Hunter Transmission Project

Aboriginal cultural heritage assessment addendum

Prepared for Energy Corporation of NSW

February 2026

Hunter Transmission Project

Aboriginal cultural heritage assessment addendum

Energy Corporation of NSW

E250595 RP#42

February 2026

Version	Date	Prepared by	Reviewed by	Comments
1	27 October 2025	William Truscott, Phillipa O'Brien-Pounde, Georgia Burnett	Alan Williams	Draft
2	7 November 2025	Phillipa O'Brien-Pounde, Georgia Burnett	Alan Williams	Draft for external review
3	20 November 2025	Georgia Burnett	Alan Williams	Draft for RAP review
4	16 December 2025	Georgia Burnett	Alan Williams	Final draft
5	6 February 2026	Georgia Burnett	Alan Willams	Final
6	17 February 2026	Georgia Burnett	Alan Willams	Final

Approved by

[redacted]

Dr Alan Williams FSA FRSA FRSN MAACAI MEIANZ MAIATSIS
Technical Lead, Aboriginal Heritage
17 February 2026

Level 10 201 Pacific Highway
St Leonards NSW 2065
ABN: 28 141 736 558

Acknowledgement of Country

We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We would like to respectfully acknowledge the Wonnarua, Awabakal and Darkinjung people as the Traditional Custodians of the land on which we deliver our project to the community. We pay our respects to Elders past, present and emerging and to all Aboriginal people of these communities.

We acknowledge the work that Aboriginal people have done to maintain land and water and would show respect through thoughtful and collaborative approaches to engage with the Aboriginal community to ensure local priorities and values inform and influence decision making.

We reflect on the continuing impact of government policies and practices and recognise our responsibility to work together, with and for Aboriginal and Torres Strait Islander peoples, families and communities towards improved economic, social and cultural outcomes.

Content warning

Aboriginal and Torres Strait Islander peoples are advised that the following report contains reference to, and images of, people who have died.

Glossary

Term	Definition
Access tracks	Temporary and permanent tracks used to access the project. Refer to *Appendix A (Updated project description)* of the amendment report for further details.
ACHA	The Aboriginal cultural heritage assessment report submitted with the EIS as part of the project.
ACHA addendum	This document developed to include amendments to the project since the submission of the environmental impact statement (EIS), and providing responses to questions and clarifications received as part of the public exhibition of the EIS.
Amended project	The amendments and refinements to the project as described in the EIS (inclusive of clarifications for the exhibited project). The amendments to the project include: • realignment of the transmission line at Mount Thorley • realignment of the transmission line at Gouldsville • localised easement widening for conductor swing • changes to substation infrastructure at Eraring • changes to access track locations • minor adjustments to the project impact area for intersection upgrades • adjustments to the proposed access routes for construction • reconfiguration of the construction support sites and worker accommodation facilities • changes to the location of laydown areas within State forests • reconfiguration of the Flick Road emergency helicopter landing area • removal of a stringing site in Olney State Forest • changes to construction plant and equipment types and locations of use Refinements to the project include: • minor changes at Bayswater substation • changes to the disturbance area at Olney
Amendment	Change(s) to the project description as included in the exhibited project. As a result, changes to what the proponent is seeking approval for are required, along with an amendment to the CSSI application for the project.
Archaeological Research Design (ARD)	A document developed during the EIS to guide archaeological test excavations that did not align with established Heritage NSW guidelines, and which was approved by Heritage NSW for implementation as part of the ACHA.
Bayswater Power Station	Existing power station at Bayswater owned by AGL.
Bayswater South switching station	The new switching station that would be constructed south of Bayswater Power Station.
Clarification	Additional information developed as a result of ongoing design and construction methodology development, submissions received during exhibition of the EIS, minor errors identified in the EIS, or further assessment that has been undertaken since exhibition of the EIS. Clarifications for the project include: • assessment of impacts from use of Pokolbin Mountains Road • assessment of potential contamination impacts at Eraring Power Station • description of intersection upgrades in the EIS.
Construction impact area	The area that would be directly impacted by the construction of the project, including (but not limited to) transmission towers and lines, stringing sites, access roads, access tracks, substations, switching stations, adjustments and upgrades to existing lines, communications infrastructure, temporary worker accommodation, construction support sites, laydown areas and utility adjustments.

Term	Definition
Construction access routes	Roads used by construction vehicles (light and heavy).
Construction support site	An area used as the base for construction activities, usually for the storage of plant/equipment and materials, processing facilities (concrete batching, aggregate crushing, grinding and screening), maintenance facilities/workshops, staff facilities, firefighting equipment, helicopter landing pad and support facilities, access and parking, and wastewater treatment. Some construction support sites would also include temporary worker accommodation. Construction support sites are discussed in *section A3.5* of *Appendix A (Updated project description)* of the amendment report.
Critical State significant infrastructure (CSSI) application area	The critical State significant infrastructure (CSSI) application for the HTP covers five local government areas (Muswellbrook, Singleton, Cessnock, Central Coast and Lake Macquarie).
Cumulative impact	The combined impacts of the project on a matter with other relevant future projects.
Disturbance area	This is used primarily to assess potential impacts on biodiversity values in *Appendix E – Revised biodiversity development assessment report* of the amendment report; and has been incorporated into this ACHA addendum for the purposes of Aboriginal cultural heritage. Includes the following categories: • disturbance area A • disturbance area A (centreline) • disturbance area B • disturbance area HZ.
Disturbance area A	The area where vegetation would be completely removed. It includes areas at and around transmission towers (including tower pads and batters), stringing sites, laydown areas, switching stations, substation upgrades, construction support sites, new and upgraded access tracks and road upgrades. Impacts within this area would include sub-surface disturbance from construction activities such as grading, excavation, and full tree removal. With the exception of areas that only require temporary disturbance (i.e. temporary access tracks and stringing sites), this area would also be subject to ongoing maintenance during operation (including vegetation removal to ground level) for operational and safety requirements, including bushfire risk management.
Disturbance area A (centreline)	A 20-metre-wide centreline area between transmission towers where all vegetation would be removed to ground level during construction. This area would also be subject to ongoing maintenance during operation (i.e. removal to maintain vegetation clearance requirements) for operational and safety requirements, including bushfire risk management.
Disturbance area B	The area within the transmission line easement, excluding disturbance area A and disturbance area A (centreline), where partial clearing would be undertaken. Removal of vegetation (including trees) would be undertaken only where it has the potential to exceed vegetation clearance heights. These heights are set for operational and safety requirements, including bushfire risk management (a minimum of 13.5 metres below the conductors at maximum operating temperature). Vegetation with mature growth heights up to 2 metres can remain, while vegetation exceeding two metres will be managed to maintain these clearance heights. This area would be subject to ongoing maintenance during operation.

Term	Definition
Disturbance area hazard tree zone (HZ)	Hazard trees are those that have the potential to pose a risk to safe operation of the transmission line by falling onto the transmission towers, conductors and associated infrastructure within the easement. A hazard tree zone has been identified in limited areas on either side of the transmission line easement through LiDAR analysis of tree heights and topography. Hazard tree management would occur during operation to maintain safe operating clearances for the conductors and tower structures. The hazard tree zone will be inspected for trees in the height range of 20 metres or more, which is typically in the high-risk category. High-risk category trees will be assessed for structural instability and managed according to the risk present, including tree removal if required.
EnergyCo	The Energy Corporation of New South Wales constituted by section 7 of the NSW *Energy and Utilities Administration Act 1987* as the NSW Government-controlled statutory authority appointed as the infrastructure planner under the NSW *Electricity Infrastructure Investment Act 2020* responsible for the delivery of NSW's Renewable Energy Zones (REZs). The proponent for the HTP.
Eraring Power Station	Existing Power Station at Eraring operated by Origin Energy.
Exclusion zone	A safe clearance area around the transmission line and towers to protect public safety, the network and to maintain access to the asset. It delineates the area where most land use activities are prohibited. The zone is located within the easement and is defined according to the operational voltage and design of the infrastructure.
Exhibited project	The project as described in the publicly exhibited EIS.
Hunter Transmission Project (HTP) or project	The HTP as described in *Appendix A (Updated project description)* of the amendment report and identified in the overview figures of the amendment report.
HTP corridor	Comprises: • the transmission line corridor connecting Bayswater South switching station to Olney switching station • the transmission line corridor connecting the Bayswater South switching station to the existing 500 kV transmission line near Bayswater Power Station • the transmission line corridor connecting the Olney switching station to the existing 500 kV transmission line between Eraring and Kemps Creek. The HTP corridor is around 140 metres wide.
HTP North, HTP Central and HTP South	Three geographical zones defined as: • HTP North – Bayswater to Broke includes the Bayswater Power Station, major coal mining complexes in the Upper Hunter Valley, Mount Thorley Industrial Estate, Singleton Military Area, and several rural properties generally on the alluvial floodplains of the Hunter River • HTP Central – Pokolbin to Corrabare includes the Pokolbin and Corrabare State forests and the rural residential areas between these forests at Cedar Creek, Millfield and Laguna • HTP South – Olney to Eraring includes the Watagan and Olney State forests, Watagans National Park, the residential areas in Martinsville and Cooranbong, and Eraring Power Station.
Laydown areas	Established to allow for flexibility in construction and to minimise the need for vehicle movements to and from the construction support sites. These would act as temporary staging, storage, and complex plant/equipment setup areas. They would also act as traffic control nodes during construction of the HTP.
No clearing zone	Areas within the transmission line easement where vegetation removal is not required. These areas would occur where there is sufficient separation of 10 metres or more between the maximum operating temperature conductor position and the existing vegetation. This area is excluded from the disturbance area.

Term	Definition
Olney switching station	The new switching station that would be constructed in Olney State Forest.
Operation impact area	The area that would be occupied by permanent components of the project and/or maintained, including transmission line easements, transmission lines and towers, substations, switching stations, communications infrastructure, maintenance facilities, permanent access roads to substations and switching stations and access tracks to the transmission line easement.
Pre-construction minor works	Activities with a low potential to impact the environment that may be permissible in advance of construction and without the requirement for an approved environmental management strategy/construction environmental management plan (CEMP).
Project impact area	The area that has been assumed for the purpose of the amendment report to be directly affected by the construction and operation of the project. It includes the indicative location of project infrastructure, the area that would be directly disturbed during construction and any easement required during operation.
(the) proponent	The Energy Corporation of NSW (EnergyCo).
Registered Aboriginal Party (RAP)	An Aboriginal individual and/or organisation that has registered to be consulted on the project; and is identified as a Registered Aboriginal part through the exhibited ACHA and ACHA addendum.
Refinement	A change that fits within the limits set by the project description of the exhibited project and does not change what the proponent is seeking approval for and/or does not require an amendment to the CSSI application for the project.
Renewable Energy Zone (REZ)	A geographic area identified and declared by the NSW Government as a Renewable Energy Zone.
Stringing site	Used for the preparation, assembly and operation of stringing equipment to connect the transmission line to the towers. Stringing sites would be positioned along the HTP corridor. On other transmission projects, they may be referred to as 'brake and winch' sites.
Substation	A facility used to increase or decrease voltages between incoming and outgoing lines (e.g. 330 kV to 500 kV).
Switching station	A facility used to connect two or more distinct transmission lines of the same designated voltage.
Temporary worker accommodation	Temporary accommodation that would be erected and used during construction to house the construction workforce. Temporary worker accommodation would be located at some construction support sites.
Transgrid	Preferred network operator for the HTP.
Transmission line easement	An area surrounding and including the transmission lines which is a legal proprietary right and allows for ongoing access and maintenance of the transmission lines. Landowners can typically continue to use most of the land within transmission line easements, subject to some restrictions for safety and operational reasons.
Transmission tower	For 500 kV transmission lines, this is typically a free-standing steel lattice structure (suspension or tension tower). Transmission towers for the HTP would generally be up to 85 metres high.

Executive Summary

ES1 Project overview

The Hunter Transmission Project (HTP, the project) involves the construction of a new overhead 500 kilovolt (kV) transmission line of around 110 kilometres connecting the existing 500 kV transmission line at Bayswater to the existing 500 kV transmission line in the Olney State Forest near Eraring in the Hunter region of New South Wales (NSW).

An environmental impact statement (EIS) was prepared in accordance with the requirements of Part 5, Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The EIS was placed on public exhibition by the NSW Department of Planning, Housing and Infrastructure (DPHI) for a period of 28 days, between 27 August 2025 and 24 September 2025.

The Energy Corporation of NSW (EnergyCo) has proposed amendments and refinements to the exhibited project. The amendments and refinements respond to stakeholder and contractor feedback on the project, as well as provide functional improvements to the design and construction methodology of the project. The proposed amendments and refinements take into account submissions received during the public exhibition of the EIS and ongoing design and construction methodology development since the EIS was exhibited.

ES2 Purpose of report

An Aboriginal cultural heritage assessment report (hereafter exhibited ACHA) was prepared as part of the EIS and provided an assessment of the potential Aboriginal heritage impacts associated with the project.

This ACHA addendum report represents supplementary information further considering the proposed project amendments and responding to submissions received during the public exhibition. Specifically, the ACHA addendum:

- provides information on additional field survey and test excavation undertaken following submission of the EIS to further supplement and refine the existing archaeological models and identified cultural assemblage
- provide information on additional field survey investigations undertaken for a series of d amendments to the project since exhibition of the EIS
- provide clarifications and additional information to respond to comments made by Heritage NSW, Forestry Corporation of NSW, NSW National Parks and Wildlife Service, and Mindaribba Local Aboriginal Land Council (LALC) during the public exhibition of the EIS documentation.

ES3 Results and findings

ES3.1 Field investigations

Additional field investigations included:

- field surveys of previously uninspected areas of the project impact area. These were undertaken to fill any gaps in the field survey coverage undertaken for the ACHA addendum as a result of proposed amendments and/or improved land access

- test excavation to further understand any buried cultural deposits within the project impact area. These investigations focussed on proposed disturbance within areas of predicted Warkworth Sands system in the vicinity of the Hunter River/Wollombi Brook confluence. Of the 40 locations within the project impact area proposed for test excavation in the exhibited ACHA, 17 have now been completed.[1]

Around 160 kilometres of additional field survey was undertaken as part of the ACHA addendum, and which identified a further 13 Aboriginal objects, sites and places (as well as re-investigated seven previously documented sites). These were all found in previously unsurveyed portions of the exhibited project impact area and were dominated by isolated and low-density stone artefacts, but included a potential culturally modified tree. In combination with the exhibited ACHA investigations, 82.5% of the amended project impact area has been inspected. Of the remaining project impact area, 7% has not been surveyed either being rugged terrain considered dangerous (3%) and/or comprising existing sealed roads (4%). When combining all activities for the project since November 2023, ~800 kilometres of transects within the amended project impact area and its immediate surrounds have occurred, and over 8,700 points of observation and recording undertaken.

Additional archaeological excavations included 180 test pits (consisting of 160 x 0.25 square metre (m^2) and 20 x 1 m^2 test pits) undertaken in small grids at each of the 17 locations, and equating to ~60 m^2 or ~31.26 cubic metres (m^3). The test pits encountered two main soil types, either shallow duplex soil profiles or deep Warkworth Sands system units. The former were typically shallow (<50 centimetres), while the latter routinely reached depths of >1 metre. When incorporating the previous phase of works within the exhibited ACHA, this totals 284 test pits, equivalent to ~89 m^2. In total, 563 stone artefacts were recovered from the ACHA addendum investigations, with an average density of 3.4 artefacts/m^2. They were dominated by indurated mudstone and silcrete raw materials, with a range of tool types (including backed blades and scrapers) recovered. The findings align with predictions of the distribution of the Warkworth Sands system and suggest ~117 hectares of the deposit is within the amended project impact area.

The test excavations ultimately identified 20 discrete Aboriginal sites. Of these, ten test pits primarily situated immediately south of Wollombi Brook and on a rise east of Hobden Gully ridge overlooking the Hunter River (north of Wollombi Brook) were amalgamated into five focus areas indicative of more extensive visitation and/or occupation, along with a range of other sparser subsurface stone artefact densities. The highest artefact densities were encountered within test pits 141-1 to 141-21 inclusive on the banks of Wollombi Brook, with chronological samples suggesting extended occupation in the last 1 to 2000 years. Test pits 156-2 to 156-21 inclusive and 158-2 to 158-26 inclusive were situated in the Warkworth Sands system, and from which cultural materials of significant age were encountered. Specifically, at test pits 156-2 to 156-21 inclusive, the assemblage appears to reflect visitation over the last 17,000 years, while at test pits 158-2 to 158-26 inclusive visitation may have initially occurred at 38000 years ago and continuing to ~13,000 years ago. While cautious interpretation is needed given the bioturbation and mixing evident in the Warkworth Sands system, if accurate, this would be the earliest evidence of human activity in the Hunter Valley documented to date.

[1] The completion of this field program forms part of the mitigation measures outlined in *Chapter 9 (Management)* and *Appendix E (Post-approval requirements – updated guiding principles)*.

ES3.2 The cultural assemblage

The exhibited ACHA identified 32 significant Aboriginal objects, and places, along with a background scatter that amalgamated 191 isolated and low-density stone artefact scatters within the project impact area. Information was also provided of 379 Aboriginal objects, sites and places outside the exhibited project impact area, but within 200 metres. As part of the ACHA addendum, numerous refinements to the cultural assemblage within the amended project impact area have been undertaken as a result of comments though the public exhibition of the EIS. This included the further consideration of Aboriginal object, sites and places: 1) identified as previously destroyed; 2) outside, but on the periphery of the project impact area; 3) increasing detail of those outside, but within 55 metres of the project impact area; 4) the separation of the background scatter sites that amalgamated discrete listings and to rather present them separately; and 5) inclusion of cultural materials some distance beyond the project impact area, but potentially affected through the project mitigation measures.[2]

When applying these requirements, the cultural assemblage totals:

- Within the amended project impact area: 303 Aboriginal objects, sites and places, including 13 rockshelters, six grinding grooves, eight cultural places, three culturally modified trees, three stone arrangements, nine high density stone artefact scatters, eleven moderate density stone artefact scatters, eight subsurface cultural deposits, 121 low density artefact scatters and 121 isolated stone artefacts
- Outside, but within 55 metres of the amended project impact area: 146 Aboriginal objects, sites and places, including five rockshelters, seven grinding grooves, three resource and gathering sites, four culturally modified trees, two stone arrangements, five high density stone artefact scatters, ten moderate density stone artefact scatters, one hearth, 50 low density artefact scatters and 59 isolated stone artefacts
- Outside the amended project impact area, but may be impacted through the mitigation measures of the project, which propose Aboriginal led research that may include investigation and recovery of cultural materials: three rockshelters.

Of the 303 Aboriginal objects, sites and places entirely or partially within the amended project impact area, 23 are considered of high significance. These are dominated by the site types discussed above, including rockshelters, grinding grooves, stone arrangements, cultural places, and cultural deposits documented in the test excavation. 81 moderate significant Aboriginal objects, sites and places are also documented, which include a range of stone artefact materials (many previously documented across the region). The remaining 199 Aboriginal objects, sites and places are considered of low significance, and are dominated by surface isolated or low-density stone artefacts. When considering areas outside, but within 55 metres of the project impact area, of the 146 Aboriginal objects, sites and places documented, 17 highly significant Aboriginal objects, sites and places, are present; 27 of moderate significance; and 102 of low significance. The three rockshelters outside the project impact area that may be affected through Aboriginal led research activities recommended by the project were all considered of high significance.

Several cultural landscapes, including view-lines and -scapes, identified in the exhibited ACHA continue to remain relevant to the project. These typically represent concentrated areas of cultural sites and materials, and broader view-lines between Dreaming places (primarily promontories) across the broader region.

[2] The distance of 55 m from the amended project impact area is based on the predicted distance for indirect vibration impacts by the project based on German Standard DIN 4150-2016 Vibration in Buildings - Part 3: Effects on Structures criteria for sensitive heritage structures – the closest comparison available to the identified cultural materials.

ES4 Potential impacts and management

In response to comments received during the public exhibition, the potential impacts of the amended project impact area have been further refined. Rather than propose a 100% impact within the amended project impact area as outlined in the exhibited ACHA, this ACHA addendum has adopted the disturbance areas as identified *Appendix E – Revised biodiversity development assessment report* of the amendment report. These include several no-go areas, or areas where minimal development activities are proposed, and within which cultural materials would be unaffected. In addition, 20 high and moderate significant Aboriginal objects, sites and places within or in close proximity to the amended project impact area are now committed for avoidance (an increase from five in the exhibited ACHA). Further refinement is also being explored for project elements in the vicinity of highly significant cultural deposits, HTP-N-FA01 and HTP-N-FA02.

Overall, 232 Aboriginal objects, sites and/or places will be directly or indirectly impacted by the project. These include:

- 217 Aboriginal sites and places are within disturbance areas A and B and would be either completely or partially impacted by the project. These include five rockshelters, five cultural sites (primarily resource and gathering), two grinding groove sites, two culturally modified trees, 29 surface and sub-surface stone artefact sites of moderate to high-density, and 174 low density artefact scatters and isolated finds
- a further 12 Aboriginal objects, sites and places within or within 55 m of the amended project impact area but outside of disturbance areas A and B, but which are prone to indirect impacts, such as vibration and/or hydrological changes[3]
- three sites outside the project impact area (>55 m) would be partially impacted as a result of Aboriginal led research outlined in the mitigation measures in *Chapter 9 (Management)*

These values are an increase in potential impacts from the exhibited ACHA (n=223) by nine additional identified sites and/or places. The remaining cultural assemblage, consisting of 69 Aboriginal objects, site and places within the amended project impact area and 131 outside, but within 55 metres of the amended project impact area, are unlikely to be affected by the project. Of the 117 hectares of predicted Warkworth sand system within the amended project impact area, ~50 hectares (43%) are situated within areas where ground disturbance is not predicted, and would be unaffected by the project.

Potential impacts to cultural landscapes, view-lines and -scapes identified within, or in the vicinity of the amended project impact area, remain unchanged from the exhibited ACHA. Where impacts are predicted, project specific mitigation measures have been developed in consultation with the key Aboriginal Traditional Owners.

This ACHA addendum report includes updated management and mitigation sections based on this revised cultural assemblage. These now include further consideration of avoidance and minimising impacts throughout detailed design and construction, more extensive engagement and consultation during the development of key documentation, and further details of post-approval mitigation measures.

[3] One of these sites includes HTP-C-RS14 (#45-3-5013), which is also proposed to Aboriginal led research and may result in direct harm to the site through activities such as excavation and/or analysis of art motifs. This is further outlined in *Chapter 9 (Management).*

TABLE OF CONTENTS

Appendices

Tables

Figures

Plates

1 Introduction

1.1 Background

The Hunter Transmission Project (HTP, the project) involves the construction of a new overhead 500 kilovolt (kV) transmission line of around 110 kilometres connecting the existing 500 kV transmission line at Bayswater to the existing 500 kV transmission line in the Olney State Forest near Eraring in the Hunter region of New South Wales (NSW).

Due to its strategic importance, the NSW Minister for Planning and Public Spaces has declared the project to be Critical State Significant Infrastructure (CSSI) under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

An environmental impact statement (EIS) was prepared in accordance with the requirements of Part 5, Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The EIS was placed on public exhibition by the NSW Department of Planning, Housing and Infrastructure (DPHI) for a period of 28 days, between 27 August 2025 and 24 September 2025.

The Energy Corporation of NSW (EnergyCo) has proposed amendments and refinements to the exhibited project. The amendments and refinements respond to stakeholder and contractor feedback on the project, as well as provide functional improvements to the design and construction methodology of the project. The proposed amendments and refinements take into account submissions received during the public exhibition of the EIS and ongoing design and construction methodology development since the EIS was exhibited. These amendments and refinements have been described and considered in relevant impact assessments.

1.2 The project (as exhibited)

The key elements of the project, as exhibited in the EIS, include:

- a new overhead 500 kV double circuit transmission line of around 110 kilometres
- two new switching stations (Bayswater South and Olney)
- upgrades to the existing Bayswater and Eraring substations
- adjustments and upgrades to existing transmission lines
- property adjustment works to facilitate access to the transmission lines and switching stations
- utility adjustments required for the construction of the transmission network infrastructure
- ancillary works to support construction including road upgrades, establishment of new access tracks and upgrades to existing access tracks, construction support sites (some with temporary worker accommodation), and other construction facilities such as laydown areas.

The HTP corridor runs mostly through power station, mining and government land between Bayswater and Broke. It then traverses the Pokolbin, Corrabare, Watagan and Olney State forests where it joins the existing 500 kV transmission line running between Eraring and Kemps Creek in western Sydney.

1.3 The project (as amended)

The proposed amendments and refinements to the exhibited project are collectively referred to in this Aboriginal cultural heritage assessment (ACHA) addendum as the 'amended project'.

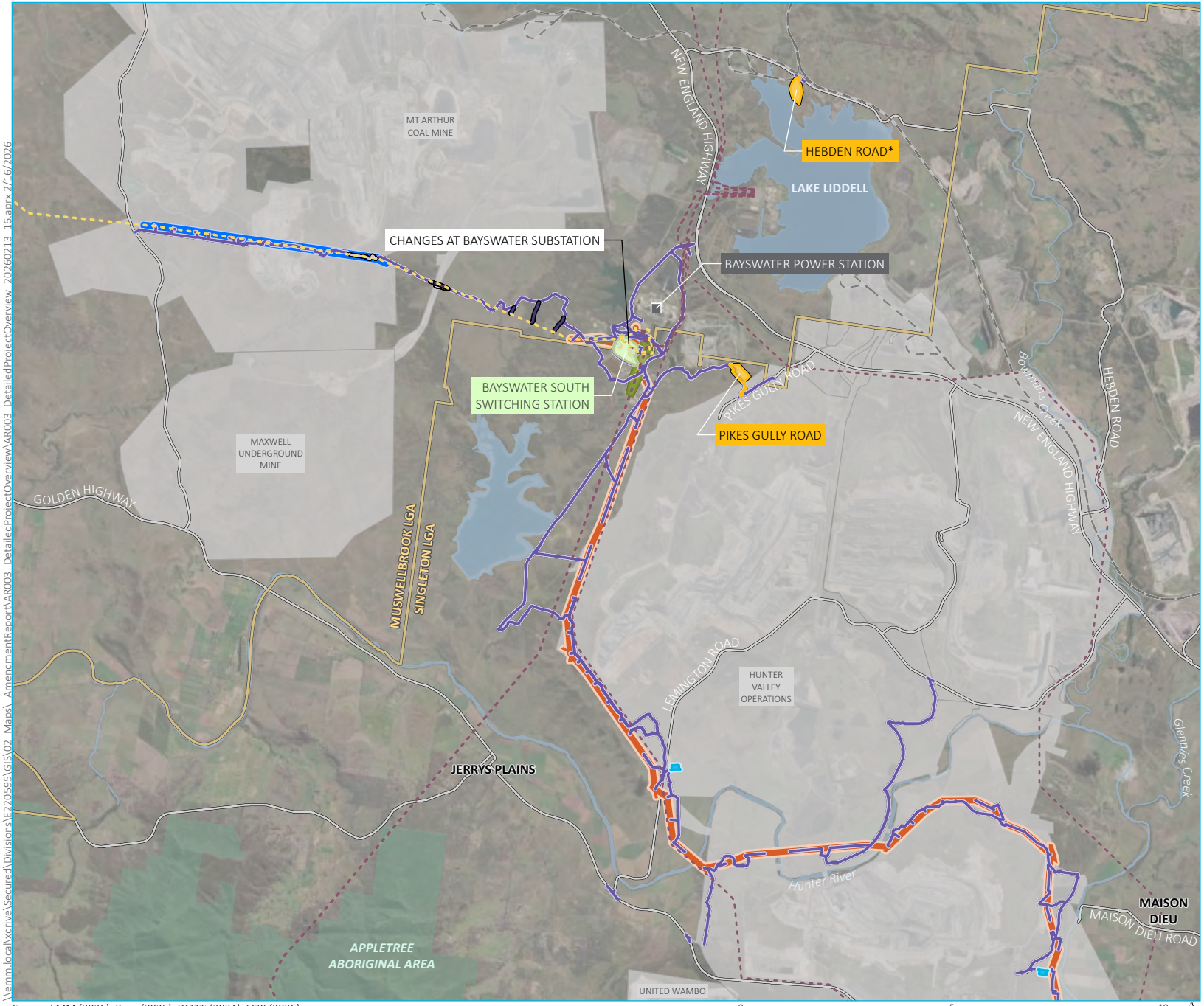
The key proposed amendments include:

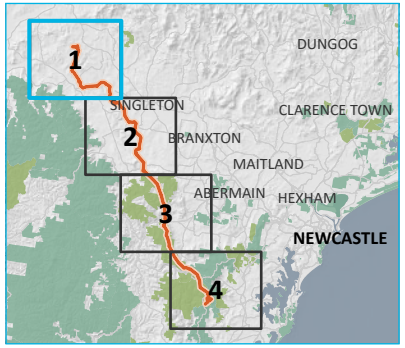
- realignment of the transmission line at Mount Thorley
- realignment of the transmission line at Gouldsville
- localised easement widening for conductor swing
- changes at Eraring substation
- changes to access tracks
- minor adjustments to the project impact area for intersection upgrades
- adjustments to the proposed access routes for construction
- reconfiguration of construction support sites and temporary worker accommodation facilities
- changes to laydown areas within State forests
- reconfiguration of the Flick Road emergency helicopter landing area
- removal of stringing site in Olney State Forest
- changes to construction plant and equipment types and locations

The key refinements include:

- minor changes at Bayswater substation
- changes to the disturbance area at Olney.

These amendments are further outlined in Figure 1.1, and descriptions of the amendments are included in *Chapter 2 (Description of amendments and refinements)*.





