 6397700.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 77

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-1922	United Collieries 22 (Singleton)	GDA	56	313091	6396045	Open site	Destroyed	Artefact : 2		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alan Williams,Doc					**Permits**		
37-6-0132	Agip 10;Warkworth;	GDA	56	313234	6396691	Open site	Destroyed	Artefact : -	Open Camp Site	295
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Can					**Permits**		
37-6-1926	United Collieries 27 (Singleton)	GDA	56	313527	6395282	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Ben Churcher					**Permits**	3141	
37-6-0275	Red Bank Creek 10	GDA	56	313355	6396440	Open site	Destroyed	Artefact : -	Open Camp Site	491
	Contact	**Recorders**	Margrit Koettig,Phil Hughes,OzArk Environmental and Heritage Management - Dub					**Permits**		
37-6-3643	Wambo Site 460	GDA	56	313482	6394192	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-3598	United Isolated Find 28 (United IF-28)	GDA	56	313494	6395072	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1779	HVO-148	GDA	56	313754	6396479	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3613	United Isolated Find 34 (United IF-34)	GDA	56	313828	6396242	Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Miss.Stephanie Rusden					**Permits**		
37-6-1117	Wambo site 18	AGD	56	314047	6393630	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**		
37-6-2923	MTW-506	GDA	56	314599	6393476	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2940	MTW-519	GDA	56	314741	6393110	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2930	MTW-512	GDA	56	314740	6393557	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0133	Warkworth;Agip 8;	GDA	56	313605	6396423	Open site	Destroyed	Artefact : -	Open Camp Site	295
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					**Permits**		
37-6-1775	HVO-144	GDA	56	313620	6396481	Open site	Destroyed	Artefact : 3		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3612	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Destroyed			
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-3611	United Open Site-18 (United OS-18)	GDA	56	313204	6395068	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-3600	United Isolated Find 30 (United IF-30)	GDA	56	313283	6396158	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3594	United Isolated Find 24 (United IF-24)	GDA	56	313365	6394924	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1919	United Collieries 19 (Singleton)	GDA	56	313425	6395188	Open site	Destroyed	Artefact : 2		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Ben Churcher					**Permits**	3141	
37-6-3596	United Isolated Find 26 (United IF-26)	GDA	56	313431	6395020	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1925	United Collieries 26 (Singleton)	GDA	56	313444	6395341	Open site	Destroyed	Artefact : 2		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Ben Churcher					**Permits**	3141	
37-6-1777	HVO-146	GDA	56	313739	6396449	Open site	Destroyed	Artefact : 2		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-0711	WB 13	GDA	56	313825	6396242	Open site	Valid	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,OzArk Environmental and Heritage Management - Dubbo,Miss.Ste					**Permits**		
37-6-4003	Wambo Site 511	GDA	56	313926	6393737	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-1131	Wambo site 14	AGD	56	314580	6393745	Open site	Valid	Artefact : -		104590
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2085,3130	
37-6-2931	MTW-513	GDA	56	314738	6393542	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2936	MTW-514	GDA	56	314745	6393543	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1774	HVO-143	GDA	56	313593	6396513	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1010	UC5/1	GDA	56	313105	6395060	Open site	Destroyed	Artefact : -		100936
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Matthew Barber,Mr.B					**Permits**		
37-6-0131	Agip 6 Warkworth	GDA	56	313238	6396508	Open site	Destroyed	Artefact : -	Open Camp Site	295
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					**Permits**		
37-6-1924	United Collieries 25 (Singleton)	GDA	56	313556	6395131	Open site	Destroyed	Artefact : 2		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Ben Churcher					**Permits**	3141	
37-6-3651	Wambo Site 468	GDA	56	313294	6395119	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,RPS AA					**Permits**		
37-6-0272	Red Bank Creek 12;	GDA	56	313305	6396690	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Margrit Koettig,Phil Hughes,OzArk Environmental and Heritage Management - Dub					**Permits**		
37-6-4000	Wambo Site 508	GDA	56	313357	6394645	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3647	Wambo Site 464	GDA	56	313411	6394281	Open site	Not a Site	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-6-3048	Wambo Site 369	GDA	56	313510	6394073	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Peter Kuskie,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-3603	United Isolated Find 33 (United IF-33)	GDA	56	313699	6396061	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-0595	Red Pow 1	AGD	56	313650	6393190	Open site	Valid	Artefact : -	Open Camp Site	2464,104590
	Contact	**Recorders**	Sue Effenberger					**Permits**	2085,4014	
37-6-1778	HVO-147	GDA	56	313752	6396451	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-0877	PK1;;	GDA	56	313888	6396819	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Peter Kuskie,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0596	Red Pow 2	AGD	56	313840	6395140	Open site	Valid	Artefact : -	Open Camp Site	2464
	Contact	**Recorders**	Sue Effenberger					**Permits**		
37-6-0705	WB 19	GDA	56	314026	6396651	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-0710	WB 14	GDA	56	314367	6395867	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-0444	Warkworth Dune.;	AGD	56	314520	6394400	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Luke Godwin,Doctor.Jeannette Hope					**Permits**		
37-6-1920	United Collieries 20	GDA	56	313640	6395277	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alan Williams,Mr.					**Permits**		
37-6-4002	Wambo Site 510	GDA	56	313699	6393662	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-4004	Wambo Site 512	GDA	56	313709	6393844	Open site	Partially Destroyed	Artefact : -, Ochre Quarry : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-1657	Haul Road 4	GDA	56	313159	6395950	Open site	Destroyed	Artefact : 18		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,OzArk Environmental and Herita					**Permits**	2527	
37-6-3616	United OS-22	GDA	56	313521	6396083	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-1923	United Collieries 24 (Singleton)	GDA	56	313556	6395131	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Alan Williams,Mr.Ben Churcher					**Permits**	3141	
37-6-3640	Wambo Site 457	GDA	56	313579	6393958	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-2075	Wambo PAD B	GDA	56	313304	6395391	Open site	Not a Site	Potential Archaeological Deposit (PAD) : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,Mr.Ben					**Permits**		
37-6-3638	Wambo Site 455	GDA	56	313438	6393939	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-6-3637	Wambo Site 454	GDA	56	313511	6393978	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-6-3642	Wambo Site 459	GDA	56	313509	6394169	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-0135	Wambo site 5 Warkworth	AGD	56	313655	6393772	Open site	Partially Destroyed	Artefact : -	Open Camp Site	318
	Contact	**Recorders**	Mr.Peter Kuskie,Len Dyall					**Permits**	4014	
37-6-3046	Wambo Site 368	GDA	56	313916	6393296	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-6-0712	WB 12	GDA	56	314526	6396331	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-2924	MTW-505	GDA	56	314745	6393485	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0134	Agip 9;Warkworth;	GDA	56	313604	6396515	Open site	Destroyed	Artefact : -	Open Camp Site	295
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					**Permits**		
37-5-0496	Haul Road 2	GDA	56	313100	6396125	Open site	Destroyed	Artefact : 7		100065
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users					**Permits**	2527	
37-6-0330	Redbank Creek No. 42	GDA	56	313205	6396640	Open site	Destroyed	Artefact : -	Open Camp Site	491
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3650	Wambo Site 467	GDA	56	313242	6395148	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,RPS AA					**Permits**		
37-6-1611	Haul Road 1	AGD	56	313162	6395137	Open site	Deleted	Potential Archaeological Deposit (PAD) : -, Artefact : 350		
	Contact Searle	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,OzArk Environmental and Herita					**Permits**	2527,3141	
37-6-3620	United Open Site-25 (United OS-25)	GDA	56	313508	6396284	Open site	Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-3606	United Open Site 13 (United OS-13)	GDA	56	313313	6396222	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-3999	Wambo Site 23	GDA	56	313425	6394090	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-3644	Wambo Site 461	GDA	56	313449	6394153	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-6-1116	Wambo site 17	AGD	56	314119	6393524	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**		
37-6-0708	WB 16;	GDA	56	314346	6395781	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-2420	MTW-121	GDA	56	314642	6393262	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-2925	MTW-507	GDA	56	314641	6393545	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2926	MTW-508	GDA	56	314645	6393536	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0709	WB 15	GDA	56	314715	6395862	Open site	Valid	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-4001	Wambo Site 509	GDA	56	313600	6394008	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-1452	JP 38	AGD	56	313576	6393799	Open site	Partially Destroyed	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie,Mr.Peter Kuskie					**Permits**	4014	
37-6-3652	Wambo Site 469	GDA	56	313089	6395142	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,RPS AA					**Permits**		
37-6-3595	United Isolated Find 25 (United IF-25)	GDA	56	313190	6395321	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1612	Haul Road 3	AGD	56	313148	6395369	Open site	Destroyed	Artefact : 10		
	Contact	**Recorders**	Umwelt (Australia) Pty Limited - Individual users,OzArk Environmental and Herita					**Permits**	2527	
37-6-3641	Wambo Site 458	GDA	56	313522	6394107	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-3645	Wambo Site 462	GDA	56	313532	6394188	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-3648	Wambo Site 465	GDA	56	313344	6395130	Open site	Destroyed	Artefact : 1		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,RPS AA					**Permits**		
37-6-3649	Wambo Site 466	GDA	56	313417	6395095	Open site	Destroyed	Artefact : 1		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Ms.Gillian Goode,RPS AA					**Permits**		
37-6-3646	Wambo Site 463	GDA	56	313476	6394347	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-3618	United Open Site 24 (United OS-24)	GDA	56	313762	6395944	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-2927	MTW-509	GDA	56	314616	6393555	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1773	HVO-142	GDA	56	313575	6396535	Open site	Destroyed	Artefact : 4		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1776	HVO-145	GDA	56	313626	6396456	Open site	Destroyed	Artefact : 2		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3602	United Isolated Find 31 (United IF-31)	GDA	56	313313	6396222	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3614	United OS-20	GDA	56	313344	6395141	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-1033	UC2/1	GDA	56	313323	6396475	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-0136	Wambo site 6 Warkworth	AGD	56	313262	6395228	Open site	Destroyed	Artefact : -	Open Camp Site	100936
	Contact	**Recorders**	Len Dyall,Mr.Ben Churcher					**Permits**	3141,4014	
37-6-3621	WAMBO SITE 401	GDA	56	313436	6393967	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**		
37-6-1781	HVO-150	GDA	56	313698	6396516	Open site	Destroyed	Artefact : 1, Hearth : -		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-0990	JP37	AGD	56	313755	6393690	Open site	Partially Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Peter Kuskie,Rex Silcox					**Permits**	4014	
37-6-3636	Wambo Site 453	GDA	56	313873	6393359	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-0707	WB 18;	GDA	56	314216	6396751	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-1115	Wambo site 16	AGD	56	314320	6393479	Open site	Valid	Artefact : -		104590
	Contact	**Recorders**	Ms.Elizabeth White					**Permits**	2085	
37-6-3619	MTW-667	GDA	56	314447	6393560	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Mr.Joel Deacon					**Permits**		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-2421	MTW-122	GDA	56	314663	6393233	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-2928	MTW-510	GDA	56	314668	6393572	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0706	WB 17	GDA	56	314648	6395657	Open site	Valid	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3617	United Open Site 23 (United OS-23)	GDA	56	313585	6396001	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo,OzA					**Permits**		
37-6-0331	Redbank Creek No. 43	GDA	56	313105	6396540	Open site	Destroyed	Artefact : -	Open Camp Site	491
	Contact	**Recorders**	ASRSYS,OzArk Environmental and Heritage Management - Dubbo,Mr.Ben Churcher					**Permits**		
37-6-1020	UNITED site 2	AGD	56	313039	6395258	Open site	Destroyed	Artefact : -		100936
	Contact	**Recorders**	Ms.Vanessa Hardy,Mr.Ben Churcher					**Permits**		
37-6-3599	United Isolated Find 29 (United IF-29)	GDA	56	313519	6395238	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-1771	HVO-140	GDA	56	313512	6396625	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3639	Wambo Site 456	GDA	56	313573	6393906	Open site	Partially Destroyed	Artefact : 1		
	Contact	**Recorders**	Mr.Peter Kuskie,Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-3597	United Isolated Find 27 (United IF-27)	GDA	56	313418	6395092	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3653	Wambo Site 472	GDA	56	313781	6393415	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Gillian Goode,RPS AAP Consulting Pty Ltd - Hamilton					**Permits**	4014	
37-6-1780	HVO-149	GDA	56	313759	6396518	Open site	Destroyed	Artefact : 1		
	Contact Searle	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-0594	Wambo Site 15 Select 1	AGD	56	314554	6393516	Open site	Valid	Artefact : 11	Open Camp Site	2437
	Contact	**Recorders**	Sue Effenberger					**Permits**		
37-6-2408	MTW-109	GDA	56	314710	6393411	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-2929	MTW-511	GDA	56	314710	6393563	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3593	United Isolated Find 23 (United IF-23)	GDA	56	313073	6395177	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		
37-6-3615	United OS-21	GDA	56	313641	6395164	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Doctor.Jodie Benton,OzArk Environmental and Heritage Management - Dubbo					**Permits**		
37-6-3601	United IF-32	GDA	56	313645	6395904	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785100

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 313035.0 - 314785.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785102

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3323	HVO-1205	GDA	56	317064	6395415	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1753	HVO-122	GDA	56	317138	6394547	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-2410	MTW-111	GDA	56	314985	6393305	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-4018	WB 21B	GDA	56	315451	6395152	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3272	HVO-73	GDA	56	316153	6395460	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1761	HVO-130	GDA	56	316966	6393962	Open site	Valid	Artefact : 2		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0703	WB 21A	GDA	56	315506	6395005	Open site	Valid	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0640	ISF 1; Lemington Mine Lease	GDA	56	317187	6393741	Open site	Valid	Artefact : -	Isolated Find	2694
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3371	HVO-1253	GDA	56	317040	6396195	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3361	HVO-1243	GDA	56	317067	6396097	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1751	HVO-120	GDA	56	317113	6394208	Open site	Valid	Artefact : 20		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1754	HVO-123	GDA	56	317109	6394455	Open site	Valid	Artefact : 5		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3327	HVO-1210	GDA	56	317099	6395813	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3337	HVO-1220	GDA	56	317099	6395980	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3334	HVO-1217	GDA	56	317121	6396053	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3328	HVO-1211	GDA	56	317140	6395876	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2412	MTW-113	GDA	56	314818	6393191	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-2411	MTW-112	GDA	56	315018	6393253	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785102

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-2941	MTW-520	GDA	56	315213	6393238	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1757	HVO-126	GDA	56	315726	6394209	Open site	Valid	Artefact : 2		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1760	HVO-129	GDA	56	316155	6393545	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3271	HVO-72	GDA	56	316370	6395250	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1763	HVO-132	GDA	56	316617	6393400	Open site	Valid	Artefact : 3		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0403	WB2;	AGD	56	316800	6395400	Open site	Valid	Artefact : -	Open Camp Site	1088,1225,98221
	Contact	**Recorders**	Helen Brayshaw					**Permits**		
37-6-3312	HVO-1194	GDA	56	316916	6395843	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3331	HVO-1214	GDA	56	317166	6395877	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3343	HVO-1227	GDA	56	317193	6395938	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3382	HVO-1264	GDA	56	317195	6396368	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3338	HVO-1221	GDA	56	317077	6395964	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0645	Wollombi Brook Trench; Lemington Mine Lease	GDA	56	315361	6395595	Open site	Valid	Artefact : -	Open Camp Site	2694
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-0401	WB4;	GDA	56	315707	6395441	Open site	Destroyed	Artefact : -	Open Camp Site	1088,1225,1226
	Contact	**Recorders**	Laura-Jane Smith,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-3262	HVO-63	GDA	56	315721	6395622	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3261	HVO-62	GDA	56	315733	6395621	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0404	WB3;	GDA	56	315846	6395312	Open site	Destroyed	Artefact : -	Open Camp Site	1088,1225
	Contact	**Recorders**	Laura-Jane Smith,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-1783	PAD1 HVO	AGD	56	315782	6394350	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785102

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3273	HVO-74	GDA	56	316181	6395453	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3363	HVO-1245	GDA	56	316982	6396121	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1755	HVO-124	GDA	56	317127	6394379	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3335	HVO-1218	GDA	56	317139	6396005	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0874	Woodland 6	AGD	56	315000	6396000	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	Mr.John Appleton					**Permits**		
37-6-2615	MTW-325	GDA	56	315558	6393245	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-6-3264	HVO-65	GDA	56	315721	6395639	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1764	HVO-133	GDA	56	315730	6396480	Open site	Destroyed	Artefact : 7		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	4435	
37-6-3265	HVO-66	GDA	56	315886	6395588	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1759	HVO-128	GDA	56	316038	6393580	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3315	HVO-1197	GDA	56	316932	6395904	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-0991	JP30	AGD	56	316450	6393000	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rex Silcox					**Permits**		
37-6-2617	MTW-327	GDA	56	315548	6393326	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-6-2937	MTW-515	GDA	56	314797	6393546	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3339	HVO-1222	GDA	56	317036	6396058	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3336	HVO-1219	GDA	56	317110	6395985	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3322	HVO-1204	GDA	56	317136	6395345	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3329	HVO-1212	GDA	56	317135	6395893	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-2609	MTW-318	GDA	56	315377	6393368	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-6-2618	MTW-328	GDA	56	315650	6393182	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-6-0714	WB8	GDA	56	315886	6395861	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-3269	HVO-70	GDA	56	316071	6395538	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1450	JP 31	AGD	56	316012	6392963	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-3325	HVO-1209	GDA	56	316923	6395569	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3275	HVO-76	GDA	56	316508	6395242	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-0626	WB 9 (White House)	GDA	56	316963	6396067	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3410	HVO-1226	GDA	56	316971	6395997	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett					**Permits**		
37-6-3365	HVO-1247	GDA	56	316976	6396118	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3326	HVO-1206	GDA	56	317022	6395438	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3332	HVO-1215	GDA	56	317190	6395845	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-2414	MTW-115	GDA	56	314796	6393138	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-3372	HVO-1254	GDA	56	317046	6396200	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3548	HVO-1694	GDA	56	317088	6396159	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon					**Permits**		
37-6-2413	MTW-114	GDA	56	314827	6393142	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-1451	JP 35	AGD	56	315000	6393329	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**		
37-6-0643	WB 6 (Haulage Road 2)	GDA	56	315066	6396231	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785102

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-2616	MTW-326	GDA	56	315512	6393359	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-6-3170	HVO-81	GDA	56	315653	6396464	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Georgia Bennett,Doctor.Alan (emm consulting) Williams					**Permits**	4435	
37-6-3169	HVO-80	GDA	56	315672	6396459	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Georgia Bennett,Doctor.Alan (emm consulting) Williams					**Permits**	4435	
37-6-0704	WB 20A	GDA	56	315788	6394366	Open site	Valid	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3267	HVO-68	GDA	56	315930	6395646	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-1756	HVO-125	GDA	56	316067	6394843	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3274	HVO-75	GDA	56	316256	6395425	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3316	HVO-1198	GDA	56	316953	6395582	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3277	HVO-78	GDA	56	316543	6395209	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3366	HVO-1248	GDA	56	316974	6396114	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3364	HVO-1246	GDA	56	316979	6396122	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3341	HVO-1224	GDA	56	317007	6396030	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3330	HVO-1213	GDA	56	317151	6395884	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4172	HVO-2140	GDA	56	317128	6395401	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3321	HVO-1203	GDA	56	317146	6395322	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3171	HVO-82	GDA	56	315687	6396461	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Georgia Bennett,Doctor.Alan (emm consulting) Williams					**Permits**	4435	
37-6-3263	HVO-64	GDA	56	315704	6395640	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3260	HVO-61	GDA	56	315740	6395616	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785102

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-4017	WB 20B	GDA	56	315966	6394298	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-1758	HVO-127	GDA	56	316005	6394183	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-2630	MTW-347	GDA	56	316174	6393999	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**		
37-6-0402	WB1;	GDA	56	316156	6396011	Open site	Destroyed	Artefact : -	Open Camp Site	1088,1225,98221
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-3270	HVO-71	GDA	56	316392	6395247	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd					**Permits**		
37-6-3278	HVO-79	GDA	56	316650	6395098	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3314	HVO-1196	GDA	56	316855	6395874	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3313	HVO-1195	GDA	56	316910	6395845	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3368	HVO-1250	GDA	56	316967	6396110	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3362	HVO-1244	GDA	56	316985	6396124	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3342	HVO-1225	GDA	56	316992	6396018	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3369	HVO-1251	GDA	56	317001	6396138	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3340	HVO-1223	GDA	56	317003	6396044	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3411	HVO-1265	GDA	56	317151	6396366	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Rio Tinto Coal Australia (RTCA) Pty Limited,Ms.Georgia Bennett					**Permits**		
37-6-3381	HVO - 1263	GDA	56	317196	6396366	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3370	HVO-1252	GDA	56	317029	6396225	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3324	HVO-1207	GDA	56	317075	6395378	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0642	Haulage Road_1;Lemington Mine Lease;WB 11 (Haulage Road);	GDA	56	314797	6396606	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785102

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-2409	MTW-110	GDA	56	314890	6393246	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Rick Bullers					**Permits**		
37-6-0644	Wollombi Brook Dam; Lemington Mine Lease	GDA	56	315267	6395530	Open site	Valid	Artefact : -	Open Camp Site	2694
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-0715	WB7	GDA	56	315586	6395861	Open site	Destroyed	Artefact : -	Open Camp Site	3497
	Contact	**Recorders**	Helen Brayshaw,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	992	
37-6-3172	HVO-83	GDA	56	315684	6396480	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Ms.Georgia Bennett,Doctor.Alan (emm consulting) Williams					**Permits**	4435	
37-6-3259	HVO-60	GDA	56	315733	6395601	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3266	HVO-67	GDA	56	315919	6395626	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3268	HVO-69	GDA	56	316028	6395477	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3258	HVO-59	GDA	56	316227	6395038	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3276	HVO-77	GDA	56	316535	6395226	Open site	Valid	Artefact : -		
	Contact	**Recorders**	AECOM Australia Pty Ltd - Sydney					**Permits**		
37-6-3367	HVO-1249	GDA	56	316973	6396108	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3333	HVO-1216	GDA	56	317175	6395837	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 314785.0 - 317200.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 118

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785103

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3379	HVO-1261	GDA	56	317268	6396400	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0617	ISF3-LPR	GDA	56	318154	6393541	Open site	Destroyed	Artefact : -	Isolated Find	2570
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	542	
37-6-3446	HVO-1303	GDA	56	318292	6396218	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3451	HVO-1308	GDA	56	318327	6396067	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3427	HVO-1284	GDA	56	318414	6395690	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3444	HVO-1301	GDA	56	318435	6396238	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1445	JP 24	AGD	56	318473	6393247	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-3440	HVO-1297	GDA	56	318554	6396290	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3491	HVO-1349	GDA	56	318797	6396004	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3397	HVO-1280	GDA	56	317922	6396273	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3389	HVO-1272	GDA	56	317707	6396238	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3377	HVO-1259	GDA	56	317248	6396347	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3380	HVO-1262	GDA	56	317259	6396435	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3454	HVO-1311	GDA	56	318615	6396273	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3455	HVO-1312	GDA	56	318623	6396285	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0010	Heatherlea;	AGD	56	318628	6395872	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	ASRSYS					**Permits**		
37-6-4058	HVO-1550	GDA	56	318799	6394010	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow Heritage Solutions					**Permits**		
37-6-3390	HVO-1273	GDA	56	317409	6396421	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 317200.0 - 318800.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ms.Helen Selimiotis,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3376	HVO-1258	GDA	56	317470	6396342	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3375	HVO-1257	GDA	56	317482	6396339	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3385	HVO-1268	GDA	56	317577	6396363	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3395	HVO-1278	GDA	56	317999	6396240	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0610	Jerrys Plains Road 1	GDA	56	318104	6393541	Open site	Destroyed	Artefact : -	Open Camp Site	2570
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	542	
37-6-3450	HVO-1307	GDA	56	318360	6396055	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3445	HVO-1302	GDA	56	318398	6396237	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3442	HVO-1299	GDA	56	318479	6396289	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3547	HVO-1447	GDA	56	318550	6394862	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3396	hVO-1279	GDA	56	317979	6396261	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3378	HVO-1260	GDA	56	317264	6396362	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3453	HVO-1310	GDA	56	318611	6396272	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3464	HVO-1321	GDA	56	318695	6396317	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0618	Long Point Rd 1a;	AGD	56	318650	6393700	Open site	Valid	Artefact : -	Open Camp Site	2570
	Contact	**Recorders**	Sue Effenberger					**Permits**		
37-6-3462	HVO-1319	GDA	56	318712	6396308	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3373	HVO-1255	GDA	56	317484	6396304	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3347	HVO-1231	GDA	56	317626	6396204	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 317200.0 - 318800.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785103

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3344	HVO-1228	GDA	56	317628	6396146	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3345	HVO-1229	GDA	56	317650	6396147	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3424	HVO-1281	GDA	56	318177	6395741	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3425	HVO-1282	GDA	56	318213	6395772	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3546	HVO-1420	GDA	56	318503	6395251	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3441	HVO-1298	GDA	56	318535	6396291	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3352	HVO-1236	GDA	56	317713	6396134	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3387	HVO-1270	GDA	56	317740	6396261	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3439	HVO-1296	GDA	56	318583	6396272	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3456	HVO-1313	GDA	56	318683	6396280	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3457	HVO-1314	GDA	56	318692	6396287	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3463	HVO-1320	GDA	56	318713	6396321	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3465	HVO-1322	GDA	56	318746	6396343	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1762	HVO-131	GDA	56	317368	6395342	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrov					**Permits**		
37-6-3430	HVO-1287	GDA	56	318061	6395406	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3392	HVO-1275	GDA	56	318150	6396242	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1446	JP 25	AGD	56	318252	6393258	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 317200.0 - 318800.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-3443	HVO-1300	GDA	56	318508	6396305	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1449	JP 28	AGD	56	317938	6393273	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-0623	ISF 2;lemington Mine Lease;	AGD	56	318550	6393650	Open site	Valid	Artefact : -	Isolated Find	2694
	Contact	**Recorders**	Sue Effenberger					**Permits**		
37-6-3461	HVO-1318	GDA	56	318715	6396307	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3459	HVO-1316	GDA	56	318716	6396304	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3460	HVO-1317	GDA	56	318719	6396306	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3466	HVO-1323	GDA	56	318757	6396351	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1750	HVO-119	GDA	56	317432	6393930	Open site	Valid	Artefact : 2		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3391	HVO-1274	GDA	56	317472	6396416	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0641	ISF 4;Lemington Mine Lease;	AGD	56	317450	6393150	Open site	Valid	Artefact : -	Isolated Find	2694,104590
	Contact	**Recorders**	Sue Effenberger					**Permits**	2085	
37-6-0625	Silcrete Site	GDA	56	317775	6395380	Open site	Valid	Stone Quarry : -, Artefact : -	Quarry	2694
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3394	HVO-1277	GDA	56	318000	6396261	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0612	Jerrys Plains Road 3	GDA	56	318104	6393441	Open site	Destroyed	Artefact : -	Open Camp Site	2570,104590
	Contact	**Recorders**	Sue Effenberger,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**	542,2085	
37-6-0611	Jerry's Plains Road 2;	AGD	56	318050	6393150	Open site	Valid	Artefact : -	Open Camp Site	2570,104590
	Contact	**Recorders**	Sue Effenberger					**Permits**	542,2085	
37-6-3449	HVO-1306	GDA	56	318191	6396216	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3447	HVO-1304	GDA	56	318281	6396228	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3436	HVO-1293	GDA	56	318516	6396239	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 317200.0 - 318800.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785103