KEY

- Exhibited project impact area

Amended project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Adjustment to existing transmission line (lines 31 and 32)
- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access tracks, road upgrades and intersection upgrades
- New access track
- Access tracks no longer required

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- Energy
- Local government area

Proposed amendments
Map 1 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 1.1

Source: EMM (2026); Beca (2025); DCSSS (2024); ESRI (2026)

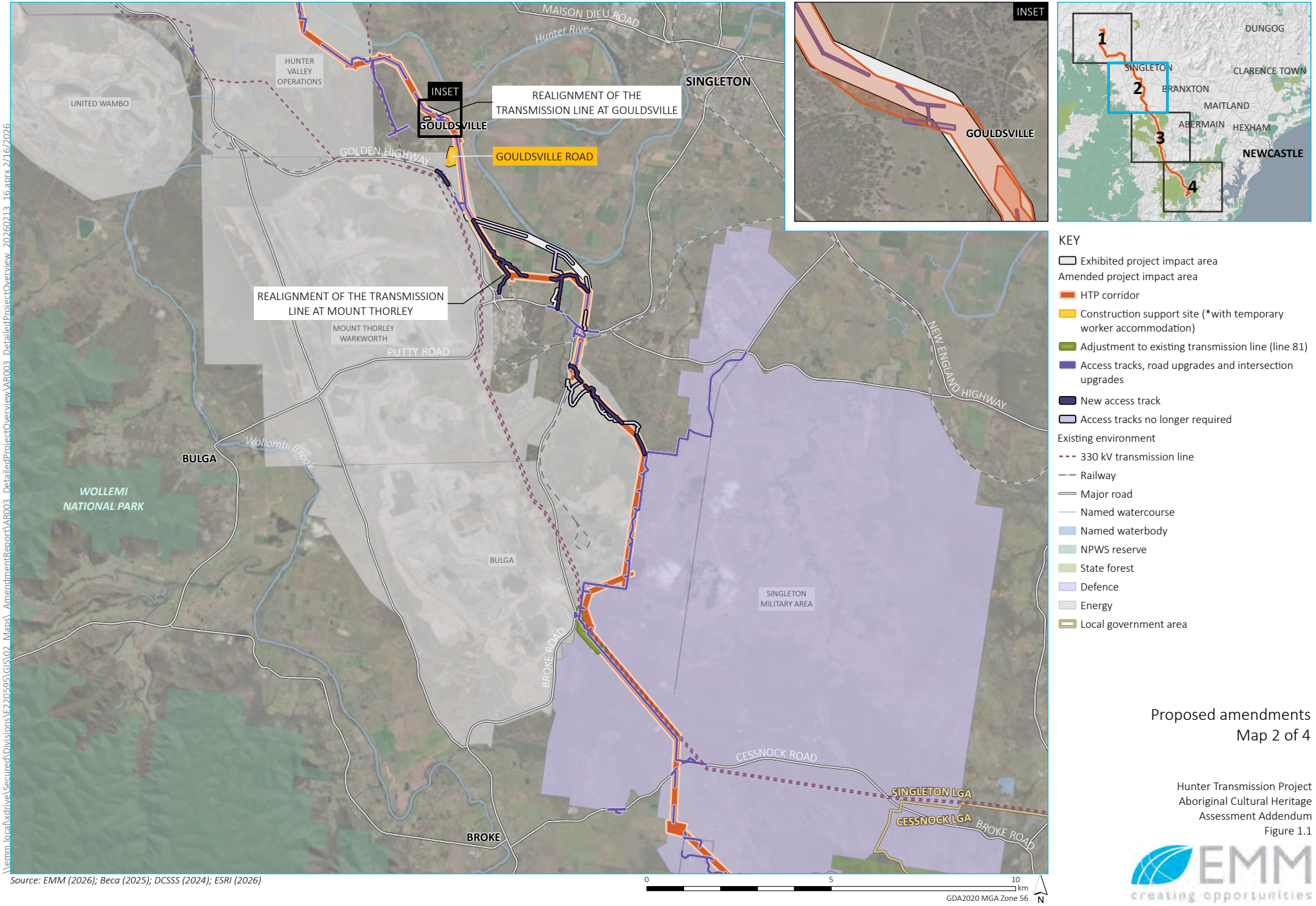
0 5 10 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\EF220595\GIS\02_Maps_AmendmentReport\AR003_DetailedProjectOverviewAR003_DetailedProjectOverview_20260213_16.aprx 2/16/2026

EMM creating opportunities



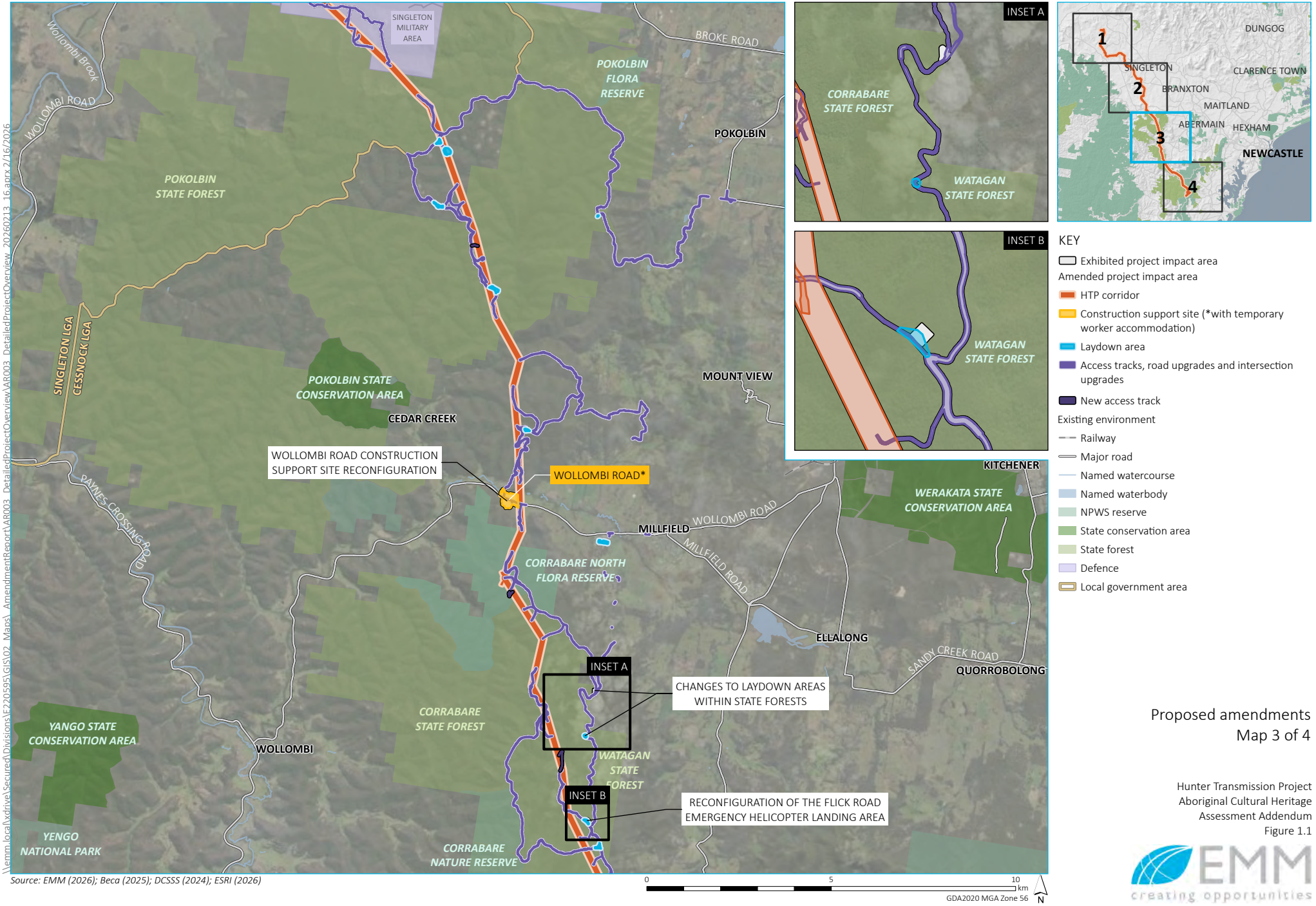
\\emm.local\xdrive\Secured\Divisions\EF220595\GIS\02_Maps_AmendmentReport\AR003_DetailedProjectOverview\AR003_DetailedProjectOverview_20260213_16.aprx 2/16/2026

Source: EMM (2026); Beca (2025); DCSSS (2024); ESRI (2026)

Proposed amendments
Map 2 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 1.1

EMM
creating opportunities



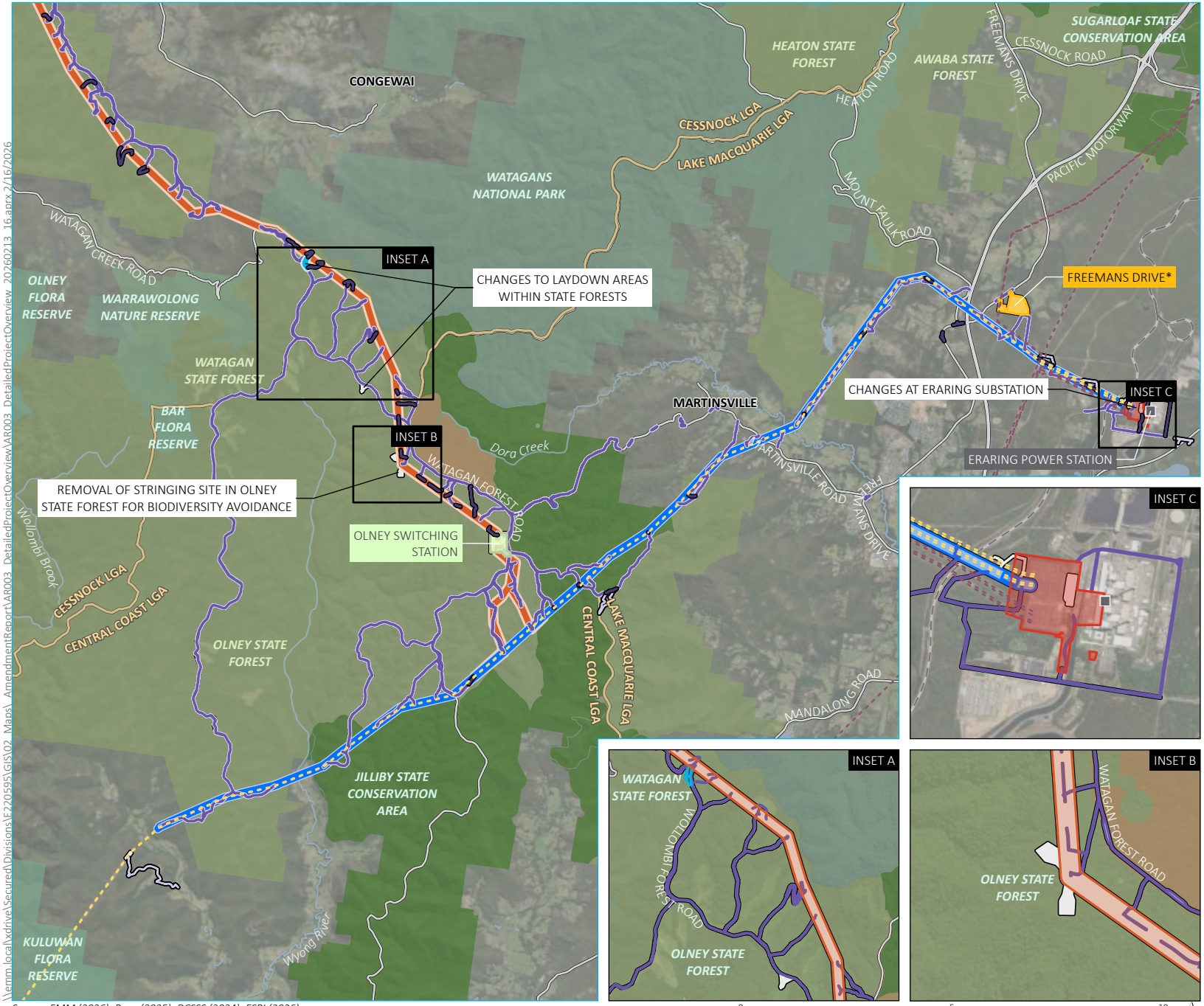
\\emm.local\xdrive\Secured\Divisions\EF220595\GIS\02_Maps_AmendmentReport\AR003_DetailedProjectOverview\AR003_DetailedProjectOverview_20260213_16.aprx 2/16/2026

Source: EMM (2026); Beca (2025); DCSSS (2024); ESRI (2026)

Proposed amendments
Map 3 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 1.1

EMM
creating opportunities



Source: EMM (2026); Beca (2025); DCSSS (2024); ESRI (2026)

\\emm.local\xdrive\Secured\Divisions\EF220595\GIS\02_Maps_AmendmentReport\AR003_DetailedProjectOverviewAR003_DetailedProjectOverview_20260213_16.aprx 2/16/2026

Proposed amendments
Map 4 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 1.1

EMM
creating opportunities

1.4 Purpose and structure of this report

The purpose of this report is to support the Hunter Transmission Project Amendment Report through assessment of the potential Aboriginal cultural heritage impacts of the amended project. This report considers whether the proposed amendments and refinements would result in any changes to the predicted Aboriginal cultural heritage impacts described in the EIS for the exhibited project, and whether any changes to mitigation measures are required.

This ACHA addendum is to be read in conjunction with the EIS for the exhibited project and the exhibited ACHA.

The structure and content of this ACHA addendum is as follows:

- *Chapter 1 – Introduction*: provides an introduction to this ACHA addendum
- *Chapter 2 – Description of amendments and refinements*: includes an overview of the proposed amendments and refinements compared to the description of project features as part of the exhibited project
- *Chapter 3 – Methodology*: outlines the methodology used for the preparation of this ACHA addendum
- *Chapter 4 – Aboriginal consultation*: describes the consultation that has been undertaken with the registered Aboriginal parties (RAPs) since the submission of the EIS and in the finalisation of this ACHA addendum
- *Chapter 5 – Field investigations*: outlines additional field survey and test excavations undertaken during and/or following the submission of the EIS to further inform the cultural assemblage within the amended project impact area
- *Chapter 6 – The archaeological resource*: provides an updated description of the Aboriginal objects and sites within the amended project impact area following modifications to the exhibited ACHA sought through public exhibitions and as a result of proposed refinements.
- *Chapter 7 – Significance assessment*: classifies the scientific and cultural significance of identified Aboriginal objects and sites within the amended project impact area
- *Chapter 8 – Assessment of impacts*: includes an assessment of the potential construction and operational Aboriginal cultural heritage impacts of the amended project compared to the impacts described as part of the exhibited project, and describes where the impacts of the proposed amendments and refinements would be consistent with those described as part of the exhibited project
- *Chapter 9 – Management*: includes the proposed environmental management framework and mitigation measures for the Aboriginal cultural heritage impacts of the amended project, including any changes to the mitigation measures presented as part of the exhibited project
- *Appendix A – Public exhibition comments*: provides the public exhibition comments on the exhibited ACHA and a table that outlines how these issues have been addressed in this ACHA addendum
- *Appendix B – Aboriginal consultation*: provides documents and meeting minutes associated with the consultation process in *Chapter 4 – Aboriginal consultation*
- *Appendix C – Field investigations*: presents raw data, photographs and tabular data associated with the field investigation activities outlined in *Chapter 5 – Field investigations*

- *Appendix D – Archaeological site information*: presents tables and more detailed descriptions of Aboriginal objects and sites discussed in this ACHA addendum
- *Appendix E –Post-approval requirements – updated guiding principles*: describes additional details and requirements to provide context and further direction of the mitigation measures outlined in *Chapter 9 – Management.*

2 Description of amendments and refinements

This chapter provides a description of the proposed amendments and refinements compared to the exhibited project. These amendments and refinements have been made in response to stakeholder and contractor feedback, as well as feedback received from community submissions on the exhibited project. The design and construction methodology for the project would continue to be refined and confirmed during detailed design. An updated description of the project incorporating the proposed amendments and refinements is included in *Appendix A (Updated project description)* of the amendment report.

The amendments and refinements to the exhibited project (inclusive of the additional information and clarifications for the exhibited project) are collectively referred to in this report as the 'amended project'.

Descriptions of the proposed amendments and refinements as part of the amended project are included in Table 2.1.

Table 2.1 Description of proposed amendments and refinements compared to the exhibited project

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
Amendments			
Changes to 500 kV transmission line infrastructure	Realignment of the transmission line at Mount Thorley	The transmission line alignment between Bulga and Mount Thorley was designed to utilise mining-owned land wherever feasible and avoid the designated conservation offset area associated with the Bulga mining complex. To address safety concerns related to major hazardous facilities, the transmission line alignment has been developed to establish a safe minimum distance from facilities (Enaex and Dyno Nobel) in Mount Thorley Industrial Estate. Further refinements within Mount Thorley-Warkworth mining complex land, adjacent to the Golden Highway, shifted the transmission line alignment away from the Hunter River, further west. This adjustment allowed tower foundations to be sited in areas with reduced peak flood depths and velocities, improving resilience during flood events.	Around 4 kilometres of the new 500 kV double circuit transmission line at Mount Thorley would be realigned, moving it up to around 900 metres further south and away from the Hunter River. This proposed realignment of the transmission line at Mount Thorley as part of the amended project has been developed with input from the directly impacted landowners and stakeholders and would involve the transmission line continuing south adjacent to the Whittingham to Mount Thorley rail line before deviating in an eastward direction to join the exhibited HTP corridor north of the Putty Road / Broke Road intersection.
	Realignment of the transmission line at Gouldsville	The transmission line alignment in Gouldsville was designed to avoid impacts on high-quality remnant threatened ecological communities through co-location with existing electrical infrastructure easements and access tracks.	Around one kilometre of the new 500 kV double circuit transmission line at Gouldsville would be realigned, moving it slightly south towards Long Point Road West and Gouldsville Road. This proposed realignment has been developed to further minimise impacts to threatened ecological communities, including the Central Hunter Grey Box – Ironbark Woodland threatened ecological community, listed as endangered under the NSW *Biodiversity Conservation Act 2016*.

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
	Localised easement widening for conductor swing	Section 4.5.1 of the EIS outlines that the operation of the transmission line would occur in a permanent 70-metre-wide easement.	Further development of the project design has identified localised areas of the transmission line easement where the span of conductors between transmission towers would 'swing' during periods of high wind, to a point where there is the potential that during these situations the conductors would extend outside of the 70-metre-wide operational easement. In consultation with Transgrid (as the preferred network operator for the project), the exhibited 70-metre-wide transmission line easement would be widened to be between 80 metres and around 140 metres wide in certain locations so that the transmission line assets stay wholly within the operational easement for the project.
Changes to substation infrastructure	Changes at Eraring substation	*Section 4.2.3* in the EIS provides a general overview of the proposed upgrades at Eraring substation, which include: • expansion of the substation to accommodate the installation of new transformers • relocating generator connections from Eraring Power Station and installation/replacement of associated switchgear as required • relocation of the existing transformer spare unit • installation of new 500 kV/330 kV transformer units, augmentation of 500 kV/330 kV bays and associated switchgear and connections adjustments to existing utilities and drainage infrastructure to accommodate the proposed substation expansion.	At Eraring substation, the amended project proposes to include: • a larger footprint for constructability, including for parking and the adjustment of utilities • substation generator connections on the existing hardstand area • modification works on the existing bench • new poles and adjustment of the existing generator connections into Eraring Power Station localised undergrounding of the optical ground wire route by trenching between existing transmission towers.

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
Changes to intersections, access roads and access tracks	Changes to access tracks	Access requirements for construction and operation of the project were described in *section 4.3.5* of the EIS. Based on the concept design and early construction planning, potential access routes, including access roads and access tracks, were identified and are listed in Table 4-7 and shown in Figure 4-10 of the EIS.	The amended project includes changes to access tracks proposed for use during construction and operation of the project, which have been identified through ongoing development of the project design and feedback received through consultation with landowners, stakeholders and government agencies. Construction of additional/changed sections of access tracks would be consistent with the construction methodology outlined in section 4.3.5 of the EIS. Changes to access tracks would be: • within State forests to provide a more suitable route for construction vehicles, improve access to the HTP corridor for clearing, and avoid the need to cross riparian zones • within Olney State Forest to minimise impacts to a number of threatened amphibian species and their habitat • on land that forms part of the Bulga mining complex to avoid a clean water diversion, keep access for the project separate from access to the mining complex, and avoid direct impacts to existing biodiversity offset areas • for the upgrades to existing transmission lines and towers to ensure access tracks are fit for purpose and to reduce impacts to landowners • off Putty Road to access the proposed realignment of the transmission line at Mount Thorley.

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
	Minor adjustments to the project impact area for intersection upgrades	*Section 4.3.5* of the EIS noted that the project would rely on the use of existing public roads during construction and operation of the project. In several locations along the construction routes, upgrade works would be required, including at several intersections (which were listed in Table 4-10 of the EIS), to cater safely for the proposed construction traffic volumes and delivery of oversized equipment or construction material and ensure public road safety.	The assessment of the amended project as part of the revised traffic and transport impact assessment identified the need for an additional intersection upgrade at Jerrys Plains Road southbound off ramp / existing access track at Mount Thorley, as a result of the changes to access tracks associated with the change to transmission line alignment at Mount Thorley. In addition, revised turn warrant assessments were completed for the intersections required to be used for the construction of the project, which identified the need for different intersection treatments than what was included in the EIS for five intersections. This includes: • Freemans Drive / Martinsville Road (intersection ID I-23) – additional land acquisition to accommodate turning vehicle movements • Putty Road / existing access track (intersection ID I-31) – an eastbound merge lane along Putty Road • Cessnock Road / new access track (intersection ID I-37) – widening on Cessnock Road for acceleration and deceleration lanes • Golden Highway / Gouldsville Road (intersection ID I-07), to incorporate a channelised right hand turn. The need for different intersection treatments has resulted in minor adjustments to the project impact area at these locations.
	Adjustments to the proposed access routes for construction	Table 4-7 of the EIS provided a summary of the proposed access routes to be used for construction of the project. This list was based on the concept design for the project and early construction planning.	Adjustments to the proposed access routes to be used for construction have been made following a review of the proposed construction methodology for the project. This included the addition of some construction routes now required and the removal of some construction routes no longer required. The complete list of proposed access routes for construction is provided in Table A-7 of the updated project description (refer to *Appendix A (Updated project description)* of the amendment report.

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
Changes to construction methods and facilities	Reconfiguration of construction support sites and temporary worker accommodation	*Section 4.3.6* and *section 4.3.7* of the EIS describes the construction support sites and temporary worker accommodation that would be established to support the construction of the HTP. The EIS assumed a peak construction workforce of 830 workers, with allowance for 780 workers to be housed in temporary worker accommodation at the Hebden Road, Gouldsville Road and Freemans Drive construction support sites.	Further consideration of the construction methodology for the project along with feedback received during exhibition of the EIS has identified the need to: • remove provisions for temporary worker accommodation facilities at the Gouldsville Road construction support site • reconfigure the Wollombi Road construction support site to include temporary worker accommodation with capacity to house up to 300 workers. Consistent with other temporary worker accommodation facilities for the project, the temporary worker accommodation at Wollombi Road would be operational 24 hours per day 7 days per week. The amended project would therefore include a change in construction activities proposed to be carried out at both the Gouldsville Road construction support site and the Wollombi Road construction support site. At Gouldsville Road, this would include a decrease in light vehicle movements in and out of the construction support site and reduced operating hours. At the Wollombi Road construction support site, this would include an increase in light vehicle movements in and out of the construction support site and extended operating hours at the construction support site, resulting in potential changes to amenity impacts. This amendment would not change the assumed peak construction workforce.

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
	Changes to laydown areas within State forests	Figure 4-2 of the EIS shows the locations of laydown areas located outside the HTP corridor. Laydown areas identified in the EIS as being located within the State forests include: • Broken Back Road in Cedar Creek • Campbell Spring Trail in Cedar Creek • Trig Road/Mf1 Road in Corrabare • Trig Road/Crumps Road in Corrabare • Wollombi Forest Road in Ravensdale.	Feedback received from the Forestry Corporation of NSW during continued development of the project design identified an alternative arrangement of laydown areas for construction within the State forests. As a result, the amended project includes: • removal of the laydown areas included in the EIS near: – the intersection of Trig Road / Mf1 Road / North Road in Corrabare State Forest – Wollombi Forest Road (south of Halls Road) in the State Forest of the Watagan Mountains • inclusion of two new laydown areas within the State forests, located near: – the Trig Road / Flick Road intersection in the Corrabare State Forest – the Watagan Creek Road / Burma Road intersection in the State Forest of the Watagan Mountains. These new laydown areas would perform the same functions as laydown areas described in the EIS. However, they would result in changes to the project impact area and disturbance area compared to the EIS. Laydown areas would remain as included in the exhibited EIS at: • Broken Back Road in Cedar Creek • Campbell Spring Trail in Cedar Creek • Wollombi Forest Road in Ravensdale.
	Reconfiguration of the Flick Road emergency helicopter landing area in response to feedback received from Forestry Corporation of NSW	The construction methodology described in the EIS noted the project would include the provision of emergency helipads at laydown areas on Wollombi Forest Road and Flick Road for helicopters to land in the event of an emergency.	Continued construction planning and consultation with Foresty Corporation of NSW identified that the arrangement of the emergency helicopter landing site along Flick Road would need to be reconfigured so that its design complements the natural site topography and terrain. As such, the amended project would include the reconfiguration of the emergency helicopter landing site at Flick Road. The amended Flick Road emergency helicopter landing site would result in a change in the disturbance area and project impact area.

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
	Removal of stringing site in Olney State Forest to minimise impacts to threatened amphibian species	*Section 4.3.2* of the EIS outlines the work that would be carried out within the HTP corridor, which includes stringing sites. It is noted that stringing sites would be used for the preparation, assembly and operation of stringing equipment to connect the transmission line to the towers. Stringing sites would be positioned along the HTP corridor at various locations, including in the Olney State Forest north of the Olney switching station.	In response to consultation carried out with species experts and regulators for the biodiversity assessment of the project, refinements to the project to reduce the extent of vegetation clearing have been made within the exhibited HTP corridor in the Olney State Forest to the north of the proposed Olney switching station. These changes have been made to minimise impacts to threatened species, particularly frog species such as the Littlejohn's Tree Frog, within the Olney State Forest. As a result of these changes, the proposed stringing site to the north of the Olney switching station has been removed to minimise disturbance in this location. Alternative construction methodologies would be implemented to connect the transmission line to the towers at this location.
	Changes to construction plant and equipment types and locations	*Section 4.4.2* of the EIS outlines the plant and equipment required as part of construction for the project.	It is proposed to amend the list of plant and equipment required during construction of the project to also include the following: • diesel generators located at construction support sites and laydown areas • crushing and screening plant located at construction support sites and at laydown areas within State forests • washdown facilities located at construction support sites • wastewater treatment plants at construction support sites. These additional plant and equipment have been added to the proposed list to be used during construction in response to feedback from potential construction contractors.
Refinement			

Project feature	Amendment / refinement	Summary of exhibited project	Summary of amendment/refinement
Changes to substation infrastructure	Minor changes at Bayswater substation	*Section 4.2.3* of the EIS includes a general overview of the proposed upgrades to the Bayswater substation as part of the project, including: • works within the substation to trench and connect communications infrastructure to Bayswater South switching station via underground fibre cable • modifications and upgrades to protection, control, automation and communication equipment. *Section 4.2.3* of the EIS also includes a general overview of the proposed construction of Bayswater South switching station. Space would be provided at Bayswater South switching station to allow for additional switching station infrastructure, such as additional line shunt reactors and switching station bays, and connections for additional transmission lines in the future.	Based on continued development of the project design, it has been identified that the project is required to include an underground fibre optic communication connection between the Bayswater substation and the Bayswater South switching station. As part of the amended project, this underground fibre optic connection would be located in a trench within the exhibited HTP corridor. The trench would require excavation of about 200 metres in length and would be around 0.6 metres wide and one metre deep. Changes would also include the fitout of two additional switching bays at Bayswater South switching station. This would occur within the exhibited footprint of the Bayswater South switching station.
Changes to construction methods and facilities	Changes to the disturbance area at Olney	As described in *section 7.3* of the EIS, the assessment of biodiversity impacts includes a disturbance area within the project impact area to provide a more accurate estimation of the likely magnitude of vegetation clearance required, and any associated biodiversity impacts. The disturbance area takes a more precise approach than the project impact area and represents areas of direct impacts such as full clearing at transmission towers and partial clearing within the transmission line easement. This approach was adopted to avoid a substantial overestimation of the likely biodiversity impacts and the associated quantity of biodiversity offsets required.	In response to consultation carried out with species experts and regulators for the biodiversity assessment of the project, refinements to the project to reduce to the extent of vegetation clearing have been made within the exhibited HTP corridor in the Olney State Forest to the north of the proposed Olney switching station. These changes have been made to minimise impacts to threatened species and their habitat, particularly a number of amphibian species within the Olney State Forest, including the Littlejohn's Tree Frog. These refinements within Olney State Forest have included adjustments to the disturbance area used to assess the potential impacts to biodiversity. While changes have been made to the disturbance area at this location, the HTP corridor would remain the same within the Olney State Forest as the EIS, and the same approach to vegetation management in the disturbance area as the EIS would apply.

3 Methodology

This chapter describes the methodology used to respond to public submissions of the exhibited ACHA and assess the proposed amendments as part of the assessment of Aboriginal cultural heritage impacts. This chapter also notes where the methodology used to assess these impacts is consistent with the methodology used as part of the exhibited project.

3.1 Response to submissions

Appendix A – Public exhibition comments outlines NSW regulator and public submissions seeking clarification on and/or refinement of the exhibited ACHA. These primarily fell into the following categories:

- presenting the cultural assemblage documented in the exhibited ACHA differently. The exhibited ACHA grouped several low-density artefact sites and isolated finds into one background scatter, which has since been reviewed to achieve finer detail and improved management. Further information on these sites, and those proposed as destroyed has also been sought
- additional information on cultural materials that are outside, but in proximity to the project impact area. While these cultural materials are documented in the exhibited ACHA, being outside the project impact area, they are largely constrained to appendices and not specifically considered within the impact assessment. Further consideration of indirect impacts has been sought, and as such greater focus on these cultural materials is now presented
- additional field investigations, both pedestrian survey and test excavation, have been undertaken since the completion of the exhibited ACHA. These are now presented in this document to provide a more comprehensive understanding of cultural materials within the amended project impact area
- several comments sought greater involvement and/or commitment to post-approval requirements in the management of cultural materials. This has resulted in further refinement of the mitigation measures and associated guiding principles presented in *Chapter 9 (Management)*.

Table A.1 outlines specific responses and locations where each comment has been addressed in this report.

3.2 Assessment screening

Table 3.1 includes a screening assessment of the proposed amendments and refinements for the project. The relevance of each amendment/refinement to Aboriginal cultural heritage is outlined to determine the level of assessment required in this ACHA addendum.

Table 3.1 Screening assessment – Aboriginal cultural heritage

Amendment/refinement	Relevance to Aboriginal cultural heritage	Level of assessment required
Amendments		
Realignment of the transmission line at Mount Thorley	Remains in close proximity to Hunter River and Loder Creek	Desktop review and field investigations
Realignment of the transmission line at Gouldsville	Remains in close proximity to Hunter River and Loder Creek	Desktop review and field investigations
Localised easement widening for conductor swing	Intermittently present throughout Pokolbin State Forest and Corrabare Flora Reserve, but reflects	Desktop review

Amendment/refinement	Relevance to Aboriginal cultural heritage	Level of assessment required
	largely greater 'swing' of aerial infrastructure and unlikely to result in substantive ground disturbance	
Changes at Eraring substation	Primarily within existing substation and/or surrounding transmission lines. Appears previously disturbed	Desktop review
Changes to access tracks	Within a range of areas, including State forests within which numerous cultural materials are documented or within areas previously cleared and/or subject to ground disturbance	Desktop review and field investigations
Minor adjustments to the project impact area for intersection upgrades	Within previously disturbed areas / the road reserve	-
Adjustments to the proposed access routes for construction	Involves construction vehicles using already established routes	-
Reconfiguration of the construction support sites and temporary worker accommodation	Previously assessed by the exhibited ACHA	-
Changes to laydown areas within State forests	Within State forests within which numerous cultural materials are documented	Desktop review and field investigations
Reconfiguration of the Flick Road emergency helicopter landing area in response to feedback received from Forestry Corporation of NSW	Previously assessed by the exhibited ACHA	Desktop review
Removal of stringing site in Olney State Forest to minimise impacts to amphibian species	Previously assessed by the exhibited ACHA	-
Changes to construction plant and equipment	Relates to equipment used in the construction of the project	-
Refinements		
Minor changes at Bayswater substation	Primarily within existing substation and/or surrounding transmission lines. Appears previously disturbed	Desktop review
Changes to the disturbance area at Olney	Within Olney State Forest within which numerous cultural materials are documented	Desktop review and field investigations

The amendments and refinements noted in Table 3.1 as requiring further assessment have been carried forward into this ACHA addendum. Other amendments and refinements have been assumed to not result in Aboriginal cultural heritage impacts and have therefore not been assessed in this report.

3.3 Legislation, polices, plans and guidelines

This ACHA addendum has been prepared with reference to the following plans/policies/guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011)
- *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010b).

Further Commonwealth and State legislation relevant to the ACHA addendum is provided in Appendix A of the exhibited ACHA.

3.4 Study area

The ACHA addendum study area includes around 174,880 hectares centred on the amended project impact area and where relevant incorporates the broader areas of the Muswellbrook, Singleton, Cessnock, Central Coast and Lake Macquarie local government areas (LGAs).

The study area includes portions of Pokolbin, Corrabare, Watagan and Olney State forests managed and operated by Forestry Corporation of NSW; and portions of Corrabare North Flora Reserve and Jilliby State Conservation Area managed and operated by NSW National Parks and Wildlife Service. The latter has established procedures and guidelines on the management of cultural materials, which have been adopted (where relevant) in the ACHA addendum.

For readability and interpretation, the ACHA addendum study area has been divided into three zones, which collectively encompass the HTP corridor and other project development activities:

- **HTP North – Bayswater to Broke** includes Lake Liddell, the Bayswater Power Station, major coal mining complexes in the Upper Hunter Valley, Mount Thorley Industrial Estate, Singleton Military Area, and several rural properties generally on the alluvial floodplains of the Hunter River
- **HTP Central – Pokolbin to Corrabare** includes the Pokolbin and Corrabare State forests and the rural residential areas between these forests at Cedar Creek, Millfield and Laguna
- **HTP South – Olney to Eraring** includes the Watagan and Olney State forests, Watagans National Park, the residential areas in Martinsville and Cooranbong, and Eraring Power Station.

3.5 Desktop assessment

The focus of the ACHA addendum is on additional field investigations and the re-presentation of existing data documented in the exhibited ACHA. As such, additional desktop assessment has been constrained to:

- a database review undertaken to identify Aboriginal objects, sites and places and included searches of Heritage NSW's Aboriginal heritage information management system (AHIMS), and State Heritage Inventory and Register
- other reports developed for the environmental impact statement (EIS) for the project, and which have components that can inform the presence and/or survivability of cultural materials, including:
    - *Technical Report 1 Biodiversity Development Assessment Report* – prepared by WSP Australia Pty Limited (WSP)
    - *Technical Report 3 Landscape character and visual assessment* Visual – prepared by Iris Visual Planning + Design (Iris)
    - *Technical Report 8 Heritage impact statement* – prepared by Biosis Pty Ltd
    - *Technical Report 11 Surface water assessment* – prepared by EMM
    - *Technical Report 12 Groundwater assessment* – prepared by EMM
    - *Technical Report 14 Contamination preliminary site investigation* – prepared by WSP.

3.6 Aboriginal consultation

Two parallel and overlapping consultation processes were undertaken as part of the exhibited ACHA, and which have been continued for this ACHA addendum. As a requirement of the Secretary's environmental assessment requirements (SEARs), consultation was undertaken in accordance with Heritage NSW guidelines (refer to *section 3.6.1*). In addition, due to the size, complexity and fluidity of the project, numerous other communication strategies were employed to improve and maintain dialogue with the local Aboriginal community (refer to *section 3.6.2*).

3.6.1 Heritage NSW guidelines

Aboriginal consultation for this project has been undertaken in accordance with procedures set out in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010b). While these guidelines have a five-stage process, given the ACHA addendum continues from the exhibited ACHA, only the latter stages were adopted for this document:

1. Presentation of project information/assessment methodology – briefing RAPs about the project and scope of any Aboriginal heritage assessment and investigations. This has been undertaken through written correspondence.

2. Impacts and mitigation strategies – discussion of potential impacts to cultural materials and mitigation options with the RAPs prior to developing this ACHA addendum. This has included in person and on-line meetings as part of (3) below to discuss with the registered Aboriginal parties.

3. Report review – the RAPs are provided an opportunity to review and comment upon the draft ACHA addendum to contribute input into the overall findings, significance and management of cultural heritage.

3.6.2 Other communication methods

In addition to the required steps outlined in *section 3.6.1*, the Energy Corporation of NSW (EnergyCo) and EMM implemented a project-specific engagement strategy, which maximised involvement of locally based Traditional Owners and undertook a range of other on-Country activities to promote transparent and frequent two-way dialogue between the Aboriginal community and the proponent. Specifically, for the ACHA addendum, the strategy included the following additional activities:

- face-to-face meetings – Aboriginal focus group (AFG) meetings were held to promote two-way dialogue, allow project flexibility and to maintain regular interaction with locally based Traditional Owners. These were held during this ACHA addendum preparation at a location within the project impact area and/or nearby venue, with options for online and/or phone meetings as required

- regular catch ups and a local base of operations – EnergyCo's locally based Community Liaison Officer routinely liaised with locally based Aboriginal individuals and organisations as part of broader operations. This enabled ongoing consultation that has extended throughout the exhibited ACHA and ACHA addendum process and enabled regular liaison and discussion to be undertaken. This consultation has and will continue to extend beyond the remit of the exhibited ACHA and the ACHA addendum

- field investigation participation – locally based Traditional Owners were offered the opportunity to attend a range of field survey and test excavations activities carried out across the amended project impact area.

3.7 Field investigations

Two main on-Country activities were undertaken for this ACHA addendum:

- Archaeological field survey – the physical non-invasive inspection of the project by a team of archaeologists and Aboriginal participants. Field survey was focussed on proposed amendments to the project and as outlined in *section 1.3* and *section 3.2*. The field investigations extended over four weeks of investigation (between 29 September and 31 October 2025) and included some 60 person days of observation. Further details are presented in *section 5.4*.

- Archaeological test excavations – the excavation of areas that were considered to potentially contain sub-surface stone artefactual material. These focussed on areas of potential Warkworth sand system deposits in HTP North. Excavations were undertaken by a team of archaeological and Aboriginal participants between 12 May and 24 July 2025 and consisted of systematic grids of manually dug test pits across features of interest to determine the presence/absence of cultural materials. Further details are provided in *section 5.4*.

3.8 Limitations

This ACHA addendum is based on existing and publicly available environmental and archaeological information (including AHIMS data) and reports, and inputs from Aboriginal participants about the amended project impact area. The background research did not include any independent verification of the results and interpretations of externally sourced existing reports (except where ground-truthing was undertaken). Further, this ACHA addendum makes archaeological predictions based on the existing data and targeted ground-truthing, which may contain errors depending on the accuracy of these third-party studies and the extent of ground-truthing investigations.

This ACHA addendum does not consider historical and/or built heritage unless specifically related to Aboriginal heritage values. Such heritage items are addressed in the non-Aboriginal heritage assessment appended to the EIS (refer to *Technical Report 7 – Historic heritage impact statement* of the EIS) and as part of the amendment report (refer to *Appendix K (Historic heritage impact statement addendum)* of the amendment report).

4 Aboriginal consultation

4.1 Summary of this chapter

The following provides a summary of key activities and/or findings of the consultation activities completed as part of this ACHA addendum:

- Aboriginal consultation for the project has been extensive from November 2023 to present, with no substantive gaps in the process.
- Additional information sought by Heritage NSW on the finalisation process of the exhibited ACHA has been provided.
- Since the finalisation of the exhibited ACHA and the exhibition of the EIS, consultation has remained ongoing with a further ~100 interactions having occurred between July and December 2025. When incorporating the exhibited ACHA process, this amounts to over ~1500 interactions with Aboriginal individuals and/or organisations on the project since November 2023, and ~655 person days of onsite participation.
- Aboriginal feedback on the ACHA addendum has generally been positive, with only minor updates or additions to the document, generally in relation to future management of Aboriginal objects, sites and places and future socio-economic opportunities. There was strong interest in the findings of the Warkworth Sand system, and the inclusion of Aboriginal-led research as part of the project. Concerns have focussed on the lack of accessibility to some parts of the project impact area due to strict work, health and safety (WHS) requirements, an absence of traditional ecological knowledge studies, and some discontent regarding the consultation processes adopted for the project.

4.2 Summary of exhibited ACHA consultation (November 2023 – July 2025)

The following provides a summary of key activities and/or findings of the consultation activities completed as part of the exhibited ACHA up to the completion and submission of the EIS:

- The consultation activities completed as part of the exhibited ACHA were undertaken in accordance with Heritage NSW guidelines. The project also undertook additional project-specific communication strategies to promote transparent and frequent two-way dialogue. Activities included early briefings and exploration of co-design opportunities, Aboriginal focus group meetings (face-to-face) throughout the assessment process, a cultural values mapping study with Elders and key-knowledge-holders, and on-site field investigations.
- As required by Heritage NSW guidelines, consultation included provision of information to RAPs, and notification of the various field survey and excavation activities associated with the project. Ongoing discussions with Heritage NSW were also undertaken primarily in relation to the scope and extent of the field investigations.
- Since November 2023 and throughout the development of the project and progression of the exhibited ACHA, EMM and EnergyCo have been liaising with 48 RAP organisations and/or individuals. These RAPs were identified through the formal notification process as part of the Heritage NSW consultation requirements. The RAPs include locally based Wonnarua, Awabakal and Darkinjung individuals and/or organisations based primarily in Singleton, Cessnock, and Newcastle as well as the broader Aboriginal community with an interest in cultural heritage management. Of these, 31 locally based individuals and organisations identified within a project specific engagement strategy have been involved in meetings and

on-Country activities. Ultimately, over 1400 interactions have been undertaken with the RAPs across the various consultation opportunities and included around 600 person days of on-site activities.

- Discussions with the RAPs have been extensive and wide-ranging over the 22-month assessment process. Feedback on the project and exhibited ACHA and ACHA addendum activities has generally focussed on who speaks for Country, the potential impact to Dreaming places and stories within the region, targeted discussion around key sites including rockshelters, art sites and grinding grooves identified as part of the field investigation, and mitigation measures.

Consultation for this ACHA addendum report is considered an extension of the above, and is outlined in detail in the following sections.

4.2.1 Additional documentation information sought by Heritage NSW

Appendix B.1 provides a number of documents that Heritage NSW has sought on their review of the exhibited ACHA. These relate to the finalisation process undertaken for the exhibited ACHA in mid to late 2025.

4.3 Consultation undertaken for test excavations (May – July 2025) and since submission of the EIS (August – December 2025)

4.3.1 Aboriginal stakeholder consultation

Aboriginal stakeholder consultation for this report and associated fieldwork (field survey and test excavation) has included ~100 interactions with the established RAPs (refer to Appendix B.1 and Appendix B.3) since the finalisation of the exhibited ACHA between May 2025 and December 2025 (refer to Table 4.1 and Appendix B.4) and a further ~55 person days of onsite participation. This includes the test excavation program that was substantively begun in May 2025 and extended into July 2025 during the finalisation of the exhibited ACHA, but the reporting for which could not be integrated into the exhibited ACHA prior to EIS submission due to time constraints; and activities after August 2025 following the submission of the EIS.

Specific activities include:

- provision of project update to all RAPs – 18 September 2025
- undertaking test excavation of multiple locations within HTP North – 12 May 2025 to 24 July 2025
- on-site field survey – 29 September to 10 October 2025
- Aboriginal focus group meetings for all RAPs to discuss the ACHA addendum and proposed mitigation measures between 3-8 December 2025 (see *Section 4.4*)
- on-site field investigations to validate avoidance measures proposed in the ACHA addendum around several key sites with the Awabakal Traditional Owners on 8 December 2025.

Table 4.1 Timeline and summary of Aboriginal community consultation completed since the exhibited ACHA

Stage*	Description	Date started	Date completed	Notes
3	Field investigations (test excavations)	12 May 2025	24 July 2025	Additional details provided in *section 5.4*
	Field investigations (field survey)	29 September 2025	10 October 2025	Additional details provided in *section 5.4*
4/5	Review of draft report	21 November 2025	19 December 2025	Additional details provided in Appendix B.5
	AFG Meeting #5	3 December 2025 (Singleton,) 4 December 2025 (Kurri Kurri, Toronto) 5 December 2025 (online) 8 December 2025 (Muswellbrook)		Additional details provided in Appendix B.6

Notes: *Consultation stage as outlined in *Section 3.6*.

4.3.2 Government consultation

The following activities have included consultation with Heritage NSW:

- discussions of exhibited ACHA with Heritage NSW on 11 September 2025
- briefing of exhibited ACHA to Department of Planning, Housing and Infrastructure (DPHI), Forestry Corporation of NSW, NSW National Parks and Wildlife Service (NPWS) and Heritage NSW on 15 and 22 September 2025
- receipt of advice in relation to the exhibited ACHA on 24 September 2025 (refer to *Appendix A – Public exhibition comments*)
- briefing to Heritage NSW on the ACHA addendum report and findings on 28 November 2025
- briefing to NPWS on the ACHA addendum report and findings on 12 December 2025.

4.4 Aboriginal stakeholder feedback

A copy of the ACHA addendum has been provided to the RAPs (refer to Table 4.1). A draft was provided on 21 November for a period of 28 days. During this time, meetings to discuss the report were also undertaken with the appropriate Aboriginal stakeholder groups. Any comments from these processes are provided in Appendix B.5 and Appendix B.6 and summarised below:

- AFG meeting outcomes
    - HTP North
        - strong support for the inclusion of the cultural values mitigation strategy and associated Aboriginal-led research components, and the project's willingness for their inclusion and facilitation in the documentation (further outlined in *sections 6.3* and *9.5*))
        - strong interest in the identification of extremely old cultural deposits in the Warkworth Sand system near Wollombi Brook, and the ongoing efforts to minimise impacts in this locale where feasible
        - ongoing concerns over the inability to access some parts of the project impact area due to onerous WHS requirements (primarily driven by landowner requirements, and outside the control of the project), which has hindered participation of several Traditional Owners
        - a shifting focus towards future socio-economic and employment opportunities for Aboriginal people as the project progresses.
    - HTP Central
        - continued preference for inclusion of traditional ecological knowledge into the project, which has now been integrated into the cultural values mitigation strategy requirements
        - support for the return of cultural materials to Country as part of any long-term curation, but that future accessibility of these cultural materials by Aboriginal participants is explored as part of any final repatriation approach.

- HTP South
    - no Aboriginal participants attended the meeting.
- Online
    - clarification around the management of Aboriginal objects, site and places, should they be unexpectedly impacted as part of the project, and which has now been integrated into the guiding principles for the proposed Aboriginal cultural heritage management plan (refer to mitigation measure AH04 in *section 9.5*).
- On-country
    - confirmation of the exact locations of and TRGG GRINDING GROOVE SITE (#45-3-2456) to ensure feasibility of avoidance
    - support from the Awabakal Traditional Owners to consider inclusion of in the cultural values mitigation strategy. The site was found to be in a state of disrepair, and there was a desire to explore remediation of the site by the Aboriginal participants, as well as access restriction as part of the project.

• Written feedback

- AT Gomeroi sought to confirm that suitable archaeological mitigation measures were proposed for all Aboriginal objects, sites and places. This was confirmed as a key outcome of the changes in the *Appendix E – Post approval requirements – updated guiding principles* between the exhibited ACHA and ACHA addendum
- Tocomwall criticised consultation undertaken by the project with the Wonnarua Traditional Owners, both querying the processes undertaken and those involved in the project.

5 Field investigations

5.1 Summary of this chapter

This chapter provides an overview of the field investigations undertaken as part of the ACHA addendum. In summary:

- Following commitments in the exhibited ACHA and in response to discussions with Heritage NSW during the preparation of the EIS and comments received during EIS exhibition, additional on-site activities have been undertaken. These included the following:
    - Additional field surveys of previously uninspected areas of the project impact area. These were undertaken to fill any gaps in the field survey coverage undertaken for the exhibited ACHA as a result of proposed amendments and/or improved land access.
    - Additional test excavation to further understand any buried cultural deposits within the project impact area. These investigations focussed on locations within areas of predicted Warkworth Sands system in the vicinity of the Hunter River/Wollombi Brook confluence. Of the 40 proposed locations within the project impact area proposed for test excavation in the exhibited ACHA, 17 have now been completed.
- Around 160 kilometres of additional field survey was undertaken as part of the ACHA addendum, which identified a further 13 Aboriginal objects, sites and places (as well as re-investigated seven previously documented sites). These were dominated by isolated and low-density stone artefacts, but included a potential culturally modified tree. In combination with the exhibited ACHA investigations, 82.5% of the amended project impact area has been inspected. Of the remaining amended project impact area, 7% has not been surveyed due to either being rugged terrain considered dangerous (3%) and/or being existing sealed roads (4%). When combining all activities for the project since November 2023, ~800 kilometres of transects across the region have occurred, and over 8800 points of observation and recording have been undertaken.
- Additional test excavations of 17 locations within areas predicted to contain buried cultural materials and/or the Warkworth Sands system were undertaken. These included 180 test pits (consisting of 160 x 0.25 square metre (m^2) and 20 x 1 m^2 test pits) undertaken in small grids at each of the 17 locations, and equating to ~60 m^2 or ~31.26 cubic metres (m^3). The test pits encountered two main soil types, either shallow duplex soil profiles or deep Warkworth Sands system units. The former were typically shallow (<50 centimetres), while the latter routinely reached depths of >1 metre. When incorporating the previous phase of works within the exhibited ACHA, this totals 284 test pits, equivalent to ~89 m^2. In total, 563 stone artefacts were recovered from these investigations, with an average density of 3.4 artefacts/m^2. They were dominated by indurated mudstone and silcrete raw materials, with a range of tool types (including backed blades and scrapers) recovered. The findings align with predictions of the distribution of the Warkworth Sands system, and suggest ~117 hectares of the deposit are within the amended project impact area.

- The test excavations ultimately identified 20 discrete Aboriginal sites. Of these, ten test pits primarily located on the southern bank of Wollombi Brook and on a ridgeline overlooking Hunter River (north of Wollombi Brook) were amalgamated into five focus areas, along with a range of other sparser subsurface stone artefact densities. The highest artefact densities were encountered within locations on the banks of Wollombi Brook, with chronological samples suggesting extended occupation in the last 1 to 2000 years. Cultural material recovered from the other locations were within the Warkworth Sands system was of potentially significant age. While there is some uncertainty due to bioturbation and mixing of the dated sand unit that can displace artefacts vertically over time, activities appear to have occurred from at least 17,000 years to the Contact period, and potentially as early as up to 38,000 years ago. The former time period aligns with comparable studies in other parts of the Warkworth Sands system, while the latter if validated reflect very early evidence of people in the Hunter Valley.

5.2 Summary of exhibited ACHA field investigations

The following provides a summary of key activities and/or findings of the field survey activities completed as part of the exhibited ACHA:

- On-site validation consisted of a 38+ week field program, including pedestrian survey and test excavations. The field investigations focussed on the project impact area but extended beyond this as a result of refinements to design during the field program. The field survey was undertaken between March 2024 and March 2025, with test excavations occurring between September and October 2024. Ultimately, this program resulted in around 190 days of on-Country activities (equivalent to over 600 person days).

- Approximately 643 kilometres (or ~2259 hectares) of linear pedestrian transects were completed and included 7702 individual points of observation and documentation. Around 72% of the project impact area was investigated. Of the remaining 28%, 4% comprises sealed hardstand areas (such as roads) and 3% is made up of inaccessible dangerous terrain. When including superceded and refined project designs, ~1045 kilometres of field survey was undertaken for the project.

- The field survey identified 195 Aboriginal sites and places within the project impact area (156 newly identified by and 39 previously documented). When including investigations outside the exhibited project impact area due to refinements, 375 Aboriginal sites and places were documented, including 293 newly identified and 82 previously documented AHIMS sites. A further 81 previously documented AHIMS sites were revisited but could not be relocated and are assumed destroyed. A small number of previously documented sites located within the exhibited project impact area (n=13) were not subject to field investigation, as they were identified after the field survey program, due to project refinements. Of these, nine are documented as having been previously destroyed, and three considered likely destroyed.

- The cultural assemblage identified during the field investigations aligned closely with the desktop and archaeological information. In HTP North, sites were dominated by various densities of stone artefacts frequently in association with major watercourses or their lesser tributaries, including Parnells Creek, Wollombi Brook, Loder Creek, and Monkey Place Creek. Within HTP Central and HTP South, sites were dominated by rockshelters, culturally modified trees and grinding grooves sites. Various other site types were also encountered within HTP Central and HTP South, including places of cultural importance to the contemporary community.

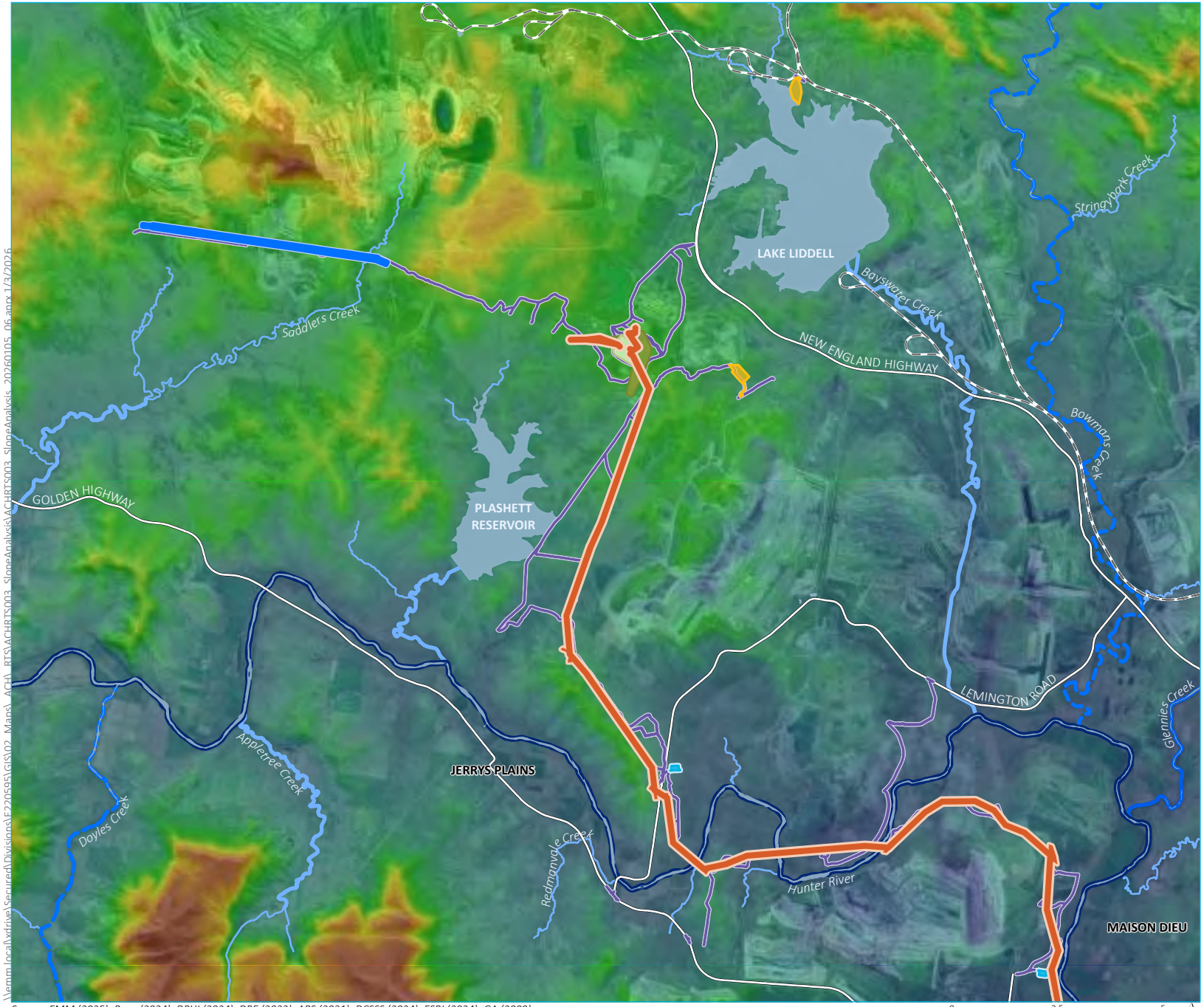
- A small test excavation program was undertaken of locations within the HTP corridor in the Singleton Military Area, and on the banks of Congewai Creek. These consisted of manually dug test pits in accordance with Heritage NSW guidelines. At the Singleton Military Area, few cultural materials were found, but disparate portions of the Warkworth Sands system were encountered, and where found to date to >12,000 years ago. At Congewai Creek, three areas of cultural deposits, each ~0.1 hectare, were documented on the banks of the creek, and indicative of activity over the last few thousand years.

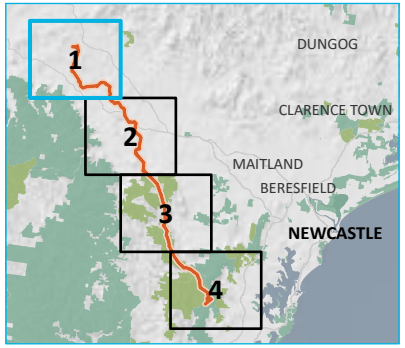
5.3 Inaccessible dangerous terrain

Around 3% of the amended project impact area is inaccessible as a result of steep and/or rugged terrain. Heritage NSW sought further information on these areas (refer to *Appendix A – Public exhibition comments*), which is provided here.

Specifically, Figure 5.1 and Plate 5.1 to Plate 5.6 presents those parts of the project impact area where extremely rugged and vertical or near vertical landforms have been observed. These are typically within HTP Central and HTP South, with the constrained access in many areas requiring personnel to climb up/down these environments to enable access. It was considered by the personnel in the field that these locations were too dangerous to progress into and may have resulted in injury. In addition, many of these areas were heavily vegetated reducing visibility and further making investigation dangerous.

Heritage NSW requested whether these areas could be investigated via other method, such as drone or aerial survey. Given the denseness of the vegetation, it is considered that the ground surface, or near ground surface would be extremely hard to discern, making it difficult to survey for cultural sites or materials using such methods. However, application of these approaches has been included as part of the proposed Aboriginal cultural heritage management plan (ACHMP) discussed in *Chapter 9 (Management)*.





KEY

- Area of extreme slope (>30 degrees)

Project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site
- Laydown area
- Adjustment to existing transmission line (lines 31 and 32)
- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Topographic elevation (mASL)

845.29

-130.06

Strahler stream order

- 4th order
- 5th order
- 6th order
- 7th order
- 9th order

Existing environment

- Rail line
- Major road
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); Beca (2024); DPHI (2024); DPE (2023); ABS (2021); DCSSS (2024); ESRI (2024); GA (2009)

0 2.5 5 km

GDA2020 MGA Zone 56

N

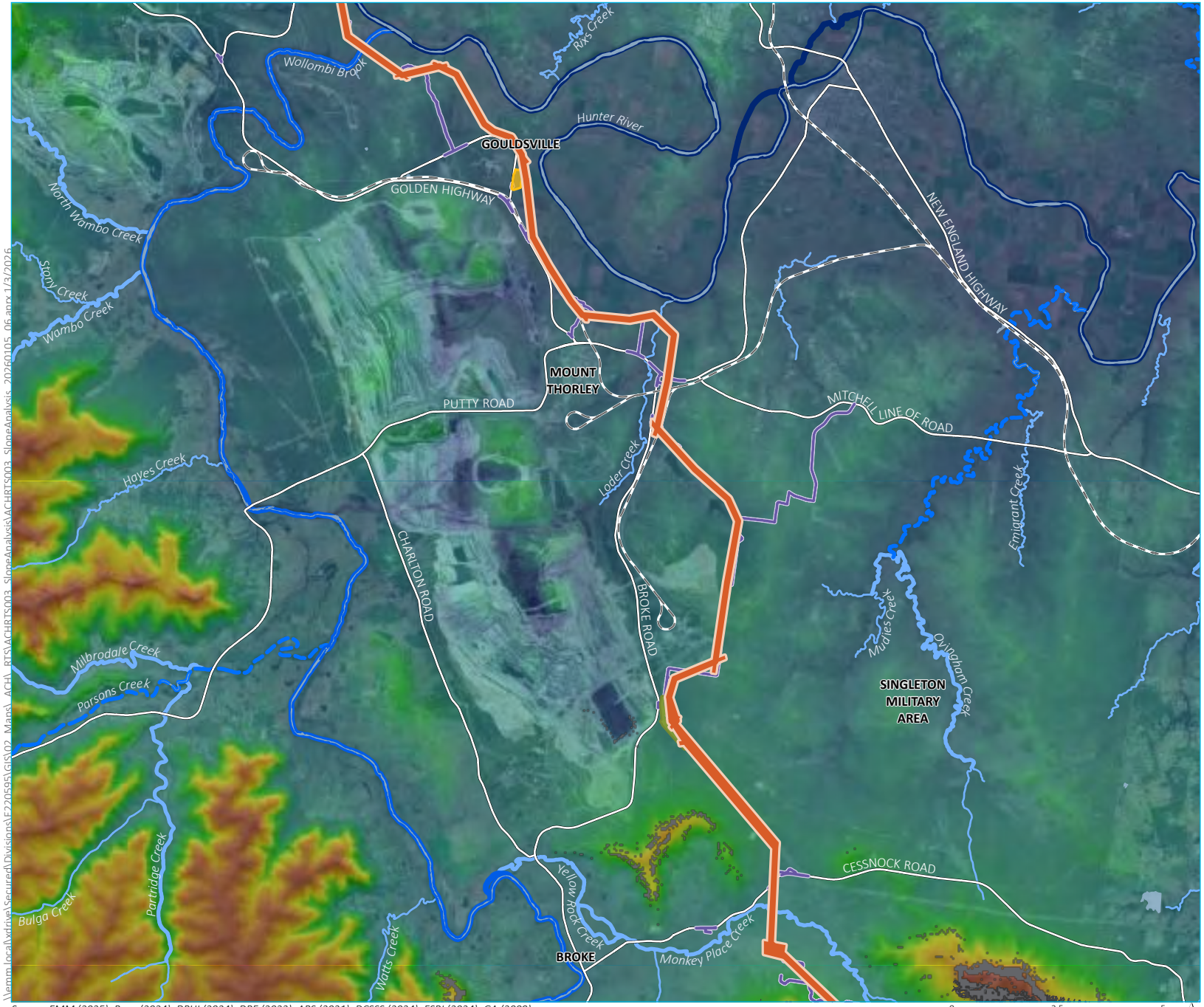
Dangerous and/or inaccessible terrain within the project impact area

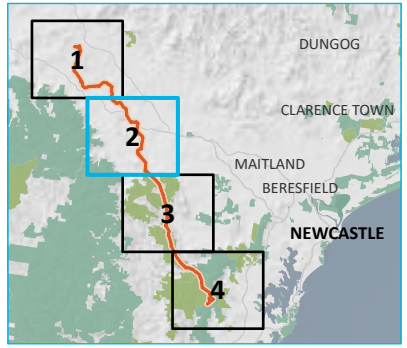
Map 1 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.1

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS003_SlopeAnalysis\ACHRTS003_SlopeAnalysis_20260105_06.aprx 1/3/2026





KEY

- Area of extreme slope (>30 degrees)

Project impact area

- HTP corridor
- Construction support site
- Adjustment to existing transmission line (line 81)
- Access track

Topographic elevation (mASL)

845.29

-130.06

Strahler stream order

- 4th order
- 5th order
- 6th order
- 8th order
- 9th order

Existing environment

- Rail line
- Major road
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); Beca (2024); DPHI (2024); DPE (2023); ABS (2021); DCSSS (2024); ESRI (2024); GA (2009)

0 2.5 5 km

GDA2020 MGA Zone 56

N

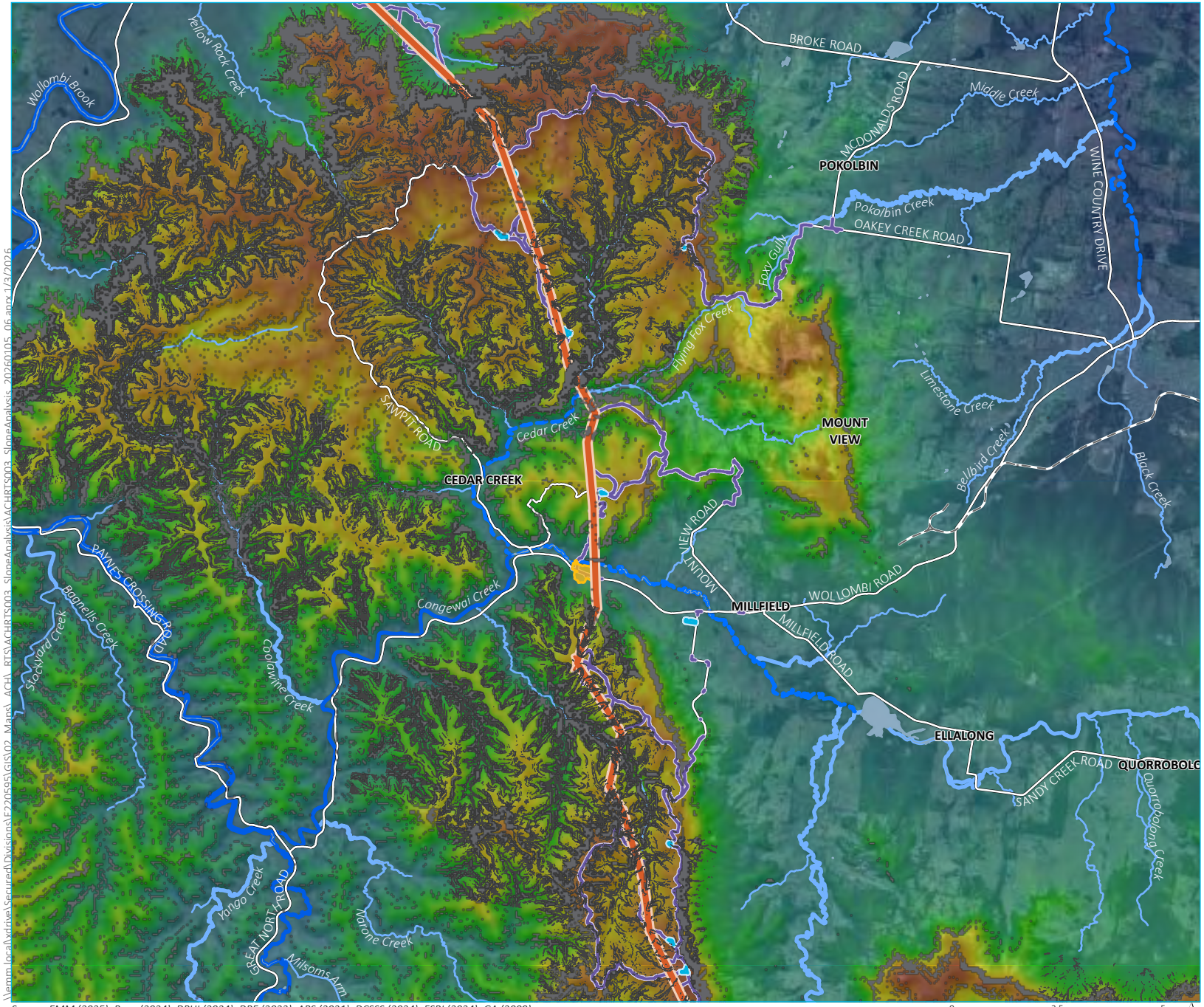
\\emm.local\wtdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS003_SlopeAnalysis\ACHRTS003_SlopeAnalysis_20260105_06.aprx 1/3/2026