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-6-3434	HVO-1291	GDA	56	317909	6396183	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3388	HVO-1271	GDA	56	317707	6396266	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1752	HVO-121	GDA	56	317244	6394434	Open site	Valid	Artefact : 1		
	Contact Searle	**Recorders**	Ms.Penny Mccardle,Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3317	HVO-1199	GDA	56	317264	6394929	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1444	JP 23	AGD	56	318608	6393255	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-4025	2010-HVOSE-19	GDA	56	318737	6393880	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3458	HVO-1315	GDA	56	318706	6396288	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3452	HVO-1309	GDA	56	317628	6394654	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3348	HVO-1232	GDA	56	317620	6396215	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3346	HVO-1230	GDA	56	317655	6396130	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3357	HVO-1239	GDA	56	317700	6396106	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3393	HVO-1276	GDA	56	318056	6396268	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-1447	JP 26	AGD	56	318381	6393292	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-3520	HVO-1378	GDA	56	318781	6395863	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4066	HVO-1416	GDA	56	318787	6396366	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3433	HVO-1290	GDA	56	317880	6396219	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3358	HVO-1240	GDA	56	317712	6396058	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3318	HVO-1200	GDA	56	317234	6394938	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 317200.0 - 318800.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785103

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3438	HVO-1295	GDA	56	318561	6396255	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4026	2010-HVOSE-20	GDA	56	318655	6393871	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Arrow Heritage Solutions					**Permits**		
37-6-3492	HVO-1350	GDA	56	318617	6396025	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3374	HVO-1256	GDA	56	317483	6396332	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-4060	HVO-1643	GDA	56	317502	6395965	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Joel Deacon,Mr.Joel Deacon,Mr.Joel Deacon,Arrow Heritage Solutions,Arrow He					**Permits**		
37-6-3360	HVO-1242	GDA	56	317648	6396061	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-0624	ISF 3;Lemington Mine Lease;	AGD	56	317700	6394750	Open site	Valid	Artefact : -	Isolated Find	2694
	Contact	**Recorders**	Sue Effenberger					**Permits**		
37-6-1448	JP 27	AGD	56	318000	6393230	Open site	Valid	Artefact : -		
	Contact T Russell	**Recorders**	Mr.Peter Kuskie					**Permits**	2085	
37-6-3426	HVO-1283	GDA	56	318192	6395806	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3448	HVO-1305	GDA	56	318197	6396208	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3432	HVO-1289	GDA	56	318442	6395407	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3428	HVO-1285	GDA	56	317952	6395648	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3353	HVO-1237	GDA	56	317709	6396144	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3350	HVO-1234	GDA	56	317710	6396150	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3386	HVO-1269	GDA	56	317717	6396307	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3351	HVO-1235	GDA	56	317734	6396145	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3384	HVO-1267	GDA	56	317369	6396441	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Helen Selimiotis					**Permits**		
37-6-3319	HVO-1201	GDA	56	317552	6395048	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 24/05/2023 for Mikhaila Chaplin for the following area at Datum :GDA, Zone : 56, Eastings : 317200.0 - 318800.0, Northings : 6393110.0 - 6396850.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 116

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E230416c HVO

Client Service ID : 785103

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3359	HVO-1241	GDA	56	317650	6396086	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3354	HVO-1238	GDA	56	317694	6396129	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3349	HVO-1233	GDA	56	317694	6396186	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3431	HVO-1288	GDA	56	317826	6395404	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3435	HVO-1292	GDA	56	318332	6396086	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3437	HVO-1294	GDA	56	318531	6396244	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3524	HVO-1382	GDA	56	318554	6395688	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-4019	Silcrete Site 2	GDA	56	317888	6395420	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Joel Deacon,Arrow Heritage Solutions					Permits		
37-6-3429	HVO-1286	GDA	56	317725	6395618	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3320	HVO-1202	GDA	56	317231	6395217	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		
37-6-3383	HVO-1266	GDA	56	317218	6396391	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms.Helen Selimiotis					Permits		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

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D.2 Aboriginal Heritage Impact Permits

CONSENT #:SZ300
(HO use only)

CONSENT AND PERMIT TO SALVAGE

CONSENT TO CARRY OUT THE DESTRUCTION OF AN ABORIGINAL RELIC/PLACE AND PERMIT TO COLLECT AND/OR EXCAVATE FOR THE PURPOSE OF SALVAGE

WHEREAS the Aboriginal relics described in Schedule "A" are situated upon the land described in Schedule "B", and constitute relics within the meaning of Section 90 of the National Parks and Wildlife Act 1974, and WHEREAS application has been made by:

Rory Gordon
Manager Environmental Service, Allied and Coal

of (address in full):

P.O.Box 315
Singleton NSW 2330

FOR CONSENT to destroy those relics in the course of:

coal mine operations

NOW I, Brian Gilligan, Director-General of National Parks and Wildlife, in pursuance of Section 90 of the said Act, and subject to the conditions hereunder set out DO HEREBY CONSENT to the destruction of the said relics by the said applicant. AND FURTHER, in accordance with the said Conditions and in pursuance of Section 87 of the said Act, I DO HEREBY PERMIT the salvage collection and/or excavation of the said relics from the aforesaid land, prior to destruction of the relics, by

Alison Nightingale,
AMBS
1 Stanley Lane East Sydney 2010

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions covering all archaeological Permits and Consents, as well as the Specific Terms and Conditions pertaining to Consents to destroy Aboriginal relics and any Special Conditions, all of which conditions are detailed in the attached pages.

DATED at Sydney this 4th day of August 2000

for Director General of
National Parks and Wildlife

Lot or Portion and DP Numbers in the Southern Part of Howick for which Consent to Destroy is currently being sought

Lot 1, DP779626

Portion 126, DP752468

Portion 128, DP752468

Portion 161, DP705454

Portion 165, DP727718

Part Portion 1, DP110656

Lot 2, DP808301

The Mitchell Line Road, DP729048

SCHEDULE A:
Aboriginal sites at Howick.

SCHEDULE B:

NPWS #37-2-0797	**AMGE 307850**	**AMGN 6404400**	HC21 salvaged - destroyed
NPWS #37-2-0798	**AMGE 308410**	**AMGN 6404620**	HC22
NPWS #37-2-0799	**AMGE 308590**	**AMGN 6405350**	HC23
NPWS #37-2-0800	**AMGE 308350**	**AMGN 6405550**	HC24
NPWS #37-2-0801	**AMGE 08620**	**AMGN 6405600**	HC25
NPWS #37-2-0802	**AMGE 309190**	**AMGN 6405200**	HC26
NPWS #37-2-1884	**AMGE 308760**	**AMGN 6405370**	HC101

SPECIAL CONDITIONS

1. The salvage shall consist of a

   a) scientific excavations and analyses to be undertaken in line with the specifications set out in Attachment 1. **Note the following alteration to the methodology set out in the application: all test trenches will be 1m wide.**

and

   b) a recovery of artefacts by the Wonnarua Tribal under the attached Care and Control Permit.

2. Should significant archaeological deposit be revealed in the "amphitheatre"(sites HC23-25) NPWS is to be informed immediately and an appropriate management strategy developed which may include extended excavations to recover relevant evidence.

3. This permit does not include burials.

SPECIFIC CONDITIONS APPLYING TO CONSENT AND PERMIT TO SALVAGE

1. The Consent covers only those relics described in the instrument of Consent and in any Schedules thereto.

2. In the case of Consents granted to cover development activities, the Consent is granted to cover only those circumstances described in the Schedules, and subject to there not being discovered in the course of further operations, in the progress of that development requiring the Consent, any other relics which will be damaged or destroyed by the continuation of the operation. (Destruction of such relics would require the granting of a separate Consent).

3. The Consent is conditional upon all relevant development approvals having been obtained.

4. Should the relics listed in Schedule 'A' above remain in existence two (2) years from the date of this document, the Consent shall be deemed to be void, and any further damage to the relics will require the preparation of a new Consent document.

5. Prior to the Consent becoming effective, the relics described in the Schedules must be salvaged, following the guide-lines attached. The salvage work is to be carried out by

6. Any Aboriginal relics recovered, being the property of the Crown, shall be deposited at The Australian Museum, in accordance with adopted procedures for the deposition of Aboriginal relics as prescribed by The Australian Museum, at or before a period of two years from the date of expiration of the Permit or any renewal thereof, whichever occurs first. Information about deposition requirements can be obtained from the Aboriginal Collections Manager, Division of Anthropology, The Australian Museum, on (02) 339 8111.

7. At the same time that Aboriginal relics are deposited in the Australian Museum, a copy of the report referred to in clause 9 below and a copy of the report referred to in clause 14 of the General Terms and Conditions, field notes, site plans, section drawings and relevant photographs, shall be deposited at The Australian Museum.

8. Should any 'relic', defined under the Heritage Act of NSW be uncovered, then excavation or disturbance of that area is to stop immediately and the Heritage Council of NSW is to be informed in accordance with S.146 of the Heritage Act, 1977 (as amended).

   Historic Archaeologists of the Heritage Council can be contacted on
   (02) 391 2066
   (02) 391 2061

   A 'relic' under the Heritage Act is defined as any deposit, object or material evidence-

   (a) which relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and

(b) which is 50 or more years old.

9. The holder of the Permit shall furnish the National Parks and Wildlife Service with a report at the completion of the salvage work or expiry of the Permit or any renewal thereof, or as specified in the guide-lines, whichever occurs first. Such report shall include:

- a complete list of all material recovered;
- a detailed description of the methods of excavation/collection and analysis used;
- a detailed plan of the site, including the location of collection areas, all trenches, auger holes and spoil heaps;
- summary of consultation undertaken with relevant Local Aboriginal Land Councils or relevant Aboriginal Community Groups.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit
3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Permits may be revoked at any time at the discretion of the Director-General.
5. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
6. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
7. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
8. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
9. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in

respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.

10. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.

11. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 10 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.

12. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.

13. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.

14. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interest local groups.

15. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period. A copy of all field records shall be lodged with The Australian Museum at the time the archaeological materials are deposited with the Museum.

16. The holder of the Permit or Consent shall notify the local District office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

17. In the event of a Permit being revoked -

a) The Person to whom that Permit was issued shall
(i) Furnish an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature, and all costs, charges and expenses in respect of any accident or injury to any

person or property which may arise solely out of the existence of any works associated with the Permit;

(ii) leave the areas, the subject of that Permit, in a condition satisfactory to the National Parks and Wildlife Service within two weeks from the date of revocation of that Permit;

(iii) furnish the National Parks and Wildlife Service within six months from the date of revocation of the Permit, a full report on the work completed at the date of revocation. Such a report shall include a complete list of any material recovered;

(iv) deposit any Aboriginal relics removed during work associated with the Permit, together with a copy of all field records, at The Australian Museum or at another place designated by the Museum, after these relics have been fully examined, or within six months from the date of revocation of that Permit whichever occurs sooner.

(b) The National Parks and Wildlife Service and The Australian Museum shall have the right to use and authorise the use of information collected under the Permit.

SZ#300

PERMIT FOR CARE AND CONTROL OF CULTURAL ITEMS

(Relics under the National Parks and Wildlife Act)

Permit issued to: **Wonnarua Tribal Council**

Address: **Unit 17 The Terrace**
174 Johns St
Singleton 2330

Authority is hereby given for the organisation named above to have care and control of the Aboriginal cultural items listed below:

TERMS AND CONDITIONS OF THIS PERMIT:

This Permit is issued subject to **Specific Terms and Conditions** (see over) pertaining to every Permit for Care and Control and detailed in the attached pages. This Permit is also subject to any **Special Conditions** which are detailed hereunder.

- Access to the artefacts will be controlled by the Wonnarua Tribal Council.

Dated at Sydney this 4th day of August 2000

Robert Sutherland
Manager
Central Aboriginal Heritage Unit

for Director-General of

Care and Control Permit - Specific Terms and Conditions.

1. Items are to be stored securely as described in the application dated.

2. If items are loaned out for educational/display purposes, the responsibility for the safe keeping still rests with the organisation permit holder.

3. Items may not be moved to a new location without the approval of the Director-General. If it is proposed to transfer care and control, the intended recipient must forward an application for a care and control permit.

4. Access to items is to be provided for in accordance with the application.

NSW
NATIONAL
PARKS AND
WILDLIFE
SERVICE

ABN 30 841 387 271

5/9/02

Dianne Markham
Coal and Allied Operations Pty Ltd
PO Box 315 Singleton
NSW 2330

Our ref: 96/388

Dear Ms Markham

Reissued - S90 Permit SZ#315

Enclosed is a Consent to Destroy with Salvage for Rory Gordon at Coal and Allied, which has been reissued. The original permit issued to you (January 2001) omitted to include one site: HSV65, which had been included in the original application. The presently reissued permit, includes that site in the list of sites covered by the permit (contained within schedule B). Please note that four of the sites in the original application had been incorrectly labelled. The following represents the corrected labels and they have been corrected in Schedule B (~~37-5-0166~~ 37-6-0166/ Site I, ~~37-5-0167~~ 37-6-0167/ Site J (HVS38), ~~37-5-0168~~ 37-6-0163/ Site K (HVS32), ~~37-5-0225~~ 37-6-0225/HVS. We apologise for any inconvenience this may have caused.

Should you have any further queries please contact Margrit Koettig on 9585 6922.

Yours faithfully,

Teresa Gay
Manager
Central Aboriginal Heritage Unit

Head Office
43 Bridge Street
PO Box 1967
Hurstville NSW
2220 Australia
Tel: (02) 9585 6444
Fax: (02) 9585 6555
www.npws.nsw.gov.au

CONSENT **SZ#315**
(re-issued 2002)

NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 90

CONSENT

CONSENT TO CARRY OUT THE DESTRUCTION OF AN ABORIGINAL RELIC/PLACE

WHEREAS the Aboriginal relics described in Schedule "A" are situated upon the land described in Schedule "B", and which constitute relics within the meaning of Section 90 of the National Parks and Wildlife Act 1974, and WHEREAS application has been made by:

Rory Gordon, Acting General Manager, Technical Services
Coal and Allied

of (address in full):

P.O.Box 315
Singleton NSW 2330

FOR CONSENT to destroy those relics in the course of:

open cut mining and associated infrastructure at Hunter Valley South

NOW I, Brian Gilligan, Director-General of National Parks and Wildlife, in pursuance of Section 90 of the said Act, and subject to the Conditions hereunder set out DO HEREBY CONSENT to the destruction of the said relics by the said applicant.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent has been re-issued to clarify areas of possible ambiguity and to correct the labelling of four of the NPWS site numbers. This Consent is subject to General Terms and Conditions covering all archaeological Permits and Consents, as well as the Specific Terms and Conditions pertaining to Consents to destroy Aboriginal relics all of which conditions are detailed in the attached pages.

Dated at Sydney this 5th day of September, 2002.

for, Director-General of
National Parks and Wildlife

SCHEDULE A: Aboriginal sites at Hunter Valley South mine, near Singleton.

SCHEDULE B: Aboriginal artefact scatters located at

Site B (HVS17)	**:NPWS #37-5-0041**	**AMGE 309400 AMGN 6398500**
Site C	**:NPWS #37-5-0042**	**AMGE 309150 AMGN 6400990**
Site G	**:NPWS #37-5-0046**	**AMGE 310800 AMGN 6398960**
Site H	**:NPWS #37-5-0047**	**AMGE 311000 AMGN 6399250**
Site I	**:NPWS #37-6-0166**	**AMGE 312410 AMGN 6400320**
Site J (HVS38)	**:NPWS #37-6-0167**	**AMGE 312470 AMGN 6399420**
Site K (HVS32)	**:NPWS #37-6-0168**	**AMGE 313500 AMGN 6400800**
HVS 1	**:NPWS #37-6-0225**	**AMGE 309450 AMGN 6400250**
HVS 2	**:NPWS #37-5-0226**	**AMGE 309640 AMGN 6400160**
HVS 3	**:NPWS #37-5-0227**	**AMGE 309700 AMGN 6400240**
HVS 4	**:NPWS #37-5-0228**	**AMGE 309820 AMGN 6400240**
HVS 5	**:NPWS #37-5-0229**	**AMGE 309700 AMGN 6400180**
HVS 6	**:NPWS #37-5-0230**	**AMGE 309630 AMGN 6400060**
HVS 7	**:NPWS #37-5-0231**	**AMGE 310180 AMGN 6399140**
HVS 8	**:NPWS #37-5-0232**	**AMGE 309860 AMGN 6399270**
HVS 9	**:NPWS #37-5-0233**	**AMGE 309680 AMGN 6399620**
HVS 10	**:NPWS #37-5-0234**	**AMGE 309540 AMGN 6399620**
HVS 11	**:NPWS #37-5-0235**	**AMGE 309350 AMGN 6399540**
HVS 12	**:NPWS #37-5-0236**	**AMGE 309300 AMGN 6399400**
HVS 13	**:NPWS #37-5-0238**	**AMGE 309530 AMGN 6399220**
HVS 14	**:NPWS #37-5-0239**	**AMGE 309620 AMGN 6399020**
HVS 15	**:NPWS #37-5-0240**	**AMGE 309540 AMGN 6398810**
HVS 16	**:NPWS #37-5-0241**	**AMGE 309460 AMGN 6398710**
HVS 17	**:NPWS #37-5-0237**	**AMGE 309400 AMGN 6398500**
HVS 18	**:NPWS #37-5-0242**	**AMGE 308540 AMGN 6398540**
HVS 19	**:NPWS #37-5-0243**	**AMGE 308640 AMGN 6398270**
HVS 20	**:NPWS #37-5-0244**	**AMGE 309950 AMGN 6398300**
HVS 21	**:NPWS #37-5-0245**	**AMGE 308970 AMGN 6398140**
HVS 22	**:NPWS #37-5-0246**	**AMGE 309160 AMGN 6398400**
HVS 23	**:NPWS #37-5-0247**	**AMGE 309630 AMGN 6398490**
HVS 24	**:NPWS #37-5-0248**	**AMGE 311040 AMGN 6397790**
HVS 25	**:NPWS #37-5-0249**	**AMGE 310920 AMGN 6397860**
HVS 26	**:NPWS #37-5-0250**	**AMGE 310820 AMGN 6397700**
HVS 30	**:NPWS #37-5-0254**	**AMGE 313720 AMGN 6399050**
HVS 31	**:NPWS #37-5-0255**	**AMGE 313530 AMGN 6401640**
HVS 33	**:NPWS #37-5-0257**	**AMGE 312500 AMGN 6400800**
HVS 34	**:NPWS #37-5-0258**	**AMGE 312450 AMGN 6400220**
HVS 35	**:NPWS #37-5-0259**	**AMGE 312700 AMGN 6400050**
HVS 36	**:NPWS #37-5-0260**	**AMGE 312900 AMGN 6401280**
HVS 37	**:NPWS #37-5-0261**	**AMGE 314500 AMGN 6401900**
HVS 39	**:NPWS #37-5-0262**	**AMGE 313290 AMGN 6400580**
HVS 40	**:NPWS #37-5-0263**	**AMGE 313500 AMGN 6401200**
HVS 41	**:NPWS #37-5-0264**	**AMGE 313490 AMGN 6400960**
HVS 48	**:NPWS #37-6-0935**	**AMGE 313634 AMGN 6400619**
HVS 49	**:NPWS #37-6-0936**	**AMGE 313602 AMGN 6400507**

HVS	**51**	**:NPWS #37-6-0937**	**AMGE 313602 AMGN 6400507**
HVS	**50**	**:NPWS #37-5-0272**	**AMGE 310239 AMGN 6398337**
HVS	**52**	**:NPWS #37-5-0273**	**AMGE 310110 AMGN 6390691**
HVS	**53**	**:NPWS #37-5-0274**	**AMGE 310559 AMGN 6398524**
HVS	**54**	**:NPWS #37-5-0275**	**AMGE 310554 AMGN 6398531**
HVS	**55**	**:NPWS #37-5-0276**	**AMGE 310929 AMGN 6398135**
HVS	**56**	**:NPWS #37-5-0277**	**AMGE 310696 AMGN 6398060**
HVS	**57**	**:NPWS #37-5-0278**	**AMGE 310695 AMGN 6398062**
HVS	**58**	**:NPWS #37-5-0279**	**AMGE 310290 AMGN 6399900**
HVS	**59**	**:NPWS #37-5-0280**	**AMGE 310530 AMGN 6398010**
HVS	**60**	**:NPWS #37-5-0281**	**AMGE 309974 AMGN 6398500**
HVS	**61**	**:NPWS #37-5-0282**	**AMGE 309500 AMGN 6398400**
HVS	**62**	**:NPWS #37-5-0283**	**AMGE 309830 AMGN 6398380**
HVS	**63**	**:NPWS #37-5-0284**	**AMGE 308900 AMGN 6381900**
HVS	**64**	**:NPWS #37-5-0285**	**AMGE 308900 AMGN 6385800**
HVS	**65**	**:NPWS #37-2-1959**	**AMGE 310690 AMGN 6409160**
HVS	**66**	**:NPWS #37-5-0286**	**AMGE 328977 AMGN 6395987**
HVS	**67**	**:NPWS #37-5-0287**	**AMGE 310640 AMGN 6398278**
HVS	**68**	**:NPWS #37-2-1918**	**AMGE 309280 AMGN 6409220**

SPECIAL CONDITIONS

1. The salvage excavations are to be undertaken as per the research design November 2000 and its Amendments A (10/01/01) and B (18/01/01) attached to this permit. Amendment B requires that the following addition/change be included in the proposed sampling strategy:
   Point 1 (change): sieving of samples from the backhoe buckets at Site I, to be at a maximum of 40 metres to ensure that the sampling is comparable to that undertaken at Site 38.
   Point 4 (additional): should any features/ artefacts be encountered during the monitoring that appear to represent occupation before the late Holocene, all work is to cease and the material assessed by NPWS. More detailed salvage excavations by hand, or other appropriate methods, may need to be undertaken.
2. The material recovered through scientific methods will be lodged with the Australian Museum and the material collected by the Wonnarua Tribal Council will be retained by them under a Care and Control permit.
3. This permit does not cover human remains. Should any human remains be noted then all work must cease and assessment be undertaken by the Aboriginal community and NPWS.

SPECIFIC CONDITIONS APPLYING TO CONSENT AND PERMIT TO SALVAGE

1. The Consent covers only those relics described in the instrument of Consent and in any Schedules thereto.

2. In the case of Consents granted to cover development activities, the Consent is granted to cover only those circumstances described in the Schedules, and subject to there not being discovered in the course of further operations, in the progress of that development requiring the Consent, any other relics which will be damaged or destroyed by the continuation of the operation. (Destruction of such relics would require the granting of a separate Consent).

3. The Consent is conditional upon all relevant development approvals having been obtained.

4. Should the relics listed in Schedule 'A' above remain in existence two (2) years from the date of this document, the Consent shall be deemed to be void, and any further damage to the relics will require the preparation of a new Consent document.

5. Prior to the Consent becoming effective, the relics described in the Schedules must be salvaged, following the guide-lines attached. The salvage work is to be carried out by

6. Any Aboriginal relics recovered, being the property of the Crown, shall be deposited at The Australian Museum, in accordance with adopted procedures for the deposition of Aboriginal relics as prescribed by The Australian Museum, at or before a period of two years from the date of expiration of the Permit or any renewal thereof, whichever occurs first. Information about deposition requirements can be obtained from the Aboriginal Collections Manager, Division of Anthropology, The Australian Museum, on (02) 339 8111.

7. At the same time that Aboriginal relics are deposited in the Australian Museum, a copy of the report referred to in clause 9 below and a copy of the report referred to in clause 14 of the General Terms and Conditions, field notes, site plans, section drawings and relevant photographs, shall be deposited at The Australian Museum.

8. Should any 'relic', defined under the Heritage Act of NSW be uncovered, then excavation or disturbance of that area is to stop immediately and the Heritage Council of NSW is to be informed in accordance with S.146 of the Heritage Act, 1977 (as amended).

   Historic Archaeologists of the Heritage Council can be contacted on
   (02) 391 2066
   (02) 391 2061

   A 'relic' under the Heritage Act is defined as any deposit, object or material evidence-

   (a) which relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and

   (b) which is 50 or more years old.

9. The holder of the Permit shall furnish the National Parks and Wildlife Service with a report at the completion of the salvage work or expiry of the Permit or any renewal thereof, or as specified in the guide-lines, whichever occurs first. Such report shall include:

   - a complete list of all material recovered;
   - a detailed description of the methods of excavation/collection and analysis used;
   - a detailed plan of the site, including the location of collection areas, all trenches, auger holes and spoil heaps;
   - summary of consultation undertaken with relevant Local Aboriginal Land Councils or relevant Aboriginal Community Groups.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.

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3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.

4. Permits may be revoked at any time at the discretion of the Director-General.

5. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.

6. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.

7. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.

8. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.

9. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.

10. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.

11. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 10 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.

12. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres

Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.

13. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.

14. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interest local groups.

15. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period. A copy of all field records shall be lodged with The Australian Museum at the time the archaeological materials are deposited with the Museum.

16. The holder of the Permit or Consent shall notify the local District office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

17. In the event of a Permit being revoked -

a) The Person to whom that Permit was issued shall

(i) Furnish an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature, and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit;

(ii) leave the areas, the subject of that Permit, in a condition satisfactory to the National Parks and Wildlife Service within two weeks from the date of revocation of that Permit;

(iii) furnish the National Parks and Wildlife Service within six months from the date of revocation of the Permit, a full report on the work completed at the date of revocation. Such a report shall include a complete list of any material recovered;

(iv) deposit any Aboriginal relics removed during work associated with the Permit, together with a copy of all field records, at The Australian Museum or at another place designated by the Museum, after these relics have been fully examined, or within six months from the date of revocation of that Permit whichever occurs sooner.

(b) The National Parks and Wildlife Service and The Australian Museum shall have the right to use and authorise the use of information collected under the Permit.

Department of
Environment and Conservation (NSW)

Your reference :
Our reference : DOC 04/20211
Contact : Liam Dagg, 02 6659 8282
Date : 19 January 2005

Mr J van de Bund
Manager Aboriginal Relations
Rio Tinto Coal Australia Pty Limited
GPO Box 391
BRISBANE QLD 4001

Dear Mr van de Bund

Application for Section 90 Consent, Hunter Valley West Pit Extension, Singleton Local Government Area, NSW.

I refer to your correspondence dated 22 November 2004 and 10 December 2004 regarding the above matter.

Enclosed is Heritage Impact Permit # 2086 for the above project, which I understand was provided to you by facsimile on 15 December 2004. I apologise for the delay in forwarding the original documentation.

You are reminded that the permit covers only those areas described in the permit schedules. As the Permit Holder you are responsible for ensuring compliance with the Special, Specific and General Conditions of the permit.

If you wish to discuss any of the above matters further please contact Mr Liam Dagg, Archaeologist, on (02) 6659 8282.

Yours sincerely

BRENDAN DIACONO
Manager Conservation Planning Unit
North East Branch
Environment Protection & Regulation Division

Locked Bag 914 Coffs Harbour NSW 2450
Federation House Level 7, 24 Moonee St Coffs Harbour NSW 2450
Telephone (02) 6651 5946
Facsimile (02) 6651 6187
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of
Environment and Conservation (NSW)

PERMIT #: 2086

FAXED 15/12/04

NATIONAL PARKS AND WILDLIFE ACT 1974

SECTION 90

HERITAGE IMPACT PERMIT TO CARRY OUT THE DESTRUCTION OF AN ABORIGINAL OBJECT/PLACE AND PERMIT TO COLLECT AND/OR EXCAVATE FOR THE PURPOSE OF SALVAGE

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and constitute Aboriginal objects within the meaning of Section 90 of the National Parks and Wildlife Act 1974, and WHEREAS application has been made by:

Mr Jeremy van de Bund, Manager – Aboriginal Relations

of : **Rio Tinto Coal Australia Pty Limited**
Level 3 – West Tower, 410 Ann Street
Brisbane, QLD 4000

FOR CONSENT to destroy those objects in the course of: **archaeological salvage and subsequent extension of the Hunter Valley West Pit Mine (in accordance with Development Consent DA 450-10-2003).**

NOW I, Lisa Corbyn, Director-General of Department of Environment and Conservation, in pursuance of Section 90 of the said Act, and subject to the conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant. AND FURTHER, in accordance with the said Conditions and in pursuance of Section 87 of the said Act, I DO HEREBY PERMIT the salvage collection of the said objects from the aforesaid land, prior to destruction of the objects, by **Environmental Resources Management (ERM) Australia Pty Ltd and Aboriginal community representatives**, named in the said conditions.