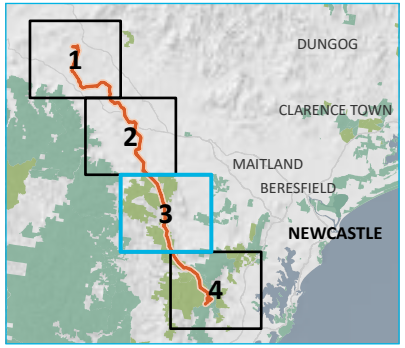
Dangerous and/or inaccessible terrain within the project impact area

Map 2 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.1

EMM
creating opportunities





KEY

Area of extreme slope (>30 degrees)

Project impact area
- HTP corridor
- Construction support site
- Laydown area
- Access track

Topographic elevation (mASL)
- 845.29
- -130.06

Strahler stream order
- 4th order
- 5th order
- 6th order
- 7th order
- 8th order

Existing environment
- Rail line
- Major road
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Dangerous and/or inaccessible terrain within the project impact area
Map 3 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.1

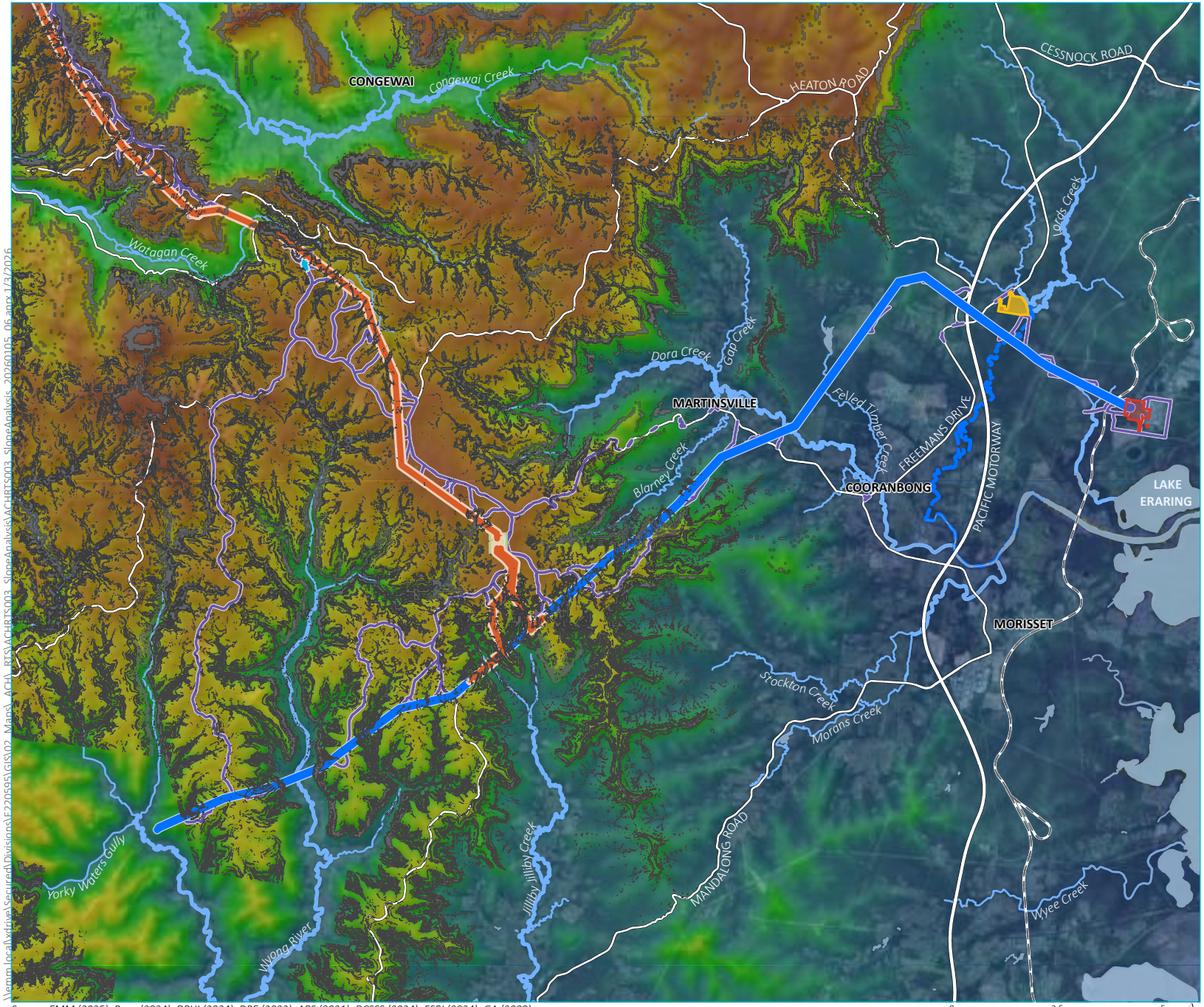
Source: EMM (2025); Beca (2024); DPHI (2024); DPE (2023); ABS (2021); DCSSS (2024); ESRI (2024); GA (2009)

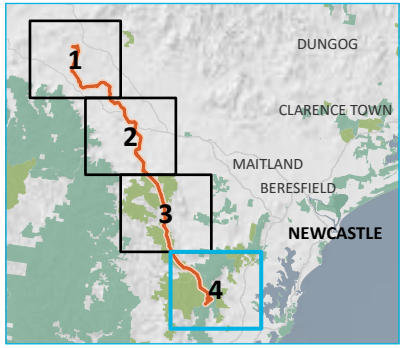
0 2.5 5 km

GDA2020 MGA Zone 56

N

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS003_SlopeAnalysis\ACHRTS003_SlopeAnalysis_20260105_06.aprx 1/3/2026





KEY

- Area of extreme slope (>30 degrees)

Project impact area

- HTP corridor
- Olney switching station
- Construction support site
- Laydown area
- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Topographic elevation (mASL)

845.29

-130.06

Strahler stream order

- 4th order
- 5th order
- 6th order

Existing environment

- Rail line
- Major road
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Dangerous and/or inaccessible terrain within the project impact area
Map 4 of 4

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.1

EMM
creating opportunities

Source: EMM (2025); Beca (2024); DPHI (2024); DPE (2023); ABS (2021); DCSSS (2024); ESRI (2024); GA (2009)

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS003_SlopeAnalysis\ACHRTS003_SlopeAnalysis_20260105_06.aprx 1/3/2026

Plate 5.1 Example of steep terrain encountered within the project impact area

Plate 5.2 Example of steep terrain encountered within the project impact area

Plate 5.3 Example of steep terrain encountered within the project impact area

Plate 5.4 Example of steep terrain encountered within the project impact area

Plate 5.5 Example of steep terrain encountered within the project impact area

Plate 5.6 Example of steep terrain encountered within the project impact area

5.4 Field investigations undertaken since submission of EIS

5.4.1 Archaeological survey

i Background and aims

Due to ongoing refinements and amendments, additional field survey has been undertaken of the project impact area. This has been undertaken to in-fill gaps in the previous assessment, and in response to Heritage NSW's request to continue aiming for 100% coverage of the project impact area (refer to *Appendix A – Public exhibition comments*).

As a result, additional archaeological field survey of the project impact area was undertaken between 29 September and 31 October. These works were undertaken by EMM archaeologists (including William Truscott, Frances Robson, Phillipa O'Brien-Pounde and Amber Morgan) primarily within HTP Central, with the participation of several RAPs, (refer to Table 5.1).

The archaeological field survey to-date has achieved approximately 82.5% coverage of the project impact area. Building on the work of the exhibited ACHA, the field survey completed as part of this ACHA addendum was composed of two discrete project components:

- the remaining exhibited project impact area where improved land access had been achieved
- the amended project impact area, which reflect amendments and refinements to the project since submission of the EIS (refer to *section 1.3*).

Table 5.1 Aboriginal stakeholder representatives involved in the field survey as part of the ACHA addendum

Organisation	Personnel
HTP North	
Jarban & Mugrebea	Les Atkinson
Long Gully Cultural Services	Ethan Trewlynn
Ungooroo Aboriginal Corporation	Allen Paget
Wanaruah Local Aboriginal Land Council (LALC)	Wayne French
Widescope Indigenous Group	Steven Hickey
HTP Central & South	
Awabakal Descendants Traditional Owners Aboriginal Corporation	Peter Leven Daniel Kulk

ii Methods

The methods for undertaking archaeological field investigations for the ACHA addendum aligned with previous investigations undertaken for the exhibited ACHA, and in accordance with section 2.2 of the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). This included the participation of archaeologists and registered Aboriginal individuals and/or organisations undertaking pedestrian inspection of the amended project impact area. Survey included revisitation of previously documented sites and places identified in the desktop review.

For the majority of the project, archaeological surveys consisted of a pedestrian inspection of the amended project impact area between ~60 and 100 metres in width. A team of six personnel (generally two archaeologists and four Aboriginal participants) were spread between 10 to 20 metres apart in a line and walked along the amended project impact area either in a single direction or completed adjoining transects to ensure complete coverage.

The archaeological survey and data collection methods followed section 2.2 of the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). Site recording was completed in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010).

iii Results

Overall, the archaeological field survey undertaken for this ACHA addendum included the completion of field survey for a further ~160 kilometres of survey units (SU) across the amended project impact area and/or areas not previously surveyed within the exhibited project impact area (refer to Table 5.2, Plate 5.7 to Plate 5.15; Figure 5.2 and Figure 5.3).[4] In total, 422 discrete observations were made across the project impact area during the field survey associated with this ACHA addendum, where a participant entered notes, photographs and/or descriptions about the landscape and/or identified cultural materials (refer to Figure 5.2).

Overall, the areas surveyed for the ACHA addendum encompassed a further ~166 hectares of the project impact area. When combined with the exhibited ACHA activities, this results in survey coverage of ~800 kilometres of the amended project impact area (refer to Table 5.2; Figure 5.3), which is a coverage of ~1964 hectares, or 82.5%. This result leaves only ~418 hectares (17.5%) of the amended project impact area remaining unsurveyed. These areas include where access remains limited (~4%), where the terrain is dangerously steep (3%; refer to *section 5.3*), and/or are already developed (e.g. established roads) and no further ground disturbance activities are proposed (~4%).

With the exception of ~4.5 kilometres of the amended project impact area around Mount Thorley and Bulga mining complex, there are no extended or large areas of the amended project impact area that have not been investigated as was the case during the exhibited ACHA. Rather the unsurveyed areas reflect small pockets intermittently present along the HTP corridor (refer to Figure 5.3). One of the largest gaps in the exhibited ACHA encompassing private property extending between the boundaries of Watagan State Forest and Corrabare North Flora Reserve has now been completed.

As part of the exhibited ACHA, the project impact area was divided into 35 main SUs, which have been developed based on the transect data and observations that demonstrate consistency in the landforms and environmental context of these areas, nine of which are relevant to this ACHA addendum. Since the additional field survey for this ACHA addendum was typically extending or filling in gaps of the previous works in the exhibited ACHA, results here have been classified against these previously identified SUs (refer to Plate 5.7 to Plate 5.15; Figure 5.2 and Figure 5.3). Of the 35 identified SUs in the exhibited ACHA, nine SUs have been supplemented by the additional investigations, including:

- SU1 traverses low rolling hills with a gentle hillslope with small open depressions between Plashett Reservoir to the west and the Hunter Valley Operations mining complex to the east. Much of the SU has been historically cleared for pastoral use with isolated clumps of predominantly regrowth vegetation concentrated around Plashett Reservoir. SU1 crosses Wiseman's Creek (2nd order), Saltwater Creek (2nd order), Parnells Creek (3rd order) and several low order drainage lines. Visibility throughout the SU was

[4] Of the 160 km of field survey, ultimately 85 km were situated within the amended project impact area. The remaining 71 km relate to project elements no longer included and/or in the general vicinity of the project impact area and encountered as a result of accessing the project.

limited by dense grass cover although vehicle tracks, fencelines, ant nests and tree canopies provided some surface exposures.

- SU14 runs along the eastern side of a series of large dams and infrastructure associated with Bulga Mine then into the western portion of the Singleton Military Area. The SU is largely flat plain with small open depressions and crosses 16 unnamed drainage lines associated with Nine Mile Creek (2nd order) that were largely dry at the time of survey. Much of the SU has been historically cleared for pastoral and/or mine use, with a high level of disturbance noted due to earthworks, land modification, dams, roads and dirt vehicle tracks. Some young clumps of revegetated trees are evident and mostly located within the bounds of the Singleton Military Area. Visibility throughout the SU was mostly limited by dense grass cover, especially in open paddocks, however some larger eroding exposures were documented under young saplings and the dams.

- SU11 follows the undulating lower hillslopes with open depressions on the eastern side of the Hunter River floodplain. The SU crosses Wollombi Brook (8th order tributary to the Hunter River), Sandy Hollow (2nd order) and 6 other unnamed lower order drainage lines. Much of the SU has been historically cleared for pastoral use, with numerous dams noted throughout the landscape. Some small clumps of vegetation are preset and are concentrated around Wollombi Brook (non-pastoral use). Visibility throughout the SU was limited by dense grass cover with some exposures identified around dams, drainage channels, vehicle tracks and fence lines. Some exposures areas presented evidence for deeper sandy soils.

- SU17 largely forms the alluvial flats surrounding Monkey Place Creek (5th order) moving toward the steep footslopes/spurs at the base of Pokolbin State Forest to the southwest and southeast of the SU. The SU crosses Monkey Place Creek (5th order) as well as 18 unnamed drainage lines associated with the tributary. Portions of the SU have been historically cleared for pastoral and/or later Defence use, with the vegetation clearance impacting the integrity of the landscape across the plains. The south-west side of the SU featured relatively closed woodland as the landscape became more rugged. Visibility throughout the SU was limited by grass and leaf cover with small exposures concentrated along drainage channels and vehicle tracks.

- SU21 is a flat expanse straddling the Pokolbin (north) and Corrabare (south) State Forest area. The SU is divided by Wollombi Road and crosses Congewai Creek (6th order) and two unnamed drainage channels. Much of SU21 has been historically cleared for pastoral, residential and/or industrial activities, with small clumps of remnant forest observed around Wollombi Road and the watercourses. Visibility throughout the SU was limited by dense grass cover with small localised exposures concentrated along vehicle tracks and watercourses.

- Parts of SU25 were not visited as part of the survey because of access issues. The SU traverses the moderate to steep slopes typically found in the Watagan State Forest down to a flat valley floor with open depressions. The SU crosses Watagan Creek (5th order), and three unnamed drainage lines. The visibility is assumed to be similar to surrounding SUs being constrained by dense leaf/vegetation cover.

- SU33 runs across the often steep and narrow dirt access tracks found in Corrabare State Forest. The tracks mostly follow the undulating ridgelines that cut through the forest with varying levels of disrepair. As the roads and tracks have been previously cleared, visibility is excellent throughout much of the SU though there is limited potential for existing archaeology within the immediate surrounding area. Where some previous sites were recorded on exposed access tracks, they were unable to be relocated due to environmental factors including erosion, rain or vehicle trampling.

- SU34 includes mostly gravel covered dirt logging truck roads commonly found in the Watagan and Olney State forests. The roads cut across undulating hills with most of the SU regularly graded and upkept. As the

> roads and tracks have been previously cleared, visibility is excellent throughout the SU although there is limited potential for existing archaeology within the immediate surrounding area.

In addition to the above, one additional area was targeted for survey (SU36), reflecting the amended project impact area along the western portion of Singleton Military area, bordering Bulga Mine. This transect covered a greater extent of Nine Mile creek than what was achieved in the previous assessment. This unit largely reflects the description of SU15 in the exhibited ACHA which is as follows (refer to Plate 5.15):

> SU15 included the flat plain landscape with small open depressions surrounding Nine Mile Creek (2nd order) an ephemeral stream that follows a 120 m wide transmission corridor into a revegetated densely wooded area to the south. The SU crosses Nine Mile Creek twice and one other unnamed drainage line. Much of the SU has been historically cleared for industrial and/or Defence use, with the transmission line impacting the integrity of the landscape. Portions of the SU featured open woodland with relatively young trees. Visibility throughout the SU was limited by grass cover but increased in areas with cracking clays exposed under tree canopies and vehicle tracks.

Thirteen additional sites and places were found as part of these field investigations. These were all found in previously unsurveyed portions of the exhibited project impact area. Four previously documented sites were also successfully relocated, while three documented site locations were revisited but failed to identify any cultural materials. These findings are further discussed in *section 5.4.1iiia*.

Plate 5.7 Gentle undulating hills typical of SU1, east facing

Plate 5.8 Cleared pastoral land with clumps of revegetation typicla of SU11, view north

Plate 5.9 Modified landscape typical of SU14 with the boundary between Bulga Mine and SMA visible, south facing

Plate 5.10 Example of flat plain abutting steep spurs to the south located in SU17, south facing

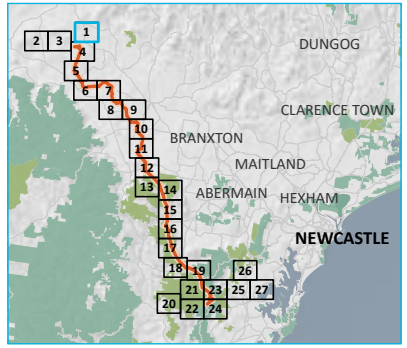
Plate 5.11 Gently undulating plain with vehicle track throughout SU21, south-west facing

Plate 5.12 Steep, densely vegetated slopes typical of the rugged landscape in SU25, north facing

Plate 5.13 Example of vehicle track on ridgelines throughout SU33, north-west facing

Plate 5.14 Example of degraded vehicle track throughout SU33, south-west facing

Plate 5.15 Example of a transmission line clearing in SU36 located in SMA, north-facing



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU1
- SU35

Project impact area
- Construction support site
- Access track

Existing environment
- Railway
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

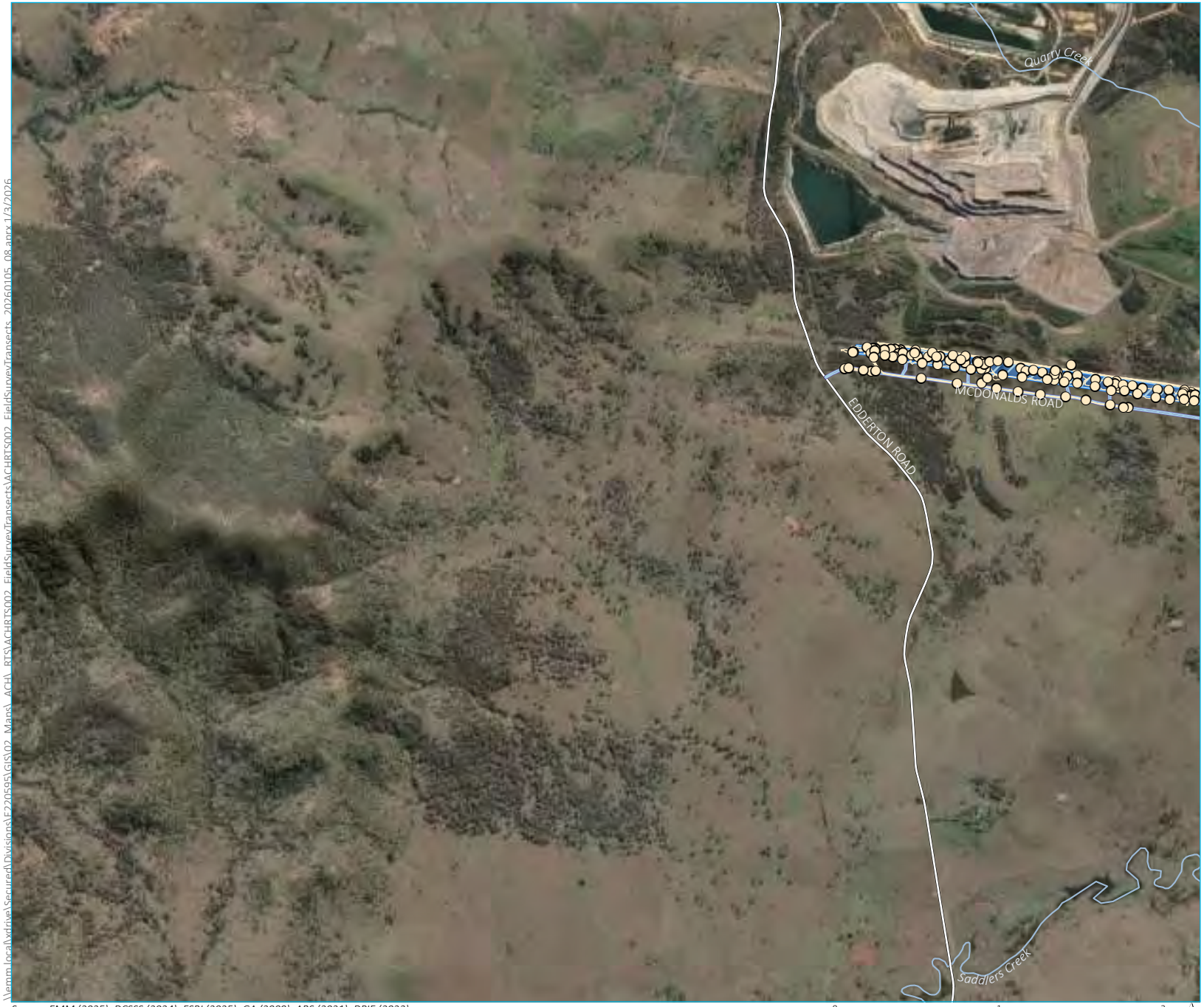
N

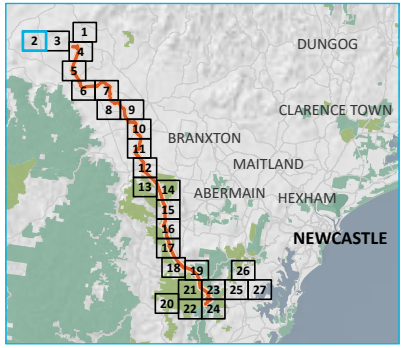
Field survey transects and surveyed areas of the amended project impact area
Map 1 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU1

Project impact area
- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

0 1 2 km

GDA2020 MGA Zone 56

N

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

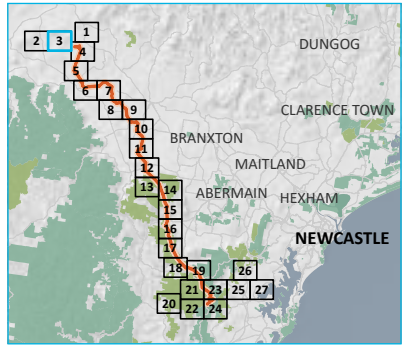
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

Field survey transects and surveyed areas of the amended project impact area

Map 2 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU1

Project impact area
- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

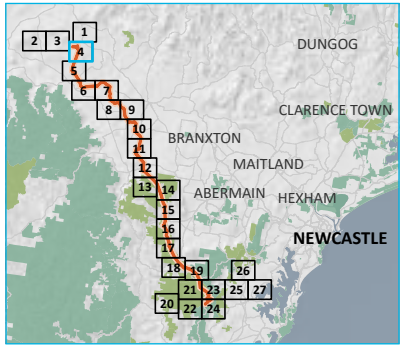
N

Field survey transects and surveyed areas of the amended project impact area
Map 3 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU1
- SU35

Project impact area
- HTP corridor
- Bayswater South switching station
- Construction support site
- Adjustment to existing transmission line (lines 31 and 32)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

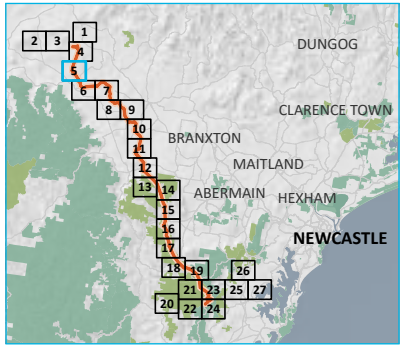
Field survey transects and surveyed areas of the amended project impact area
Map 4 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km
GDA2020 MGA Zone 56
N

creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU1
- SU2
- SU35

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

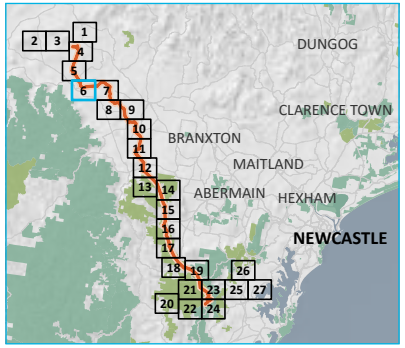
Field survey transects and surveyed areas of the amended project impact area

Map 5 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU2
- SU3
- SU4
- SU5
- SU6
- SU35

Project impact area
- HTP corridor
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

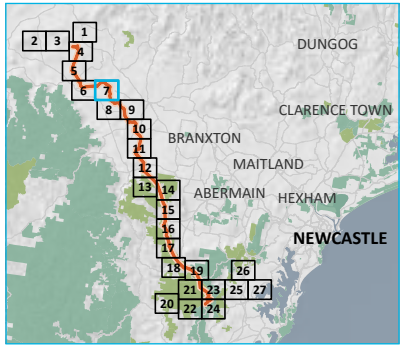
Field survey transects and surveyed areas of the amended project impact area

Map 6 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU6
- SU7
- SU8
- SU9
- SU10
- SU11
- SU35

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

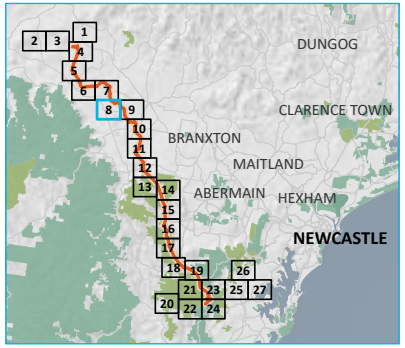
\\emm.local\ydrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

Field survey transects and surveyed areas of the amended project impact area

Map 7 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU11
- SU35

Project impact area
- HTP corridor
- Access track

Existing environment
- Railway
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

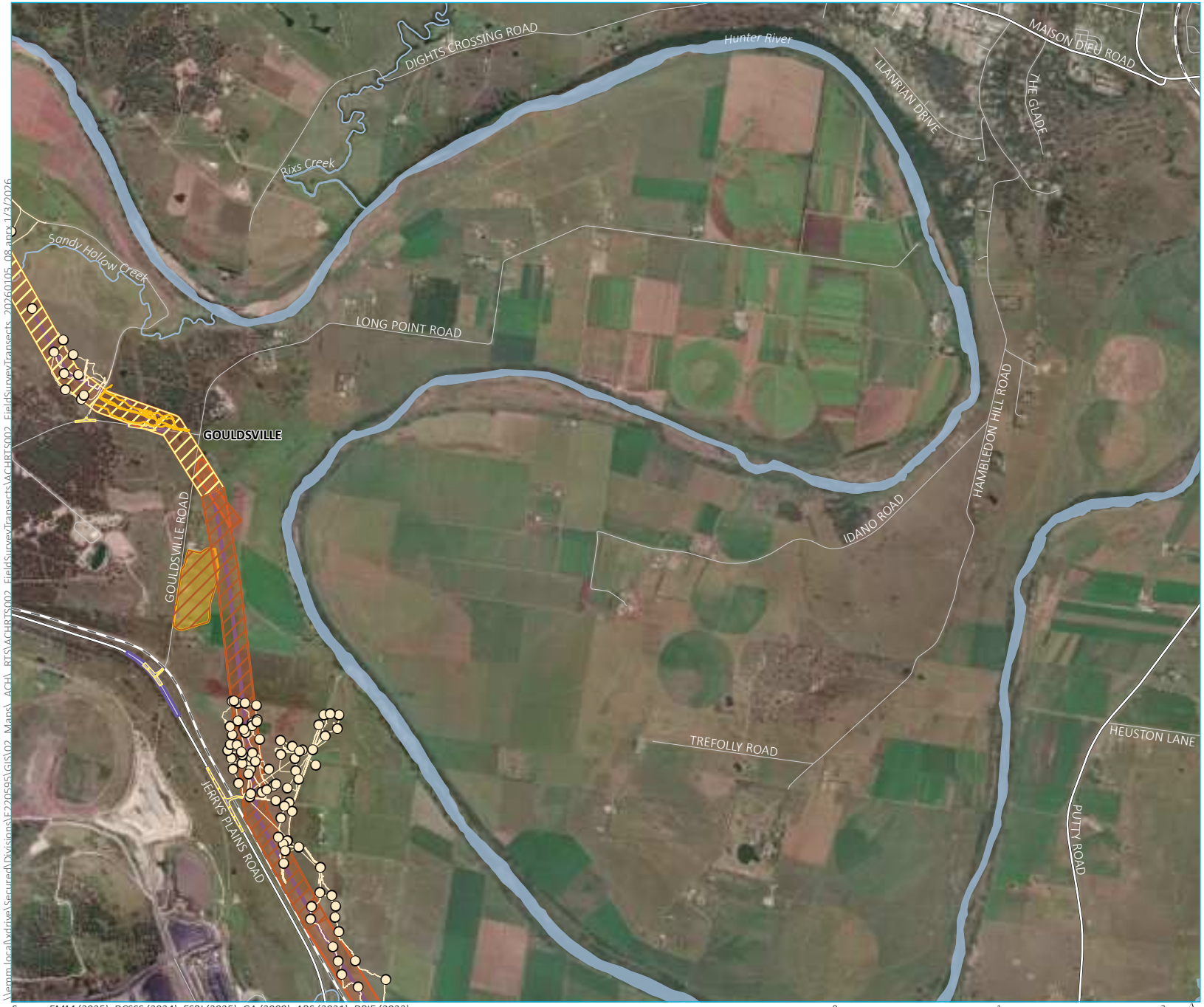
Field survey transects and surveyed areas of the amended project impact area

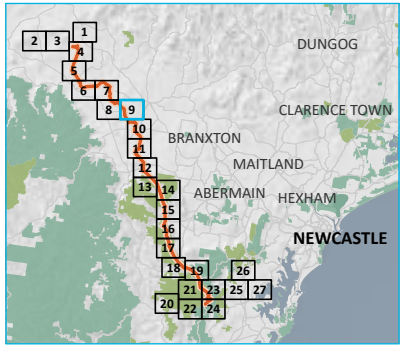
Map 8 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 13/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU11
- SU12
- SU35

Project impact area
- HTP corridor
- Construction support site
- Access track

Existing environment
- Railway
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

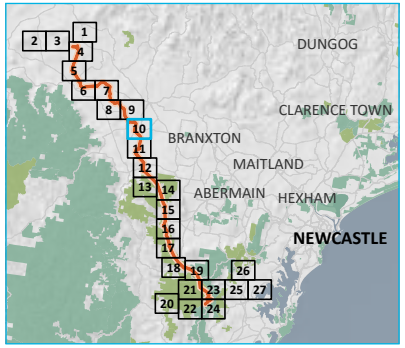
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

Field survey transects and surveyed areas of the amended project impact area

Map 9 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU13
- SU14
- SU35

Project impact area
- HTP corridor
- Access track

Existing environment
- Railway
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

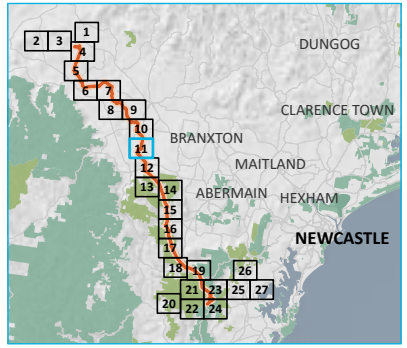
Field survey transects and surveyed areas of the amended project impact area

Map 10 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\EJ220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU14
- SU14-W
- SU15
- SU16
- SU35

Project impact area
- HTP corridor
- Adjustment to existing transmission line (line 81)
- Access track

Existing environment
- Railway
- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

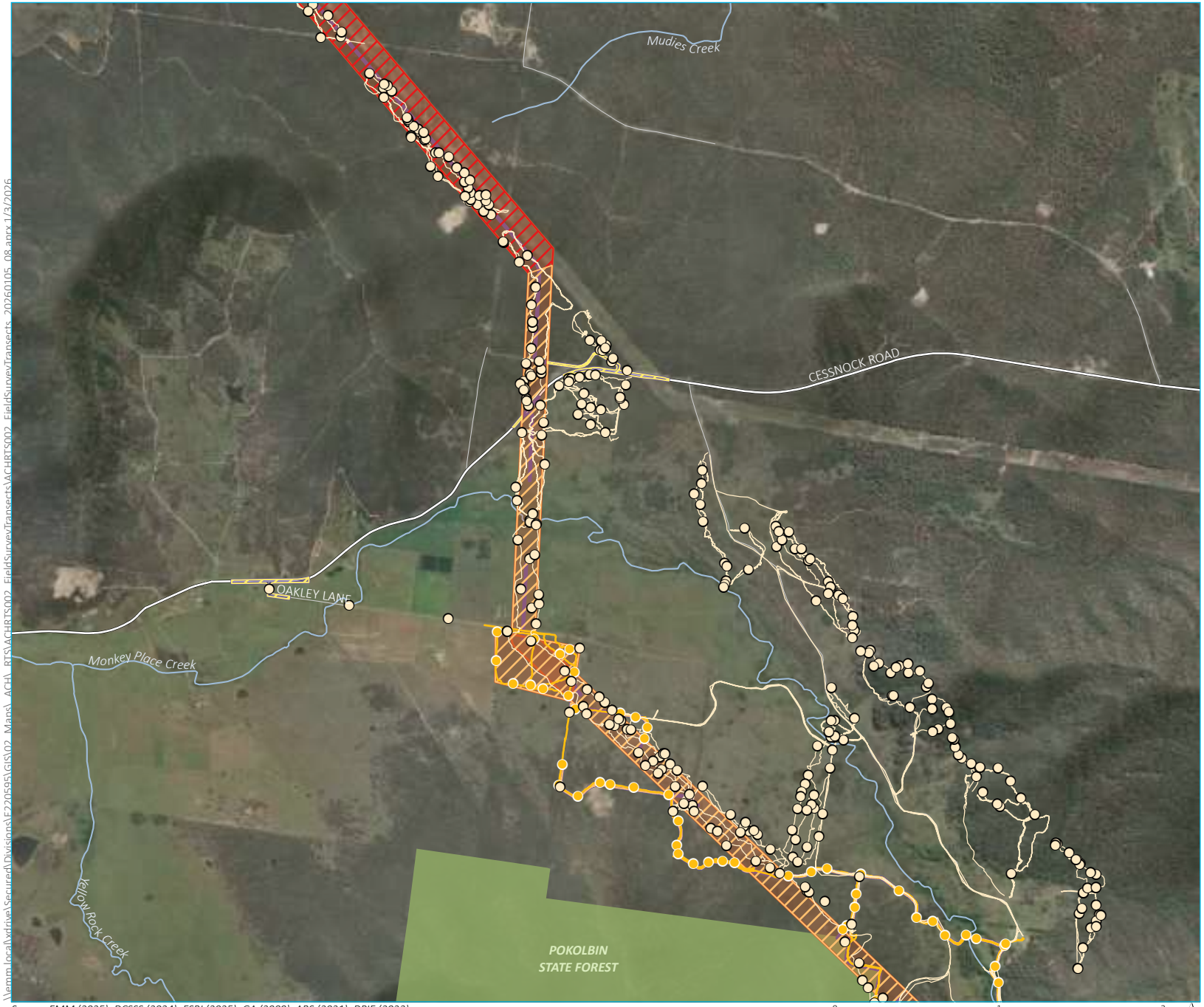
Field survey transects and surveyed areas of the amended project impact area

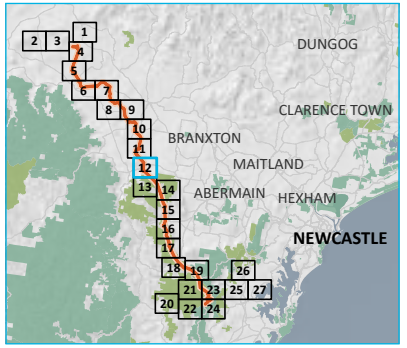
Map 11 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU16
- SU17
- SU35

Project impact area
- HTP corridor
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

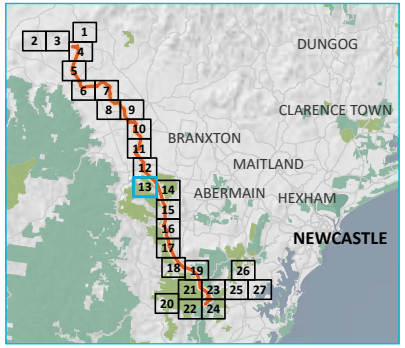
N

Field survey transects and surveyed areas of the amended project impact area

Map 12 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU17
- SU18
- SU32

Project impact area
- HTP corridor
- Access track

Existing environment
- Named watercourse
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

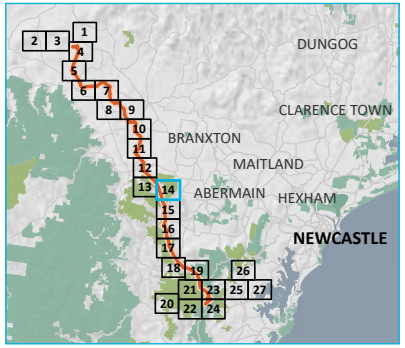
GDA2020 MGA Zone 56

N

Field survey transects and surveyed areas of the amended project impact area
Map 13 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU18
- SU32

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\wdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

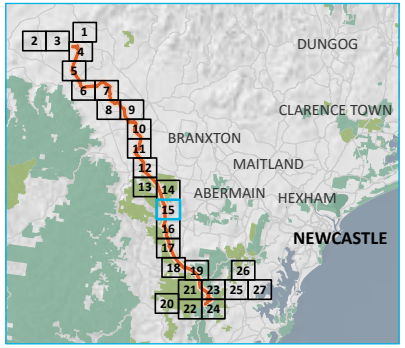
GDA2020 MGA Zone 56

N

Field survey transects and surveyed areas of the amended project impact area
Map 14 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU18
- SU19
- SU20
- SU21
- SU32

Project impact area
- HTP corridor
- Construction support site
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

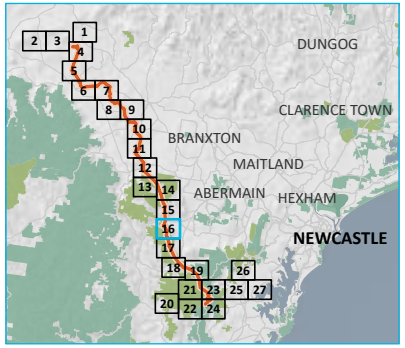
\\emm.local\vdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 13/3/2026

Field survey transects and surveyed areas of the amended project impact area

Map 15 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM
creating opportunities



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU21
- SU22
- SU23
- SU33

Project impact area
- HTP corridor
- Construction support site
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

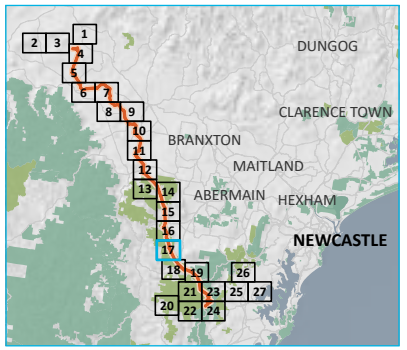
Field survey transects and surveyed areas of the amended project impact area

Map 16 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU23
- SU24
- SU33

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Minor road
- Named watercourse
- State forest
- NPWS reserve

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

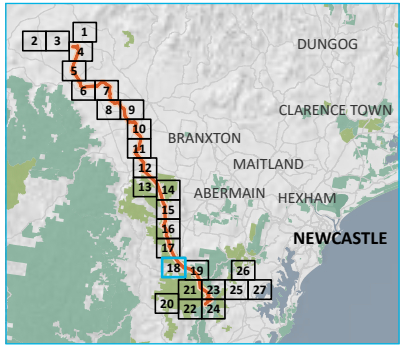
Field survey transects and surveyed areas of the amended project impact area

Map 17 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 13/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU24
- SU33

Project impact area
- HTP corridor
- Access track

Existing environment
- Major road
- Named watercourse
- State forest
- NPWS reserve

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

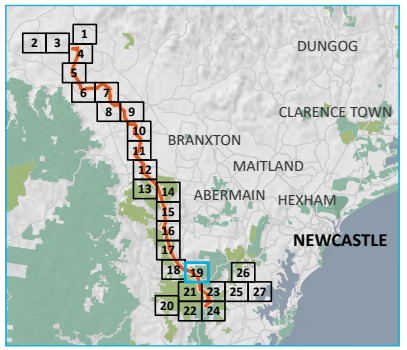
Field survey transects and surveyed areas of the amended project impact area

Map 18 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU24
- SU25
- SU26
- SU33
- SU34

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

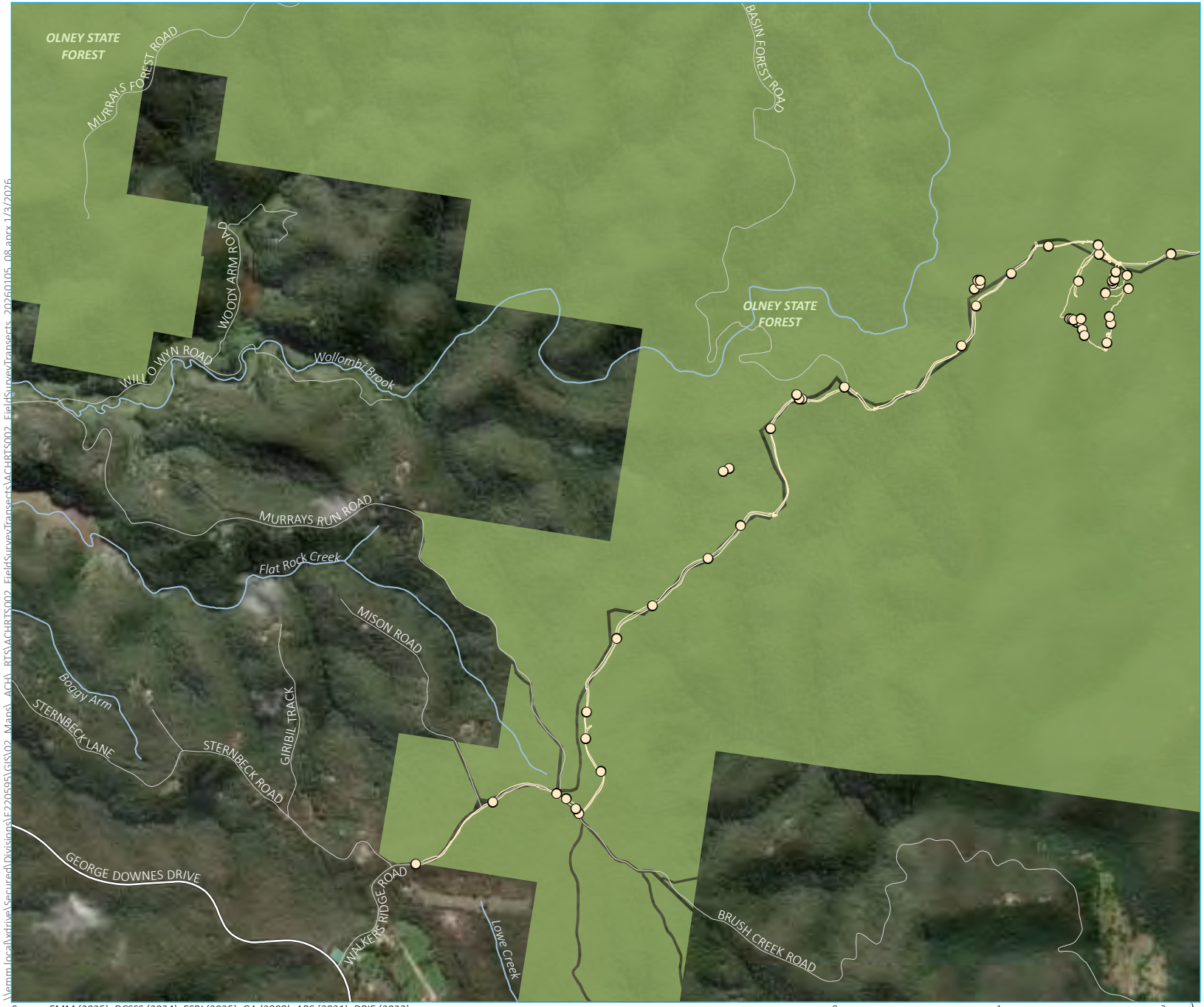
Field survey transects and surveyed areas of the amended project impact area

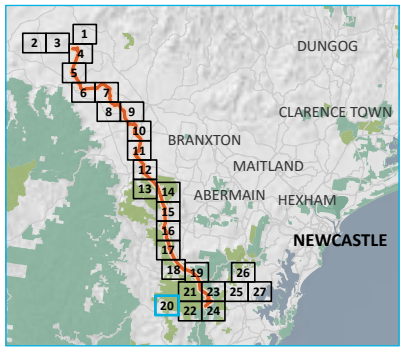
Map 19 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Existing environment
- Major road
- Minor road
- Named watercourse
- State forest
- NPWS reserve

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

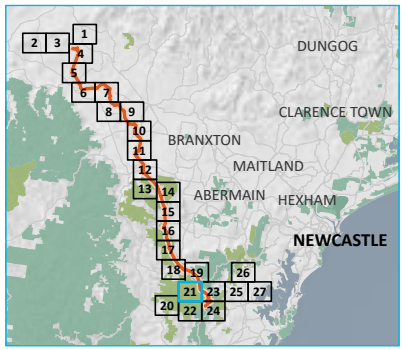
N

Field survey transects and surveyed areas of the amended project impact area
Map 20 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026



KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU26
- SU27
- SU34

Project impact area
- HTP corridor
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- State forest
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

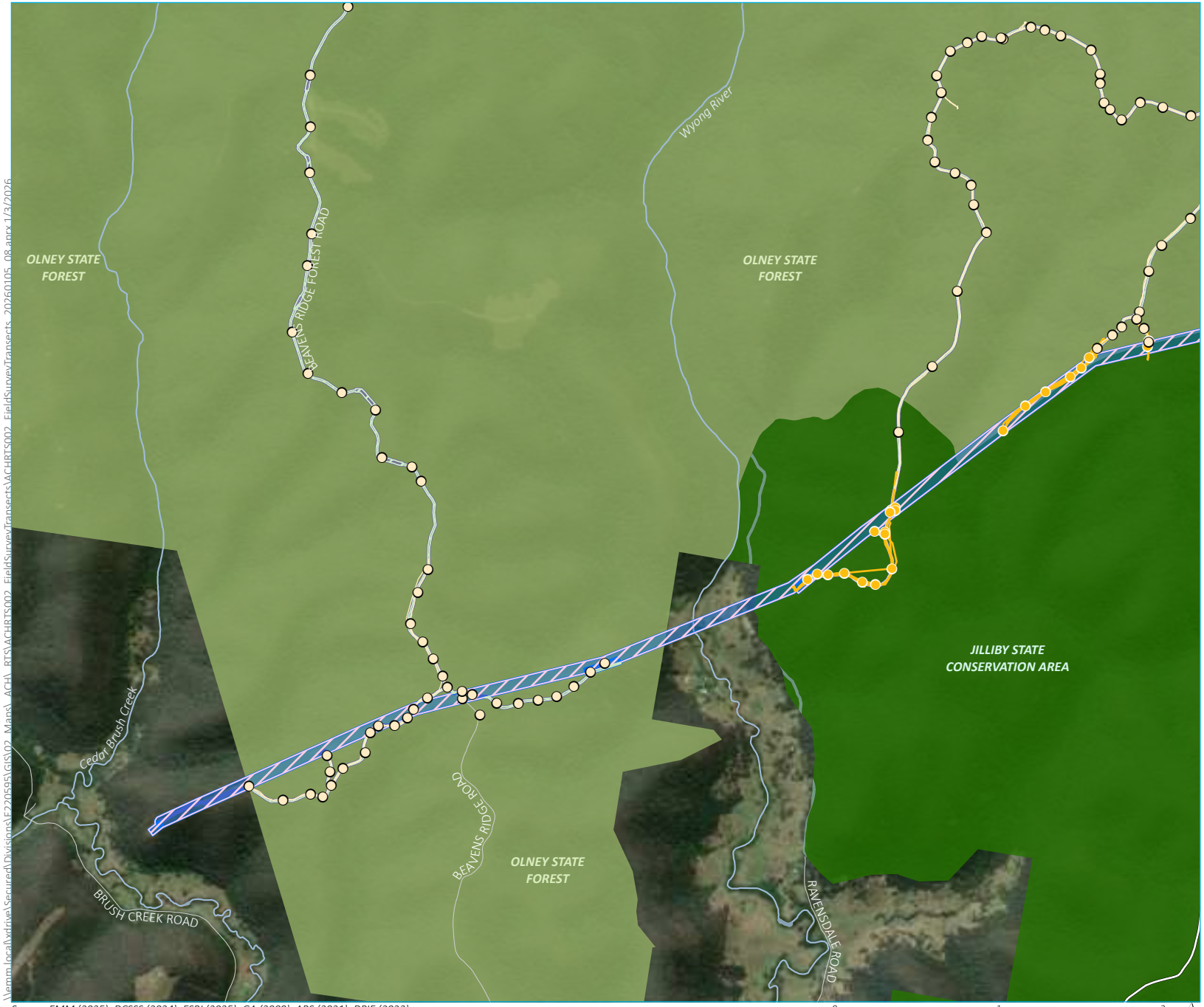
Field survey transects and surveyed areas of the amended project impact area

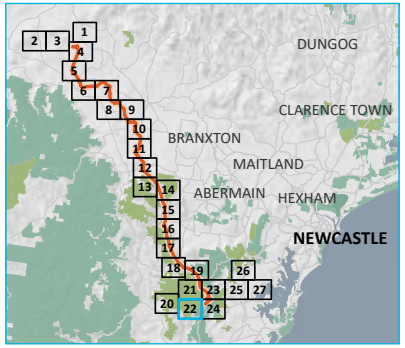
Map 21 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.annx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU31
- SU34

Project impact area
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

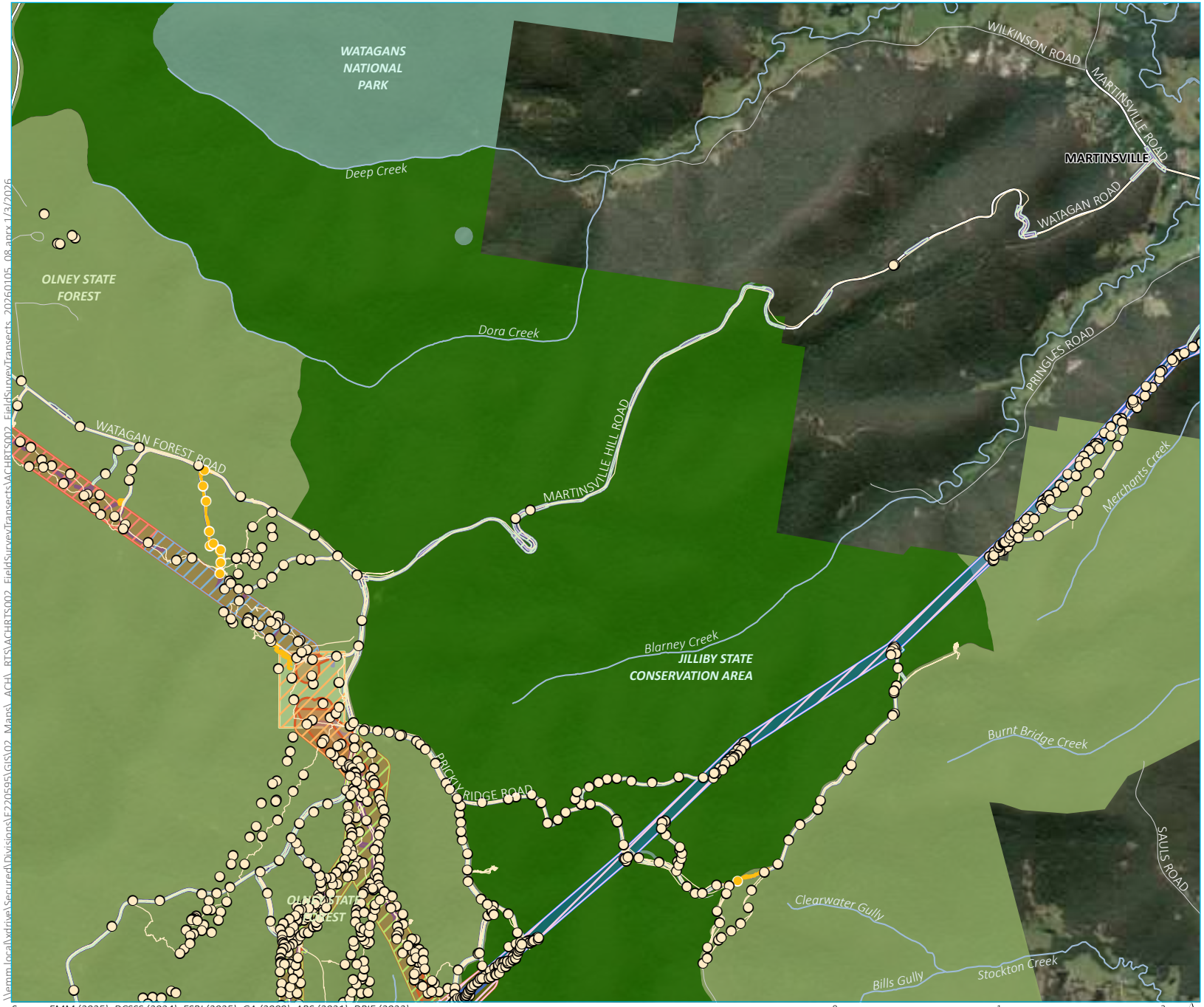
\\emm.local\xdrive\Secured\Divisions\EP220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

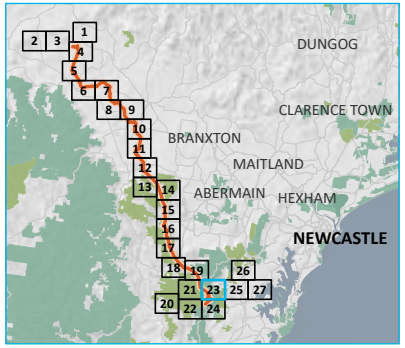
Field survey transects and surveyed areas of the amended project impact area

Map 22 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU27
- SU28
- SU29
- SU30
- SU31
- SU34

Project impact area
- HTP corridor
- Olney switching station
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

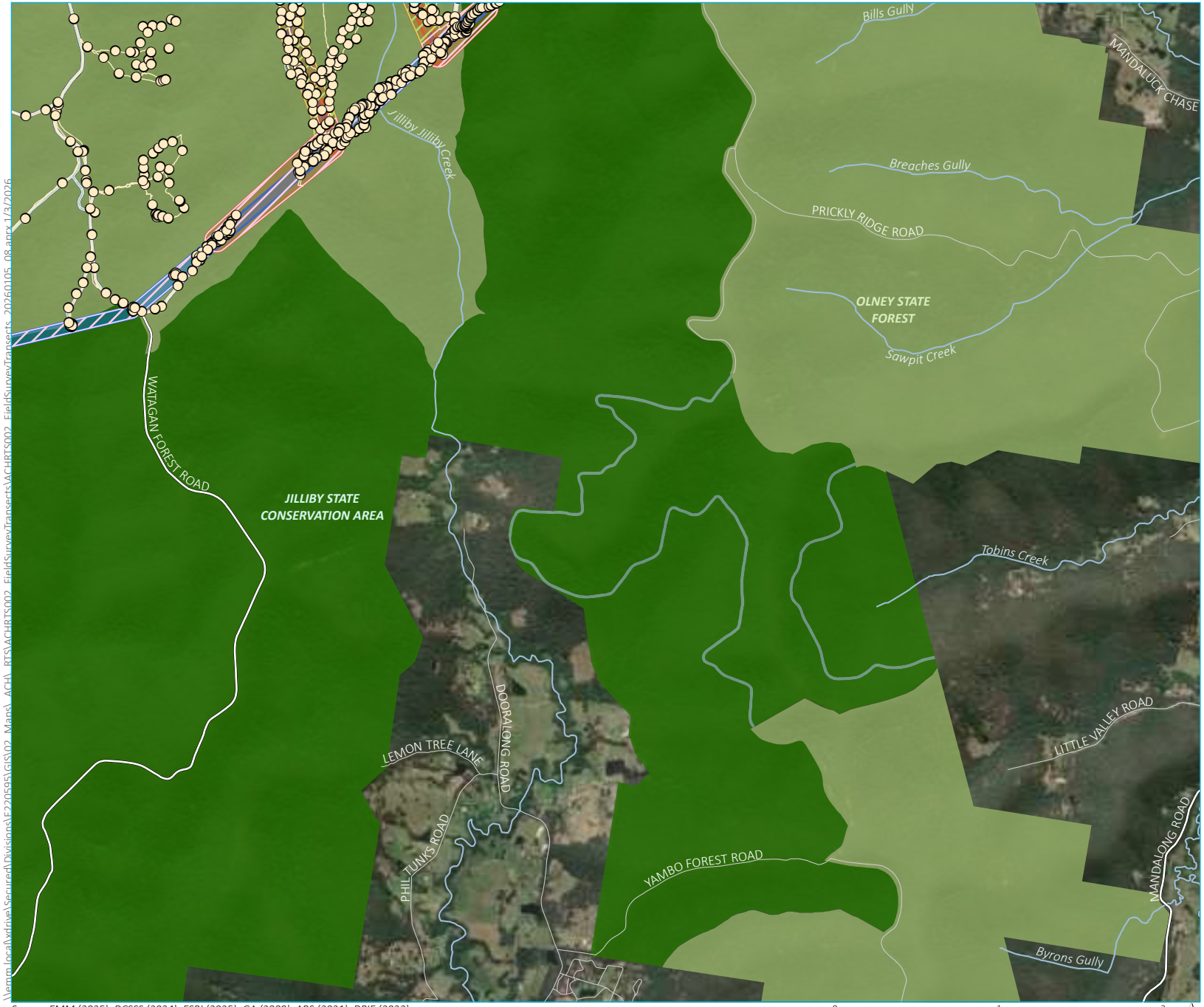
Field survey transects and surveyed areas of the amended project impact area

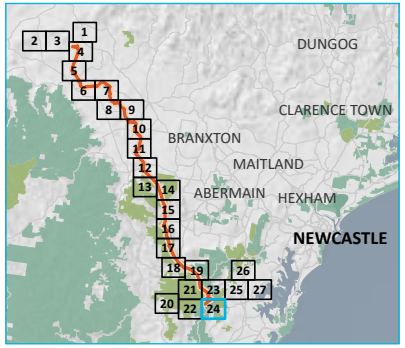
Map 23 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU30
- SU31
- SU34

Project impact area
- HTP corridor
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- State forest
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

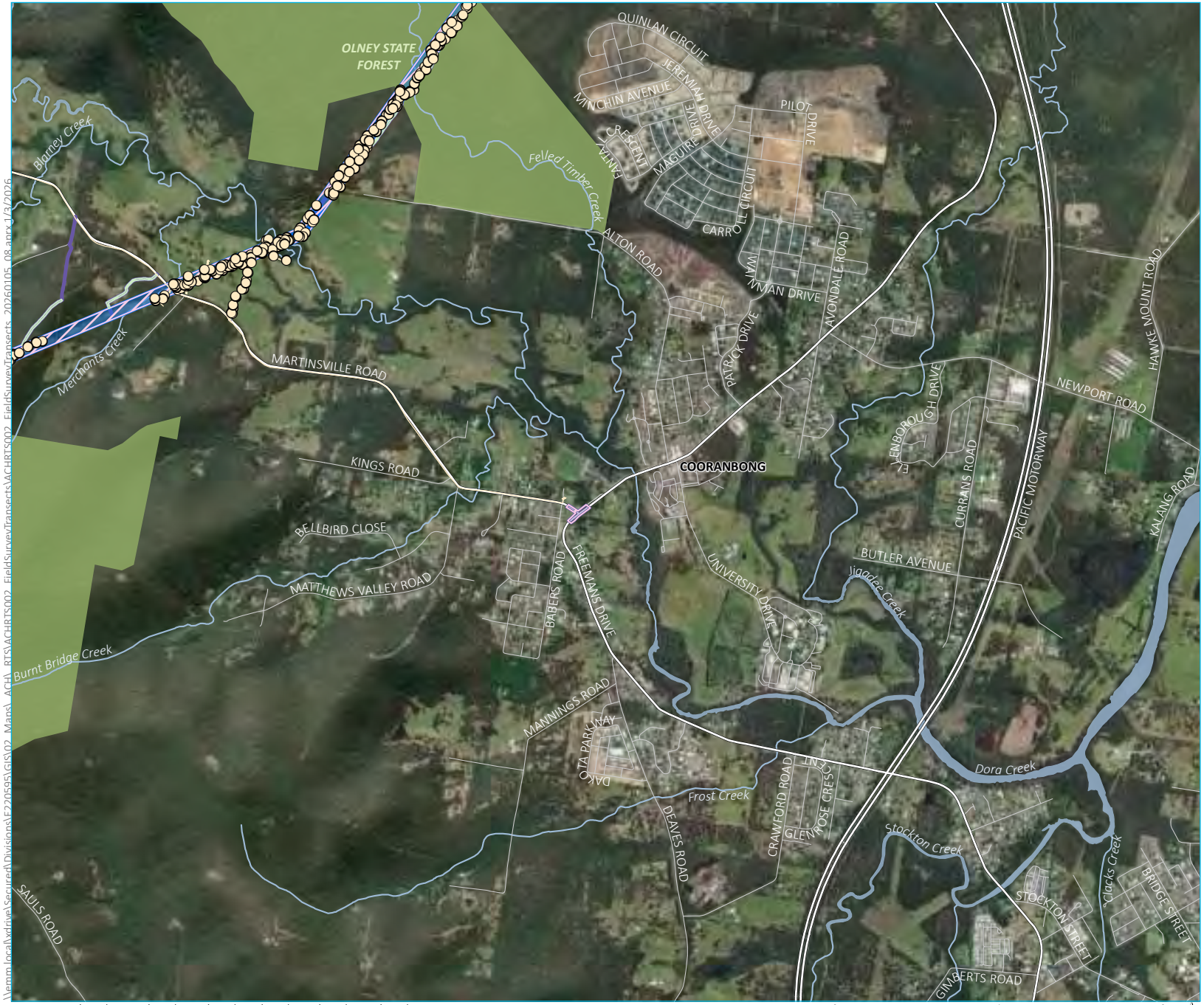
Field survey transects and surveyed areas of the amended project impact area

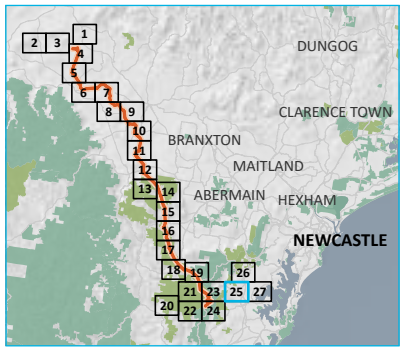
Map 24 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Exhibited