TERMS AND CONDITIONS OF THIS HERITAGE IMPACT PERMIT

This Heritage Impact Permit is issued subject to General Terms and Conditions covering all Permits, as well as the Specific Terms and Conditions pertaining to Permits to destroy Aboriginal objects and any Special Conditions, all of which conditions are detailed in the attached pages.

DATED at COFFS HARBOUR this 14 day of December, 2004.

Gary Dawes

Issued for the Director-General of
Department of Environment and Conservation

SCHEDULE A:

Aboriginal objects as defined by the *National Parks and Wildlife Act 1974* (as amended), but excluding human skeletal remains.

SCHEDULE B:

The "Study Area", as defined by Figure 8 in the application signed and dated 24 November 2004, and received by the Department of Environment and Conservation on 1 December 2004 (DEC Ref: DOC 04/20211).

SPECIAL CONDITIONS APPLYING TO HERITAGE IMPACT PERMITS WITH SALVAGE

1. The Consent Holder shall ensure that should any human remains be located during ground disturbing works, all work must cease immediately and the NSW Police Department and the Department of Environment and Conservation, North East Branch, be notified immediately. Work must not commence in the vicinity of the find until such time as Department officers have examined and discussed the management of the find.

2. The Consent Holder shall ensure that the Aboriginal heritage salvage program is conducted in accordance with the research design described in the application signed and dated 24 November 2004, and received by the Department of Environment and Conservation on 1 December 2004 (DEC Ref: DOC 04/20211).

SPECIFIC CONDITIONS APPLYING TO HERITAGE IMPACT PERMITS WITH SALVAGE

1. The Heritage Impact Permit covers only those objects described in the instrument and in any Schedules thereto.

2. In the case of Heritage Impact Permits granted to cover development activities, the Permit is granted to cover only those circumstances described in the Schedules, and subject to there not being discovered in the course of further operations, in the progress of that development requiring the Permit, any other objects which will be damaged or destroyed by the continuation of the operation. (Destruction of such objects would require the granting of a separate Permit).

3. The Heritage Impact Permit is conditional upon all relevant development approvals having been obtained.

4. Should the objects listed in Schedule 'A' above remain in existence two (2) years from the date of this document, the Heritage Impact Permit shall be deemed to be void, and any further damage to the objects will require the preparation of a new Permit document.

5. Prior to the Heritage Impact Permit becoming effective, the objects described in the Schedules must be salvaged in accordance with Special Condition 2.

6. Should any 'relic', defined under the Heritage Act of NSW be uncovered, then excavation or disturbance of that area is to stop

immediately and the Heritage Council of NSW is to be informed in accordance with S.146 of the Heritage Act, 1977 (as amended). Historic Archaeologists of the Heritage Council can be contacted on (02) 96356155

A 'relic' under the Heritage Act is defined as any deposit, object or material evidence-

(a) which relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and
(b) which is 50 or more years old.

7. The holder of the Permit shall furnish the Department of Environment and Conservation with a report at the completion of the salvage work or expiry of the Permit or any renewal thereof, or as specified in the guidelines, whichever occurs first. Such report shall include:

- a complete list of all material recovered;
- a detailed description of the methods of excavation/collection and analysis used;
- a detailed plan of the site, including the location of collection areas, all trenches, auger holes and spoil heaps;
- summary of consultation undertaken with relevant Local Aboriginal Land Councils or relevant Aboriginal Community Groups.

GENERAL TERMS AND CONDITIONS

1. Heritage Impact Permits are not transferable.

2. A Heritage Impact Permit covers only that area stated in the Heritage Impact Permit

3. A Heritage Impact Permit covers only that area stated in the instrument and in any Schedules thereto.

4. Heritage Impact Permits may be revoked at any time at the discretion of the Director-General.

5. Terms and conditions of Heritage Impact Permits may be varied at any time at the discretion of the Director-General.

6. The Person to whom the Heritage Impact Permit is issued shall be responsible for the manner in which the work covered by the Heritage Impact Permit is performed.

7. An officer of the Department of Environment and Conservation, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Heritage Impact Permit.

8. Heritage Impact Permits are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.

9. The holder of the Heritage Impact Permit shall furnish, when required to do so, an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Heritage Impact Permit.

10. The Department of Environment and Conservation shall have the right to copy all such reports prepared under DEC Heritage Impact Permits, to allow consideration thereof by qualified referees.

11. For a period of five years from the date of issue of the Heritage Impact Permit, the holder of the Heritage Impact Permit may refuse to allow the Department of Environment and Conservation, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 10 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Heritage Impact Permit, the DEC shall have the right to use and authorise the use of information contained in all reports submitted under the Heritage Impact Permit, except where specifically requested by the holder of the Heritage Impact Permit.

12. Upon publication of any information relating to work done under a Heritage Impact Permit, a copy of such publication(s) shall be forwarded to the Department of Environment and Conservation.

13. The holder of the Heritage Impact Permit shall consult with the local Aboriginal community regarding the work covered by the Heritage Impact Permit and shall respond to any reasonable request to involve the Aboriginal community in the work.

14. The Department of Environment and Conservation may supply copies of relevant reports as furnished by the holder of the Heritage Impact Permit to local Aboriginal communities. Upon request by the Service, the holder of the Heritage Impact Permit shall supply a summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interested local groups.

15. The holder of the Heritage Impact Permit shall keep field records and a copy of all such records shall be lodged with the Department of Environment and Conservation at the termination of each field work period if requested.

16. The holder of the Heritage Impact Permit shall notify the local office of the Department of Environment and Conservation at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

17. In the event of a Heritage Impact Permit being revoked -

a) The Person to whom that Heritage Impact Permit was issued shall

(i) Furnish an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature, and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Heritage Impact Permit;

(ii) leave the areas, the subject of that Heritage Impact Permit, in a condition satisfactory to the Department of Environment and Conservation within two weeks from the date of revocation of that Heritage Impact Permit;

(iii) furnish the Department of Environment and Conservation within six months from the date of revocation of the Heritage Impact Permit, a full report on the work completed at the date of revocation. Such a report shall include a complete list of any material recovered.

(b) The Department of Environment and Conservation shall have the right to use and authorise the use of information collected under the Heritage Impact Permit.

Your reference :

Our reference : DOC06/00882.CE.02/03378-14
Contact : Claire Everett (02) 6659 8288
Date : 9 March 2007

Ms Anna McMullen
Manager, Project Approvals (NSW)
Rio Tinto Coal Australia
GPO Box 391
BRISBANE QLD 4001

Dear Ms McMullen

RE: S90 APPLICATION HUNTER VALLEY OPERATIONS CARRINGTON PIT EXTENSION AREA, SINGLETON LGA, DEC CONSENT #2547

The Department of Environment and Conservation (DEC) makes reference to your section 90 *National Parks & Wildlife Act* 1974 application of 18 September 2006 to enable an extension of open cut mining at the Hunter Valley Operations Carrington Pit, NSW, Singleton Local Government Area.

Please find attached a copy of the duly approved consent (DEC #2547). The Consent Holder retains the responsibility for ensuring that all relevant parties in any way associated with the activity are aware of the Special, Specific and General Conditions of the Consent. You should be aware that in accordance with the conditions attached to the Consent, in particular **Special Conditions 1-8**, prior to the Consent becoming effective, archaeological salvage and collection works must be completed in accordance with the methods described in the Consent application.

Please note that the approved consent covers only those Aboriginal objects located within the area shown on **Attachment 1** of the Consent, and not the entire area of the proposed Carrington Pit expansion.

Should you require any further information, please contact Claire Everett, Archaeologist, at this office on (02) 6659 8288.

Yours sincerely

GARY DAVEY
Director - North East
Environment Protection and Regulation

Locked Bag 914, Coffs Harbour NSW 2450
Federation House Level 7, 24 Moonee St, Coffs Harbour, NSW 2450
Tel: (02) 6651 59 46 Fax: (02) 6651 6187
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of
Environment and Conservation (NSW)

CONSENT #2547

NATIONAL PARKS AND WILDLIFE ACT 1974

SECTION 90

CONSENT TO CARRY OUT THE DESTRUCTION OF AN ABORIGINAL OBJECT AND PERMIT TO COLLECT AND/OR EXCAVATE FOR THE PURPOSE OF SALVAGE

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and constitute Aboriginal objects within the meaning of Section 90 of the National Parks and Wildlife Act 1974, and WHEREAS application has been made by:

of : Rio Tinto Coal Australia Pty Ltd
GPO Box 391
BRISBANE QLD 4001

FOR CONSENT to destroy those objects in the course of: **extension of open cut mining operations at Hunter Valley Operations Carrington Pit at lands shown at Attachment 1 of this consent near Singleton, NSW, Singleton Local Government Area.**

NOW I, Lisa Corbyn, Director-General of Department of Environment and Conservation, in pursuance of Section 90 of the said Act, and subject to the conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant. AND FURTHER, in accordance with the said Conditions and in pursuance of Section 87 of the said Act, I DO HEREBY PERMIT the salvage collection of the said objects from the aforesaid land, prior to destruction of the objects, by representatives of the Aboriginal community.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions covering all Permits and Consents, as well as the Specific Terms and Conditions pertaining to Consents to destroy Aboriginal objects and any Special Conditions, all of which conditions are detailed in the attached pages.

DATED at ~~COFFS HARBOUR~~ NEWCASTLE this Ninth day of March, 2007.

Issued for the Director-General of Department of Environment and Conservation

D-NER

NPWS is part of the Department of Environment and Conservation

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SCHEDULE A:

All Aboriginal objects, within the definition of the *National Parks and Wildlife Act 1974*, but excluding human skeletal remains.

SCHEDULE B:

Lands described as shown at **Attachment 1** of this consent at Hunter Valley Operations Carrington Pit extension, near Singleton NSW, Singleton Local Government Area.

That area delineated on **Attachment 1** entitled *Area covered by DEC consent #2547* identified in the Consent Application dated 18 September 2006, and registered with the Department of Environment and Conservation as DOC 06/20037 ("subject lands"), and including the following Aboriginal sites:

Carrington C1 DEC AHIMS site # 37-6-2078
(centrepoint AMGE 308983, AMGN 6402615)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

Carrington C2 DEC AHIMS site # 37-6-2079
(centrepoint AMGE 308990, AMGN 6402587)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

Carrington C3 DEC AHIMS site # 37-6-2080
(centrepoint AMGE 310035, AMGN 6402740)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

Carrington C4 DEC AHIMS site # 37-5-0494
(centrepoint AMGE 310259, AMGN 6402215)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

Carrington C8 DEC AHIMS site # 37-2-2083
(centrepoint AMGE 309001, AMGN 6402765)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

Carrington C9 DEC AHIMS site # 37-2-2084
(centrepoint AMGE 309084, AMGN 6402831)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

Carrington C10 DEC AHIMS site # 37-2-2085
(centrepoint AMGE 309041, AMGN 6402981)
Lot 2 DP 808301

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Parish Ravensworth, County Durham, Singleton Local Government Area)

CM45 DEC AHIMS site # 37-2-1962
(centrepoint AMGE 309992, AMGN 6402708)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

CM46 DEC AHIMS site # 37-2-1963
(centrepoint AMGE 309660, AMGN 6402703)
Lot 2 DP 808301
Parish Ravensworth, County Durham, Singleton Local Government Area)

The consent application and subject lands were amended on 2 March 2007 upon mutual agreement of DEC, Rio Tinto Coal Australia and Upper Hunter Wonnarua Council representatives to be exclusive of the following Aboriginal sites:

CM1 DEC AHIMS site # 37-2-1504
(centrepoint AMGE 308853, AMGN 640098)
Lot 165 DP 727718
Parish Howick, County Durham, Singleton Local Government Area)

CM2 DEC AHIMS site # 37-2-1505
(centrepoint AMGE 308763, AMGN 6403428)
Lot 165 DP 727718
Parish Howick, County Durham, Singleton Local Government Area)

SPECIAL CONDITIONS APPLYING TO CONSENTS WITH SALVAGE

1. The Consent Holder will ensure that should any human remains be located during ground disturbing works, all work in the vicinity must cease immediately and the NSW Police Department and the Department of Environment and Conservation, North East Branch, be notified immediately. Work must not commence in the vicinity until such time as DEC officers have examined the find and discussed its management.

2. The Consent Holder will ensure that the proposed mitigation measures, including salvage of Aboriginal objects, are conducted in accordance with the methods described in the Consent Application dated 18 September 2006 and registered with the Department of Environment and Conservation as DOC as DOC 06/20037.

3. The Consent Holder will ensure that the recording and salvage of Aboriginal objects is conducted in accordance with the methodology presented in the document *Methodology for archaeological recording of ridgeline Aboriginal sites at Carrington Mine* prepared by ERM dated 31 July 2006, and forming part of Attachment 2 of the consent application.

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4. The Consent Holder will provide the Department of Environment and Conservation and Aboriginal stakeholders for the project with a plan for the removal and conservation of the Aboriginal scarred tree C3 (DEC AHIMS Site # 37-6-2080) for review and comment prior to the commencement of any works to remove or conserve the tree. The report shall include, but not be limited to, information regarding:
   - Techniques to be used to stabilise the tree and prevent deterioration prior to removal.
   - Techniques to be used to remove the tree.
   - Techniques to be used to conserve the tree after removal from the site.
   - Options for long-term storage and/or display of the tree.

5. The Consent Holder will ensure that Aboriginal stakeholders identified for this project are provided with the opportunity to participate in the collection of Aboriginal objects described in Schedule 'A', in accordance with the methods outlined in the Consent Application dated 18 September 2006 and registered with the Department of Environment and Conservation as DOC 06/20037 prior to the commencement of mining or mining-related ground disturbance activities on the lands described in Schedule 'B'.

6. The Consent Holder must liaise with the Aboriginal stakeholders for the project and the Department of Environment and Conservation regarding the management of any Aboriginal objects retrieved from the subject lands during the course of collection works undertaken under this consent within three months of completion of excavations under this consent. If the Aboriginal objects are to be reburied at another location within the mine lease, a new site recording form will need to be submitted to the Department of Environment and Conservation. If the Aboriginal objects are to be transferred to the care of an Aboriginal stakeholder group or are to be placed in a Keeping Place, a Care and Control permit must first be sought from the Department.

7. The Consent Holder will ensure that any proposals to modify the mitigation measures and/or collection methodology, are firstly discussed with and have the written endorsement of, the Aboriginal stakeholders for the project and the Department of Environment and Conservation, prior to modifications being implemented.

8. The Consent Holder will ensure that all contractor/s and/or maintenance personnel involved in the construction of the development on the subject lands described in Schedule 'B" be informed of the *National Parks and Wildlife Act* (1974) legislative obligations in the management and/or protection of Aboriginal objects and/or Aboriginal places, and are advised of the terms and conditions applying to this Consent.

SPECIFIC CONDITIONS APPLYING TO CONSENTS WITH SALVAGE

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1. The Consent covers only those objects described in the instrument and in any Schedules thereto.

2. In the case of Consents granted to cover development activities, the Permit is granted to cover only those circumstances described in the Schedules, and subject to there not being discovered in the course of further operations, in the progress of that development requiring the Consent, any other objects which will be damaged or destroyed by the continuation of the operation. (Destruction of such objects would require the granting of a separate Consent).

3. The Consent is conditional upon all relevant development approvals having been obtained.

4. Should the objects listed in Schedule 'A' above remain in existence five (5) years from the date of this document, the Consent shall be deemed to be void, and any further damage to the objects will require the preparation of a new Consent document.

5. Prior to the Consent becoming effective, the objects described in the Schedules must be salvaged, following the guidelines attached. The salvage work is to be carried out by ERM Pty Ltd and representatives of the local Aboriginal community.

6. Should any 'relic', defined under the *Heritage Act* of NSW be uncovered, then excavation or disturbance of that area is to stop immediately and the Heritage Council of NSW is to be informed in accordance with S.146 of the Heritage Act, 1977 (as amended). Historical archaeologists at the Heritage Council can be contacted on (02) 8837 8500.

   A 'relic' under the *Heritage Act* is defined as any deposit, object or material evidence-
   (a) which relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and
   (b) which is 50 or more years old.

7. The holder of the Consent shall furnish the Department of Environment and Conservation with a report at the completion of the salvage work or expiry of the Consent or any renewal thereof, or as specified in the guidelines, whichever occurs first. Such report shall include:

   - a complete list of all material recovered;
   - a detailed description of the methods of excavation/collection and analysis used;
   - a detailed plan of the site, including the location of collection areas, all trenches, auger holes and spoil heaps;
   - summary of consultation undertaken with relevant Local Aboriginal Land Councils or relevant Aboriginal Community Groups.

General Terms and Conditions

1. Permits and Consents are not transferable.

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2. A Permit covers only that area stated in the Permit

3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.

4. Permits may be revoked at any time at the discretion of the Director-General.

5. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.

6. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.

7. An officer of the Department of Environment and Conservation, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.

8. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.

9. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.

10. The Department of Environment and Conservation shall have the right to copy all such reports prepared under DEC Permits or Consents, to allow consideration thereof by qualified referees.

11. For a period of five years from the date of issue of the Permit, the holder of the Permit or Consent may refuse to allow the Department of Environment and Conservation, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 10 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the DEC shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.

12. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the Department of Environment and Conservation.

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13. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.

14. The Department of Environment and Conservation may supply copies of relevant reports as furnished by the holder of the Permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interested local groups.

15. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the Department of Environment and Conservation at the termination of each field work period if requested.

16. The holder of the Permit or Consent shall notify the local office of the Department of Environment and Conservation at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

17. In the event of a Permit being revoked -

    a) The Person to whom that Permit was issued shall

        (i) Furnish an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature, and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit;

        (ii) leave the areas, the subject of that Permit, in a condition satisfactory to the Department of Environment and Conservation within two weeks from the date of revocation of that Permit;

        (iii) furnish the Department of Environment and Conservation within six months from the date of revocation of the Permit, a full report on the work completed at the date of revocation. Such a report shall include a complete list of any material recovered.

    (b) The Department of Environment and Conservation shall have the right to use and authorise the use of information collected under the Permit.

9 March 2007
End

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Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*

NSW GOVERNMENT | Office of Environment & Heritage

AHIP number: C0002193

(AHIMS Permit ID: 4050)

AHIP Issued To:

Mr Joel Deacon
Specialist Cultural Heritage - NSW
Rio Tinto Coal Australia, Hunter Valley Services
PO Box 315
SINGLETON NSW 2330

OEH Office issuing this AHIP
Office of Environment and Heritage Regional Operations, Hunter Central Coast Region
(Level 4, 26 Honeysuckle Drive Newcastle) Locked Bag 1002 DANGAR NSW 2309
Telephone number: (02) 4927 3156 Fax number: (02) 4927 3192
Email: rog.hcc@environment.nsw.gov.au

Additional details for public register

a) Name of development or project	HVO Mitchell Pit Development
b) Location	Hunter Valley Operations – ML 1428 & CML 4 Lot 4 DP 1113789 Via Lemington Road RAVENSWORTH NSW 2300
c) Local Government Area(s)	Singleton
d) Description of harm authorised	• Salvage excavations; • Community collection; • Harm to certain Aboriginal objects through the proposed works; & • Harm to all unknown Aboriginal objects located within the AHIP Application Area
e) AHIP commencement date and duration	*Commencement:* 6 December 2016 *Duration:* 10 years

AHIP TO HARM ABORIGINAL OBJECTS

A. Background

(i) On 9 September 2016, an application was made to the Chief Executive of the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) pursuant to s.90 of the *National Parks and Wildlife Act 1974* (the Act).

(ii) The AHIP application was in relation to the proposed extension of the existing open cut coal mining operation at the southern end of the West Pit mining area at Hunter Valley Operations (HVO) pursuant to DA 450-10-2003. The extension is called the Mitchell Pit Development Area and is located within ML 1428.

(iii) The proposed Mitchell Pit Development AHIP application area covers approximately 414 hectares and will be associated with mining activities over the next 10 years which will impact 284 AHIMS registered sites.

(iv) The applicant is seeking an 'Area Based AHIP' to be valid for 10 years which will permit '*harm*' by means of:

- Salvage excavations;
  - i. AHIMS Site # 37-2-5122 (MP-001 – PAD1) &
  - ii. AHIMS Site # 37-2-0793 (HC17-PAD 7) *ONLY*;
- Community collection as required;
- Harm to certain Aboriginal objects through the proposed works; &
- Harm to all unknown Aboriginal objects within the application area.

(v) OEH supports the AHIP application and the management recommendations proposed to mitigate harm for the site by the proponent, HV Operations Pty Ltd.

(vi) OEH received the application on 9 September 2016 and further information was received on 3 November 2016.

(vii) OEH considered the application and supporting information provided, and matters under section 90K of the Act and decided to issue an AHIP subject to conditions.

B. AHIP issued subject to conditions

An AHIP is issued to harm Aboriginal objects identified in Schedules B and C, in accordance with the conditions of this AHIP.

This AHIP is issued pursuant to section 90 of the Act.

C. Commencement and duration of AHIP

This AHIP commences on the date it is signed unless otherwise provided by this AHIP.

Unless otherwise revoked in writing, this AHIP remains in force for:

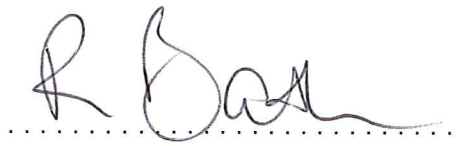
(i) Ten (10) years from the date of commencement, that is, until **6 December 2026**.

D. Proposed Works

The proposed Mitchell Pit Development will allow the expansion of current mining operations at the Wilton and West Pits to the south and west. The Mitchell Pit Development Area is located within ML 1428 and is approved under DA 450-10-2003. The development includes the continuation of open cut mining with associated infrastructure such as roads, pipelines, powerlines, dams and surface water management structures, overburden and top soils dumps.

The proposed Mitchell Pit Development AHIP Application Area covers approximately 414 hectares. It will accommodate mining and associated development activity areas for a period of approximately ten (10) years from date of commencement.

Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information about this AHIP is also set out after the Dictionary.



RICHARD BATH

Senior Team Leader Planning, Hunter Central Coast Region

Regional Operations

(By Delegation)

Date: 6 December 2016

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LAND TO WHICH THIS AHIP APPLIES

The land to which this AHIP applies is shown in **Figure (1)** The lands to which this AHIP applies - AHIP extent for the HVO Mitchell Pit Development, Hunter Valley Operations – ML 1428 & CML 4, Lot 4 DP 1113789, Via Lemington Road, Ravensworth NSW 2300 (Page 57 of this AHIP).

CONDITIONS

The conditions of this AHIP specify the actions that are permitted and/or required in relation to areas and Aboriginal objects, which are detailed in the Schedules that follow.

Administrative Conditions

Responsibility for compliance with conditions of AHIP

1. The AHIP holder must ensure that all persons involved in actions or works covered by this AHIP (whether employees, contractors, sub-contractors, agents or invitees) are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the actions relating to this AHIP

2. A suitably qualified and experienced individual must be appointed as a project manager who is responsible for overseeing, for and on behalf of the AHIP holder, all the actions relating to this AHIP.
3. The individual appointed as project manager must be the project manager nominated in the application form.
4. If an alternative to the nominated project manager is appointed, OEH must be notified of their contact details within 14 days of this appointment.

Actions must be in accordance with AHIP application

5. All actions on the land must be carried out in accordance with the application except as otherwise expressly provided by a condition of this AHIP.

Operational Conditions

Certain Aboriginal objects must not be harmed

6. All human remains in, on or under the land must not be harmed.

Salvage excavations

7. Salvage excavations may be carried out at the following AHIMS registered sites only:
    i. AHIMS Site # 37-2-5122 (MP-001–PAD1) &
    ii. AHIMS Site # 37-2-0793 (HC17-PAD 7) *ONLY*.
8. Aboriginal objects that are recovered during the excavations may be analysed on-site and/or may be taken off-site for further analysis.

9. The excavations and analysis of Aboriginal objects must be carried out in accordance with *Aboriginal Cultural Heritage Assessment Report, for the Hunter Valley Operations: Mitchell Pit Development, Aboriginal Heritage Impact Permit (AHIP) Application. Prepared for HV Operations Pty Ltd, Prepared by Central Queensland Cultural Heritage Management Pty Ltd, FINAL, 3 November 2016*, that was provided with the application.
10. The excavations should be completed in an area before any harm of Aboriginal objects described in Schedule C can commence in that same area.

Community collection

11. The Registered Aboriginal Parties should be provided with an opportunity where safe and practicable to do so, to collect Aboriginal objects across the AHIP AA.
12. The opportunity for community collection must be provided:
    (a) in accordance with *Aboriginal Cultural Heritage Assessment Report, for the Hunter Valley Operations: Mitchell Pit Development, Aboriginal Heritage Impact Permit (AHIP) Application. Prepared for HV Operations Pty Ltd, Prepared by Central Queensland Cultural Heritage Management Pty Ltd, FINAL, 3 November 2016*, that was provided with the application, and
    (b) before any harm of Aboriginal objects described in Schedule C can commence in the area.
13. Aboriginal objects that are recovered during the community collection may be analysed on-site and/or may be taken off-site for further analysis as decided by the Registered Aboriginal Parties.
14. If an opportunity for community collection has been provided and this collection does not occur, the AHIP holder may proceed with any actions to harm Aboriginal objects described in Schedule C, in accordance with the conditions of this AHIP.

Harm of certain Aboriginal objects through the proposed works

15. The Aboriginal objects described in Schedule C may be harmed. Nothing in this condition authorised harm to Aboriginal objects described in Schedule A (whether human remains, Aboriginal objects or 'no-harm areas').
16. Aboriginal objects described in Schedule C must not be harmed unless:
    (a) all salvage excavations described in Schedule B2 have been completed in the area, and
    (b) all opportunities for community collection of Aboriginal objects described in Schedule B3 have been provided in the area.

Temporary storage of certain Aboriginal objects

17. Any Aboriginal objects that are removed from the land by actions authorised by this AHIP, must be moved as soon as practicable to the temporary storage location in the table below, pending any agreement reached about the long term management of the Aboriginal objects.
18. The temporary storage location is as follows:

Location name:	Rio Tinto Coal Australia Hunter Valley Services Cultural Heritage Storage Facility
Address:	1011 Lemington Road Ravensworth NSW 2300

Storage particulars:	Secured locked storage facility

19. Any Aboriginal objects stored at the temporary storage location must not be further harmed, except in accordance with the conditions of this AHIP.

Long term management of certain Aboriginal objects

20. Requirement 26 "*Stone artefact deposition and storage*" in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (24 September 2010, available online at: www.environment.nsw.gov.au/licences/archinvestigations.htm) must be complied with.

Access routes

21. Where practicable, existing access routes to parts of the land where actions relating to this AHIP are to be carried out must be used.

Notification and Reporting Conditions

Notification of commencement and completion of actions

22. Written notice must be provided to the OEH office at least 5 days prior to the commencement of actions authorised by this AHIP.

23. Written notice must be provided to the OEH office within 5 days of the completion of actions authorised by this AHIP.

Copy of this AHIP and notices to be provided to Registered Aboriginal Parties

24. A copy of this AHIP must be provided to each Registered Aboriginal Party, within 14 days of receipt of the AHIP from OEH.

25. Where this AHIP is varied or transferred, a copy of the AHIP variation or transfer notice must be provided to each Registered Aboriginal Party, within 14 days of receipt of the notice.

Human remains

26. If any human remains are discovered and/or harmed in, on or under the land, the AHIP holder must:

    (a) not further harm these remains
    (b) immediately cease all work at the particular location
    (c) secure the area so as to avoid further harm to the remains
    (d) notify the local police and OEH's Environment Line on 131 555 as soon as practicable and provide any available details of the remains and their location, and
    (e) not recommence any work at the particular location unless authorised in writing by OEH.

Incidents which may breach the Act or AHIP

27. The AHIP holder must notify the OEH office in writing as soon as practicable after becoming aware of:

    (a) any contravention of s.86 of the Act not authorised by an AHIP, and/or
    (b) any contravention of the conditions of this AHIP.