Survey unit within project impact area
- SU31
- SU34

Project impact area
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

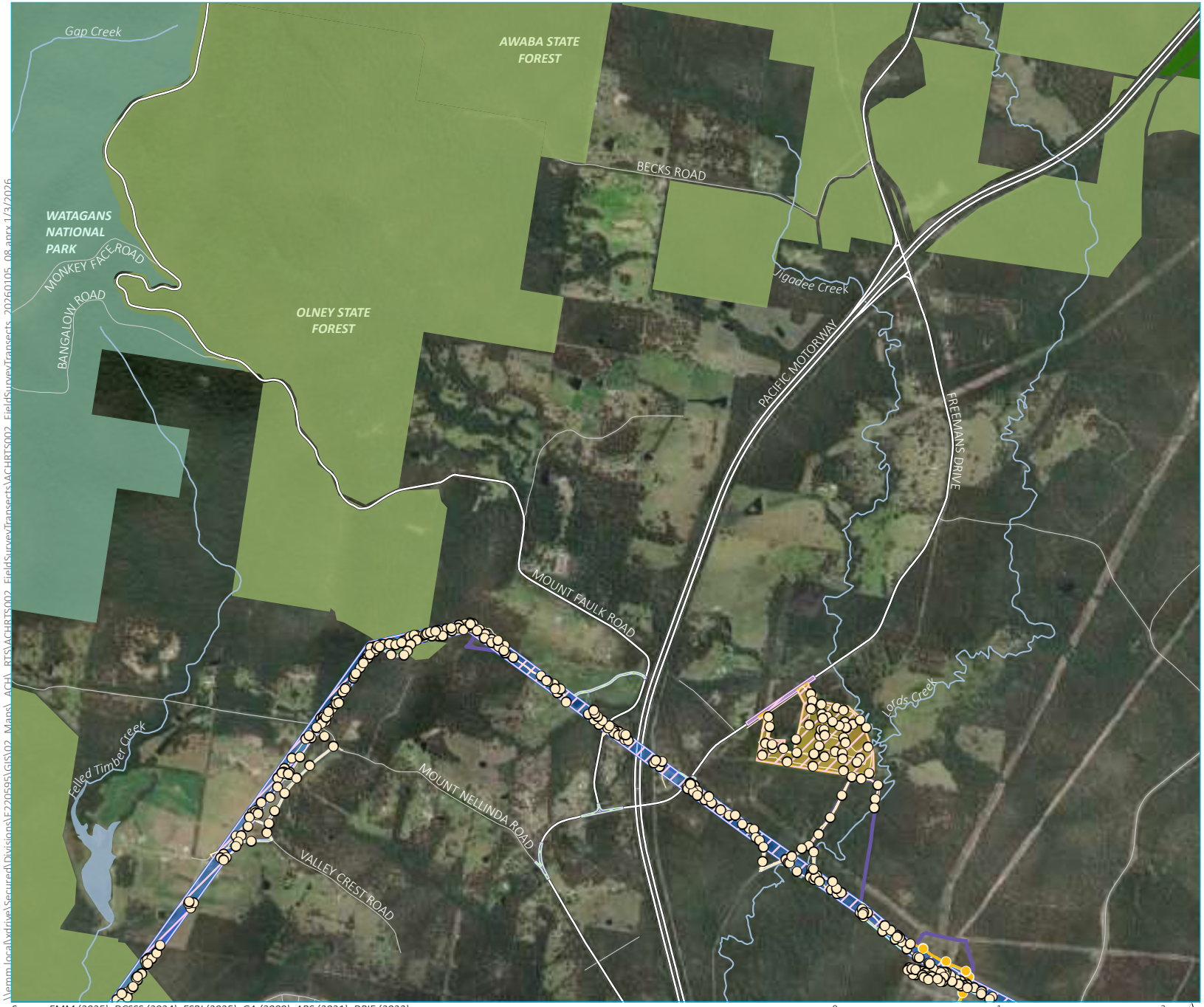
N

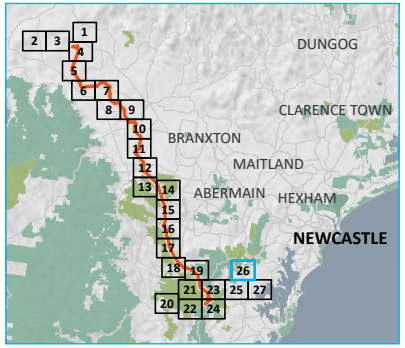
Field survey transects and surveyed areas of the amended project impact area
Map 25 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU31
- SU34

Project impact area
- Construction support site
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

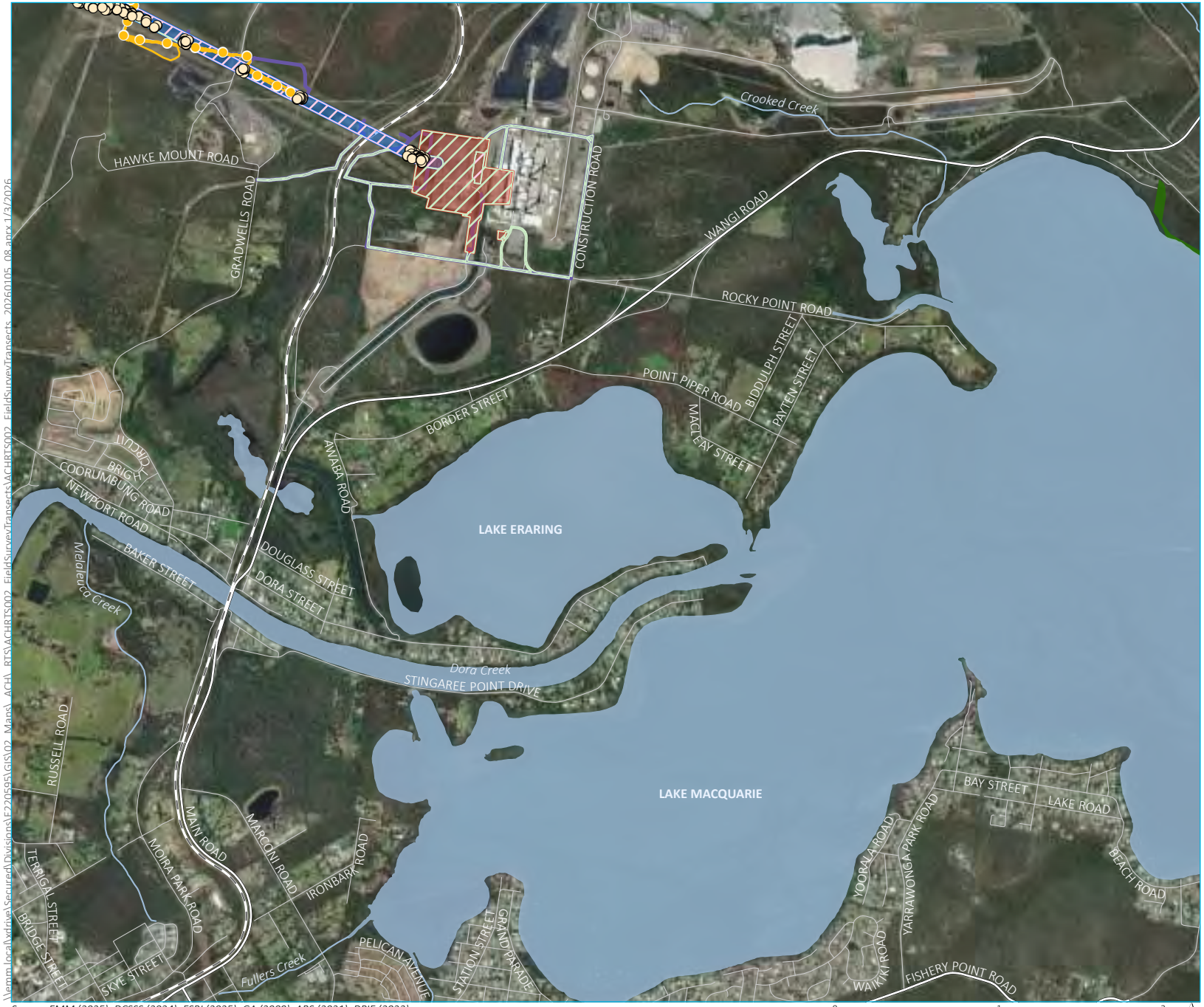
N

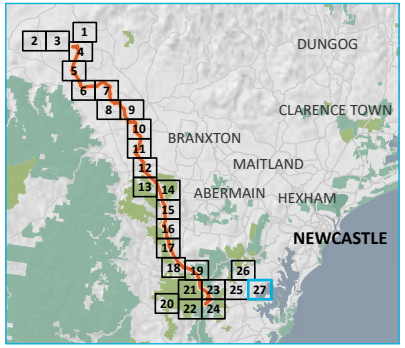
\\emm.local\wdrive\SecuredDivisions\E220505\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

Field survey transects and surveyed areas of the amended project impact area
Map 26 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities





KEY

Field survey documentation point
- Amended
- Exhibited

Field survey track
- Amended
- Exhibited

Survey unit within project impact area
- SU31
- SU34

Project impact area
- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Railway
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009); ABS (2021); DPIE (2023)

0 1 2 km

GDA2020 MGA Zone 56

N

Field survey transects and surveyed areas of the amended project impact area

Map 27 of 27

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.2

EMM creating opportunities

\\emm.local\wdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS002_FieldSurveyTransects\ACHRTS002_FieldSurveyTransects_20260105_08.aprx 1/3/2026

a Summary of field survey coverage

Ultimately, the field survey achieved an 82.5% of coverage of the amended project impact area, an increase from 72% of the exhibited project impact area, as documented in the exhibited ACHA (see *section 5.2*). Cumulatively some ~800 kilometres of field survey was undertaken for the project. Spatial analysis suggests that these transects have investigated around 1964 hectares. Overall, around 8800 points of observation and documentation (i.e. where a member of the field team has noted the conditions, taken photographs, written notes and/or documented cultural materials) have been undertaken across the amended project impact area.

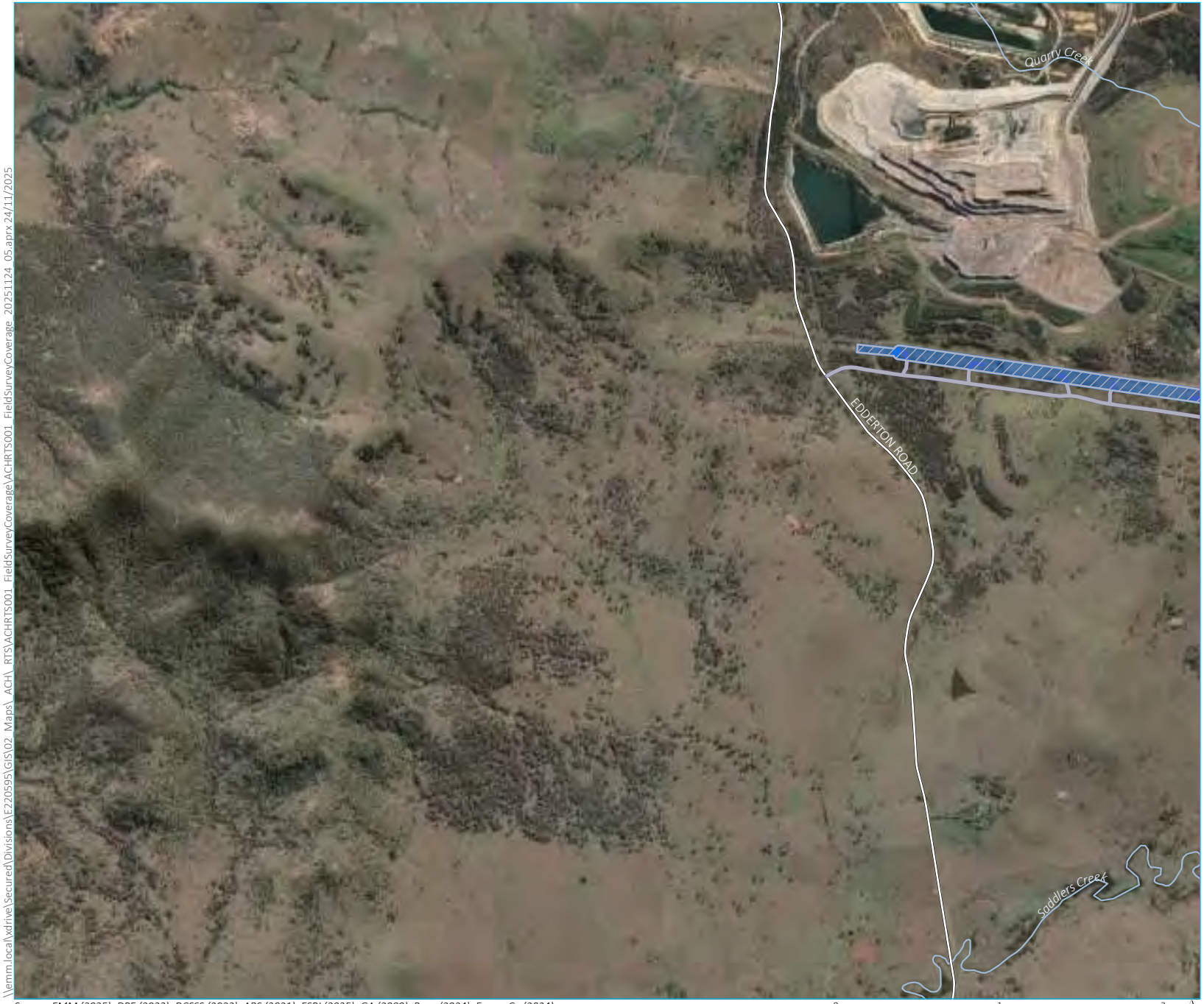
The total survey coverage leaves only ~418 hectares of the project impact area (~17.5%) remaining unsurveyed, which is primarily located within areas pending access agreements (~251 hectares; 11%) – much of this primarily east of Mount Thorley and Bulga mining complex (~119 hectares; 5%) – as well as a result of steep and/or rugged terrain (~73 hectares; 3%), and/or sealed roads and tracks that would be used but subject to limited (if any) additional ground disturbance (~94 hectares; 4%). However, critically, with the exception of ~4.5 kilometres of the amended project impact area east of Mount Thorley and Bulga mining complex, there are no extended or large areas that have not been investigated. Rather the unsurveyed areas reflect small pockets of land intermittently within the broader investigated area.

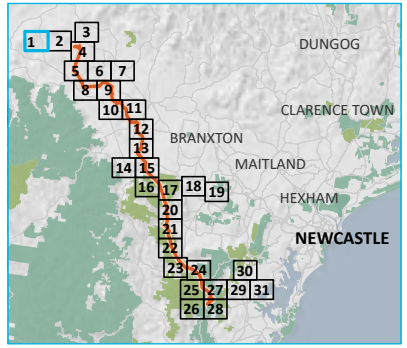
Cumulatively the exhibited ACHA and ACHA addendum field investigations documented 266 newly identified discrete Aboriginal sites, objects and/or places, 183 of which are within the amended project impact area (see *section 5.4.1iiia*).

Table 5.2 **Field survey undertaken within the amended project impact area as part of this ACHA addendum. Note field survey supplemented existing transects and stratigraphic units presented in the exhibited ACHA and reproduced here now accounting for the additional investigation.**

Unit #	Length (m)	Area (m²)	Landform	Exposure (%)	Visibility (%)	Effective coverage		Aboriginal sites identified	
						Area (m²)	% of construction area	Number of sites[††]	Site IDs
SU1	20,423	962,735	Gentle undulating hills with small open depressions	10	30	28,882	3	10	HTP-N-AS77, HTP-N-AS78, HTP-N-CMT02, HTP-N-IF72, HTP-N-IF73, HTP-N-IF74, HTP-N-IF79, #37-2-0500, #37-3-0811, #37-2-0816
SU11	3920	85,911	Gentle undulating hills with open depressions	20	40	6,873	8	3	HTP-N-AS86, HTP-N-IF82, HTP-N-IF83
SU14	3432	167,481	Modified landforms set within flat plains with small open depressions	20	30	10,049	6	-	-
SU17	16,780	794,365	Flat plain abutting steep spurs to the south	10	20	15,887	2	3	HTP-N-IF75, HTP-N-IF76, HTP-N-IF77
SU21	5974	43,853	Gentle undulating plain with open depressions	10	5	219	0.5	-	-
SU25	21,224	14,6663	Moderate to steep gully with open depressions	10	5	733	0.5	-	-
SU33	12,336	83,530	Modified landforms set within undulating hills	80	50	33,412	40	-	-
SU34	5723	40,508	Modified landforms set within steep hills	80	40	12,963	32	-	-
SU36	10573	32,5015	Modified landforms set within flat plains with small open depressions	20	20	13,001	4	1	#37-6-2842
Total	**100,385**	**2,650,061**	**-**			**204,153**	**8**	**17**	**-**
Average	*11,154*	*320,268*	-	*29*	*27*	*13,558*	*11*	*4*	-

[†] Count of Aboriginal sites include previously recorded Aboriginal Heritage Information Management System (AHIMS) sites that were validated and newly identified sites.





KEY

Survey coverage

- Surveyed

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

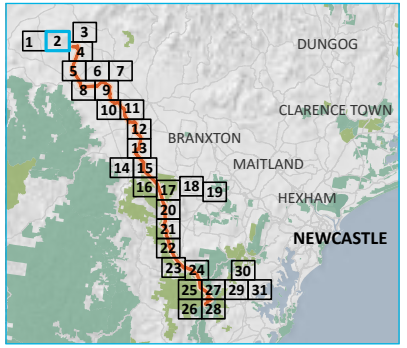
Updated total field survey coverage of amended project impact area

Map 1 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

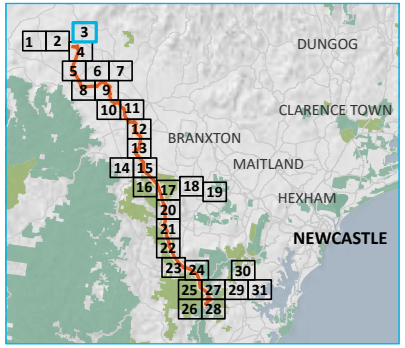
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025

Updated total field survey coverage of amended project impact area

Map 2 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- Construction support site
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

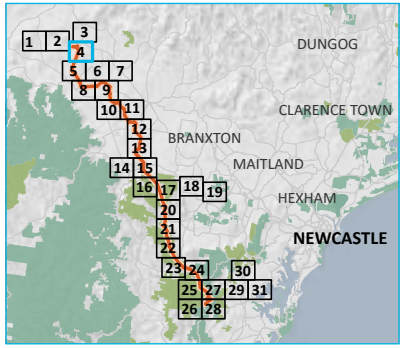
Updated total field survey coverage of amended project impact area

Map 3 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Construction support site
- Adjustment to existing transmission line (lines 31 and 32)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 4 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

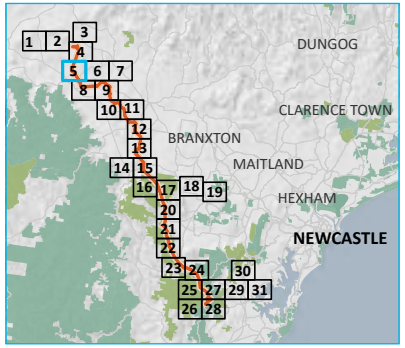
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

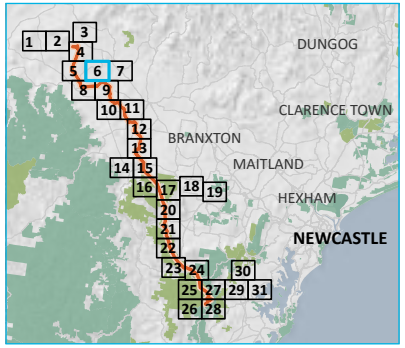
Updated total field survey coverage of amended project impact area

Map 5 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Non-Surveyed

Project impact area

- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

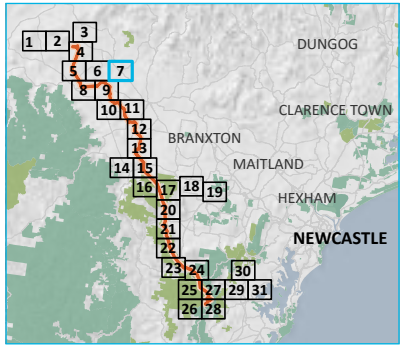
Updated total field survey coverage of amended project impact area

Map 6 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Non-Surveyed

Project impact area

- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 7 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

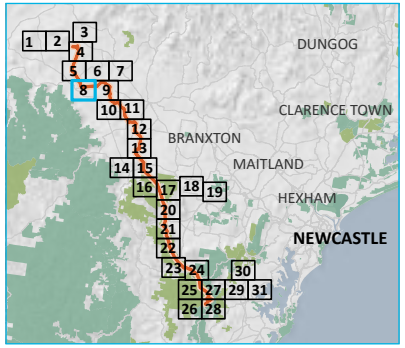
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025

creating opportunities



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 8 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

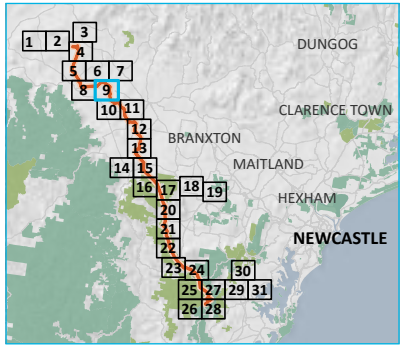
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 9 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

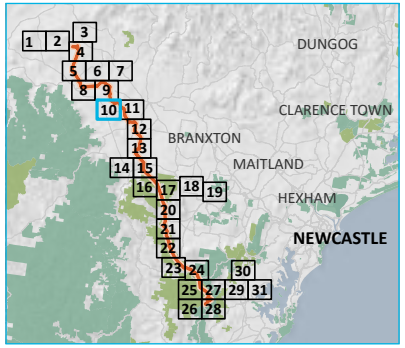
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

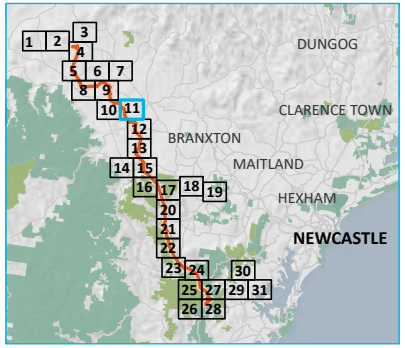
Updated total field survey coverage of amended project impact area

Map 10 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Construction support site
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

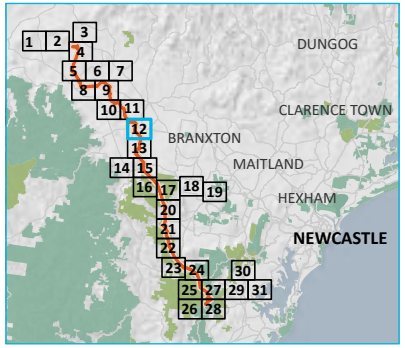
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025

Updated total field survey coverage of amended project impact area
Map 11 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

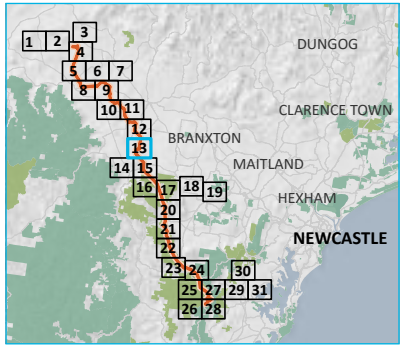
Updated total field survey coverage of amended project impact area

Map 12 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Adjustment to existing transmission line (line 81)
- Access track

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 13 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

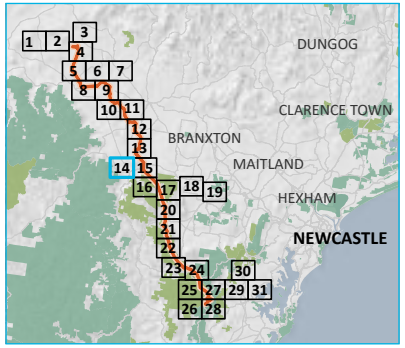
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

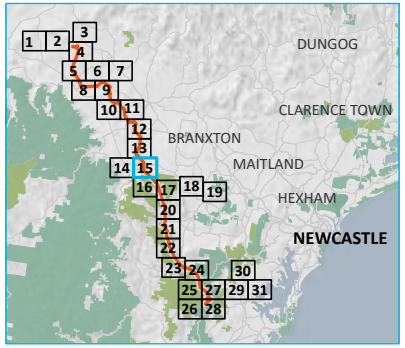
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025

Updated total field survey coverage of amended project impact area

Map 14 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

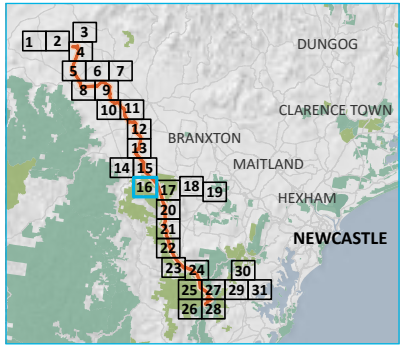
Updated total field survey coverage of amended project impact area

Map 15 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Dangerous

Project impact area

- HTP corridor
- Access track
- Named watercourse
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 16 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

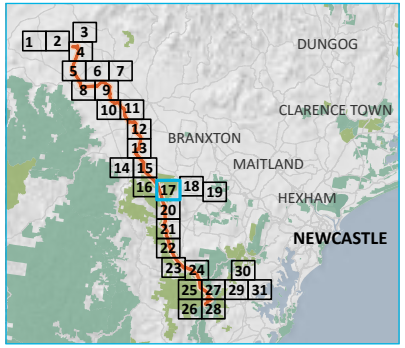
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage
- Surveyed
- Dangerous

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

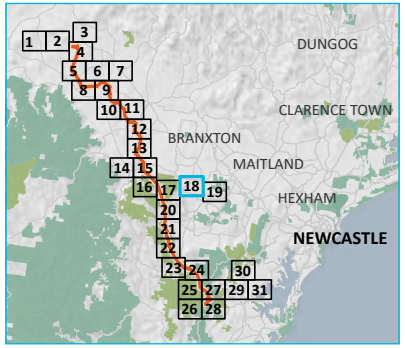
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025

Updated total field survey coverage of amended project impact area

Map 17 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM
creating opportunities



KEY

Survey coverage

- Non-Surveyed
- Dangerous

Project impact area

- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

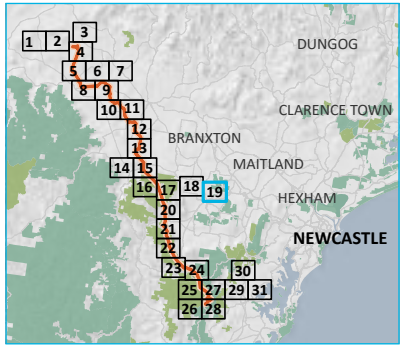
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02 Maps\ ACH\ RTS\ACHRTS001 FieldSurveyCoverage\ACHRTS001 FieldSurveyCoverage 20251124 05.aprx 24/11/2025

Updated total field survey coverage of amended project impact area

Map 18 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities



KEY

Survey coverage

- Non-Surveyed

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

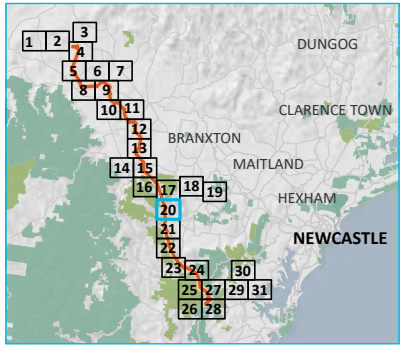
N

Updated total field survey coverage of amended project impact area

Map 19 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities



KEY

Survey coverage
- Surveyed
- Non-Surveyed
- Dangerous

Project impact area
- HTP corridor
- Construction support site
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 20 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

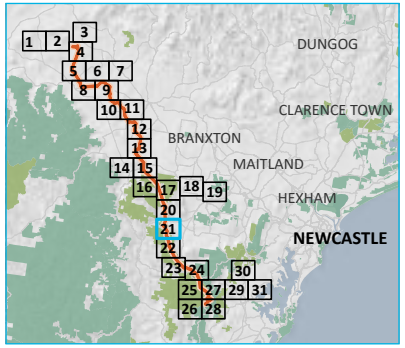
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage
- Surveyed
- Non-Surveyed
- Dangerous

Project impact area
- HTP corridor
- Construction support site
- Laydown area
- Access track

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 21 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

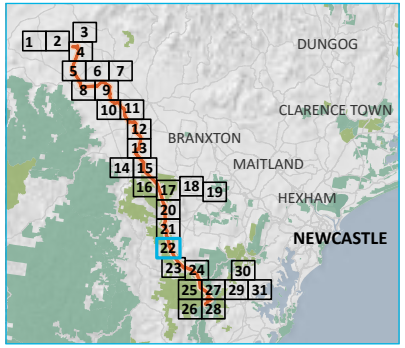
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage
- Surveyed
- Dangerous

Project impact area
- HTP corridor
- Laydown area
- Access track

Existing environment
- Minor road
- Named watercourse
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 22 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

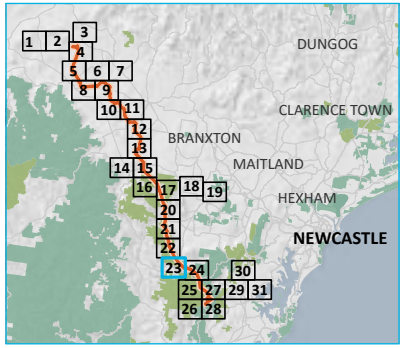
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Named watercourse
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

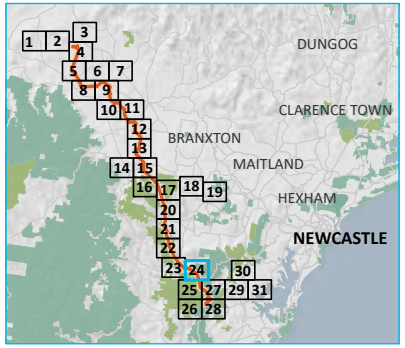
Updated total field survey coverage of amended project impact area

Map 23 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 24 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

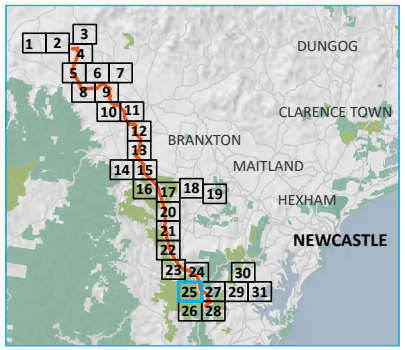
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 25 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

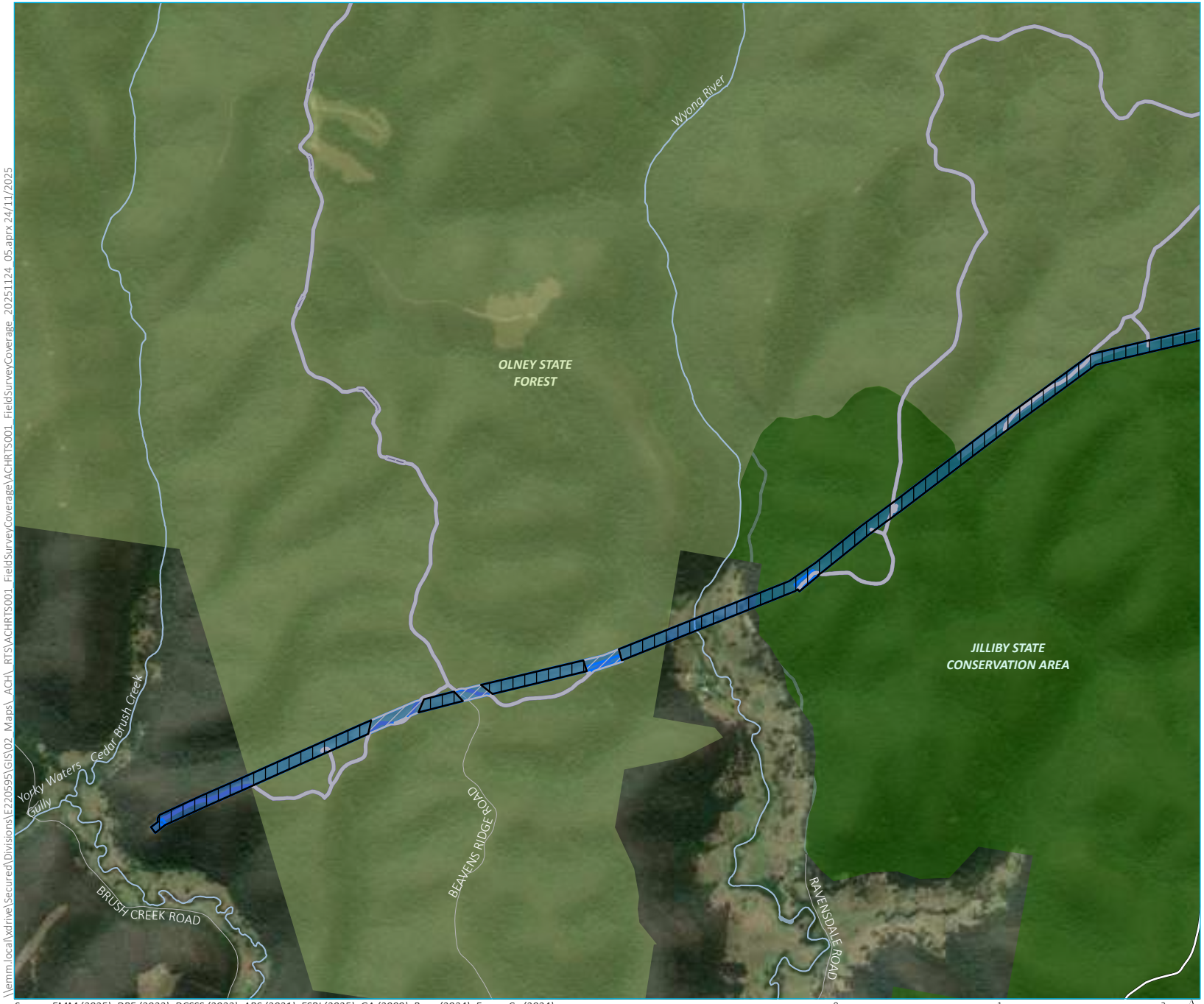
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

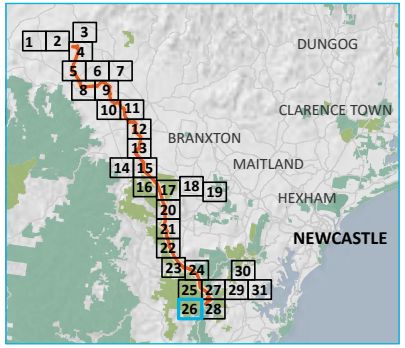
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025





KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 26 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

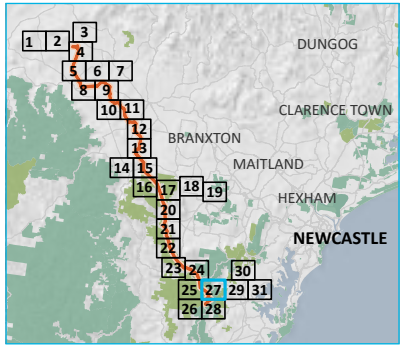
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025

EMM creating opportunities



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 27 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

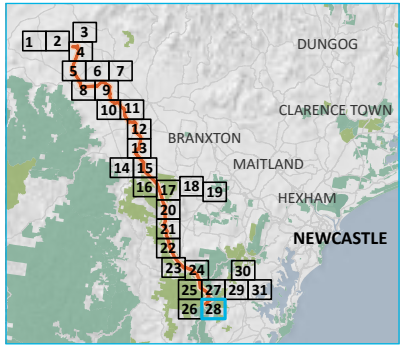
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025



KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- HTP corridor
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 28 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

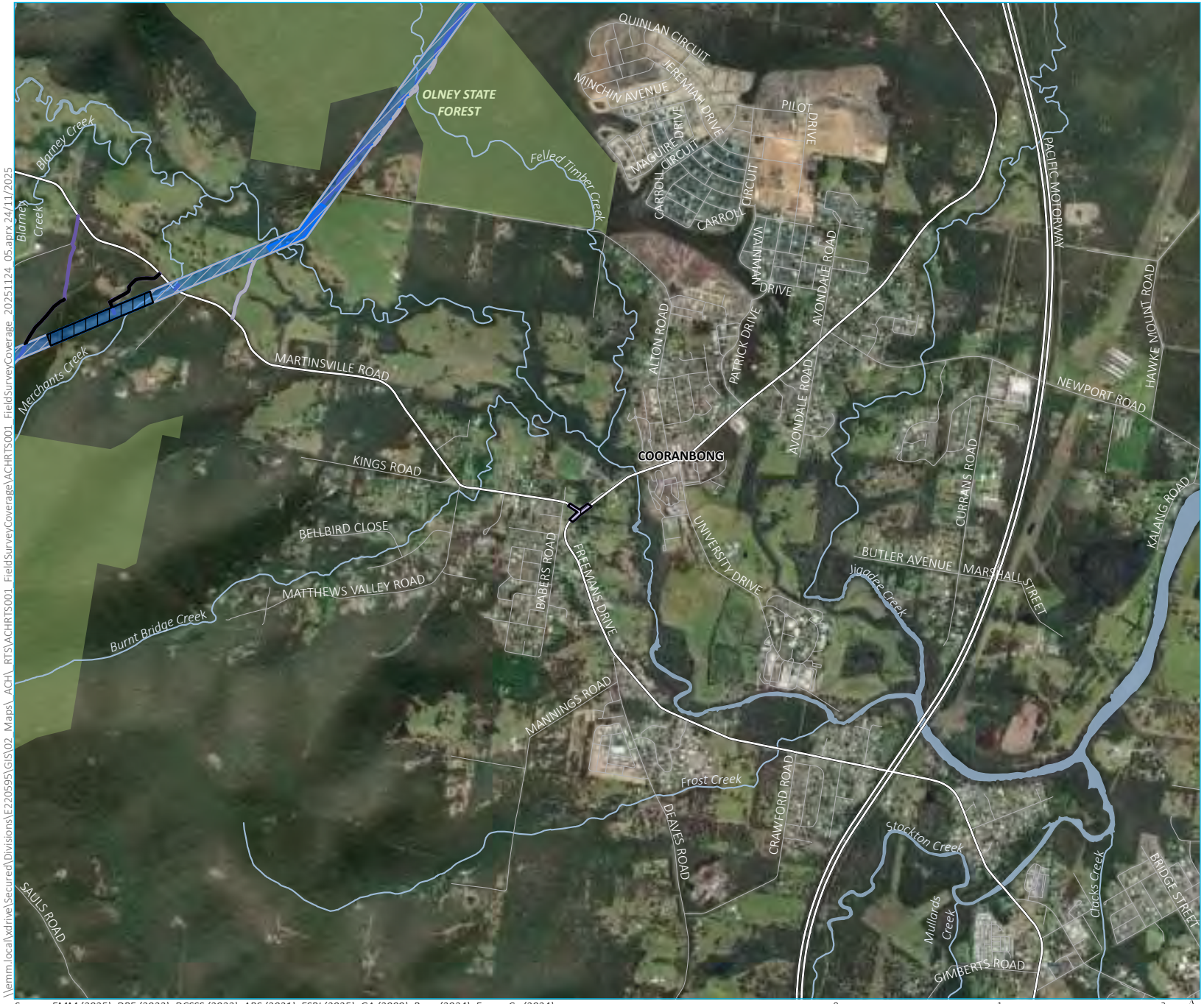
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

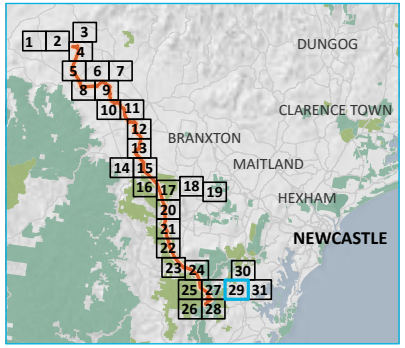
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025





KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

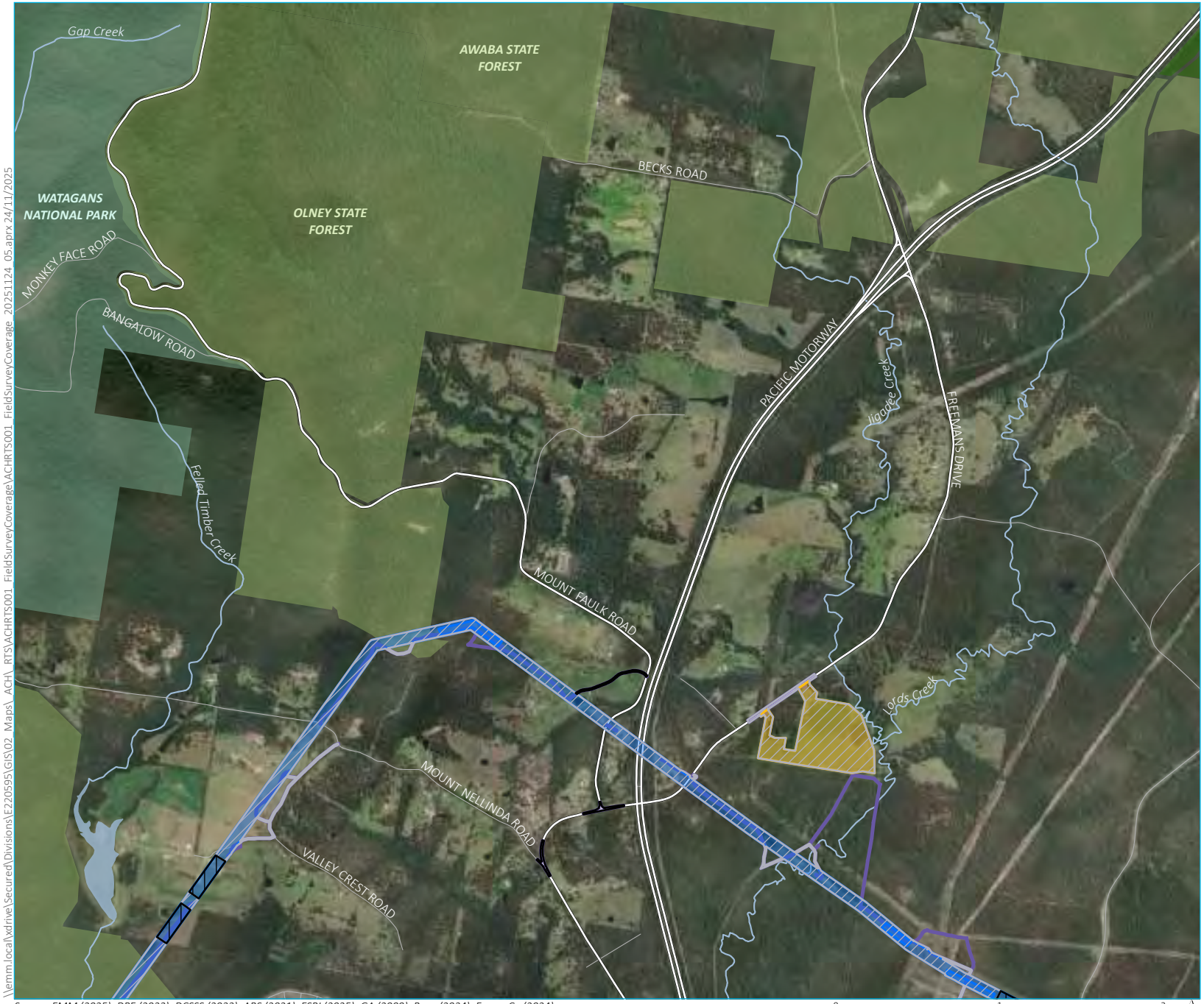
Updated total field survey coverage of amended project impact area

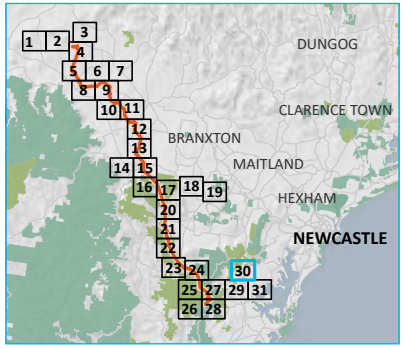
Map 29 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025





KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- Construction support site
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 30 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

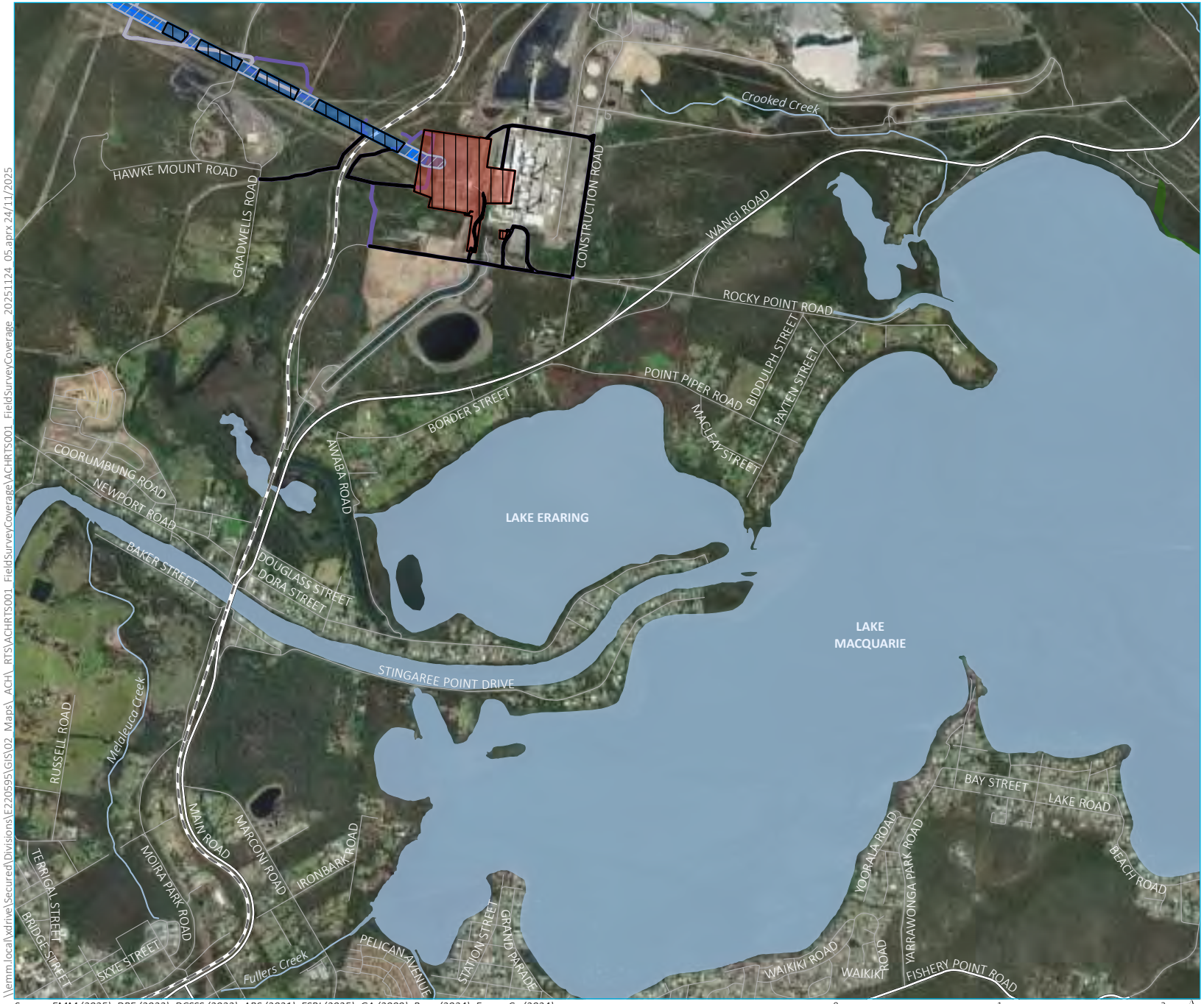
Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

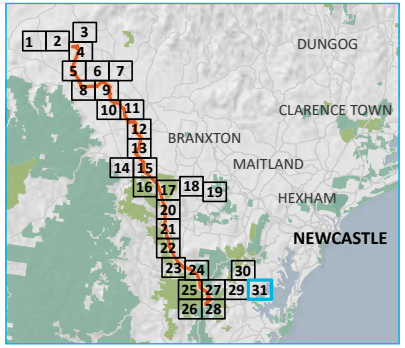
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps\ACH_RTS\ACHRTS001_FieldSurveyCoverage\ACHRTS001_FieldSurveyCoverage_20251124_05.aprx 24/11/2025





KEY

Survey coverage

- Surveyed
- Non-Surveyed

Project impact area

- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Updated total field survey coverage of amended project impact area

Map 31 of 31

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.3

Source: EMM (2025); DPE (2023); DCSSS (2023); ABS (2021), ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02 Maps\ ACH\ RTS\ACHRTS001 FieldSurveyCoverage\ACHRTS001 FieldSurveyCoverage 20251124 05.aprx 24/11/2025

creating opportunities

iv Additional Aboriginal sites identified as part of ACHA addendum report

The ACHA addendum investigations identified 13 further extant Aboriginal objects, sites and places within the project impact area (refer to Plate 5.16 to Plate 5.19, and Figure 5.4). Of these sites, HTP-N-IF79 was identified as a surface site during the test excavation for the ACHA addendum field assessment and has been incorporated into this section. In addition, the field team investigated and relocated four previously documented sites, with a further three visited, but unable to be validated. Despite this, these latter sites continue to be included in the cultural assemblage outlined in *section 6.5*.

Spatially, the results of this additional survey align well with the results documented in the exhibited ACHA, with all Aboriginal objects, sites and/or places recorded in HTP North (EMM 2025). Aboriginal objects, sites and/or places were documented across SUs 1 and 17, in association with named watercourses or their lesser tributaries including Saltwater Creek and Monkey Place Creek. When considering landforms, sites were most commonly identified on plains and/or hillslopes, reflecting the undulating landscape that comprises much of the project impact area in HTP North.

The newly identified sites and objects primarily consisted of isolated or low-density sites containing less than 20 artefacts, representing transient use/activity in the past. A culturally modified eucalypt tree was documented along the eastern banks of Saltwater Creek during the field investigation and has been given a tentative status given the historical activities in the region. Three previously documented sites (AHIMS #37-2-0500, #37-2-0811, and #37-6-2842) were visited and substantive numbers of artefactual material were identified consistent with long-term and/or intensive occupation at these areas. Of these, BMP 1; Jerrys Plain (AHIMS #37-2-0500) reflects a moderate density (n=20+) artefact scatter identified on a gentle hill slope ~120 metres south of Saltwater Creek. During fieldwork undertaken to support this ACHA addendum, this site was documented more extensively than previous recordings, with ~20 additional artefacts identified.

Notably, an attempt to relocate P20 (AHIMS #37-2-0816) was made during the survey. The site card for this site describes a low-density artefact scatter with six artefacts recorded on an erosional scald located on a hill slope landform. During the survey for this assessment, only a quartz flake and an indurated mudstone/tuff/chert (IMTC) flaked material were identified near an existing transmission tower and west of an unnamed ephemeral creek line. Despite the visibility in this location, no further artefacts could be identified. Similarly, P16 (AHIMS #37-2-0811) described to be a high-density artefact scatter site with potential archaeological deposit (PAD) was visited on an eroded creek bank. The previously recorded assemblage of this site documents thousands of stone artefacts comprising silcrete, IMTC materials, quartz with several pieces of black glass bottle (reflective of post-Contact activity). This site was revised as part of the ACHA addendum field investigation and though a number of artefacts (n=50) aligned with the original recording were observed, several thousand previously referenced could not be accounted for. Increased vegetation and limited exposures prevented observations equivalent to the original site being recorded and may provide one reason for the disparity of findings.

In summary, all 13 newly identified Aboriginal objects and sites are located within the amended project impact area. These were all found in previously unsurveyed portions of the exhibited project impact area. This includes a potentially culturally modified tree (HTP-N-CMT02), three low-density artefact scatter sites (HTP-N-AS77, HTP-N-AS78 and HTP-N-AS86), and nine isolated finds (HTP-N-IF72, HTP-N-IF73, HTP-N-IF74, HTP-N-IF75, HTP-N-IF76, HTP-N-IF77, HTP-N-IF79, HTP-N-IF82 and HTP-N-IF83). A further four (AHIMS #37-2-0500, #37-2-0811, #37-2-0816, and #37-6-2842) previously recorded sites were revisited and validated, and three previously documented sites were revisited, but could not be relocated (AHIMS #37-2-2-0810, #37-2-0817, and #37-6-3981).

Plate 5.16 Scar on eucalypt tree from potential cultural modification, scar is north facing

Plate 5.17 Potential culturally modified tree (HTP-N-CMT02), view south

Plate 5.18 BMP 1; Jerrys Plain (AHIMS #37-2-0500) sample of silcrete flakes (n=5)

Plate 5.19 BMP 1; Jerrys Plain (AHIMS #37-2-0500) context view north of a large exposure cuased by sheetwash erosion and vehicle track disturbance

Plate 5.20 P16 (AHIMS #37-2-0811) context view west of an exposure caused by sheet wash on a very gently inclined hillslope

Plate 5.21 HTP-N-AS78 sample of silcrete flakes (n=2)

Plate 5.22 HTP-N-AS77 sample of mudstone flake (n=1)

Plate 5.23 HTP-N-AS77 context view north of a large exposure alongside a vehicle track caused by sheet wash erosion

KEY

Identified Aboriginal site

- Newly identified Aboriginal site
- Previously documented Aboriginal site (relocated)

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2026); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2026); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

Identified Aboriginal sites through addendum investigations
Map 1 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.4

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS013_IdentifiedAboriginalSites\ACHRTS013_IdentifiedAboriginalSites_20260204_05.aprx 4/02/2026

KEY

Identified Aboriginal site

- Newly identified Aboriginal site
- Previously documented Aboriginal site (not relocated)
- Previously documented Aboriginal site (relocated)

Project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site
- Adjustment to existing transmission line (lines 31 and 32)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Identified Aboriginal sites through addendum investigations
Map 2 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.4

EMM creating opportunities

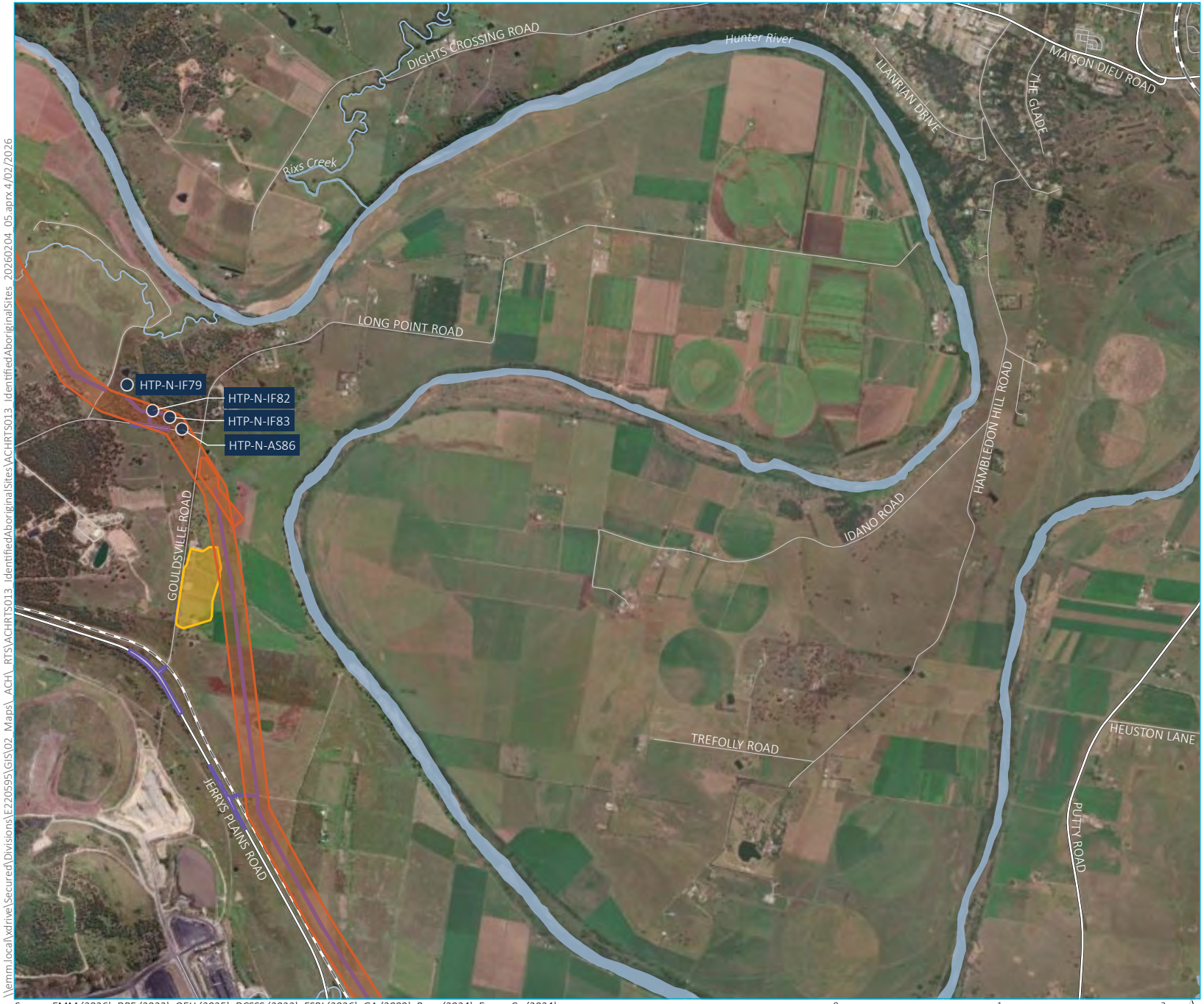
Source: EMM (2026); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2026); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS013_IdentifiedAboriginalSites\ACHRTS013_IdentifiedAboriginalSites_20260204_05.aprx 4/02/2026



KEY

Identified Aboriginal site

- Newly identified Aboriginal site

Project impact area

- HTP corridor
- Construction support site
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2026); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2026); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

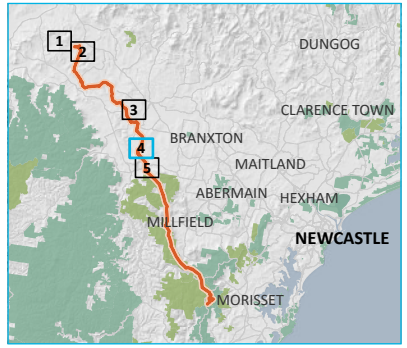
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS013_IdentifiedAboriginalSites\ACHRTS013_IdentifiedAboriginalSites_20260204_05.aprx 4/02/2026

Identified Aboriginal sites through addendum investigations
Map 3 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.4

EMM creating opportunities



KEY

Identified Aboriginal site

- Previously documented Aboriginal site (relocated)

Project impact area

- HTP corridor
- Adjustment to existing transmission line (line 81)
- Access track

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2026); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2026); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

Identified Aboriginal sites through addendum investigations
Map 4 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.4

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS013_IdentifiedAboriginalSites\ACHRTS013_IdentifiedAboriginalSites_20260204_05.aprx 4/02/2026

KEY

Identified Aboriginal site

- Newly identified Aboriginal site
- Previously documented Aboriginal site (not relocated)

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Identified Aboriginal sites through addendum investigations
Map 5 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.4

EMM
creating opportunities

Source: EMM (2026); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2026); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS013_IdentifiedAboriginalSites\ACHRTS013_IdentifiedAboriginalSites_20260204_05.aprx 4/02/2026

5.4.2 Test excavations

i Overview of exhibited ACHA test excavations undertaken for the EIS

The following has been summarised from the exhibited ACHA and outlines the test excavations completed prior to the submission of the EIS.

A program of test excavations was proposed for areas of predicted Warkworth sand system and/or potential subsurface cultural deposits within HTP North and HTP Central. Excavations were undertaken in accordance with a project specific Archaeological Research Design (ARD) approved by Heritage NSW, which ultimately aligned closely with established Heritage NSW guidelines. Due to land access constraints, test excavations were focussed within the Singleton Military Area and in the vicinity of Congewai Creek. In relation to the former, multiple proposed alignments were investigated; and the results used to inform the exhibited project impact area.

Overall, 50 test pits (47 x 0.25 m^2 test pits, 3 x 1 m^2 test pits, totalling 14.75 m^2) were undertaken within the Singleton Military Area as discrete 20-metre grids focussed on proposed project elements. These primarily identified a shallow duplex or fabric contrast soil profile, with a low-density of cultural materials encountered in the upper 40 centimetres. Small pockets of predicted Warkworth sand system were encountered in two areas, each less than 1.6 hectares in size, and neither containing significant cultural materials. Optically stimulated luminescence (OSL) ages suggest initial formation >12,000 years ago for these deposits. One of these locales was avoided through project re-design. The recovered cultural materials included a wide range of raw materials and were indicative of early manufacturing processes; and likely dating to the last few thousand years.

Fifty-four test pits (53 x 0.25 m^2 test pits, 1 m^2 test pit, totalling 14.25 m^2) were undertaken on the southern bank of Congewai Creek as a discrete 20 metre grid focussed on proposed project elements. These primarily identified a shallow duplex or fabric contrast soil profile, with a low density of cultural materials encountered in the upper 40 centimetres. Three discrete areas of higher density cultural materials, 19 and 32/m^2, were encountered, between 0.1 to 0.6 hectare in size and located between 100 to 200 metres from the creek's edge. These have been identified as HTP-C-FA01 (#37-6-4490), HTP-C-FA02 (#37-6-4489), and HTP-C-FA03 (#37-6-4491) in subsequent sections. The recovered cultural materials included a wide range of raw materials and were indicative of early manufacturing processes. OSL ages from the site suggest initial formation of the deposit 3000 to 5000 years ago, with the cultural materials deposited in the last 2500 to 3000 years. Discrete locations and varying depths of the cultural deposits strongly suggest repeated visitation occurred at this locale in the past.

ii Background and aims

Discussions with Heritage NSW during submission of the EIS and mitigation measure (AH05) of the exhibited ACHA indicated the need for further test excavations of the project impact area to further inform the project. This has been reinforced in subsequent comments from Heritage NSW (refer to *Appendix A – Public exhibition comments*) seeking further information on this program.

As a result of this, an additional, more extensive archaeological test excavation program has been carried out between 12 May and 24 July 2025. While undertaken during the finalisation of the exhibited ACHA and prior to the EIS submission, the results of this program, especially specialist inputs such as chronological dating, were unable to be completed in the require timeframes. As a result, they are provided in their entirety in this ACHA addendum. These works were undertaken by EMM archaeologists (including William Truscott, Taylar Reid, Georgia Burnett, Frances Robson, Phillipa O'Brien-Pounde, Amber Morgan, Mikhaila Chaplin, Joel Mason, Megan Sheppard-Brennand, and Angus Lynch), with the participation of several RAPs, primarily within HTP North (refer to Appendix C.2).

These excavations were focussed on the areas previously identified in the exhibited ACHA as being considered archaeologically sensitive, namely within or adjacent to areas that had been predicted to contain Warkworth Sands system deposits – a geological unit demonstrated to disparately contain old and significant cultural materials. Locales for test excavation were also based on regional models and field survey results that identified cultural materials and landforms of interest within these zones, which are outlined at length in the exhibited ACHA. There were four discrete areas where test excavations were completed within the HTP corridor:

- near the Hunter River to the east of Lemington Road (test pits 169-2 to 169-20, 172-1 to 172-22, and 173-3 to 173-16)
- on rises to the east of Hobden Gully (test pits 155-1 to 155-17 inclusive, 156-2 to 156-21, 157-2 to 157-14, 158-2 to 158-24)
- on floodplains to the west of the confluence of the Hunter River and Wollombi Brook (test pits 143-2 to 143-18 and 144-2(EXP) to 144-19)
- on terraces between Wollombi Brook and Long Point (test pits 131-1 to 131-11, 132-1 to 132-9, 133-1 to 133-11, 134- 2 to 134-12, 135-2 to 135-20, and 136-2 to 136-19).

Additional locations were also proposed on the banks of Parnells Creek and in the vicinity of Loder Creek and its tributaries, but continue to be limited by land access constraints (and are proposed for incorporation into post-approval requirements in *Chapter 9 (Management)*. Due to the nature of the previous land-use and/or the nature of archaeological material, it was considered that other parts of the amended project impact area within the Hunter Valley Operations mining complex did not require test excavations to be adequately characterised. As outlined in the exhibited ACHA, much of the project here encompasses undulating slopes and/or areas of mine rehabilitation, which are landforms where significant cultural materials are considered less likely to occur.