Reports about incidents which may breach the Act or AHIP

28. Where OEH suspects that an incident has occurred which may have breached the Act or AHIP, OEH may request a written incident report, which includes the following:
    (a) the nature of the incident
    (b) the actual or likely impact of the incident on Aboriginal objects and/or Aboriginal places
    (c) the nature and location of these Aboriginal objects and/or Aboriginal places, referring to and providing maps and photos where appropriate
    (d) any conditions of an AHIP which may have been breached, and
    (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.
29. The incident report must be provided to the OEH office within the timeframe specified in the request.

Provision of Aboriginal Site Impact Recording Form

30. An Aboriginal Site Impact Recording Form must be completed and submitted to the AHIMS Registrar, for each AHIMS site identified in Schedules B and C, within 6 months of the completion of the actions authorised by this AHIP.

    Note:
    (i) The Aboriginal Site Impact Recording Form can be found on the OEH website: www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm
    (ii) Contact details for the AHIMS Registrar can be found on the OEH website: www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm

Report about harm to Aboriginal objects - Salvage Excavation Report

31. A Salvage Excavation Report must be prepared about the actions relating to the harm of Aboriginal objects (as permitted by this AHIP). The report must:
    (a) include a short summary of the report
    (b) describe any ongoing consultation with or involvement of representatives of Registered Aboriginal Parties in relation to this AHIP
    (c) describe how any Aboriginal objects or 'no-harm areas' described in Schedule A were managed during the period covered by the AHIP
    (d) provide details of the Aboriginal objects which were fully or partially harmed in the course of undertaking the actions
    (e) if any salvage excavations were authorised by this AHIP, provide a description of the methods and results of the salvage excavation
    (f) detail any community collection of Aboriginal objects undertaken by the Registered Aboriginal Parties
    (g) comment on the effectiveness of any mitigation measures that were implemented
    (h) comment on the effectiveness of any management plan which was in place
    (i) if any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now at that location
    (j) detail the results of any analysis of Aboriginal objects
    (k) detail the long term management arrangements for any Aboriginal objects, and
    (l) include a statement confirming that all Aboriginal Site Impact Recording Forms have been completed and submitted to the AHIMS Registrar.

32. The Salvage Excavation Report must be submitted to the OEH office within 2 years of the completion of the actions authorised by this AHIP.

33. A copy of the Salvage Excavation Report, including a summary of the report in plain English, must be sent by registered post to each Registered Aboriginal Party within 14 days of the report being submitted to OEH.

General Conditions

Indemnity

34. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Chief Executive of OEH, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from:

    (a) any damage or destruction to any real or personal property; and

    (b) injury suffered or sustained (including death) by any persons arising out of or in connection with any actions undertaken pursuant to this AHIP.

Release

35. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Chief Executive of OEH, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from:

    (a) any damage or destruction to any real or personal property; and

    (b) injury suffered or sustained (including death) by any persons arising from or in connection with any actions undertaken pursuant to this AHIP.

Written notice

36. Any requirement to provide written notice to the OEH office in this AHIP may be complied with by emailing the notice to the OEH office's email address or by sending by registered post to the OEH office's address. The OEH office's contact details are specified at the front of this AHIP.

SCHEDULES

The following schedules identify the areas and Aboriginal objects that are subject to the conditions of this AHIP.

Schedule A: Aboriginal objects which must not be harmed

A1 Human remains

All human remains in, on or under the land must not be harmed, as specified by the conditions of this AHIP.

A2 Aboriginal objects that are identified on AHIMS

Not applicable

A3 No-harm areas

Not applicable

Schedule B: Aboriginal objects that may be harmed through the certain actions

B1 Movement only

Not applicable

B2 Salvage excavations

Salvage excavations may be carried out at the two (2) AHIMS registered sites listed below.

The salvage excavation area comprises the following known Aboriginal objects, as identified on AHIMS (excluding any Aboriginal objects described in Schedule A):

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	37-2-5122	PAD	MP-001 – PAD1	*No*	305484	6407281	GDA
Whole	37-2-0793	PAD	HC17-PAD7	*No*	306825	6405349	GDA

B3 Community collection

Community collection *may* be carried out across the AHIP application area where safe and practicable to do so, as shown on Figure (1) The lands to which this AHIP applies - AHIP extent for the HVO Mitchell Pit Development, Hunter Valley Operations – ML 1428 & CML 4, Lot 4 DP 1113789, Via Lemington Road, Ravensworth NSW 2300 (Page 57 of this AHIP).

The community collection area includes the following known Aboriginal objects, as identified on AHIMS (excluding any Aboriginal objects described in Schedule A):

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	37-2-0777	Artefact	HC1 (HVO-879 & 1697)	No	305798	6406475	GDA
Whole	37-2-0778	Artefact	HC2 (HVO-845-46 & 1696)	No	305821	6406335	GDA
Whole	37-2-0779	Artefact	HC3 (HVO-895-96 & 920)	No	305305	6406339	GDA
Whole	37-2-0780	Artefact	HC4 (HVO-891)	No	305446	6405865	GDA
Whole	37-2-0781	Artefact	HC5 (HVO-1760)	No	305955	6406039	GDA
Whole	37-2-0782	Artefact	HC6 (HVO-1698)	No	305764	6405799	GDA
Whole	37-2-0783	Artefact	HC7 (HVO-751-53)	No	306025	6405681	GDA
Whole	37-2-0784	Artefact	HC8 (HVO-733)	No	306045	6405419	GDA

Whole	37-2-0785	Artefact	HC9 (HVO-792 & 822-23)	No	305735	6405659	GDA
Whole	37-2-0786	Artefact	HC10 (HVO-761-63 & 802)	No	305855	6405289	GDA
Whole	37-2-0787	Artefact	HC11 (HVO-622)	No	305955	6405209	GDA
Whole	37-2-0788	Artefact	HC12 (HVO-429-31)	No	306415	6405209	GDA
Whole	37-2-0789	Artefact	HC13 (HVO-647-50)	No	306115	6405249	GDA
Whole	37-2-0790	Artefact	HC14 (HVO-767-78)	No	306329	6405211	GDA
Whole	37-2-0791	Artefact	HC15 (HVO-172-80, 253-65, 289-98, 298, 300-02, 304, 311-22, 324-337, 362-65, 626-30, 632, 634-37, 641-46, 760, 769-71, 968-71, 973-74, 1743-44, 1748 & 1751-52)	No	306505	6405009	GDA
Whole	37-2-0792	Artefact	HC16 (HVO-323, 471-88 & 573-74)	No	306865	6405189	GDA

Whole	37-2-0793	Artefact	HC17 (HVO-437-39, 444, 490-92, 520-23)	No	306815	6405349	GDA
Whole	37-2-0794	Artefact	HC18 (HVO-223-24, 525-34, 568-72 & 1742)	No	307355	6404979	GDA
Whole	37-2-0795	Artefact	HC19 (HVO-550-55)	No	307315	6405679	GDA
Whole	37-2-5074	Artefact	HVO-153	No	306308	6404757	GDA
Whole	37-2-5075	Artefact	HVO-161	No	306215	6404701	GDA
Whole	37-2-5076	Artefact	HVO-162	No	306640	6404529	GDA
Whole	37-2-5079	Artefact	HVO-222	No	307025	6404955	GDA
Whole	37-2-5089	Artefact	HVO-310	No	306559	6405142	GDA
Whole	37-2-5094	Artefact	HVO-366	No	306778	6404872	GDA
Whole	37-2-5095	Artefact	HVO-367	No	306703	6404871	GDA
Whole	37-2-5096	Artefact	HVO-368 & 1749	No	306661	6404986	GDA
Whole	37-2-5097	Artefact	HVO-445	No	306765	6405559	GDA
Whole	37-2-5098	Artefact	HVO-447	No	306864	6405620	GDA
Whole	37-2-5099	Artefact	HVO-448	No	306858	6405777	GDA

Whole	37-2-5100	Artefact	HVO-454	No	306974	6405833	GDA
Whole	37-2-5101	Artefact	HVO-458	No	307002	6405979	GDA
Whole	37-2-5102	Artefact	HVO-459	No	306857	6405881	GDA
Whole	37-2-5103	Artefact	MP-002 (HVO-932-33)	No	305415	6406992	GDA
Whole	37-2-5104	Artefact	MP-003 (HVO-940-942 & 1717)	No	305461	6406841	GDA
Whole	37-2-5105	Artefact	MP-004 (HVO-944-45)	No	305404	6406779	GDA
Whole	37-2-5106	Artefact	MP-005 (HVO-905 & 943)	No	305471	6406779	GDA
Whole	37-2-5107	Artefact	MP-006 (HVO-975-77 & 1733)	No	305221	6406755	GDA
Whole	37-2-5108	Artefact / PAD	MP-007 (HVO-872-75, 877 & 906)	No	305734	6406724	GDA
Whole	37-2-5109	Artefact	MP-008 (HVO-901-04)	No	305464	6406650	GDA
Whole	37-2-5110	Artefact	MP-009 (HVO-927-29)	No	305188	6406593	GDA

Whole	37-2-5111	Artefact	MP-010 (HVO-924-26)	No	305208	6406539	GDA
Whole	37-2-5112	Artefact	MP-011 (HVO-921-23)	No	305182	6406454	GDA
Whole	37-2-5113	Artefact	MP-012 (HVO-917-19)	No	305227	6406434	GDA
Whole	37-2-5114	Artefact	MP-013 (HVO-946-48)	No	305374	6406616	GDA
Whole	37-2-5115	Artefact	MP-014 (HVO-898-900)	No	305407	6406533	GDA
Whole	37-2-5116	Artefact	MP-015 (HVO-908-09 & 1734)	No	305557	6406591	GDA
Whole	37-2-5117	Artefact	MP-016 (HVO-869-71)	No	305615	6406567	GDA
Whole	37-2-5118	Artefact	MP-017 (HVO-865-66 & 868)	No	305597	6406500	GDA
Whole	37-2-5119	Artefact	MP-018 (HVO-911-12)	No	305486	6406435	GDA
Whole	37-2-5120	Artefact	MP-019 (HVO-863-64)	No	305603	6406453	GDA

Whole	37-2-5121	Artefact	MP-020 (HVO-880-85)	No	305667	6406425	GDA
Whole	37-2-5122	Artefact / PAD	MP-001 (HVO-934, 953-53, 956-62, 964-66 & 979)	No	305484	6407289	GDA
Whole	37-2-5123	Artefact	MP-022 (HVO-843-44 & 848)	No	305850	6406405	GDA
Whole	37-2-5124	Artefact	MP-023 (HVO-812-13)	No	306025	6406466	GDA
Whole	37-2-5125	Artefact	MP-024 (HVO-859-60)	No	305486	6406298	GDA
Whole	37-2-5126	Artefact	MP-025 (HVO-915-16)	No	305326	6406243	GDA
Whole	37-2-5127	Artefact	MP-026 (HVO-853-56 & 858)	No	305445	6406148	GDA
Whole	37-2-5128	Artefact	MP-027 (HVO-887-89 & 1755)	No	305523	6406187	GDA
Whole	37-2-5129	Artefact	MP-028 (HVO-830-32)	No	305604	6406075	GDA

Whole	37-2-5130	Artefact	MP-029 (HVO-833-35)	No	305701	6406170	GDA
Whole	37-2-5131	Artefact	MP-030 (HVO-836 & 847)	No	305780	6406260	GDA
Whole	37-2-5132	Artefact	MP-031 (HVO-816-19 & 1771)	No	305874	6406216	GDA
Whole	37-2-5133	Artefact	MP-032 (HVO-851-52)	No	305343	6405765	GDA
Whole	37-2-5134	Artefact	MP-033 (HVO-824-25)	No	305596	6405412	GDA
Whole	37-2-5135	Artefact	MP-034 (HVO-797-98)	No	305671	6405382	GDA
Whole	37-2-5136	Artefact	MP-035 (HVO-794-96)	No	305740	6405452	GDA
Whole	37-2-5137	Artefact	MP-036 (HVO-800-01, 803 & 1738)	No	305806	6405358	GDA
Whole	37-2-5138	Artefact	MP-037 (HVO-757-759)	No	305903	6405119	GDA
Whole	37-2-5139	Artefact	MP-038 (HVO-625 & 631)	No	305992	6405124	GDA

Whole	37-2-5140	Artefact	MP-039 (HVO-623-24)	No	306060	6405185	GDA
Whole	37-2-5141	Artefact	MP-040 (HVO-620-21)	No	306034	6405247	GDA
Whole	37-2-5142	Artefact	MP-021 (HVO-861-62)	No	305577	6406394	GDA
Whole	37-2-5143	Artefact	HVO-755	No	305991	6405483	GDA
Whole	37-2-5144	Artefact	HVO-766	No	306335	6405246	GDA
Whole	37-2-5145	Artefact	HVO-750	No	306068	6405731	GDA
Whole	37-2-5146	Artefact	HVO-754	No	306046	6405518	GDA
Whole	37-2-5147	Artefact	HVO-756	No	305939	6405496	GDA
Whole	37-2-5148	Artefact	HVO-778	No	306107	6405871	GDA
Whole	37-2-5149	Artefact	HVO-780	No	306069	6405873	GDA
Whole	37-2-5150	Artefact	HVO-783	No	306134	6406172	GDA
Whole	37-2-5151	Artefact	HVO-782 & 1759	No	306134	6406252	GDA
Whole	37-2-5152	Artefact	HVO-784	No	306081	6406112	GDA
Whole	37-2-5153	Artefact	HVO-785	No	306062	6406018	GDA

Whole	37-2-5154	Artefact	HVO-786	No	305918	6405918	GDA
Whole	37-2-5155	Artefact	HVO-789	No	305891	6405822	GDA
Whole	37-2-5156	Artefact	HVO-793	No	305750	6405538	GDA
Whole	37-2-5157	Artefact	HVO-463	No	306712	6405567	GDA
Whole	37-2-5158	Artefact	HVO-502	No	306957	6405488	GDA
Whole	37-2-5159	Artefact	HVO-506	No	307132	6405798	GDA
Whole	37-2-5160	Artefact	HVO-507	No	307202	6405902	GDA
Whole	37-2-5161	Artefact	HVO-508	No	307251	6406116	GDA
Whole	37-2-5162	Artefact	HVO-509	No	307220	6406103	GDA
Whole	37-2-5163	Artefact	HVO-510 & 1779	No	307163	6406075	GDA
Whole	37-2-5164	Artefact	HVO-511	No	307162	6405999	GDA
Whole	37-2-5165	Artefact	HVO-545	No	307266	6405533	GDA
Whole	37-2-5166	Artefact	HVO-556	No	307316	6405715	GDA
Whole	37-2-5167	Artefact	HVO-557	No	307371	6405769	GDA
Whole	37-2-5168	Artefact	HVO-558	No	307380	6405807	GDA
Whole	37-2-5169	Artefact	HVO-559	No	307299	6405952	GDA

Whole	37-2-5170	Artefact	HVO-567 & 1741	No	306994	6405227	GDA
Whole	37-2-5171	Artefact	HVO-605	No	307220	6405380	GDA
Whole	37-2-5172	Artefact	HVO-606	No	307223	6405342	GDA
Whole	37-2-5173	Artefact	HVO-609	No	307410	6405556	GDA
Whole	37-2-5174	Artefact	HVO-612	No	307401	6405510	GDA
Whole	37-2-5175	Artefact	HVO-619	No	307464	6405706	GDA
Whole	37-2-5176	Artefact	MP-095 (HVO-170-71 & 1745)	No	306468	6404788	GDA
Whole	37-2-5177	Artefact	MP-096 (HVO-154-58)	No	306291	6404812	GDA
Whole	37-2-5179	Artefact	MP-094 (HVO-282-88, 1746 & 1750)	No	306599	6404973	GDA
Whole	37-2-5180	Artefact	HVO-811	No	306032	6406246	GDA
Whole	37-2-5181	Artefact	HVO-814	No	306011	6406377	GDA
Whole	37-2-5182	Artefact	HVO-815	No	305929	6406371	GDA
Whole	37-2-5183	Artefact	HVO-820	No	305858	6406061	GDA
Whole	37-2-5184	Artefact	HVO-821	No	305671	6405844	GDA

Whole	37-2-5185	Artefact	HVO-826	No	305676	6405544	GDA
Whole	37-2-5186	Artefact	HVO-827	No	305485	6405597	GDA
Whole	37-2-5187	Artefact	HVO-828	No	305563	6406026	GDA
Whole	37-2-5188	Artefact	HVO-829	No	305609	6405989	GDA
Whole	37-2-5199	Artefact	MP-093 (HVO-165-69)	No	306555	6404791	GDA
Whole	37-2-5200	Artefact	MP-064 (HVO-440-43)	No	306746	6405498	GDA
Whole	37-2-5201	Artefact	MP-065 (HVO-460-62)	No	306741	6405630	GDA
Whole	37-2-5202	Artefact	MP-066 (HVO-446 & 515-19)	No	306870	6405526	GDA
Whole	37-2-5203	Artefact	MP-067 (HVO-513-14)	No	306943	6405618	GDA
Whole	37-2-5204	Artefact	MP-068 (HVO-449-50)	No	306902	6405791	GDA
Whole	37-2-5205	Artefact	MP-069 (HVO-451-53 & 455)	No	306918	6405857	GDA

Whole	37-2-5206	Artefact	MP-070 (HVO-456-57)	No	306979	6405937	GDA
Whole	37-2-5207	Artefact	MP-071 (HVO-504-05)	No	307051	6405572	GDA
Whole	37-2-5208	Artefact	MP-072 (HVO-498-501)	No	306927	6405409	GDA
Whole	37-2-5209	Artefact	MP-073 (HVO-560-61)	No	307022	6405400	GDA
Whole	37-2-5210	Artefact	MP-074 (HVO-493-97, 562-63 & 1727)	No	306927	6405323	GDA
Whole	37-2-5211	Artefact	MP-075 (HVO-564-66)	No	306928	6405240	GDA
Whole	37-2-5212	Artefact	MP-076 (HVO-536-44)	No	307090	6405275	GDA
Whole	37-2-5213	Artefact	MP-077 (HVO-546-47)	No	307201	6405586	GDA
Whole	37-2-5214	Artefact	MP-078 (HVO-548-49 & 1765)	No	307289	6405583	GDA
Whole	37-2-5218	Artefact	HVO-810	No	306021	6406160	GDA

Whole	37-2-5219	Artefact	MP-063 (HVO-464-65)	No	306679	6405509	GDA
Whole	37-2-5220	Artefact	MP-062 (HVO-433-35)	No	306691	6405399	GDA
Whole	37-2-5221	Artefact	MP-061 (HVO-397-413, 432, 436, 467-70, 524 & 1726)	No	306674	6405351	GDA
Whole	37-2-5222	Artefact	MP-060 (HVO-414-15)	No	306567	6405327	GDA
Whole	37-2-5223	Artefact	MP-046 (HVO-806-09)	No	305862	6405882	GDA
Whole	37-2-5224	Artefact	MP-047 (HVO-774-77, 787-88 & 1723)	No	305992	6405834	GDA
Whole	37-2-5225	Artefact	MP-048 (HVO-749, 779 & 781)	No	306147	6405857	GDA
Whole	37-2-5226	Artefact	MP-049 (HVO-677-78)	No	306379	6405853	GDA
Whole	37-2-5227	Artefact	MP-050 (HVO-742-43 & 1739)	No	306226	6405754	GDA
Whole	37-2-5228	Artefact	MP-051 (HVO-659 & 661-62)	No	306273	6405577	GDA

Whole	37-2-5229	Artefact	MP-052 (HVO-657, 663, 665-71, 683, 687-91 & 694)	No	306351	6405587	GDA
Whole	37-2-5230	Artefact	MP-053 (HVO-692-93)	No	306331	6405471	GDA
Whole	37-2-5231	Artefact	MP-054 (HVO-725-27)	No	306343	6405367	GDA
Whole	37-2-5232	Artefact / PAD	MP-055 (HVO-466, 684-86, 699-02, 704-12, 719-23 & 1695)	No	306486	6405509	GDA
Whole	37-2-5233	Artefact	MP-056 (HVO-428 & 698)	No	306457	6405268	GDA
Whole	37-2-5234	Artefact	MP-057 (HVO-427, 703 & 1763)	No	306502	6405325	GDA
Whole	37-2-5235	Artefact	MP-058 (HVO-299, 303, 305-09 & 1753)	No	306470	6405107	GDA
Whole	37-2-5236	Artefact	MP-059 (HVO-370-96 & 416-26)	No	306610	6405237	GDA
Whole	37-2-5237	Artefact	MP-041 (HVO-729-30 & 764-65)	No	305955	6405325	GDA
Whole	37-2-5238	Artefact	MP-042 (HVO-653-55 & 1762)	No	306137	6405384	GDA

Whole	37-2-5239	Artefact	MP-043 (HVO-753 & 772)	No	305983	6405615	GDA
Whole	37-2-5240	Artefact	MP-044 (HVO-790-91)	No	305861	6405694	GDA
Whole	37-2-5241	Artefact	MP-045 (HVO-804-05)	No	305805	6405857	GDA
Whole	37-2-5242	Artefact	HVO-907	No	305557	6406675	GDA
Whole	37-2-5243	Artefact	HVO-910	No	305491	6406518	GDA
Whole	37-2-5244	Artefact	HVO-913	No	305461	6406345	GDA
Whole	37-2-5245	Artefact	HVO-914	No	305394	6406304	GDA
Whole	37-2-5246	Artefact	HVO-931	No	305451	6406943	GDA
Whole	37-2-5247	Artefact	HVO-935	No	305553	6407047	GDA
Whole	37-2-5248	Artefact	HVO-936	No	305552	6407000	GDA
Whole	37-2-5249	Artefact	HVO-937	No	305505	6406986	GDA
Whole	37-2-5250	Artefact	HVO-938	No	305553	6406931	GDA
Whole	37-2-5251	Artefact	HVO-939	No	305493	6406950	GDA
Whole	37-2-5252	Artefact	HVO-949	No	305321	6406572	GDA

Whole	37-2-5253	Artefact	HVO-837	No	305740	6406351	GDA
Whole	37-2-5254	Artefact	HVO-849 & 1722	No	305693	6406016	GDA
Whole	37-2-5255	Artefact	HVO-848	No	305759	6406177	GDA
Whole	37-2-5256	Artefact	HVO-857	No	305392	6406162	GDA
Whole	37-2-5257	Artefact	HVO-867	No	305555	6406513	GDA
Whole	37-2-5258	Artefact	HVO-850	No	305362	6405806	GDA
Whole	37-2-5259	Artefact	HVO-840	No	305876	6406627	GDA
Whole	37-2-5260	Artefact	HVO-839	No	305879	6406511	GDA
Whole	37-2-5261	Artefact	HVO-897	No	305384	6406468	GDA
Whole	37-2-5262	Artefact	HVO-894	No	305269	6406274	GDA
Whole	37-2-5263	Artefact	HVO-892	No	305241	6406072	GDA
Whole	37-2-5264	Artefact	HVO-886	No	305607	6406304	GDA
Whole	37-2-5265	Artefact	HVO-876	No	305848	6406715	GDA
Whole	37-2-5266	Artefact	HVO-159	No	306024	6404830	GDA
Whole	37-2-5267	Artefact	HVO-160	No	306076	6404745	GDA
Whole	37-2-5268	Artefact	HVO-152	No	306515	6404703	GDA

Whole	37-2-5269	Modified Tree (Carved or Scarred)	HVO-930	No	305326	6406717	GDA
Whole	37-2-5270	Artefact	HVO-950	No	305282	6406477	GDA
Whole	37-2-5271	Artefact	HVO-978	No	305289	6406916	GDA
Whole	37-2-5272	Artefact	HVO-952	No	305467	6407476	GDA
Whole	37-2-5273	Artefact	HVO-955	No	305508	6407481	GDA
Whole	37-2-5274	Artefact	HVO-489	No	306791	6405227	GDA
Whole	37-2-5275	Artefact	HVO-503	No	307021	6405601	GDA
Whole	37-2-5276	Artefact	HVO-512	No	306951	6405674	GDA
Whole	37-2-5277	Artefact	HVO-841	No	305919	6406488	GDA
Whole	37-2-5278	Artefact	HVO-611 & 1764	No	307318	6405494	GDA
Whole	37-2-5280	Artefact	HVO-638	No	306158	6405095	GDA
Whole	37-2-5281	Artefact	HVO-639	No	306166	6405095	GDA
Whole	37-2-5282	Artefact	HVO-640	No	306171	6405092	GDA
Whole	37-2-5283	Artefact	HVO-651	No	306071	6405251	GDA
Whole	37-2-5284	Artefact	HVO-658	No	306242	6405518	GDA
Whole	37-2-5285	Artefact	HVO-660	No	306260	6405619	GDA

Whole	37-2-5286	Artefact	HVO-672	No	306331	6405697	GDA
Whole	37-2-5287	Artefact	HVO-673	No	306347	6405737	GDA
Whole	37-2-5288	Artefact	HVO-674	No	306295	6405765	GDA
Whole	37-2-5289	Artefact	HVO-675	No	306360	6405778	GDA
Whole	37-2-5290	Artefact	HVO-676	No	306328	6405800	GDA
Whole	37-2-5291	Artefact	HVO-679	No	306569	6406034	GDA
Whole	37-2-5292	Artefact	HVO-680	No	306567	6405924	GDA
Whole	37-2-5293	Artefact	HVO-681	No	306493	6405823	GDA
Whole	37-2-5294	Artefact	HVO-682	No	306439	6405742	GDA
Whole	37-2-5295	Artefact	HVO-695	No	306259	6405424	GDA
Whole	37-2-5296	Artefact	HVO-696	No	306249	6405356	GDA
Whole	37-2-5297	Artefact	HVO-713	No	306647	6405670	GDA
Whole	37-2-5298	Artefact	HVO-715	No	306758	6405918	GDA
Whole	37-2-5299	Artefact	HVO-716	No	306818	6405994	GDA
Whole	37-2-5300	Artefact	HVO-718	No	306519	6405683	GDA
Whole	37-2-5301	Artefact	HVO-724	No	306345	6405419	GDA

Whole	37-2-5302	Artefact	HVO-728	No	306302	6405348	GDA
Whole	37-2-5303	Artefact	HVO-731	No	306304	6405300	GDA
Whole	37-2-5304	Artefact	HVO-732	No	306011	6405339	GDA
Whole	37-2-5305	Artefact	HVO-734	No	306091	6405453	GDA
Whole	37-2-5306	Artefact	HVO-736	No	306167	6405550	GDA
Whole	37-2-5307	Artefact	HVO-738	No	306190	6405622	GDA
Whole	37-2-5308	Artefact	HVO-739	No	306180	6405685	GDA
Whole	37-2-5309	Artefact	HVO-740	No	306169	6405720	GDA
Whole	37-2-5310	Artefact	HVO-741	No	306230	6405714	GDA
Whole	37-2-5311	Artefact	HVO-744	No	306248	6405794	GDA
Whole	37-2-5312	Artefact	HVO-745	No	306199	6405825	GDA
Whole	37-2-5313	Artefact	HVO-746	No	306298	6405943	GDA
Whole	37-2-5314	Artefact	HVO-748 & 1737	No	306192	6405867	GDA
Whole	37-2-5317	Artefact	HVO-714	No	306737	6405801	GDA
Whole	37-2-5318	Artefact	HVO-697	No	306209	6405292	GDA
Whole	37-2-5319	Artefact	HVO-664	No	306255	6405661	GDA

Whole	37-2-5320	Artefact	HVO-656	No	306219	6405495	GDA
Whole	37-2-5321	Artefact	HVO-652	No	306068	6405314	GDA
Whole	37-2-5322	Artefact	HVO-972	No	306260	6405127	GDA
Whole	37-2-5325	Artefact	HVO-610	No	307363	6405573	GDA
Whole	37-2-5326	Artefact	HVO-717	No	306736	6406142	GDA
Whole	37-2-5327	Artefact	HVO-737	No	306122	6405586	GDA
Whole	37-2-5328	Artefact	HVO-747	No	306283	6406061	GDA
Whole	37-2-5329	Artefact	HVO-735	No	306123	6405529	GDA
Whole	37-2-5330	Artefact	HVO-967	No	306251	6405034	GDA
Whole	37-2-5331	Artefact	HVO-963	No	305596	6407417	GDA
Whole	37-2-5332	Artefact	HVO-951	No	305487	6407533	GDA
Whole	37-2-5333	Artefact	HVO-893 & 1756	No	305254	6406206	GDA
Whole	37-2-5334	Artefact	HVO-890	No	305523	6406116	GDA
Whole	37-2-5335	Artefact	HVO-878	No	305753	6406555	GDA
Whole	37-2-5336	Artefact	HVO-842	No	305929	6406446	GDA
Whole	37-2-5337	Artefact	HVO-535	No	307050	6405226	GDA

Whole	37-2-5338	Artefact	HVO-799	No	305713	6405248	GDA
Whole	37-2-5339	Artefact	HVO-1758	No	306095	6406333	GDA
Whole	37-2-5340	Artefact	HVO-1757	No	306025	6406198	GDA
Whole	37-2-5341	Artefact	HVO-1754	No	305977	6406242	GDA
Whole	37-2-5342	Artefact	HVO-1747	No	306342	6404843	GDA
Whole	37-2-5343	Artefact	HVO-1740	No	307177	6405177	GDA
Whole	37-2-5344	Artefact	HVO-1736	No	306152	6405768	GDA
Whole	37-2-5345	Artefact	HVO-1735	No	305740	6406407	GDA
Whole	37-2-5346	Artefact	HVO-1732	No	305526	6406648	GDA
Whole	37-2-5347	Artefact	HVO-1731	No	305552	6406632	GDA
Whole	37-2-5348	Artefact	HVO-1730	No	305608	6406612	GDA
Whole	37-2-5349	Artefact	HVO-1729	No	306918	6405717	GDA
Whole	37-2-5350	Artefact	HVO-1728	No	307080	6405944	GDA
Whole	37-2-5351	Artefact	HVO-1725	No	306713	6405123	GDA
Whole	37-2-5352	Artefact	HVO-1721	No	305517	6405908	GDA
Whole	37-2-5353	Artefact	HVO-1719	No	305343	6406045	GDA

Whole	37-2-5354	Artefact	HVO-1718	No	305336	6407021	GDA
Whole	37-2-5355	Artefact	HVO-1716	No	305572	6406730	GDA
Whole	37-2-5356	Artefact	HVO-1715	No	305857	6406676	GDA
Whole	37-2-5357	Artefact	HVO-1714	No	305360	6406792	GDA
Whole	37-2-5358	Artefact	HVO-1724	No	305841	6405502	GDA
Whole	37-2-5359	Artefact	HVO-1720	No	305522	6406074	GDA
Whole	37-2-5371	Artefact	HVO-1778	No	307428	6406099	GDA
Whole	37-2-5372	Artefact	HVO-1777	No	307119	6406198	GDA
Whole	37-2-5373	Artefact	HVO-1776	No	306189	6406439	GDA
Whole	37-2-5374	Artefact	HVO-1775	No	306283	6406138	GDA
Whole	37-2-5375	Artefact	HVO-1774	No	305624	6407056	GDA
Whole	37-2-5376	Artefact	HVO-1773	No	306258	6405834	GDA
Whole	37-2-5377	Artefact	HVO-1772	No	306174	6406077	GDA
Whole	37-2-5378	Artefact	HVO-1770	No	306034	6406427	GDA
Whole	37-2-5379	Artefact	HVO-1769	No	307405	6405834	GDA
Whole	37-2-5380	Artefact	HVO-1768	No	307105	6405618	GDA

Whole	37-2-5381	Artefact	HVO-1767	No	307014	6405514	GDA
Whole	37-2-5382	Artefact	HVO-1766	No	307093	6405560	GDA
Whole	37-2-5383	Artefact	HVO-1761	No	305501	6406232	GDA

Schedule C: Aboriginal objects which may be harmed through the proposed works

The Aboriginal objects described in this schedule may be harmed, but only in accordance with the conditions of this AHIP (excluding any Aboriginal objects described in Schedule A).

C1 Harm of Aboriginal objects identified on AHIMS

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	37-2-0777	Artefact	HC1 (HVO-879 & 1697)	No	305798	6406475	GDA
Whole	37-2-0778	Artefact	HC2 (HVO-845-46 & 1696)	No	305821	6406335	GDA
Whole	37-2-0779	Artefact	HC3 (HVO-895-96 & 920)	No	305305	6406339	GDA
Whole	37-2-0780	Artefact	HC4 (HVO-891)	No	305446	6405865	GDA
Whole	37-2-0781	Artefact	HC5 (HVO-1760)	No	305955	6406039	GDA
Whole	37-2-0782	Artefact	HC6 (HVO-1698)	No	305764	6405799	GDA
Whole	37-2-0783	Artefact	HC7 (HVO-751-53)	No	306025	6405681	GDA

Whole	37-2-0784	Artefact	HC8 (HVO-733)	No	306045	6405419	GDA
Whole	37-2-0785	Artefact	HC9 (HVO-792 & 822-23)	No	305735	6405659	GDA
Whole	37-2-0786	Artefact	HC10 (HVO-761-63 & 802)	No	305855	6405289	GDA
Whole	37-2-0787	Artefact	HC11 (HVO-622)	No	305955	6405209	GDA
Whole	37-2-0788	Artefact	HC12 (HVO-429-31)	No	306415	6405209	GDA
Whole	37-2-0789	Artefact	HC13 (HVO-647-50)	No	306115	6405249	GDA
Whole	37-2-0790	Artefact	HC14 (HVO-767-78)	No	306329	6405211	GDA
Whole	37-2-0791	Artefact	HC15 (HVO-172-80, 253-65, 289-98, 298, 300-02, 304, 311-22, 324-337, 362-65, 626-30, 632, 634-37, 641-46, 760, 769-71, 968-71, 973-74, 1743-44, 1748 & 1751-52)	No	306505	6405009	GDA

Whole	37-2-0792	Artefact	HC16 (HVO-323, 471-88 & 573-74)	No	306865	6405189	GDA
Whole	37-2-0793	Artefact	HC17 (HVO-437-39, 444, 490-92, 520-23)	No	306815	6405349	GDA
Whole	37-2-0794	Artefact	HC18 (HVO-223-24, 525-34, 568-72 & 1742)	No	307355	6404979	GDA
Whole	37-2-0795	Artefact	HC19 (HVO-550-55)	No	307315	6405679	GDA
Whole	37-2-5074	Artefact	HVO-153	No	306308	6404757	GDA
Whole	37-2-5075	Artefact	HVO-161	No	306215	6404701	GDA
Whole	37-2-5076	Artefact	HVO-162	No	306640	6404529	GDA
Whole	37-2-5079	Artefact	HVO-222	No	307025	6404955	GDA
Whole	37-2-5089	Artefact	HVO-310	No	306559	6405142	GDA
Whole	37-2-5094	Artefact	HVO-366	No	306778	6404872	GDA
Whole	37-2-5095	Artefact	HVO-367	No	306703	6404871	GDA
Whole	37-2-5096	Artefact	HVO-368 & 1749	No	306661	6404986	GDA
Whole	37-2-5097	Artefact	HVO-445	No	306765	6405559	GDA
Whole	37-2-5098	Artefact	HVO-447	No	306864	6405620	GDA

Whole	37-2-5099	Artefact	HVO-448	No	306858	6405777	GDA
Whole	37-2-5100	Artefact	HVO-454	No	306974	6405833	GDA
Whole	37-2-5101	Artefact	HVO-458	No	307002	6405979	GDA
Whole	37-2-5102	Artefact	HVO-459	No	306857	6405881	GDA
Whole	37-2-5103	Artefact	MP-002 (HVO-932-33)	No	305415	6406992	GDA
Whole	37-2-5104	Artefact	MP-003 (HVO-940-942 & 1717)	No	305461	6406841	GDA
Whole	37-2-5105	Artefact	MP-004 (HVO-944-45)	No	305404	6406779	GDA
Whole	37-2-5106	Artefact	MP-005 (HVO-905 & 943)	No	305471	6406779	GDA
Whole	37-2-5107	Artefact	MP-006 (HVO-975-77 & 1733)	No	305221	6406755	GDA
Whole	37-2-5108	Artefact / PAD	MP-007 (HVO-872-75, 877 & 906)	No	305734	6406724	GDA
Whole	37-2-5109	Artefact	MP-008 (HVO-901-04)	No	305464	6406650	GDA

Whole	37-2-5110	Artefact	MP-009 (HVO-927-29)	No	305188	6406593	GDA
Whole	37-2-5111	Artefact	MP-010 (HVO-924-26)	No	305208	6406539	GDA
Whole	37-2-5112	Artefact	MP-011 (HVO-921-23)	No	305182	6406454	GDA
Whole	37-2-5113	Artefact	MP-012 (HVO-917-19)	No	305227	6406434	GDA
Whole	37-2-5114	Artefact	MP-013 (HVO-946-48)	No	305374	6406616	GDA
Whole	37-2-5115	Artefact	MP-014 (HVO-898-900)	No	305407	6406533	GDA
Whole	37-2-5116	Artefact	MP-015 (HVO-908-09 & 1734)	No	305557	6406591	GDA
Whole	37-2-5117	Artefact	MP-016 (HVO-869-71)	No	305615	6406567	GDA
Whole	37-2-5118	Artefact	MP-017 (HVO-865-66 & 868)	No	305597	6406500	GDA
Whole	37-2-5119	Artefact	MP-018 (HVO-911-12)	No	305486	6406435	GDA

Whole	37-2-5120	Artefact	MP-019 (HVO-863-64)	No	305603	6406453	GDA
Whole	37-2-5121	Artefact	MP-020 (HVO-880-85)	No	305667	6406425	GDA
Whole	37-2-5122	Artefact / PAD	MP-001 (HVO-934, 953-53, 956-62, 964-66 & 979)	No	305484	6407289	GDA
Whole	37-2-5123	Artefact	MP-022 (HVO-843-44 & 848)	No	305850	6406405	GDA
Whole	37-2-5124	Artefact	MP-023 (HVO-812-13)	No	306025	6406466	GDA
Whole	37-2-5125	Artefact	MP-024 (HVO-859-60)	No	305486	6406298	GDA
Whole	37-2-5126	Artefact	MP-025 (HVO-915-16)	No	305326	6406243	GDA
Whole	37-2-5127	Artefact	MP-026 (HVO-853-56 & 858)	No	305445	6406148	GDA
Whole	37-2-5128	Artefact	MP-027 (HVO-887-89 & 1755)	No	305523	6406187	GDA

Whole	37-2-5129	Artefact	MP-028 (HVO-830-32)	No	305604	6406075	GDA
Whole	37-2-5130	Artefact	MP-029 (HVO-833-35)	No	305701	6406170	GDA
Whole	37-2-5131	Artefact	MP-030 (HVO-836 & 847)	No	305780	6406260	GDA
Whole	37-2-5132	Artefact	MP-031 (HVO-816-19 & 1771)	No	305874	6406216	GDA
Whole	37-2-5133	Artefact	MP-032 (HVO-851-52)	No	305343	6405765	GDA
Whole	37-2-5134	Artefact	MP-033 (HVO-824-25)	No	305596	6405412	GDA
Whole	37-2-5135	Artefact	MP-034 (HVO-797-98)	No	305671	6405382	GDA
Whole	37-2-5136	Artefact	MP-035 (HVO-794-96)	No	305740	6405452	GDA
Whole	37-2-5137	Artefact	MP-036 (HVO-800-01, 803 & 1738)	No	305806	6405358	GDA
Whole	37-2-5138	Artefact	MP-037 (HVO-757-759)	No	305903	6405119	GDA

Whole	37-2-5139	Artefact	MP-038 (HVO-625 & 631)	No	305992	6405124	GDA
Whole	37-2-5140	Artefact	MP-039 (HVO-623-24)	No	306060	6405185	GDA
Whole	37-2-5141	Artefact	MP-040 (HVO-620-21)	No	306034	6405247	GDA
Whole	37-2-5142	Artefact	MP-021 (HVO-861-62)	No	305577	6406394	GDA
Whole	37-2-5143	Artefact	HVO-755	No	305991	6405483	GDA
Whole	37-2-5144	Artefact	HVO-766	No	306335	6405246	GDA
Whole	37-2-5145	Artefact	HVO-750	No	306068	6405731	GDA
Whole	37-2-5146	Artefact	HVO-754	No	306046	6405518	GDA
Whole	37-2-5147	Artefact	HVO-756	No	305939	6405496	GDA
Whole	37-2-5148	Artefact	HVO-778	No	306107	6405871	GDA
Whole	37-2-5149	Artefact	HVO-780	No	306069	6405873	GDA
Whole	37-2-5150	Artefact	HVO-783	No	306134	6406172	GDA
Whole	37-2-5151	Artefact	HVO-782 & 1759	No	306134	6406252	GDA
Whole	37-2-5152	Artefact	HVO-784	No	306081	6406112	GDA

Whole	37-2-5153	Artefact	HVO-785	No	306062	6406018	GDA
Whole	37-2-5154	Artefact	HVO-786	No	305918	6405918	GDA
Whole	37-2-5155	Artefact	HVO-789	No	305891	6405822	GDA
Whole	37-2-5156	Artefact	HVO-793	No	305750	6405538	GDA
Whole	37-2-5157	Artefact	HVO-463	No	306712	6405567	GDA
Whole	37-2-5158	Artefact	HVO-502	No	306957	6405488	GDA
Whole	37-2-5159	Artefact	HVO-506	No	307132	6405798	GDA
Whole	37-2-5160	Artefact	HVO-507	No	307202	6405902	GDA
Whole	37-2-5161	Artefact	HVO-508	No	307251	6406116	GDA
Whole	37-2-5162	Artefact	HVO-509	No	307220	6406103	GDA
Whole	37-2-5163	Artefact	HVO-510 & 1779	No	307163	6406075	GDA
Whole	37-2-5164	Artefact	HVO-511	No	307162	6405999	GDA
Whole	37-2-5165	Artefact	HVO-545	No	307266	6405533	GDA
Whole	37-2-5166	Artefact	HVO-556	No	307316	6405715	GDA
Whole	37-2-5167	Artefact	HVO-557	No	307371	6405769	GDA
Whole	37-2-5168	Artefact	HVO-558	No	307380	6405807	GDA

Whole	37-2-5169	Artefact	HVO-559	No	307299	6405952	GDA
Whole	37-2-5170	Artefact	HVO-567 & 1741	No	306994	6405227	GDA
Whole	37-2-5171	Artefact	HVO-605	No	307220	6405380	GDA
Whole	37-2-5172	Artefact	HVO-606	No	307223	6405342	GDA
Whole	37-2-5173	Artefact	HVO-609	No	307410	6405556	GDA
Whole	37-2-5174	Artefact	HVO-612	No	307401	6405510	GDA
Whole	37-2-5175	Artefact	HVO-619	No	307464	6405706	GDA
Whole	37-2-5176	Artefact	MP-095 (HVO-170-71 & 1745)	No	306468	6404788	GDA
Whole	37-2-5177	Artefact	MP-096 (HVO-154-58)	No	306291	6404812	GDA
Whole	37-2-5179	Artefact	MP-094 (HVO-282-88, 1746 & 1750)	No	306599	6404973	GDA
Whole	37-2-5180	Artefact	HVO-811	No	306032	6406246	GDA
Whole	37-2-5181	Artefact	HVO-814	No	306011	6406377	GDA
Whole	37-2-5182	Artefact	HVO-815	No	305929	6406371	GDA
Whole	37-2-5183	Artefact	HVO-820	No	305858	6406061	GDA

Whole	37-2-5184	Artefact	HVO-821	No	305671	6405844	GDA
Whole	37-2-5185	Artefact	HVO-826	No	305676	6405544	GDA
Whole	37-2-5186	Artefact	HVO-827	No	305485	6405597	GDA
Whole	37-2-5187	Artefact	HVO-828	No	305563	6406026	GDA
Whole	37-2-5188	Artefact	HVO-829	No	305609	6405989	GDA
Whole	37-2-5199	Artefact	MP-093 (HVO-165-69)	No	306555	6404791	GDA
Whole	37-2-5200	Artefact	MP-064 (HVO-440-43)	No	306746	6405498	GDA
Whole	37-2-5201	Artefact	MP-065 (HVO-460-62)	No	306741	6405630	GDA
Whole	37-2-5202	Artefact	MP-066 (HVO-446 & 515-19)	No	306870	6405526	GDA
Whole	37-2-5203	Artefact	MP-067 (HVO-513-14)	No	306943	6405618	GDA
Whole	37-2-5204	Artefact	MP-068 (HVO-449-50)	No	306902	6405791	GDA
Whole	37-2-5205	Artefact	MP-069 (HVO-451-53 & 455)	No	306918	6405857	GDA

Whole	37-2-5206	Artefact	MP-070 (HVO-456-57)	No	306979	6405937	GDA
Whole	37-2-5207	Artefact	MP-071 (HVO-504-05)	No	307051	6405572	GDA
Whole	37-2-5208	Artefact	MP-072 (HVO-498-501)	No	306927	6405409	GDA
Whole	37-2-5209	Artefact	MP-073 (HVO-560-61)	No	307022	6405400	GDA
Whole	37-2-5210	Artefact	MP-074 (HVO-493-97, 562-63 & 1727)	No	306927	6405323	GDA
Whole	37-2-5211	Artefact	MP-075 (HVO-564-66)	No	306928	6405240	GDA
Whole	37-2-5212	Artefact	MP-076 (HVO-536-44)	No	307090	6405275	GDA
Whole	37-2-5213	Artefact	MP-077 (HVO-546-47)	No	307201	6405586	GDA
Whole	37-2-5214	Artefact	MP-078 (HVO-548-49 & 1765)	No	307289	6405583	GDA
Whole	37-2-5218	Artefact	HVO-810	No	306021	6406160	GDA

Whole	37-2-5219	Artefact	MP-063 (HVO-464-65)	No	306679	6405509	GDA
Whole	37-2-5220	Artefact	MP-062 (HVO-433-35)	No	306691	6405399	GDA
Whole	37-2-5221	Artefact	MP-061 (HVO-397-413, 432, 436, 467-70, 524 & 1726)	No	306674	6405351	GDA
Whole	37-2-5222	Artefact	MP-060 (HVO-414-15)	No	306567	6405327	GDA
Whole	37-2-5223	Artefact	MP-046 (HVO-806-09)	No	305862	6405882	GDA
Whole	37-2-5224	Artefact	MP-047 (HVO-774-77, 787-88 & 1723)	No	305992	6405834	GDA
Whole	37-2-5225	Artefact	MP-048 (HVO-749, 779 & 781)	No	306147	6405857	GDA
Whole	37-2-5226	Artefact	MP-049 (HVO-677-78)	No	306379	6405853	GDA
Whole	37-2-5227	Artefact	MP-050 (HVO-742-43 & 1739)	No	306226	6405754	GDA
Whole	37-2-5228	Artefact	MP-051 (HVO-659 & 661-62)	No	306273	6405577	GDA

Whole	37-2-5229	Artefact	MP-052 (HVO-657, 663, 665-71, 683, 687-91 & 694)	No	306351	6405587	GDA
Whole	37-2-5230	Artefact	MP-053 (HVO-692-93)	No	306331	6405471	GDA
Whole	37-2-5231	Artefact	MP-054 (HVO-725-27)	No	306343	6405367	GDA
Whole	37-2-5232	Artefact / PAD	MP-055 (HVO-466, 684-86, 699-02, 704-12, 719-23 & 1695)	No	306486	6405509	GDA
Whole	37-2-5233	Artefact	MP-056 (HVO-428 & 698)	No	306457	6405268	GDA
Whole	37-2-5234	Artefact	MP-057 (HVO-427, 703 & 1763)	No	306502	6405325	GDA
Whole	37-2-5235	Artefact	MP-058 (HVO-299, 303, 305-09 & 1753)	No	306470	6405107	GDA
Whole	37-2-5236	Artefact	MP-059 (HVO-370-96 & 416-26)	No	306610	6405237	GDA
Whole	37-2-5237	Artefact	MP-041 (HVO-729-30 & 764-65)	No	305955	6405325	GDA
Whole	37-2-5238	Artefact	MP-042 (HVO-653-55 & 1762)	No	306137	6405384	GDA

Whole	37-2-5239	Artefact	MP-043 (HVO-753 & 772)	No	305983	6405615	GDA
Whole	37-2-5240	Artefact	MP-044 (HVO-790-91)	No	305861	6405694	GDA
Whole	37-2-5241	Artefact	MP-045 (HVO-804-05)	No	305805	6405857	GDA
Whole	37-2-5242	Artefact	HVO-907	No	305557	6406675	GDA
Whole	37-2-5243	Artefact	HVO-910	No	305491	6406518	GDA
Whole	37-2-5244	Artefact	HVO-913	No	305461	6406345	GDA
Whole	37-2-5245	Artefact	HVO-914	No	305394	6406304	GDA
Whole	37-2-5246	Artefact	HVO-931	No	305451	6406943	GDA
Whole	37-2-5247	Artefact	HVO-935	No	305553	6407047	GDA
Whole	37-2-5248	Artefact	HVO-936	No	305552	6407000	GDA
Whole	37-2-5249	Artefact	HVO-937	No	305505	6406986	GDA
Whole	37-2-5250	Artefact	HVO-938	No	305553	6406931	GDA
Whole	37-2-5251	Artefact	HVO-939	No	305493	6406950	GDA
Whole	37-2-5252	Artefact	HVO-949	No	305321	6406572	GDA

Whole	37-2-5253	Artefact	HVO-837	No	305740	6406351	GDA
Whole	37-2-5254	Artefact	HVO-849 & 1722	No	305693	6406016	GDA
Whole	37-2-5255	Artefact	HVO-848	No	305759	6406177	GDA
Whole	37-2-5256	Artefact	HVO-857	No	305392	6406162	GDA
Whole	37-2-5257	Artefact	HVO-867	No	305555	6406513	GDA
Whole	37-2-5258	Artefact	HVO-850	No	305362	6405806	GDA
Whole	37-2-5259	Artefact	HVO-840	No	305876	6406627	GDA
Whole	37-2-5260	Artefact	HVO-839	No	305879	6406511	GDA
Whole	37-2-5261	Artefact	HVO-897	No	305384	6406468	GDA
Whole	37-2-5262	Artefact	HVO-894	No	305269	6406274	GDA
Whole	37-2-5263	Artefact	HVO-892	No	305241	6406072	GDA
Whole	37-2-5264	Artefact	HVO-886	No	305607	6406304	GDA
Whole	37-2-5265	Artefact	HVO-876	No	305848	6406715	GDA
Whole	37-2-5266	Artefact	HVO-159	No	306024	6404830	GDA
Whole	37-2-5267	Artefact	HVO-160	No	306076	6404745	GDA
Whole	37-2-5268	Artefact	HVO-152	No	306515	6404703	GDA

Whole	37-2-5269	Modified Tree (Carved or Scarred)	HVO-930	No	305326	6406717	GDA
Whole	37-2-5270	Artefact	HVO-950	No	305282	6406477	GDA
Whole	37-2-5271	Artefact	HVO-978	No	305289	6406916	GDA
Whole	37-2-5272	Artefact	HVO-952	No	305467	6407476	GDA
Whole	37-2-5273	Artefact	HVO-955	No	305508	6407481	GDA
Whole	37-2-5274	Artefact	HVO-489	No	306791	6405227	GDA
Whole	37-2-5275	Artefact	HVO-503	No	307021	6405601	GDA
Whole	37-2-5276	Artefact	HVO-512	No	306951	6405674	GDA
Whole	37-2-5277	Artefact	HVO-841	No	305919	6406488	GDA
Whole	37-2-5278	Artefact	HVO-611 & 1764	No	307318	6405494	GDA
Whole	37-2-5280	Artefact	HVO-638	No	306158	6405095	GDA
Whole	37-2-5281	Artefact	HVO-639	No	306166	6405095	GDA
Whole	37-2-5282	Artefact	HVO-640	No	306171	6405092	GDA
Whole	37-2-5283	Artefact	HVO-651	No	306071	6405251	GDA
Whole	37-2-5284	Artefact	HVO-658	No	306242	6405518	GDA
Whole	37-2-5285	Artefact	HVO-660	No	306260	6405619	GDA

Whole	37-2-5286	Artefact	HVO-672	No	306331	6405697	GDA
Whole	37-2-5287	Artefact	HVO-673	No	306347	6405737	GDA
Whole	37-2-5288	Artefact	HVO-674	No	306295	6405765	GDA
Whole	37-2-5289	Artefact	HVO-675	No	306360	6405778	GDA
Whole	37-2-5290	Artefact	HVO-676	No	306328	6405800	GDA
Whole	37-2-5291	Artefact	HVO-679	No	306569	6406034	GDA
Whole	37-2-5292	Artefact	HVO-680	No	306567	6405924	GDA
Whole	37-2-5293	Artefact	HVO-681	No	306493	6405823	GDA
Whole	37-2-5294	Artefact	HVO-682	No	306439	6405742	GDA
Whole	37-2-5295	Artefact	HVO-695	No	306259	6405424	GDA
Whole	37-2-5296	Artefact	HVO-696	No	306249	6405356	GDA
Whole	37-2-5297	Artefact	HVO-713	No	306647	6405670	GDA
Whole	37-2-5298	Artefact	HVO-715	No	306758	6405918	GDA
Whole	37-2-5299	Artefact	HVO-716	No	306818	6405994	GDA
Whole	37-2-5300	Artefact	HVO-718	No	306519	6405683	GDA
Whole	37-2-5301	Artefact	HVO-724	No	306345	6405419	GDA

Whole	37-2-5302	Artefact	HVO-728	No	306302	6405348	GDA
Whole	37-2-5303	Artefact	HVO-731	No	306304	6405300	GDA
Whole	37-2-5304	Artefact	HVO-732	No	306011	6405339	GDA
Whole	37-2-5305	Artefact	HVO-734	No	306091	6405453	GDA
Whole	37-2-5306	Artefact	HVO-736	No	306167	6405550	GDA
Whole	37-2-5307	Artefact	HVO-738	No	306190	6405622	GDA
Whole	37-2-5308	Artefact	HVO-739	No	306180	6405685	GDA
Whole	37-2-5309	Artefact	HVO-740	No	306169	6405720	GDA
Whole	37-2-5310	Artefact	HVO-741	No	306230	6405714	GDA
Whole	37-2-5311	Artefact	HVO-744	No	306248	6405794	GDA
Whole	37-2-5312	Artefact	HVO-745	No	306199	6405825	GDA
Whole	37-2-5313	Artefact	HVO-746	No	306298	6405943	GDA
Whole	37-2-5314	Artefact	HVO-748 & 1737	No	306192	6405867	GDA
Whole	37-2-5317	Artefact	HVO-714	No	306737	6405801	GDA
Whole	37-2-5318	Artefact	HVO-697	No	306209	6405292	GDA
Whole	37-2-5319	Artefact	HVO-664	No	306255	6405661	GDA

Whole	37-2-5320	Artefact	HVO-656	No	306219	6405495	GDA
Whole	37-2-5321	Artefact	HVO-652	No	306068	6405314	GDA
Whole	37-2-5322	Artefact	HVO-972	No	306260	6405127	GDA
Whole	37-2-5325	Artefact	HVO-610	No	307363	6405573	GDA
Whole	37-2-5326	Artefact	HVO-717	No	306736	6406142	GDA
Whole	37-2-5327	Artefact	HVO-737	No	306122	6405586	GDA
Whole	37-2-5328	Artefact	HVO-747	No	306283	6406061	GDA
Whole	37-2-5329	Artefact	HVO-735	No	306123	6405529	GDA
Whole	37-2-5330	Artefact	HVO-967	No	306251	6405034	GDA
Whole	37-2-5331	Artefact	HVO-963	No	305596	6407417	GDA
Whole	37-2-5332	Artefact	HVO-951	No	305487	6407533	GDA
Whole	37-2-5333	Artefact	HVO-893 & 1756	No	305254	6406206	GDA
Whole	37-2-5334	Artefact	HVO-890	No	305523	6406116	GDA
Whole	37-2-5335	Artefact	HVO-878	No	305753	6406555	GDA
Whole	37-2-5336	Artefact	HVO-842	No	305929	6406446	GDA
Whole	37-2-5337	Artefact	HVO-535	No	307050	6405226	GDA

Whole	37-2-5338	Artefact	HVO-799	No	305713	6405248	GDA
Whole	37-2-5339	Artefact	HVO-1758	No	306095	6406333	GDA
Whole	37-2-5340	Artefact	HVO-1757	No	306025	6406198	GDA
Whole	37-2-5341	Artefact	HVO-1754	No	305977	6406242	GDA
Whole	37-2-5342	Artefact	HVO-1747	No	306342	6404843	GDA
Whole	37-2-5343	Artefact	HVO-1740	No	307177	6405177	GDA
Whole	37-2-5344	Artefact	HVO-1736	No	306152	6405768	GDA
Whole	37-2-5345	Artefact	HVO-1735	No	305740	6406407	GDA
Whole	37-2-5346	Artefact	HVO-1732	No	305526	6406648	GDA
Whole	37-2-5347	Artefact	HVO-1731	No	305552	6406632	GDA
Whole	37-2-5348	Artefact	HVO-1730	No	305608	6406612	GDA
Whole	37-2-5349	Artefact	HVO-1729	No	306918	6405717	GDA
Whole	37-2-5350	Artefact	HVO-1728	No	307080	6405944	GDA
Whole	37-2-5351	Artefact	HVO-1725	No	306713	6405123	GDA
Whole	37-2-5352	Artefact	HVO-1721	No	305517	6405908	GDA
Whole	37-2-5353	Artefact	HVO-1719	No	305343	6406045	GDA

Whole	37-2-5354	Artefact	HVO-1718	No	305336	6407021	GDA
Whole	37-2-5355	Artefact	HVO-1716	No	305572	6406730	GDA
Whole	37-2-5356	Artefact	HVO-1715	No	305857	6406676	GDA
Whole	37-2-5357	Artefact	HVO-1714	No	305360	6406792	GDA
Whole	37-2-5358	Artefact	HVO-1724	No	305841	6405502	GDA
Whole	37-2-5359	Artefact	HVO-1720	No	305522	6406074	GDA
Whole	37-2-5371	Artefact	HVO-1778	No	307428	6406099	GDA
Whole	37-2-5372	Artefact	HVO-1777	No	307119	6406198	GDA
Whole	37-2-5373	Artefact	HVO-1776	No	306189	6406439	GDA
Whole	37-2-5374	Artefact	HVO-1775	No	306283	6406138	GDA
Whole	37-2-5375	Artefact	HVO-1774	No	305624	6407056	GDA
Whole	37-2-5376	Artefact	HVO-1773	No	306258	6405834	GDA
Whole	37-2-5377	Artefact	HVO-1772	No	306174	6406077	GDA
Whole	37-2-5378	Artefact	HVO-1770	No	306034	6406427	GDA
Whole	37-2-5379	Artefact	HVO-1769	No	307405	6405834	GDA
Whole	37-2-5380	Artefact	HVO-1768	No	307105	6405618	GDA

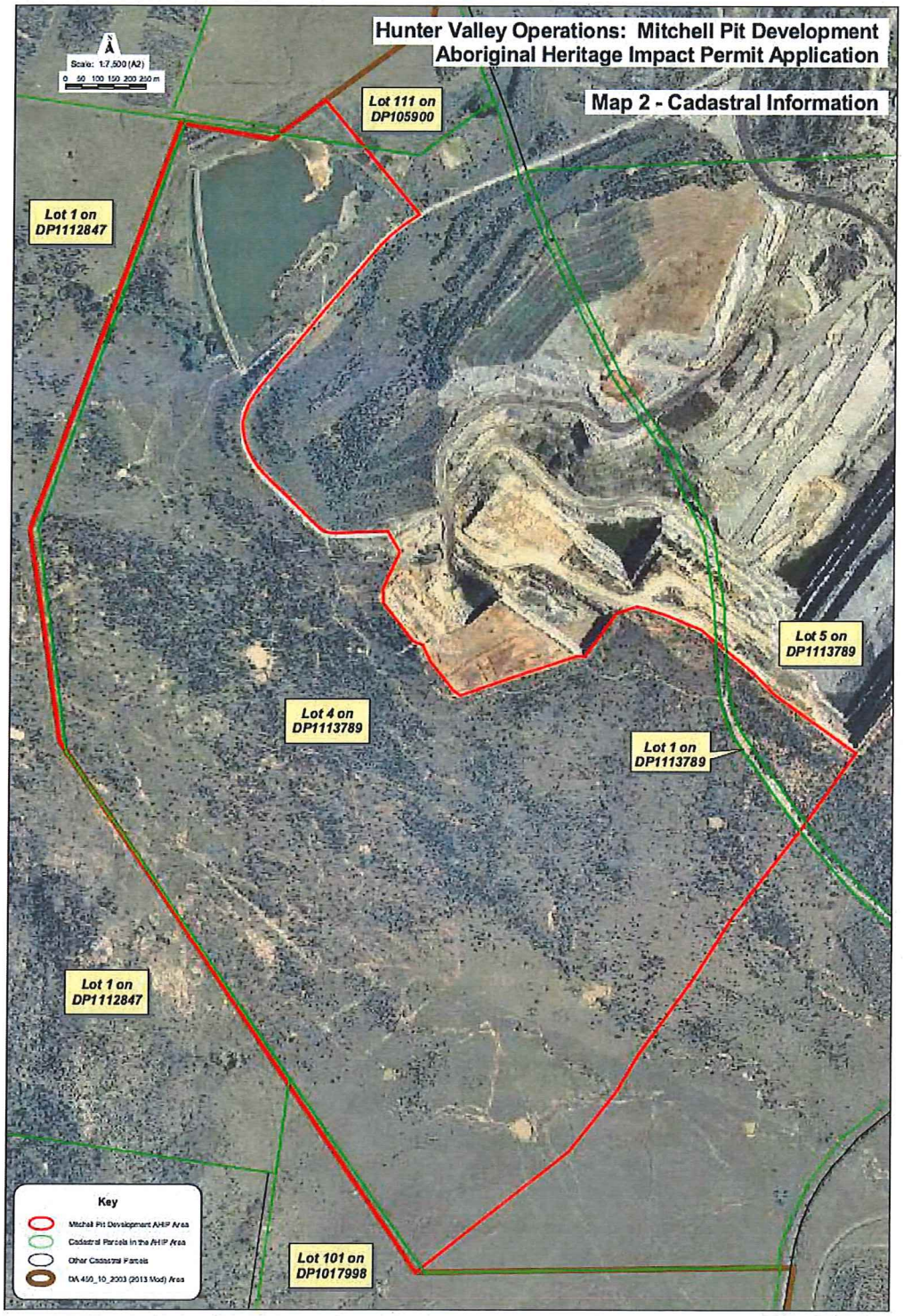
Whole	37-2-5381	Artefact	HVO-1767	No	307014	6405514	GDA
Whole	37-2-5382	Artefact	HVO-1766	No	307093	6405560	GDA
Whole	37-2-5383	Artefact	HVO-1761	No	305501	6406232	GDA

C2 Areas where harm of Aboriginal objects is authorised

All Aboriginal objects in, on or under the land to which this AHIP applies is shown in Figure (1) The lands to which this AHIP applies - AHIP extent for the HVO Mitchell Pit Development, Hunter Valley Operations – ML 1428 & CML 4, Lot 4 DP 1113789, Via Lemington Road, Ravensworth NSW 2300 (Page 57 of this AHIP).

Figure (1)

The lands to which this AHIP applies - The lands to which this AHIP applies - AHIP extent for the HVO Mitchell Pit Development, Hunter Valley Operations – ML 1428 & CML 4, Lot 4 DP 1113789, Via Lemington Road, Ravensworth NSW 2300.



DICTIONARY

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal object	has the same meaning as in the Act.
Act	means the *National Parks and Wildlife Act 1974.*
AHIMS	means the Aboriginal Heritage Information Management System maintained by OEH, as defined in s.90Q of the Act.
AHIP	means Aboriginal Heritage Impact Permit
AHIP holder	means the entity or person listed on the cover page under the heading "AHIP issued to".
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Chief Executive	means Chief Executive of the Office of Environment and Heritage (NSW)
Community collection	means the collection of Aboriginal objects by one or all Registered Aboriginal Parties or their representatives.
Community collection area	means an area described as a community collection area in Schedule B3
Harm	has the same meaning as in the Act. In relation to Aboriginal objects, harm means the movement, damage, defacement and/or destruction of Aboriginal objects. In relation to an Aboriginal place, harm means the damage, defacement and/or destruction of the Aboriginal place.
Land	means the land described under the heading "Land to which this AHIP applies".
No-harm areas	means those areas described in Schedule A3.
OEH	Office of Environment and Heritage (NSW).
OEH office	means the office listed on the cover page of this AHIP.
Proposed works	means the works described under the heading "D. Proposed Works" at the front of this AHIP.
Public register	means the public register established under s.188F of the Act, that contains details of AHIPs issued by the Chief Executive of OEH, as described under the heading "Information about this AHIP".
Registered Aboriginal Parties	means the Registered Aboriginal Parties listed in the application.
Salvage excavation	means an archaeological excavation carried out in accordance with the methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of salvage excavation is to recover a sample of Aboriginal objects as an archival record of Aboriginal life from a site that will be destroyed.
Salvage excavation area	means any area described as a salvage excavation area in Schedule B2.

Test excavation	means an archaeological excavation carried out in accordance with methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of test excavation is to collect a sample of Aboriginal objects, in order to establish the nature and extent of sub-surface Aboriginal objects and to assist in the assessment of management options for the site.
Test excavation area	means any area described as a test excavation area in Schedule B2

INFORMATION ABOUT THIS AHIP

Public Register

Under section 188F of the Act, the Chief Executive of OEH is required to keep a public register containing the details of each AHIP issued. The details of this AHIP that will be published on the public register are outlined on the front page of this AHIP.

The public register is available online at www.environment.nsw.gov.au

Appeals

Under section 90L of the Act, the AHIP holder may appeal to the Land and Environment Court if they are dissatisfied with any condition of this AHIP. The appeal must be lodged within 21 days of the date this AHIP was issued.

Penalties for breach of the Act or AHIP condition

Significant penalties can be imposed by the Land and Environment Court for harm to an Aboriginal object or Aboriginal Place other than as authorised by a condition of an AHIP, or for a breach of an AHIP condition. OEH can also issue penalty notices for a breach of the Act or AHIP condition.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the *National Parks and Wildlife Act*

Newly identified Aboriginal objects must be notified to the Chief Executive of OEH under s.89A of the Act using the form available online at www.environment.nsw.gov.au

Stop work orders, interim protection orders and remediation directions may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the OEH office for a variation of any conditions of an AHIP, using the AHIP variation application form available online at www.environment.nsw.gov.au. Requests for significant variations must be accompanied by evidence of further consultation with Registered Aboriginal Parties and may include payment of fees.

The conditions of an AHIP may be varied at any time by the Chief Executive of OEH in order to correct a typographical error or to resolve an inconsistency between conditions. The AHIP holder may appeal a decision of the Chief Executive of OEH to vary the conditions of the AHIP.

Transfer of AHIP

The AHIP holder may apply to transfer this AHIP to another person by using the AHIP transfer application form available online at www.environment.nsw.gov.au.

Surrender of AHIP

The AHIP holder may apply to surrender this AHIP by using the AHIP surrender application form available online at www.environment.nsw.gov.au. The surrender must be approved by the Chief Executive of OEH and may be subject to conditions.

Suspension and revocation of AHIP

An AHIP may be suspended or revoked at any time at the discretion of the Chief Executive of OEH. Prior to suspending or revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

Disclosure of information pursuant to lawful requirement

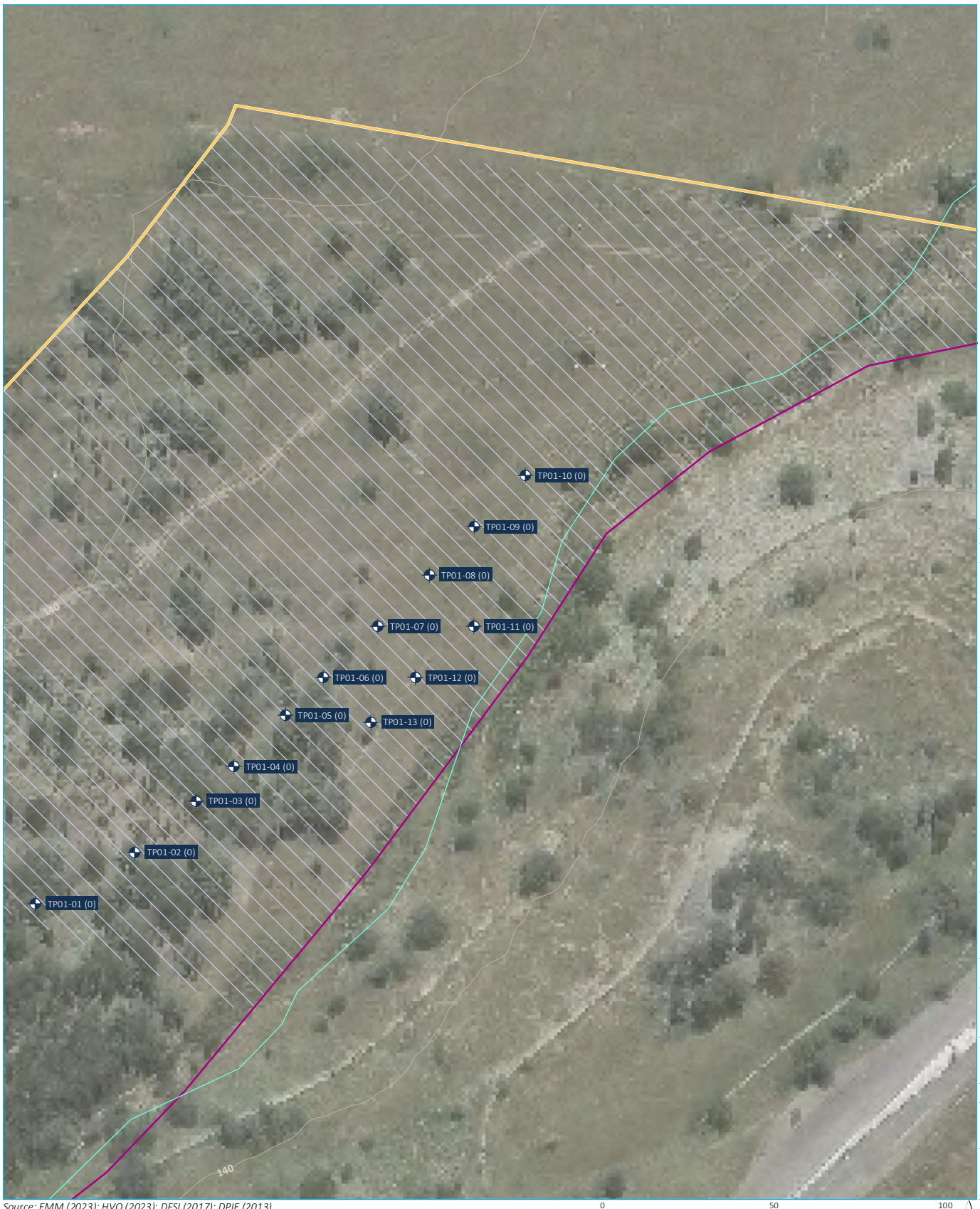
This AHIP does not prevent the disclosure of any information or document in OEH's possession in accordance with any lawful requirement.

Making copies of reports

By providing a report, the AHIP holder acknowledges that OEH can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.

OEH is able to make copies of any reports provided to OEH under this AHIP.

D.3 Test excavation data



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

\\emmsvr1\H190408\GIS\02_Maps_Heritage\ACHA_ADDENDUM\ACHAAD002_TestExcavationLayoutAndResults_DDP_20230923_07.mxd 23/10/2023

KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Site extent
- Test excavation point (artefact count)

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

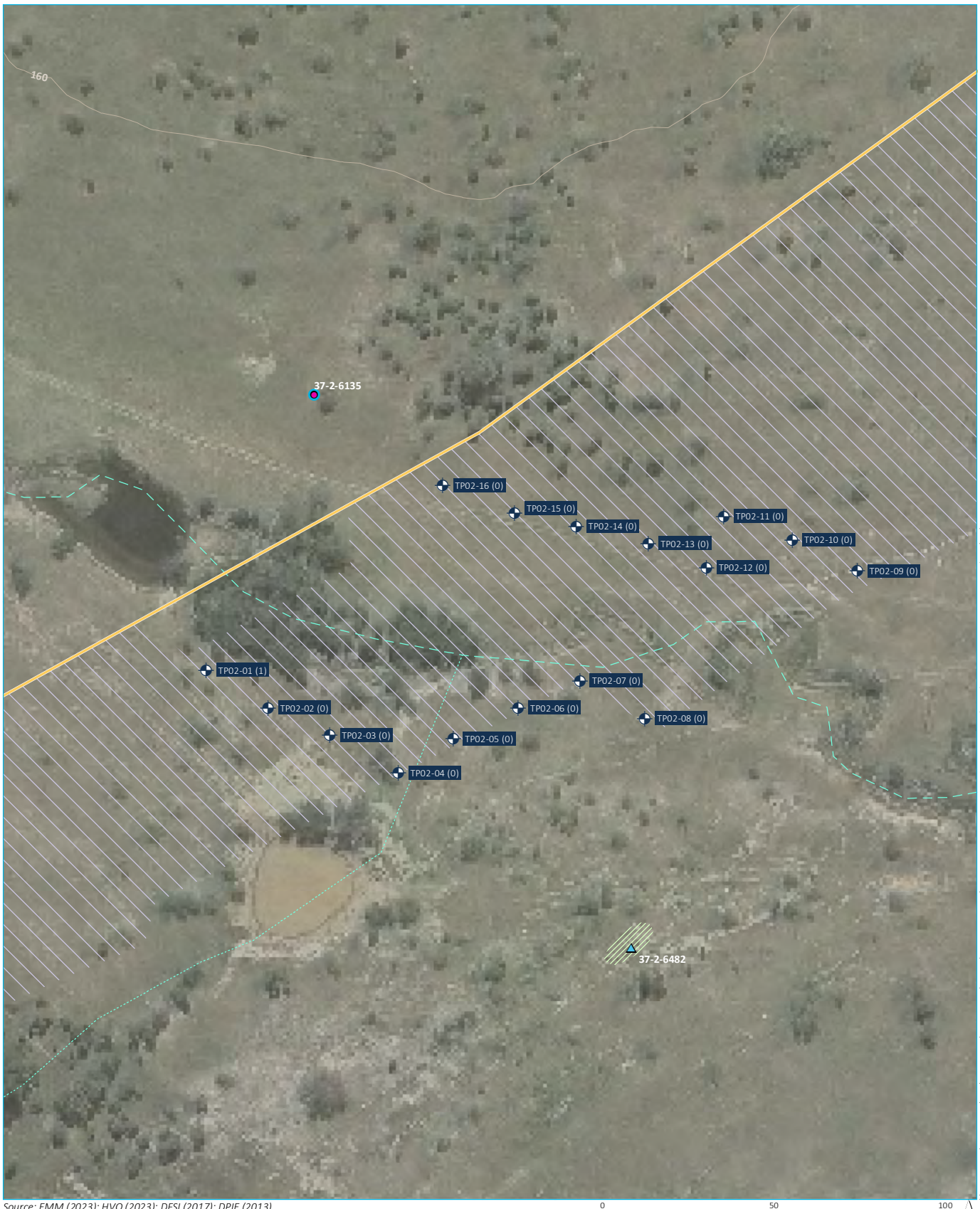
Strahler stream order

- 3rd order

Test excavation layout and results: Area 1

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.1

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)
- Valid

AHIMS - Site type

- Undefined artefact site with associated PAD

Previously undocumented Aboriginal Sites

- Open Artefact Scatter

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

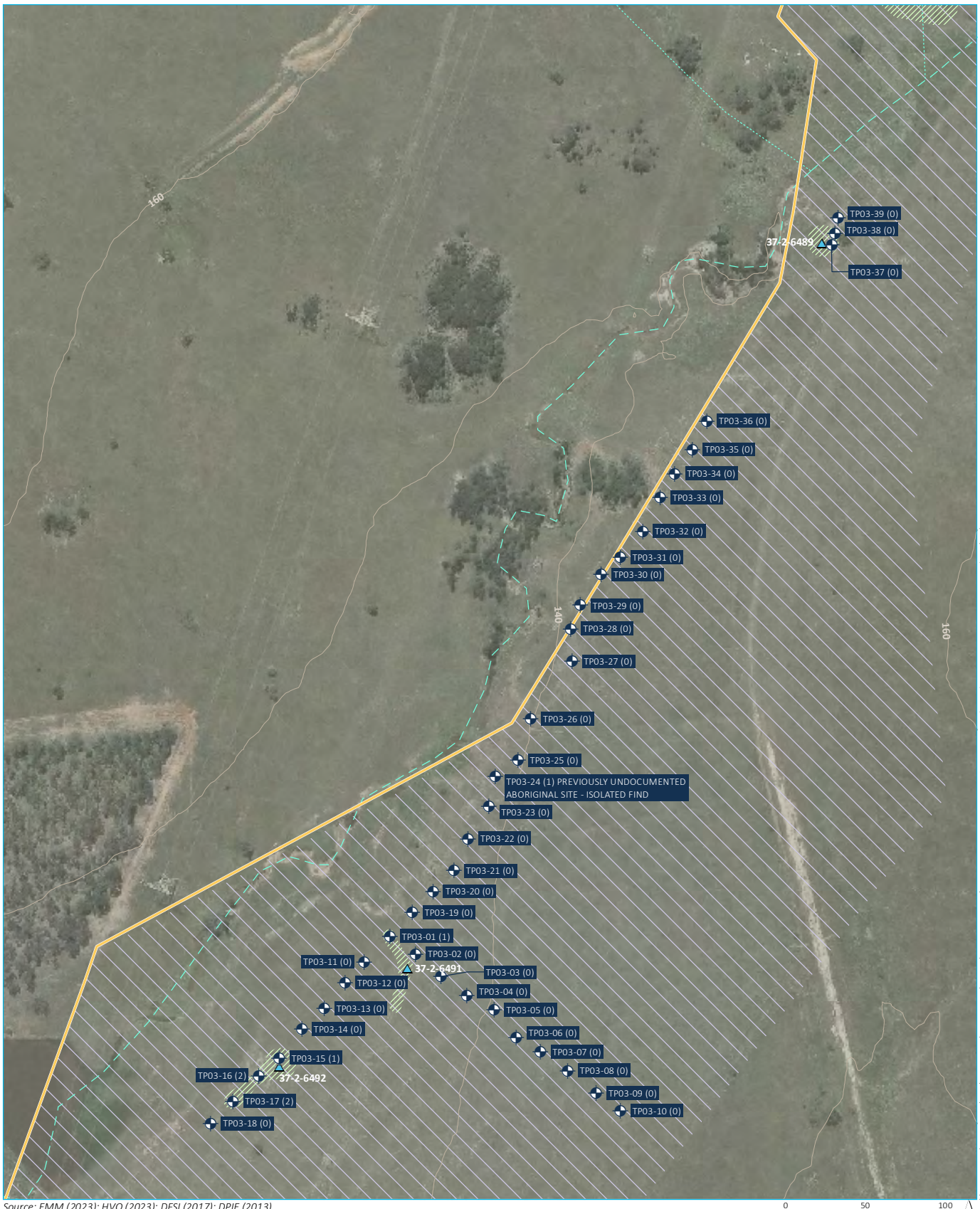
Strahler stream order

- 1st order
- 2nd order

Test excavation layout and results: Area 2

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.2

EMM creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)

Previously undocumented Aboriginal Sites

- Open Artefact Scatter

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

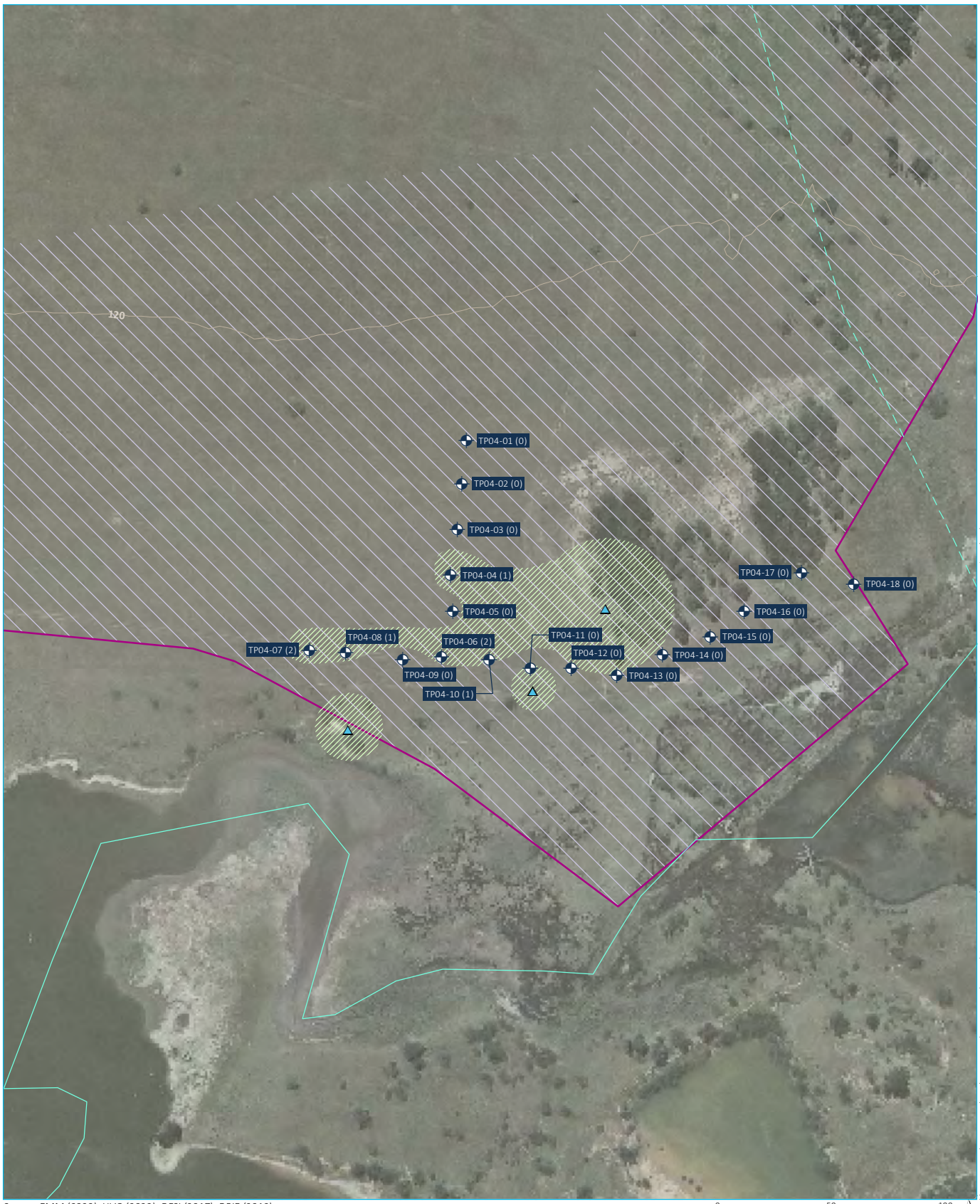
Strahler stream order

- 1st order
- 2nd order

Test excavation layout and results: Area 3

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.3

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Site extent
- Test excavation point (artefact count)

Previously undocumented Aboriginal Sites

- Open Artefact Scatter

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

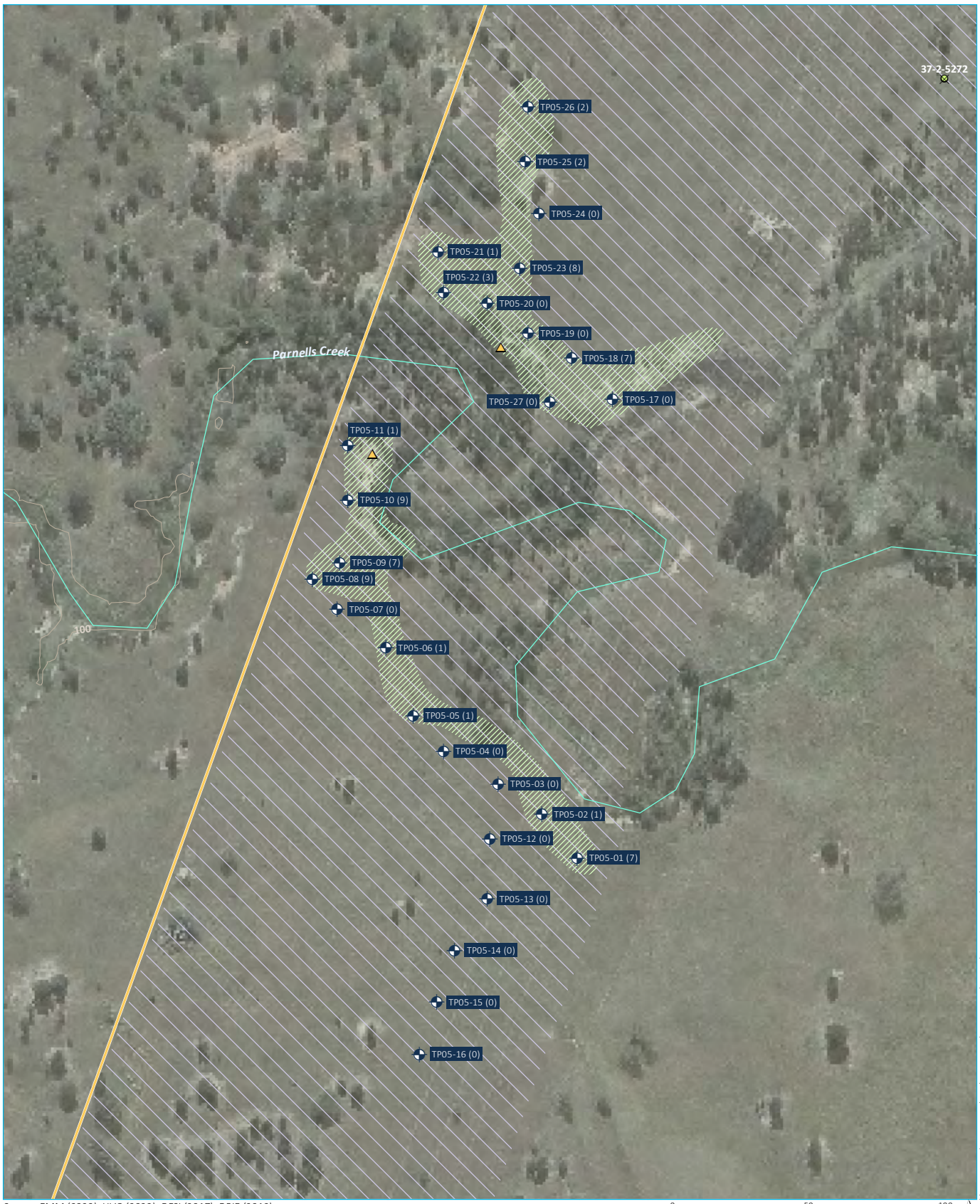
Strahler stream order

- 2nd order
- 3rd order

Test excavation layout and results: Area 4

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.4

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)
- Destroyed

AHIMS - Site type

- Low density artefact scatter (0-10)

Previously undocumented Aboriginal Sites

- Open Artefact Scatter with PAD

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

Strahler stream order

- 3rd order

Test excavation layout and results: Area 5

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.5

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Site extent
- Test excavation point (artefact count)

Previously undocumented Aboriginal Sites

- Isolated Find

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

Strahler stream order

- 1st order

Test excavation layout and results: Area 6

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.6

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

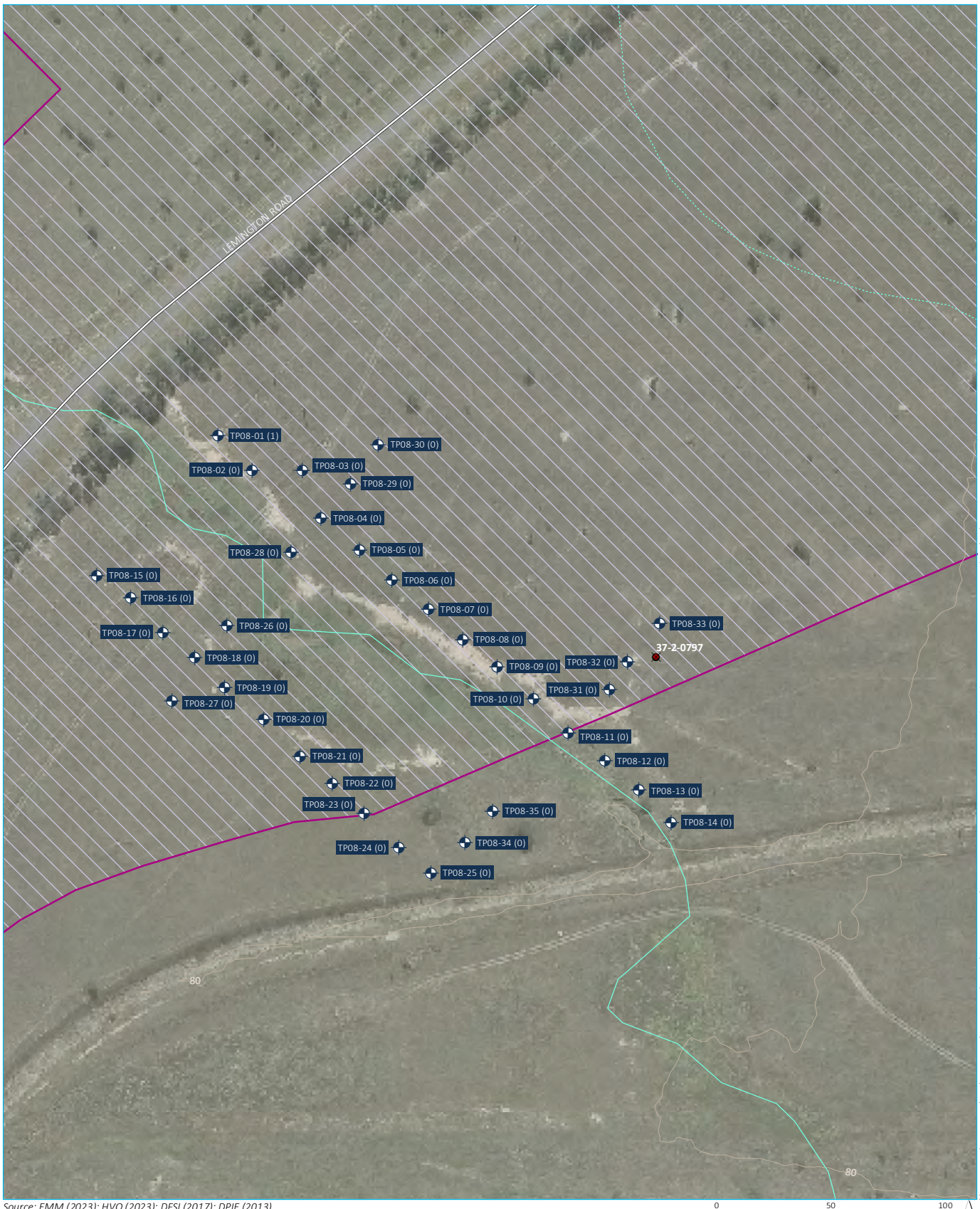
Strahler stream order

- 1st order

Test excavation layout and results: Area 7

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.7

EMM
creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Site extent
- Test excavation point (artefact count)
- Destroyed

AHIMS - Site type

- Very high density artefact scatter (100+)

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

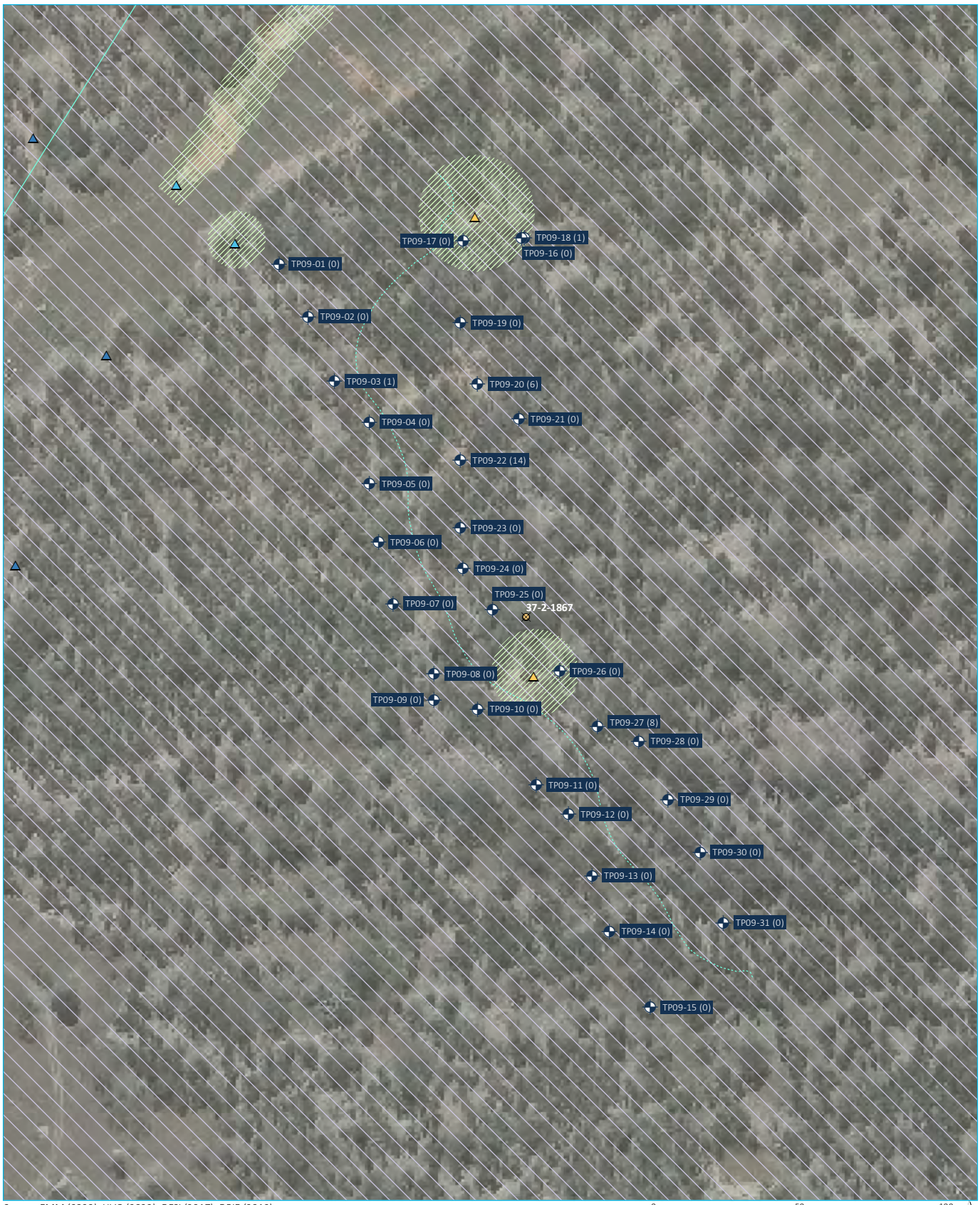
Strahler stream order

- 1st order
- 3rd order

Test excavation layout and results: Area 8

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.8

EMM creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)
- Destroyed

AHIMS - Site type

- Moderate density artefact scatter (11-30)

Previously undocumented Aboriginal Sites

- Isolated Find
- Open Artefact Scatter
- Open Artefact Scatter with PAD

Existing environment

- Rail line
- Major road
- Minor road

Strahler stream order

- 3rd order

Test excavation layout and results: Area 9

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.9

EMM
creating opportunities

Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

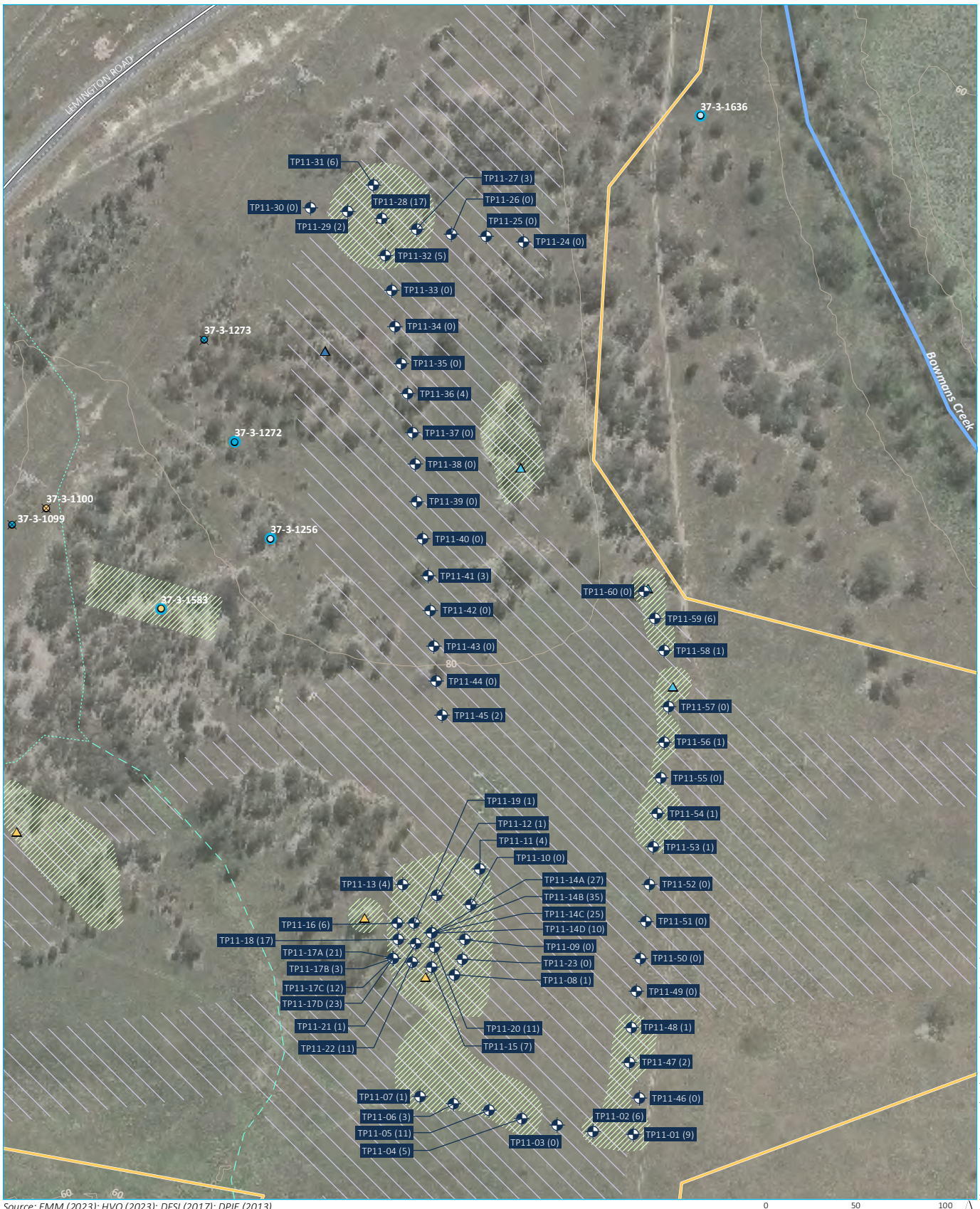
Strahler stream order

- 2nd order

Test excavation layout and results: Area 10

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.10

EMM creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)
- Destroyed
- Valid

AHIMS - Site type

- Isolated find
- Moderate density artefact scatter (11-30)
- Undefined artefact site

Previously undocumented Aboriginal Sites

- Isolated Find
- Open Artefact Scatter
- Open Artefact Scatter with PAD

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

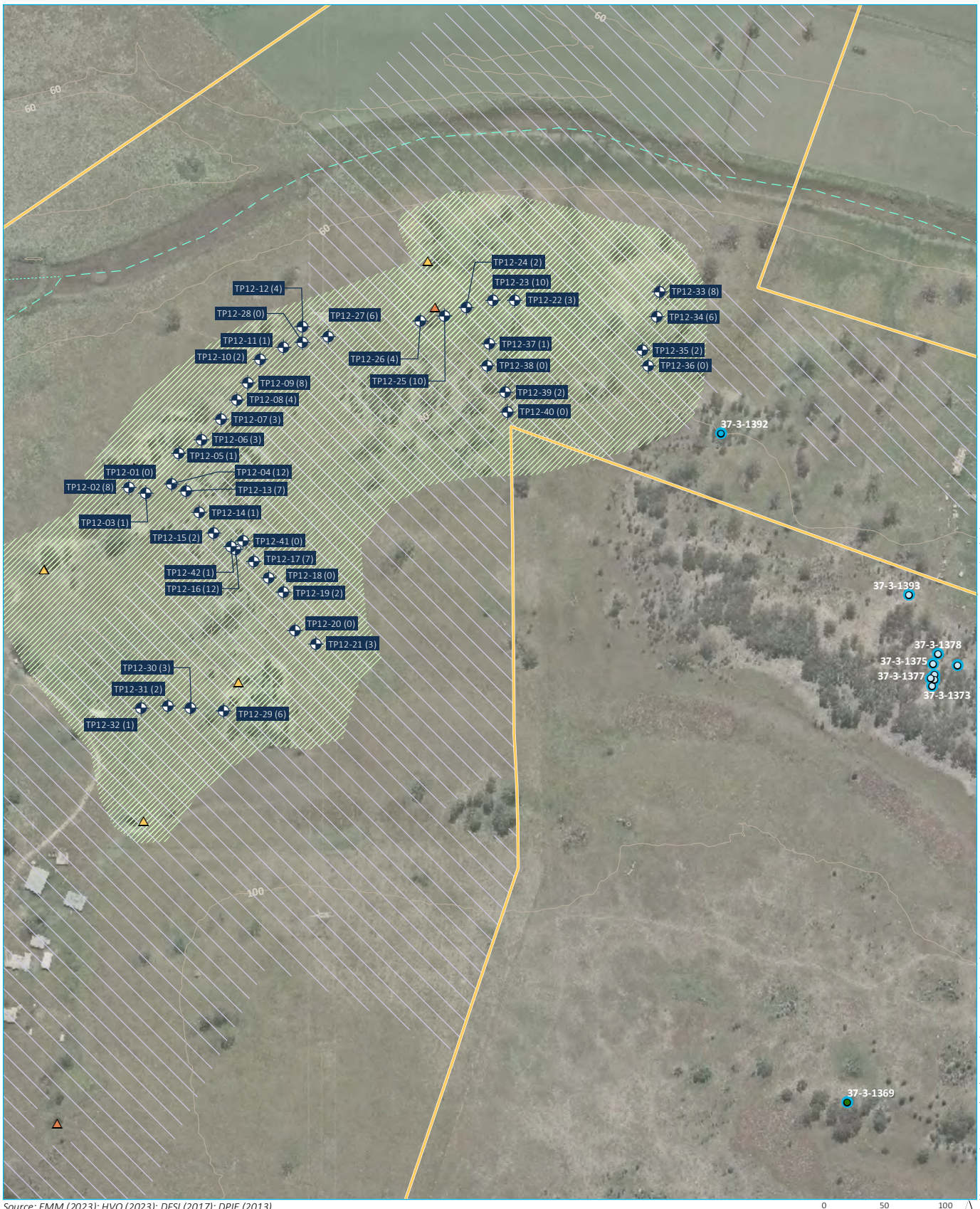
Strahler stream order

- 1st order
- 2nd order
- 6th order

Test excavation layout and results: Area 11

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.11

EMM creating opportunities



Source: EMM (2023); HVO (2023); DFSI (2017); DPIE (2013)

0 50 100 m

GDA2020 MGA Zone 56

N

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KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Site extent
- Test excavation point (artefact count)
- Valid
- Undefined artefact site

AHIMS - Site type

- Isolated find
- Culturally modified tree with artefact(s)

Previously undocumented Aboriginal Sites

- Open Artefact Scatter with PAD
- Scarred Tree

Existing environment

- Rail line
- Major road
- Minor road
- 20 m contour

Strahler stream order

- 1st order
- 2nd order

Test excavation layout and results: Area 12

HVO Continuation Project
Aboriginal Cultural Heritage Assessment
- Addendum
Figure D.12

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Appendix E

Details of moderate-low and low significant sites

EMM
creating opportunities

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-2-0528	Site Q	Valid	Open Artefact Scatter	Low	Direct
37-2-0791	HC15	Partially Destroyed	Open Artefact Scatter	Low	Direct
37-2-0800	HC24	Valid	Open Artefact Scatter	Low	Direct
37-2-0801	HC25	Valid	Open Artefact Scatter	Low	Direct
37-2-0805	Cum 41	Valid	Open Artefact Scatter	Low	Direct
37-2-0807/37-2-1927 (duplicate)	Cum 43	Valid	Open Artefact Scatter	Low	Direct
37-2-1522	Carrington Mine CM 19	Valid	Isolated find	Low	Direct
37-2-1535	Carrington Mine CM 32	Valid	Open Artefact Scatter	Low	Direct
37-2-1875	CM55	Valid	Open Artefact Scatter	Low	Direct
37-2-2710	RW13 (Jerrys Plains)	Valid	Open Artefact Scatter	Low	Direct
37-2-2715	RW32 (Jerrys Plains)	Valid	Open Artefact Scatter	Low	Direct
37-2-2721	RW60 (Jerrys Plains)	Valid	Open Artefact Scatter	Low	Direct
37-2-2754	1121 (Doyles Creek)	Valid	Open Artefact Scatter	Low	Direct
37-2-2755	1122 (Doyles Creek)	Valid	Isolated Find	Low	Direct
37-2-2756	1123 (Doyles Creek)	Valid	Isolated Find	Low	Direct
37-2-2757	1124 (Doyles Creeks)	Valid	Isolated Find	Low	Direct
37-2-2758	1125 (Doyles Creek)	Valid	Isolated find	Low	Direct
37-2-4880	REA299	Valid	Open Artefact Scatter	Low	Direct
37-2-5055	HVO-1127	Valid	Isolated Find	Low	Direct
37-2-5056	HVO-1128	Valid	Open Artefact Scatter	Low	Direct
37-2-5057	HVO-1129	Valid	Open Artefact Scatter	Low	Direct
37-2-5060	HVO-1132	Valid	Open Artefact Scatter	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-2-5061	HVO-1133	Valid	Isolated Find	Low	Direct
37-2-5062	HVO-1134	Valid	Isolated Find	Low	Direct
37-2-5063	HVO-1136	Valid	Open Artefact Scatter	Low	Direct
37-2-5064	HVO-1138	Valid	Isolated Find	Low	Direct
37-2-5065	HVO-1139	Valid	Isolated Find	Low	Direct
37-2-5077	HVO-181	Valid	Open Artefact Scatter	Low	Direct
37-2-5078	HVO-194	Valid	Isolated Find	Low	Direct
37-2-5080	HVO-225	Valid	Isolated Find	Low	Direct
37-2-5081	HVO-238	Valid	Isolated Find	Low	Direct
37-2-5082	HVO-239	Valid	Isolated Find	Low	Direct
37-2-5083	HVO-244	Valid	Open Artefact Scatter	Low	Direct
37-2-5084	HVO-245	Valid	Isolated Find	Low	Direct
37-2-5085	HVO-246	Valid	Open Artefact Scatter	Low	Direct
37-2-5086	HVO-271	Valid	Isolated Find	Low	Direct
37-2-5087	HVO-280	Valid	Open Artefact Scatter	Low	Direct
37-2-5088	HVO-281	Valid	Open Artefact Scatter	Low	Direct
37-2-5090	HVO-341	Valid	Isolated Find	Low	Direct
37-2-5091	HVO-350	Valid	Open Artefact Scatter	Low	Direct
37-2-5092	HVO-351	Valid	Open Artefact Scatter	Low	Direct
37-2-5093	HVO-352	Valid	Isolated Find	Low	Direct
37-2-5178	MP-089	Valid	Open Artefact Scatter	Low	Direct
37-2-5189	MP-082	Valid	Open Artefact Scatter	Low	Direct
37-2-5190	MP-083	Valid	Open Artefact Scatter	Low	Direct
37-2-5191	MP-084	Valid	Open Artefact Scatter	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-2-5192	MP-085	Valid	Open Artefact Scatter	Low	Direct
37-2-5193	MP-087	Valid	Open Artefact Scatter	Low	Direct
37-2-5194	MP-086	Valid	Open Artefact Scatter	Low	Direct
37-2-5195	MP-088	Valid	Open Artefact Scatter	Low	Direct
37-2-5196	MP-090	Valid	Open Artefact Scatter	Low	Direct
37-2-5197	MP-091	Valid	Open Artefact Scatter	Low	Direct
37-2-5198	MP-092	Valid	Open Artefact Scatter	Low	Direct
37-2-5215	MP-079	Valid	Open Artefact Scatter	Low	Direct
37-2-5216	MP-080	Valid	Open Artefact Scatter	Low	Direct
37-2-5217	MP-081	Valid	Open Artefact Scatter	Low	Direct
37-2-5315	HVO-1135	Valid	Isolated Find	Low	Direct
37-2-5316	HVO-1137	Valid	Isolated Find	Low	Direct
37-2-5323	HVO-346	Valid	Open Artefact Scatter	Low	Direct
37-2-5324	HVO-369	Valid	Isolated Find	Low	Direct
37-3-0174	N 1	Valid	Open Artefact Scatter	Low	Direct
37-3-0286	MD2	Valid	Open Artefact Scatter	Low	Direct
37-3-0391	Carrington Mine CM 43	Valid	Isolated find	Low	Direct
37-3-0784	RW49 (Camberwell)	Valid	Open Artefact Scatter	Low	Direct
37-3-0785	RW50 (Camberwell)	Valid	Open Artefact Scatter	Low	Direct
37-3-0787	RW52 (Camberwell)	Valid	Open Artefact Scatter	Low	Direct
37-3-0788	RW53 (IF) (Camberwell)	Valid	Isolated find	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-3-0793	RW58 (Camberwell)	Valid	Open Artefact Scatter	Low	Direct
37-3-0819	Narama Extended 6	Partially Destroyed	Open Artefact Scatter	Low	Direct
37-3-1021	REA149	Valid	Isolated Find	Low	Direct
37-3-1034	REA162	Valid	Open Artefact Scatter	Low	Direct
37-3-1035	REA163	Valid	Open Artefact Scatter	Low	Direct
37-3-1037	REA165	Valid	Isolated Find	Low	Direct
37-3-1048	REA176	Valid	Isolated find	Low	Direct
37-3-1054	REA182	Valid	Open Artefact Scatter	Low	Direct
37-3-1060	REA188	Valid	Isolated Find	Low	Direct
37-3-1065	REA193	Valid	Open Artefact Scatter	Low	Direct
37-3-1077	REA205	Valid	Open Artefact Scatter	Low	Direct
37-3-1081	REA209	Valid	Open Artefact Scatter	Low	Direct
37-3-1088	REA216	Valid	Isolated Find	Low	Direct
37-3-1276	REA402	Valid	Isolated Find	Low	Direct
37-3-1290	REA387	Valid	Isolated Find	Low	Direct
37-3-1310	REA308	Valid	Open Artefact Scatter	Low	Direct
37-3-1581	Ravensworth Open Cut OS-3	Valid	Open Artefact Scatter	Low	Direct
37-3-1582	Ravensworth Open Cut OS-4	Valid	Open Artefact Scatter	Low	Direct
37-5-0568	HVO-983	Valid	Isolated Find	Low	Direct
37-5-0570	HVO-985	Valid	Isolated Find	Low	Direct
37-6-0640	ISF 1	Valid	Isolated Find	Low	Direct
37-6-0874	Woodland 6	Valid	Isolated Find	Low	Direct
37-6-0876	PK3	Valid	Open Artefact Scatter	Low	None
37-6-0877	PK1	Valid	Isolated Find	Low	Direct
37-6-1744	HVO-113	Valid	Isolated find	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-6-1745	HVO-114	Valid	Isolated find	Low	Direct
37-6-1751	HVO-120	Valid	Open Artefact Scatter	Low	Direct
37-6-1754	HVO-123	Valid	Open Artefact Scatter	Low	Direct
37-6-1755	HVO-124	Valid	Isolated Find	Low	Direct
37-6-1766	HVO-135	Valid	Open Artefact Scatter	Low	Direct
37-6-2992	HVO-1688	Valid	Open Artefact Scatter	Low	Direct
37-6-2993	HVO-1687	Valid	Isolated Find	Low	Direct
37-6-2994	HVO-1686	Valid	Isolated Find	Low	Direct
37-6-2995	HVO-1685	Valid	Isolated Find	Low	Direct
37-6-1755	HVO-124	Valid	Isolated Find	Low	Direct
37-6-3004	HVO-1676	Valid	Isolated Find	Low	Direct
37-6-3005	HVO-1675	Valid	Open Artefact Scatter	Low	Direct
37-6-3011	HVO-1669	Valid	Isolated Find	Low	Direct
37-6-3026	HVO-1653	Valid	Isolated Find	Low	Direct
37-6-3027	HVO-1652	Valid	Isolated Find	Low	Direct
37-6-3029	HVO-1650	Valid	Open Artefact Scatter	Low	Direct
37-6-3031	HVO-1648	Valid	Isolated Find	Low	Direct
37-6-3230	HVO-31	Valid	Isolated Find	Low	None
37-6-3231	HVO-32	Valid	Isolated Find	Low	None
37-6-3232	HVO-33	Valid	Isolated Find	Low	None
37-6-3233	HVO-34	Valid	Open Artefact Scatter	Low	None
37-6-3234	HVO-35	Valid	Open Artefact Scatter	Low	None
37-6-3239	HVO-40	Valid	Isolated Find	Low	None
37-6-3240	HVO-41	Valid	Isolated Find	Low	None
37-6-3241	HVO-42	Valid	Open Artefact Scatter	Low	None
37-6-3242	HVO-43	Valid	Open Artefact Scatter	Low	None

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-6-3244	HVO-45	Valid	Isolated Find	Low	Direct
37-6-3245	HVO-46	Valid	Isolated Find	Low	Direct
37-6-3246	HVO-47	Valid	Open Artefact Scatter	Low	None
37-6-3247	HVO-48	Valid	Open Artefact Scatter	Low	None
37-6-3248	HVO-49	Valid	Open Artefact Scatter	Low	None
37-6-3253	HVO-54	Valid	Open Artefact Scatter	Low	None
37-6-3254	HVO-55	Valid	Isolated Find	Low	None
37-6-3255	HVO-56	Valid	Open Artefact Scatter	Low	None
37-6-3256	HVO-57	Valid	Isolated Find	Low	None
37-6-3257	HVO-58	Valid	Isolated Find	Low	None
37-6-3258	HVO-59	Valid	Open Artefact Scatter	Low	Direct
37-6-3259	HVO-60	Valid	Open Artefact Scatter	Low	Direct
37-6-3260	HVO-61	Valid	Open Artefact Scatter	Low	Direct
37-6-3261	HVO-62	Valid	Open Artefact Scatter	Low	Direct
37-6-3262	HVO-63	Valid	Isolated Find	Low	Direct
37-6-3263	HVO-64	Valid	Open Artefact Scatter	Low	Direct
37-6-3264	HVO-65	Valid	Open Artefact Scatter	Low	Direct
37-6-3265	HVO-66	Valid	Isolated Find	Low	Direct
37-6-3266	HVO-67	Valid	Open Artefact Scatter	Low	Direct
37-6-3267	HVO-68	Valid	Open Artefact Scatter	Low	Direct
37-6-3268	HVO-69	Valid	Isolated Find	Low	Direct
37-6-3269	HVO-70	Valid	Isolated Find	Low	Direct
37-6-3270	HVO-71	Valid	Isolated Find	Low	Direct
37-6-3271	HVO-72	Valid	Isolated Find	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-6-3272	HVO-73	Valid	Isolated Find	Low	Direct
37-6-3273	HVO-74	Valid	Isolated Find	Low	Direct
37-6-3274	HVO-75	Valid	Isolated Find	Low	Direct
37-6-3275	HVO-76	Valid	Isolated Find	Low	Direct
37-6-3276	HVO-77	Valid	Isolated Find	Low	Direct
37-6-3277	HVO-78	Valid	Isolated Find	Low	Direct
37-6-3278	HVO-79	Valid	Isolated Find	Low	Direct
37-6-3281	HVO-84	Valid	Open Artefact Scatter	Low	None
37-6-3282	HVO-85	Valid	Open Artefact Scatter	Low	None
37-6-3284	HVO-88	Valid	Open Artefact Scatter	Low	None
37-6-3285	HVO-89	Valid	Open Artefact Scatter	Low	None
37-6-3286	HVO-90	Valid	Open Artefact Scatter	Low	None
37-6-3287	HVO-91	Valid	Isolated Find	Low	None
37-6-3288	HVO-92	Valid	Isolated Find	Low	None
37-6-3289	HVO-93	Valid	Isolated Find	Low	None
37-6-3290	HVO-94	Valid	Isolated Find	Low	None
37-6-3291	HVO-95	Valid	Open Artefact Scatter	Low	None
37-6-3292	HVO-96	Valid	Open Artefact Scatter	Low	None
37-6-3295	HVO-99	Valid	Open Artefact Scatter	Low	None
37-6-3296	HVO-100	Valid	Isolated Find	Low	None
37-6-3297	HVO-101	Valid	Isolated Find	Low	Direct
37-6-3298	HVO-102	Valid	Isolated Find	Low	None
37-6-3299	HVO-103	Valid	Isolated Find	Low	None
37-6-3300	HVO-104	Valid	Isolated Find	Low	None
37-6-3301	HVO-105	Valid	Isolated Find	Low	Direct
37-6-3302	HVO-106	Valid	Isolated Find	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-6-3303	HVO-107	Valid	Open Artefact Scatter	Low	None
37-6-3304	HVO-108	Valid	Open Artefact Scatter	Low	None
37-6-3305	HVO-109	Valid	Open Artefact Scatter	Low	None
37-6-3321	HVO-1203	Valid	Isolated Find	Low	Direct
37-6-3322	HVO-1204	Valid	Isolated Find	Low	Direct
37-6-3324	HVO-1207	Valid	Isolated Find	Low	Direct
37-6-3326	HVO-1206	Valid	Open Artefact Scatter	Low	Direct
37-6-3878	HVO-2134	Valid	Open Artefact Scatter	Low	None
37-6-4172	HVO-2140	Valid	Open Artefact Scatter	Low	None
37-6-4196	HVO-2141	Valid	Open Artefact Scatter	Low	None
33-2-0031	HVOCP TR104-IF1	Valid	Isolated Find	Low	Direct
37-2-0946	HVOCP TR89-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6481	HVOCP TR17-IF1	Valid	Isolated Find	Low	Direct
37-2-6482	HVOCP TR18-AS2	Valid	Open Artefact Scatter	Low	None
37-2-6483	HVOCP TR18-AS3	Valid	Open Artefact Scatter	Low	None
37-2-6484	HVOCP TR20-IF1	Valid	Isolated Find	Low	None
37-2-6485	HVOCP TR22-AS1	Valid	Open Artefact Scatter	Low	None
37-2-6486	HVOCP TR20-AS1	Valid	Open Artefact Scatter	Low	None
37-2-6487	HVOCP TR18-AS1	Valid	Open Artefact Scatter	Low	None
37-2-6488	HVOCP TR21-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6489	HVOCP TR24-AS2	Valid	Open Artefact Scatter	Low	None
37-2-6491	HVOCP TR27-AS1	Valid	Open Artefact Scatter	Low	None

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-2-6492	HVOCP TR27-AS2	Valid	Open Artefact Scatter	Low	None
33-2-0053	HVO TR27-IF1	Valid	Isolated Find	Low	None
37-2-6493	HVOCP TR30-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6494	HVOCP TR31-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6495	HVOCP TR47-AS1	Valid	Open Artefact Scatter	Low	None
37-2-6496	HVOCP TR47-IF1	Valid	Isolated Find	Low	Direct
37-2-6498	HVOCP TR51-IF1	Valid	Isolated Find	Low	Direct
37-2-6499	HVOCP TR32-AS2	Valid	Open Artefact Scatter	Low	Direct
37-2-6500	HVOCP TR51-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6501	HVOCP TR50-IF1	Valid	Isolated Find	Low	None
37-2-6502	HVOCP TR50-AS2	Valid	Open Artefact Scatter	Low	Direct
37-2-6503	HVOCP TR50-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6504	HVOCP TR49-IF3	Valid	Isolated Find	Low	None
37-2-6505	HVOCP TR49-IF2	Valid	Isolated Find	Low	None
37-2-6506	HVOCP TR75-IF1	Valid	Isolated Find	Low	Direct
37-2-6508	HVOCP TR103-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6509	HVOCP TR103-IF1	Valid	Isolated Find	Low	Direct
37-2-6510	HVOCP TR100-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6511	HVOCP TR55-IF1	Valid	Isolated Find	Low	Direct
37-2-6513	HVOCP TR32-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6515	HVOCP TR49-IF1	Valid	Isolated Find	Low	None
37-2-6516	HVOCP TR49-AS2	Valid	Open Artefact Scatter	Low	None
37-2-6517	HVOCP TR104-AS2	Valid	Open Artefact Scatter	Low	Direct
37-2-6518	HVOCP TR104-IF2	Valid	Isolated Find	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-2-6520	HVOCP TR110-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6521	HVOCP TR114-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6522	HVOCP TR115-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6523	HVOCP TR115-IF1	Valid	Isolated Find	Low	Direct
37-2-6524	HVOCP TR116-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6525	HVOCP TR116-IF1	Valid	Isolated Find	Low	Direct
37-2-6526	HVOCP TR116-IF2	Valid	Isolated Find	Low	Direct
37-2-6527	HVOCP TR116-IF3	Valid	Isolated Find	Low	Direct
37-2-6528	HVOCP TR117-IF1	Valid	Isolated Find	Low	Direct
37-2-6529	HVOCP TR117-IF2	Valid	Isolated Find	Low	Direct
37-2-6530	HVOCP TR118-IF1	Valid	Isolated Find	Low	Direct
37-2-6531	HVOCP TR123-IF1	Valid	Isolated Find	Low	Direct
37-2-6532	HVOCP TR129-AS1	Valid	Open Artefact Scatter	Low	Direct
37-2-6533	HVOCP TR151-AS1	Valid	Open Artefact Scatter	Low	Direct
37-3-1613	HVOCP TR168-AS1	Valid	Open Artefact Scatter	Low	Direct
37-3-1614	HVOCP TR176-AS1	Valid	Open Artefact Scatter	Low	None
37-3-1615	HVOCP TR189-AS1	Valid	Open Artefact Scatter	Low	Direct
37-3-1616	HVOCP TR190-IF1	Valid	Isolated Find	Low	Direct
37-3-1620	HVOCP TR196-AS1	Valid	Open Artefact Scatter	Low	Direct
37-3-1621	HVOCP TR196-AS2	Valid	Open Artefact Scatter	Low	Direct
37-3-1630	HVOCP TR300-IF1	Valid	Isolated Find with PAD	Low	Direct
37-3-1631	HVOCP TR300-IF2	Valid	Isolated Find	Low	Direct
37-6-4115	HVOCP TR221-AS1	Valid	Open Artefact Scatter	Low	Direct
37-6-4116	HVOCP TR296-IF1	Valid	Isolated Find	Low	Direct

Table E.1 Aboriginal sites identified as of low-moderate or low significance

AHIMS	Site Name	Site Status	Site Features	Significance Rating	Type of Harm
37-6-4117	HVOCP TR223-IF1	Valid	Isolated Find	Low	Direct
37-2-0794	HC18	Partially Destroyed	Open Artefact Scatter	Low-Moderate	Direct
37-2-2082	C7 Carrington	Valid	Open Artefact Scatter with PAD	Low-Moderate	Direct
37-3-0740 / 37-3-0794	RW59 (Singleton)	Valid	Open Artefact Scatter	Low-Moderate	Direct
37-3-1079	REA207	Valid	Open Artefact Scatter	Low-Moderate	Direct
37-3-1303	REA300	Valid	Open Artefact Scatter with PAD	Low-Moderate	Direct
37-6-3237	HVO-38	Valid	Open Artefact Scatter	Low-Moderate	None
37-6-3238	HVO-39	Valid	Open Artefact Scatter	Low-Moderate	None
37-6-3249	HVO-50	Valid	Open Artefact Scatter	Low-Moderate	None
37-6-3252	HVO-53	Valid	Open Artefact Scatter	Low-Moderate	None
37-6-3279	HVO-87	Valid	Open Artefact Scatter	Low-Moderate	None
37-6-3293	HVO-97	Valid	Open Artefact Scatter	Low-Moderate	None
37-2-6490	HVOCP TR24-AS1	Valid	Open Artefact Scatter	Low-Moderate	Direct
37-2-6512	HVOCP TR49-AS1	Valid	Open Artefact Scatter	Low-Moderate	Direct
37-3-1617	HVOCP TR192-AS1	Valid	Open Artefact Scatter with PAD	Low-Moderate	Direct
37-3-1622	HVOCP TR197-AS1	Valid	Open Artefact Scatter with PAD	Low-Moderate	None
37-6-1750	HVO-119	Valid	Open Artefact Scatter	Low	Direct
37-6-2996	HVO-1684	Valid	Open Artefact Scatter with PAD	Low-Moderate	Direct
37-6-3283	HVO-86	Valid	Open Artefact Scatter	Low-Moderate	Direct
37-6-4114	HVOCP TR250-AS1	Valid	Open Artefact Scatter with PAD	Low-Moderate	Direct
37-6-4118	HVOCP TR247-AS1	Valid	Open Artefact Scatter with PAD	Low-Moderate	Direct

Appendix F
Proposed mitigation measures

EMM
creating opportunities

F.1 Summary of proposed mitigation actions

The following table provides a list of guiding principles for the future management of identified Aboriginal objects, sites and places in the event that they are adversely affected by the Project. These actions – proposed as guiding principles, since they may warrant amendment and refinement in the ACHMP proposed should the project be approved – are incorporated from EMM (2022) in most instances, with changes or additions only as a result of the additional investigation undertaken as part of this report, and generally constrained to the 27 sites described in Section 4.4.2.

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
33-2-0031	HVOCP TR104-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0528	Site Q	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0791	HC15	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0800	HC24	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0801	HC25	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0805	Cum 41	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0807	Cum 43	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0946	HVOCP TR89-AS1	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-1522	Carrington Mine CM 19	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-1535	Carrington Mine CM 32	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-1875	CM55	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2710	RW13 (Jerrys Plains)	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-2715	RW32 (Jerrys Plains)	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2721	RW60 (Jerrys Plains)	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2754	1121 (Doyles Creek)	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2755	1122 (Doyles Creek)	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2756	1123 (Doyles Creek)	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2757	1124 (Doyles Creeks)	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2758	1125 (Doyles Creek)	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-4880	REA299	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5055	HVO-1127	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5056	HVO-1128	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5057	HVO-1129	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5060	HVO-1132	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-5061	HVO-1133	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5062	HVO-1134	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5063	HVO-1136	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5064	HVO-1138	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5065	HVO-1139	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5077	HVO-181	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5078	HVO-194	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5080	HVO-225	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5081	HVO-238	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5082	HVO-239	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5083	HVO-244	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5084	HVO-245	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-5085	HVO-246	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5086	HVO-271	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5087	HVO-280	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5088	HVO-281	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5090	HVO-341	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5091	HVO-350	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5092	HVO-351	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5093	HVO-352	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5178	MP-089	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5189	MP-082	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5190	MP-083	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5191	MP-084	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-5192	MP-085	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5193	MP-087	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5194	MP-086	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5195	MP-088	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5196	MP-090	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5197	MP-091	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5198	MP-092	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5215	MP-079	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5216	MP-080	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5217	MP-081	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5315	HVO-1135	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5316	HVO-1137	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-5323	HVO-346	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-5324	HVO-369	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6481	HVOCP TR17-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6484	HVOCP TR20-IF1	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6485	HVOCP TR22-AS1	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6488	HVOCP TR21-AS1	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6489	HVOCP TR24-AS2	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6491	HVOCP TR27-AS1	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6492	HVOCP TR27-AS2	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6493	HVOCP TR30-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-6494	HVOCP TR31-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6495	HVOCP TR47-AS1	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6496	HVOCP TR47-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6498	HVOCP TR51-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6499	HVOCP TR32-AS2	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6500	HVOCP TR51-AS1	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6501	HVOCP TR50-IF1	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6502	HVOCP TR50-AS2	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6503	HVOCP TR50-AS1	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6504	HVOCP TR49-IF3	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6505	HVOCP TR49-IF2	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-6506	HVOCP TR75-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6508	HVOCP TR103-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6509	HVOCP TR103-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6510	HVOCP TR100-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6511	HVOCP TR55-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6513	HVOCP TR32-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6515	HVOCP TR49-IF1	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as ‘no-go’ zones or equivalent
37-2-6517	HVOCP TR104-AS2	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6518	HVOCP TR104-IF2	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6520	HVOCP TR110-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6521	HVOCP TR114-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6522	HVOCP TR115-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-6523	HVOCP TR115-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6524	HVOCP TR116-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6525	HVOCP TR116-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6526	HVOCP TR116-IF2	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6527	HVOCP TR116-IF3	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6528	HVOCP TR117-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6529	HVOCP TR117-IF2	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6530	HVOCP TR118-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6531	HVOCP TR123-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6532	HVOCP TR129-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6533	HVOCP TR151-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0174	N 1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-3-0286	MD2	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0391	Carrington Mine CM 43	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0784	RW49 (Camberwell)	Open Artefact Scatter	L	Direct	None	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-3-0785	RW50 (Camberwell)	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0787	RW52 (Camberwell)	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0788	RW53 (IF) (Camberwell)	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0793	RW58 (Camberwell)	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0819	Narama Extended 6	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1021	REA149	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1034	REA162	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1035	REA163	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1037	REA165	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-3-1048	REA176	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1054	REA182	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1060	REA188	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1065	REA193	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1077	REA205	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1081	REA209	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1088	REA216	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1276	REA402	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1290	REA387	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1310	REA308	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1581	Ravensworth Open Cut OS-3	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1582	Ravensworth Open Cut OS-4	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-3-1613	HVOCP TR168-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1614	HVOCP TR176-AS1	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-3-1615	HVOCP TR189-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1616	HVOCP TR190-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1620	HVOCP TR196-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1621	HVOCP TR196-AS2	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1630	HVOCP TR300-IF1	Isolated Find with PAD	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-5-0568	HVO-983	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-5-0570	HVO-985	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-0640	ISF 1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-0874	Woodland 6	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-0876	PK3	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-0877	PK1;;	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1744	HVO-113	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1745	HVO-114	Isolated find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1750	HVO-119	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1751	HVO-120	Open Artefact Scatter	L	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1754	HVO-123	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1755	HVO-124	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-1766	HVO-135	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-2992	HVO-1688	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-2993	HVO-1687	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-2994	HVO-1686	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-2995	HVO-1685	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-2996	HVO-1684	Open Artefact Scatter	L-M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3004	HVO-1676	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3005	HVO-1675	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3011	HVO-1669	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3026	HVO-1653	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3027	HVO-1652	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3029	HVO-1650	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3031	HVO-1648	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3230	HVO-31	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as ‘no-go’ zones or equivalent
37-6-3231	HVO-32	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as ‘no-go’ zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3232	HVO-33	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3233	HVO-34	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3234	HVO-35	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3239	HVO-40	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3240	HVO-41	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3241	HVO-42	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3242	HVO-43	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3244	HVO-45	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3245	HVO-46	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3246	HVO-47	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3247	HVO-48	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3248	HVO-49	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3253	HVO-54	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3254	HVO-55	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3255	HVO-56	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3256	HVO-57	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3257	HVO-58	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3258	HVO-59	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3259	HVO-60	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3260	HVO-61	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3261	HVO-62	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3262	HVO-63	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3263	HVO-64	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3264	HVO-65	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3265	HVO-66	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3266	HVO-67	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3267	HVO-68	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3268	HVO-69	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3269	HVO-70	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3270	HVO-71	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3271	HVO-72	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3272	HVO-73	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3273	HVO-74	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3274	HVO-75	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3275	HVO-76	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3276	HVO-77	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3277	HVO-78	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3278	HVO-79	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3281	HVO-84	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as ‘no-go’ zones or equivalent
37-6-3282	HVO-85	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as ‘no-go’ zones or equivalent
37-6-3283	HVO-86	Open Artefact Scatter	L-M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3284	HVO-88	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3285	HVO-89	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3286	HVO-90	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3287	HVO-91	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3288	HVO-92	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3289	HVO-93	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3290	HVO-94	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3291	HVO-95	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3292	HVO-96	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3295	HVO-99	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3296	HVO-100	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3297	HVO-101	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3298	HVO-102	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3299	HVO-103	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3300	HVO-104	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3301	HVO-105	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3302	HVO-106	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3303	HVO-107	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3304	HVO-108	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3305	HVO-109	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3321	HVO-1203	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3322	HVO-1204	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3324	HVO-1207	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3326	HVO-1206	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-3878	HVO-2134	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-4115	HVOCP TR221-AS1	Open Artefact Scatter	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-4116	HVOCP TR296-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-4117	HVOCP TR223-IF1	Isolated Find	L	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-4196	HVO-2141	Open Artefact Scatter	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-0053	HVOCP TR27-IF1	Isolated Find	L	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-0794	HC18	Open Artefact Scatter	L-M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-2082	C7 Carrington	Open Artefact Scatter with PAD	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6490	HVOCP TR24-AS1	Open Artefact Scatter	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-6512	HVOCP TR49-AS1	Open Artefact Scatter	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-0740 / 37-3-0794	RW59 (Singleton)	Open Artefact Scatter	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1079	REA207	Open Artefact Scatter	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1303	REA300	Open Artefact Scatter with PAD	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1617	HVOCP TR192-AS1	Open Artefact Scatter with PAD	L-M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-3-1622	HVOCP TR197-AS1	Open Artefact Scatter with PAD	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3237	HVO-38	Open Artefact Scatter	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3238	HVO-39	Open Artefact Scatter	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-6-3249	HVO-50	Open Artefact Scatter	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3252	HVO-53	Open Artefact Scatter	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3279	HVO-87	Open Artefact Scatter	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3293	HVO-97	Open Artefact Scatter	L-M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-4114	HVOCP TR250-AS1	Open Artefact Scatter with PAD	L-M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-6-4118	HVOCP TR247-AS1	Open Artefact Scatter with PAD	L-M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-0796	HC20	Artefact scatter	M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-2-1504	Carrington Mine CM 1	Artefact scatter with potential archaeological deposit	M	Direct	Partial	Archaeological excavations as per Section 6.5.
37-2-1505	Carrington Mine CM 2	Artefact scatter	M	Direct	Partial	Opportunity provided for Aboriginal community collection of cultural materials
37-2-1506	Carrington Mine CM 3	Artefact scatter with potential archaeological deposit	M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-2-6497	HVOCP TR47-AS2	Artefact scatter with potential archaeological deposit	M	N/A	None	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6507	HVOCP TR104-AS1	Artefact scatter with archaeological deposit	M	Direct	Total	Archaeological excavations as per Section 6.5.
37-2-6514	HVOCP TR47-AS3	Artefact scatter with potential archaeological deposit	M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-6519	HVOCP TR105-AS1	Artefact scatter with potential archaeological deposit	M	Direct	Total	Archaeological excavations as per Section 6.5.
37-3-0449	LID6	Artefact scatter	M	Direct	Partial	Archaeological excavations as per Section 6.5.
37-3-1069	REA197	Artefact scatter	M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-3-1618	HVOCP TR195-AS1	Artefact scatter with potential archaeological deposit	M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-3-1634	HVOCP TR189-AS2	Archaeological deposit	M	Direct	Total	Archaeological excavations as per Section 6.5.
37-5-0047	Malabar Site H Burnham Wood	Artefact scatter r	M	Direct	Total	Opportunity provided for Aboriginal community collection of cultural materials
37-5-0571	PAD 1 (Doyles Creek)	Potential archaeological deposit	M	Direct	Partial	Archaeological excavations as per Section 6.5.
37-6-3294	HVO-98	Artefact scatter	M	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Table F.1 Proposed management of Aboriginal objects, sites and places within the Project disturbance area

AHIMS	Site Name	Site Features	Significance Rating	Type of Harm	Degree of Harm	Mitigation measure (guiding principle)
37-3-1649	HVOCP TR195-AS3	Artefact scatter	M	Direct	Total	Archaeological excavations as per Section 6.5.
37-2-1544	Carrington Mine CM 41	Potentially culturally modified tree with stone artefacts	H	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-2-1877	CM-CD1	Archaeological Deposit	H	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-3-1619	HVOCP TR195-AS2	Artefact scatter with archaeological deposit	H	Direct	Total	Archaeological excavations as per Section 6.5.
37-3-1626 (incorporates 37-3-1623, 37-3-1624, 37-3-1625, and 37-3-1627)	HVOCP TR213-AS1	Artefact scatter with potential archaeological deposit	H	Direct	Partial	Archaeological excavations as per Section 6.5.
37-3-1628	HVOCP TR178-ST1	Culturally modified tree	H	N/A	N/A	As required: mitigation measures as per Section 6.4.
37-3-1629	HVOCP TR212-ST1	Culturally modified tree	H	N/A	N/A	As required: mitigation measures as per Section 6.4.
37-3-1635	HVOCP TR216-ST1	Culturally modified tree	H	N/A	N/A	As required: mitigation measures as per Section 6.4.
37-6-0166	Malabar Burnham Wood Site I	Archaeological deposit	H	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3024	HVO-1656	Culturally modified tree	H	N/A	N/A	As required: mitigation measures as per Section 6.4.
37-6-3250	HVO-51	Artefact scatter with potential archaeological deposit	H	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent
37-6-3251	HVO-52	Artefact scatter with potential archaeological deposit	H	N/A	N/A	Avoidance – where activities proposed within 20 m, establish fencing and signage. Where >20 m, include in site inductions and present on development site plans as 'no-go' zones or equivalent

Notes: Significance classification – H = High; M = Moderate; L-M = Low to Moderate; and L = Low.

The following low significant sites were in the ACHAR (EMM, 2022), but are no longer within the Project disturbance area, and have therefore been removed from the mitigation table: Cum 42 (37-2-0806), CUM-21 Ravensworth (37-2-0190), CK22 (37-2-1927), CK23 (37-2-1926), RW30 (37-2-2713), Cumnock South (37-3-0273), RW46 (37-3-0781), RW47 (37-3-0782), Narama Extended 5 (37-3-0818), Narama Extended 19 (37-3-0832), REA 194 (37-3-1066), REA 208 (37-3-1080), REA 210 (37-3-1082), REA 220 (37-3-1092), REA 221 (37-3-1093), REA 235 (37-3-1107), REA 323 (37-3-1324), REA 324 (37-3-1325), HVO-1603 (37-3-1392), Ravensworth Open Cut OS-2 (37-3-1580), Ravensworth Open Cut OS-5 (37-3-1583), HVO-1649 (37-6-3030), HVO-2140 (37-6-4172), HVOCP TR18-AS2 (37-6-6482), HVOCP TR18 AS3 (37-6-6483), HVOCP TR20 AS1 (37-2-6486), HVOCP TR18 AS 1 (37-2-6487), HVOCP TR49 AS2 (37-2-6516), HVOCP TR300 IF2 (37-3-1631). The following low-moderate significant sites were in the ACHAR (EMM, 2022), but are no longer within the Project disturbance area, and have therefore been removed from the mitigation table: RW31 (37-2-2714), RW54 (37-3-0789), REA148 (37-3-1020),

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