Within the above parameters, the primary aims of the excavations were as follows:

- supplement previous field survey and test excavations undertaken along the project impact area as part of the exhibited ACHA
- identify, map and characterise the nature, age, extent, integrity and significance of the cultural materials within the project impact area in areas where cultural materials were considered likely to occur based on the findings of the exhibited ACHA and supplementary field survey
- collect data to answer the following research questions:
    - what are the environmental characteristics associated with the distribution of cultural materials within the construction impact area?
    - can the formative processes of the stratigraphic profile provide information on the nature and/or survivability of the archaeological resources?
    - what are the cultural, social and public values associated with the Aboriginal archaeological resource within the construction impact area?
    - how should the Aboriginal sites in the region be conserved and managed in future?
- better assess the significance and historical meaning of the cultural materials that exist within the project impact area so that future archaeological investigation can advance our understanding of past Aboriginal cultural behaviour and environmental adaptation
- direct future heritage activities and mitigation measures (if required) for the project.

Ultimately, excavations were undertaken in 17 locations primarily within the Hunter Valley Operations mining complex (refer to Figure 5.5).

Table 5.3 RAPs participating in the test excavation program at Hunter Valley Operations

Organisation and/or individual	Personnel
Wanaruah LALC	Wayne French
Aliera French Trading	Aliera French
Ungooroo Aboriginal Corporation	Allen Paget
Thomas Dahlstrom	Steven 'George' Flick

iii Methods

The test excavations focussed on a series of locations within the HTP corridor extending from south of Wollombi Brook to Lemington Road in the southern portion of Hunter Valley Operations (refer to Figure 5.5).

The test excavations adopted approaches and methods outlined in a project specific Archaeological Research Design (ARD) permissible under the project's SEARs and approved by Heritage NSW on 29 November 2024 (ref: DOC24/978012) (refer to Appendix C.2.1).

The ARD set out test excavations as follows:

- at each location a grid of 0.25 m² test pits are spaced at 40 metre grid (phase 1)
- when a total of ≥5 artefacts were collected from a test pit or potential Warkworth Sands system deposits were encountered: i) the initial 0.25 m² test pit/s was expanded to 1 m² test pits; and ii) the grid of test pits increased spatial resolution, typically to 20 metre spacing (phase 2) to determine the nature and spatial extent of the cultural materials/deposits
- where deep Warkworth Sands system deposits were encountered options were available to reduce the overall grid of test pits and rather expand fewer areas and focus on excavations to greater depths. Ultimately this was not required, with few test pits needing to exceed 1 metre below surface
- all excavation was undertaken in 10 cm spits, with all sediment sieved through a 5-millimetre mesh to recover cultural materials
- various chronological, soil and palaeo-environmental samples were collected and reporting requirements as per Heritage NSW's *Code of Practise for the Archaeological Investigation of Aboriginal Objects in NSW* guidelines were adopted.

iv Results

This section provides a summary of the excavations and subsequent analysis, with further detail provided in Appendix C.2. This includes a full catalogue of the excavated test pits (refer to Appendix C.2.2), photographic catalogue (refer to Appendix C.2.3), stratigraphic drawings of artefact bearing test pits (refer to Appendix C.2.4), OSL dating report (refer to Appendix C.2.5), and detailed lithic analysis (refer to Appendix C.2.6) and catalogue (refer to Appendix C.2.7). A summary of the post excavation analysis, including stratigraphy, chronology and lithics analysis, from the excavations is provided below.

When incorporating the previous phase (refer to *section 5.4.2i*) and the test excavations undertaken for the ACHA addendum, a total of 260 x 0.25 m² test pits and 24 x 1 m² test pits, equivalent to 89 m² were undertaken. For the ACHA addendum, some 180 test pits (consisting of 160 x 0.25 m² and 20 x 1 m² test pits) were excavated across the project impact area, targeting 17 locations (refer to Figure 5.5). In accordance with the ARD, 150 were excavated as part of phase 1, and 30 test pits were excavated as part phase 2 where thresholds required further investigation. These investigations amounted to ~60 m² or ~31.26 m^3 of excavation. Test pits were, on average, ~47 centimetres deep with the majority demonstrating a duplex soil profile. Deeper test pits were generally located within source bordering sand dune deposits encountered intermittently across the project impact area, which likely represent pockets of the Warkworth Sands system. At these locations several test pits were excavated to >100 centimetres, with TP156-12 (EXP) and TP158-10 (EXP) notably reaching 150 centimetres below current surface. All sediment excavated was dry sieved for cultural materials.

Of the 180 test pits excavated, 79 (~44%) contained cultural materials, with 562 stone artefacts recovered (refer to Figure 5.5 and Figure 5.6; Appendix C.2). The majority of cultural material recovered was from the upper 20 centimetres of the soil profile (n=303, 54%), although artefacts were recovered from depths up to 1 metre below ground surface in some locations. These deeply buried cultural materials were primarily recovered from test pits on the rise east of Hobden Gully (test pits beginning with the pre-fix 155, 156, 157 and 158) where deep sand deposits were encountered. When extrapolating each 0.25 m² test pit to 1 m², which is commonly how artefact densities are discussed in the archaeological literature, an extrapolated average density of 3.4/m² was found across the project impact area (refer to Figure 5.6). Test pits 141-2(EXP) to 141-21 (n=226) and 158-2 to 158-24 (n=149) contained the most extensive cultural materials, with several test pits having densities of >30/m²; and reflect foci of past activity in these locations.

A total of 21 OSL ages were recovered primarily from floodplains at the confluence of Hunter River and Wollombi Brook, and on the rises east of Hobden Gully where substantive cultural materials and/or Warkworth Sands system were encountered. These suggest that the duplex soil profiles that dominate the archaeological test excavations primarily date to the last few thousand years, and cultural materials within them appear to have been discarded in the last 1 to 2000 years. Where the Warkworth Sands system was encountered, it suggests their initial formation occurred between 50,000 to 70,000 years ago. In relation to cultural materials in these soil profiles, within test pits 156-2 to 156-21, they appear to have been deposited over the last 17,000 years, and primarily in the last 5000 years. At test pits 158-2 to 158-24, the majority of the cultural assemblage dates to between 13,000 and up to 38,000 years ago. These findings should be treated cautiously given the potential for artefacts to move within soil profiles. The use of the region in the terminal Pleistocene has been previously documented in this locale, however the presence of people prior to the Last Glacial Maximum (LGM) (>25,000 years ago) in the Hunter Valley has been rarely documented.

Based on the findings, all locations encountered cultural materials and have been documented as Aboriginal sites in subsequent sections of the report. A total of 20 newly identified or updated sites are outlined in *section 5.4.2v*. Of these, ten test pits and their immediate environs recovered >20 artefacts/m² and are amalgamated into five areas of foci for past occupation and incorporated in the cultural assemblage outlined in *Chapter 6 (The archaeological resource)*, including TP134-9 (EXP) (n=22), TP140-16 (EXP) (n=25), TP141-3 (EXP) (n=37), TP141-8 (EXP) (n=32), TP141-10(EXP) (n=28), TP141-15 (EXP) (n=84), TP156-6 (EXP) (n=22), TP158-9 (EXP) (n=50), TP158-10 (EXP) (n=28), and TP158-16 (EXP) (n=33).

Plate 5.24 View north showing the location of TP144-19 towards the Hunter River

Plate 5.25 TP 144-9 north section, showing soil profile (i)

Plate 5.26 View north showing the location of TP141-15 towards the confluence of Wollombi Brook and Hunter River

Plate 5.27 TP 141-15 north section, showing soil profile (ii) with more abundant gravels present

Plate 5.28 View north showing the location of TP134-7 towards the Hunter River

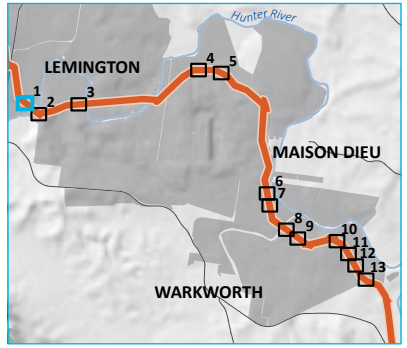
Plate 5.29 TP 134-7 north section, showing soil profile (ii)

Plate 5.30 View north showing the location of TP158-17

Plate 5.31 TP 158-10 north section, showing soil profile (iii)

Plate 5.32 View north showing the location of TP172-8 towards the Hunter River

Plate 5.33 TP 172-16 north section, showing soil profile (iv)



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0

Project impact area

- HTP corridor
- Access track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

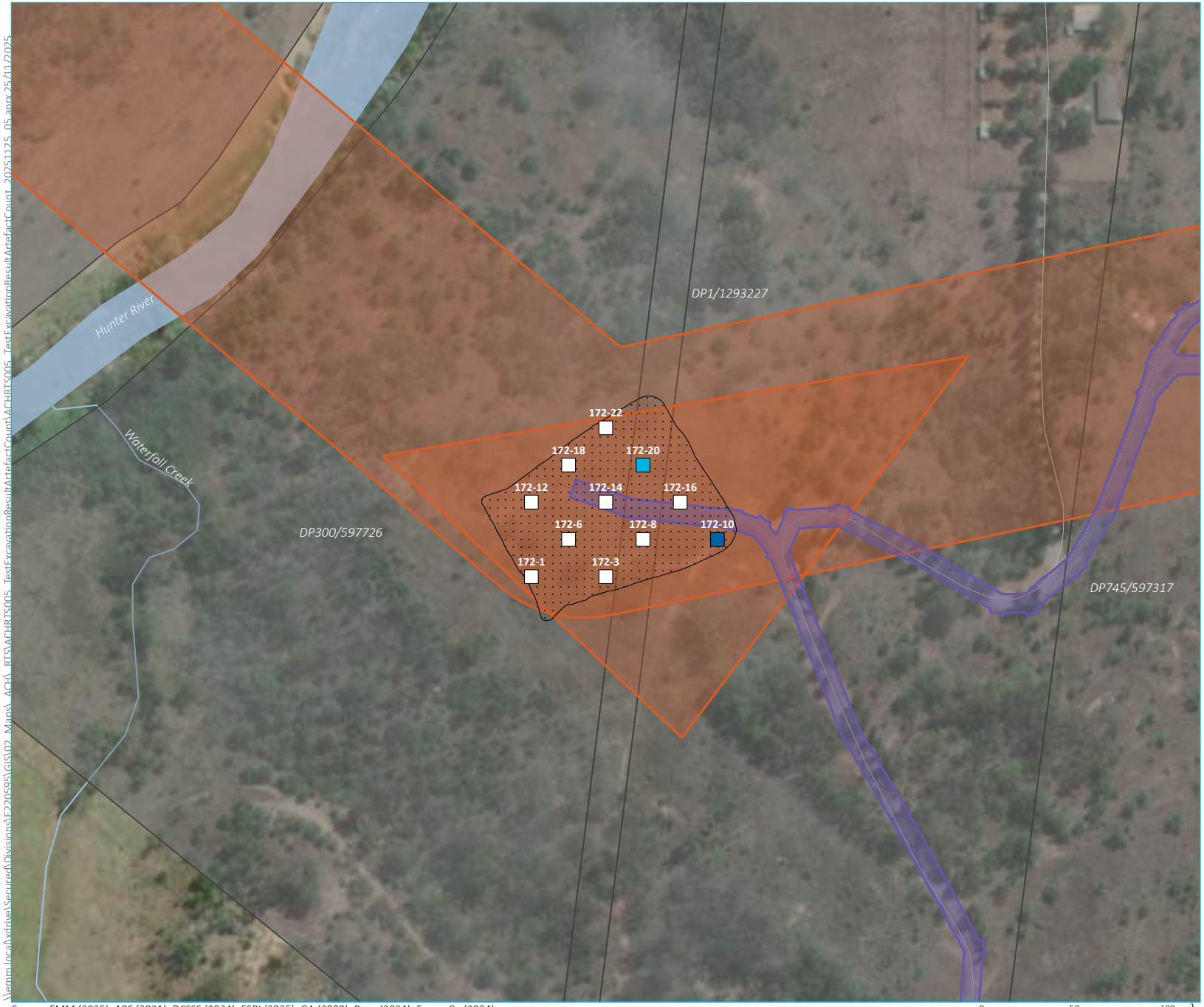
N

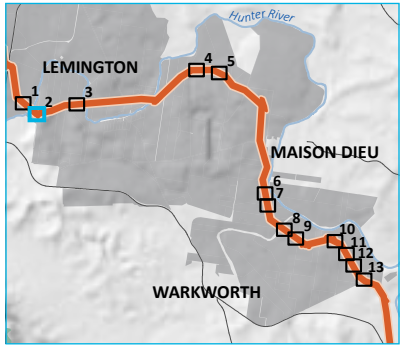
Test excavation results
Map 1 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 2
- 3

Project impact area

- HTP corridor
- Access track

Existing environment

- Minor road
- Vehicular track
- Named watercourse
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

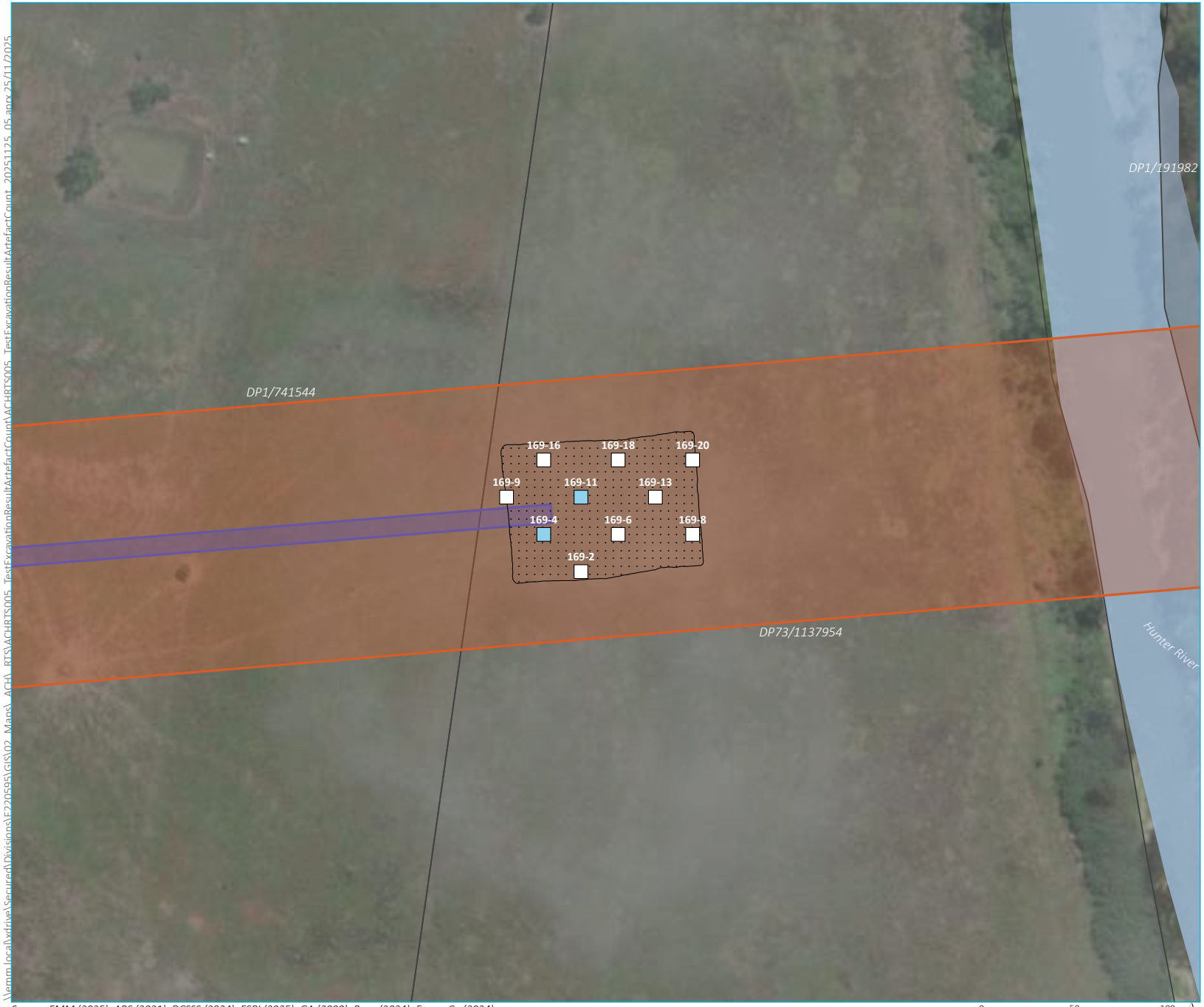
N

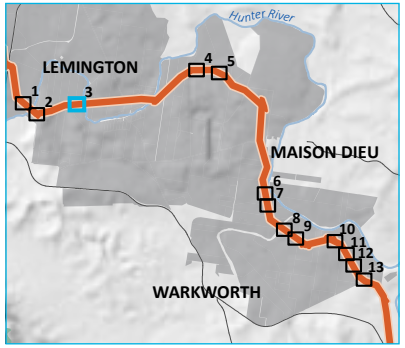
Test excavation results
Map 2 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1

Project impact area

- HTP corridor
- Access track

Existing environment

- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

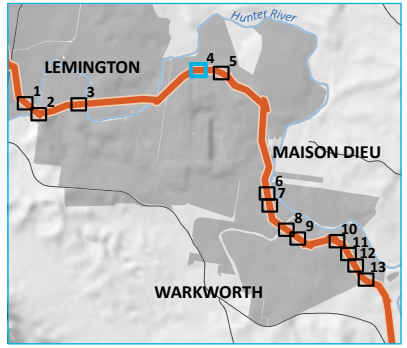
N

Test excavation results
Map 3 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

\\emm.local\xdrive\Secured\Divisions\EP220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 2
- 3
- 4
- 19
- 31
- 39
- 50

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track
- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

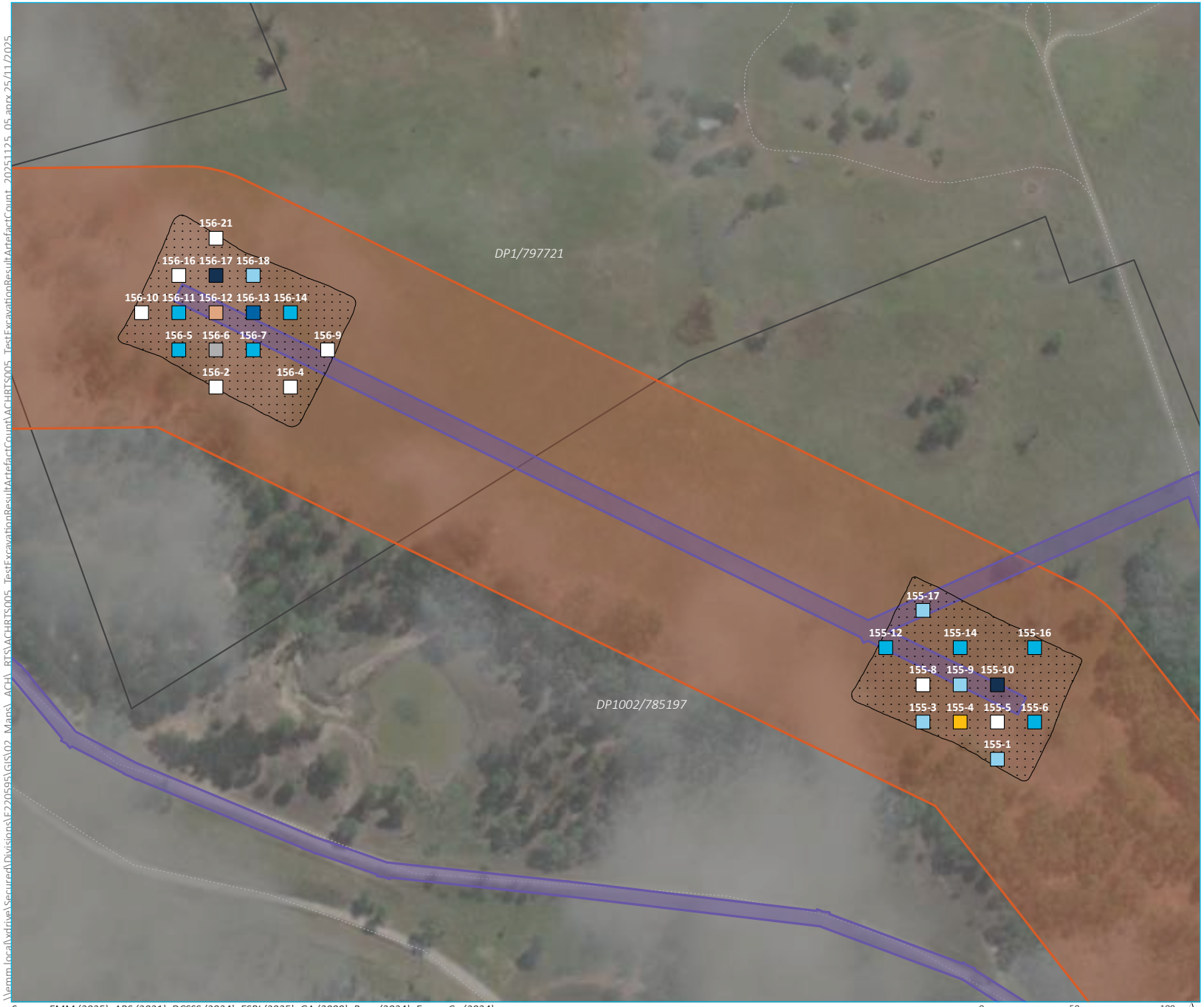
N

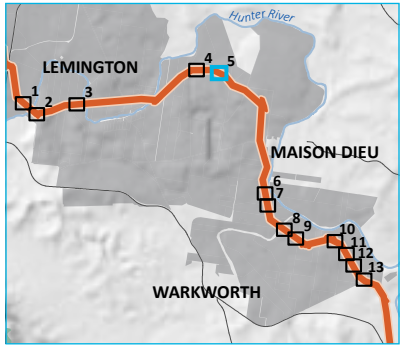
Test excavation results
Map 4 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 2
- 3
- 4
- 9
- 16
- 22

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Test excavation results
Map 5 of 13

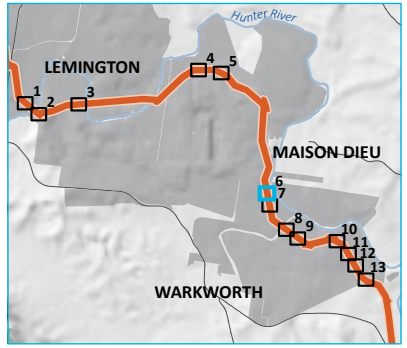
Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m
GDA2020 MGA Zone 56
N

\\emm.local\vdrive\Secured\Divisions\EJ220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025

creating opportunities



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

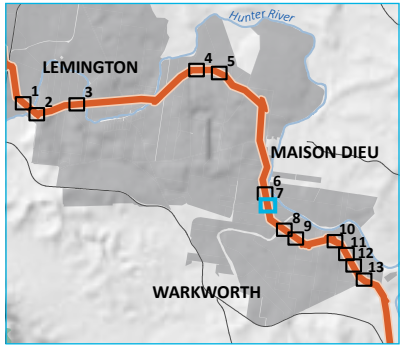
N

Test excavation results
Map 6 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

\\emm.local\vdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0

Project impact area

- HTP corridor
- Access track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Test excavation results
Map 7 of 13

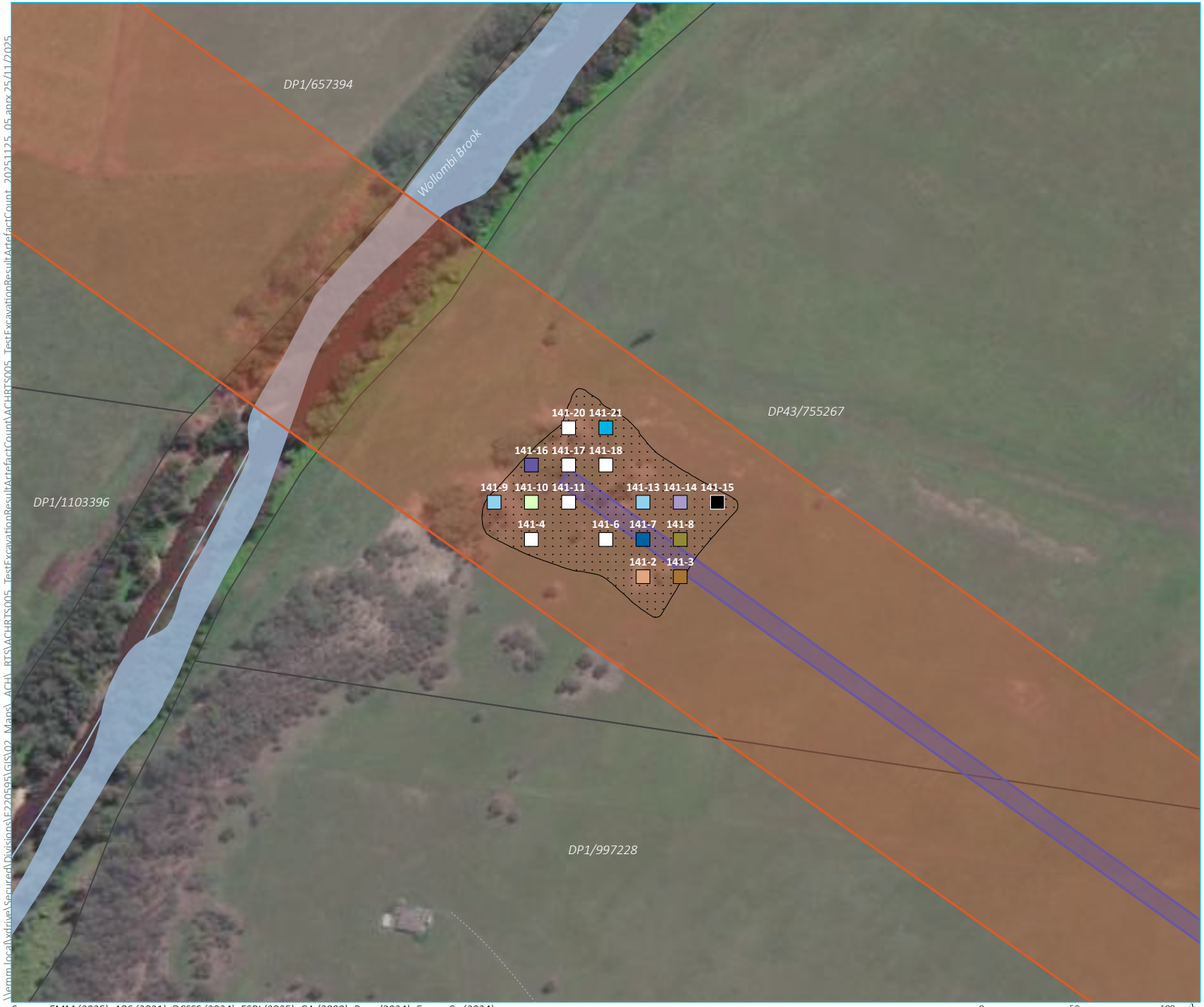
Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

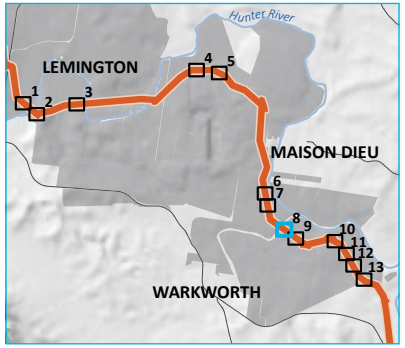
EMM
creating opportunities

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m
GDA2020 MGA Zone 56
N

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 2
- 3
- 12
- 14
- 16
- 28
- 35
- 38
- 92

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track
- Named watercourse
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

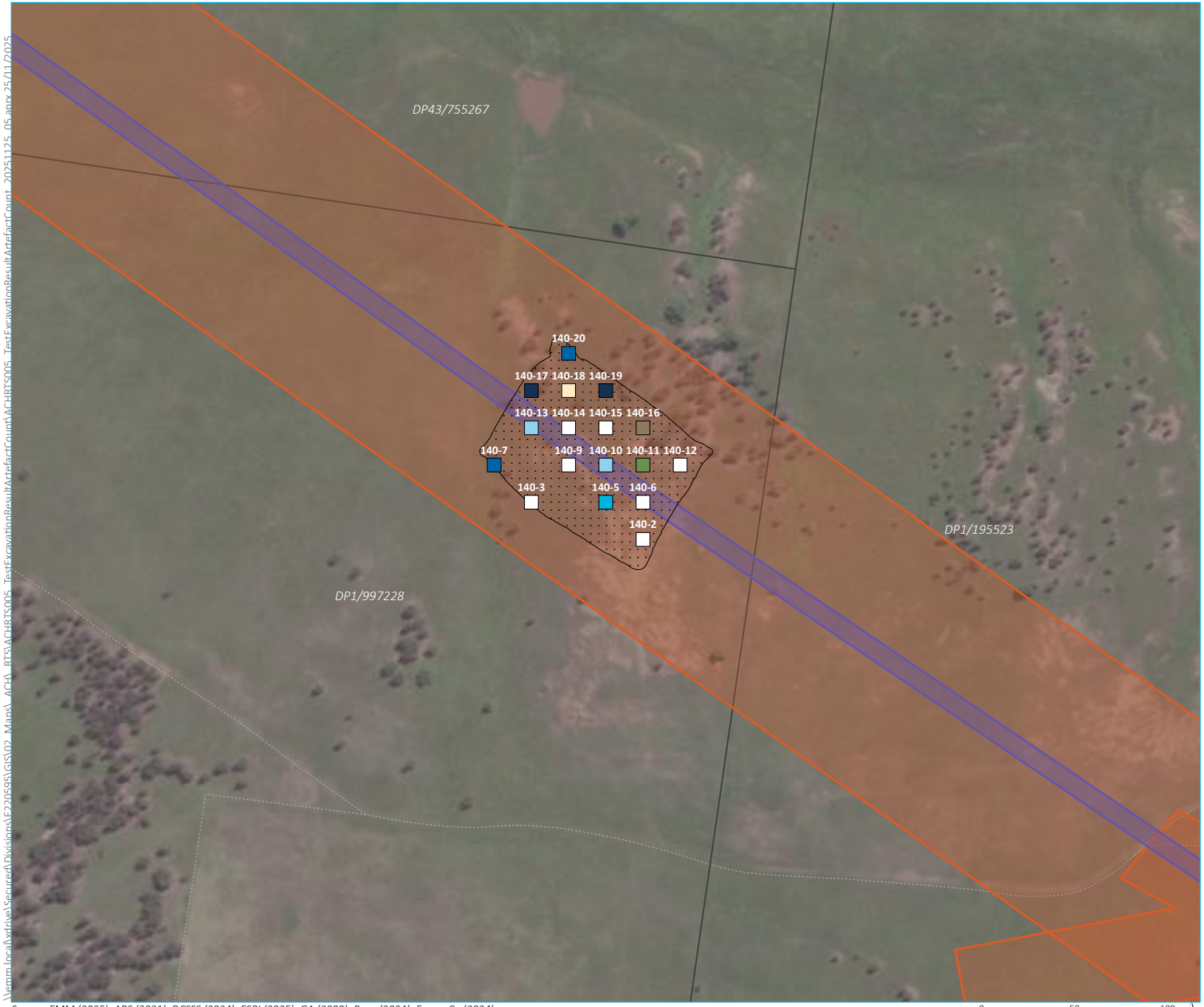
GDA2020 MGA Zone 56

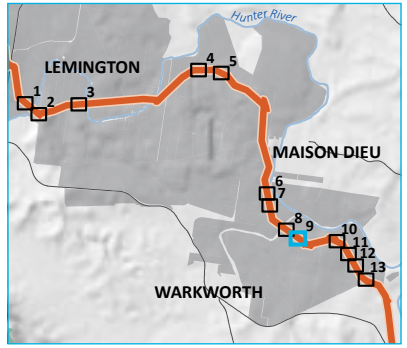
N

Test excavation results
Map 8 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities





KEY

Hunter Valley Operations

Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 2
- 3
- 4
- 8
- 29
- 33

Project impact area

HTP corridor

Access track

Existing environment

Vehicular track

INSET KEY

Hunter Valley Operations

HTP corridor

Major road

Named watercourse

Test excavation results
Map 9 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

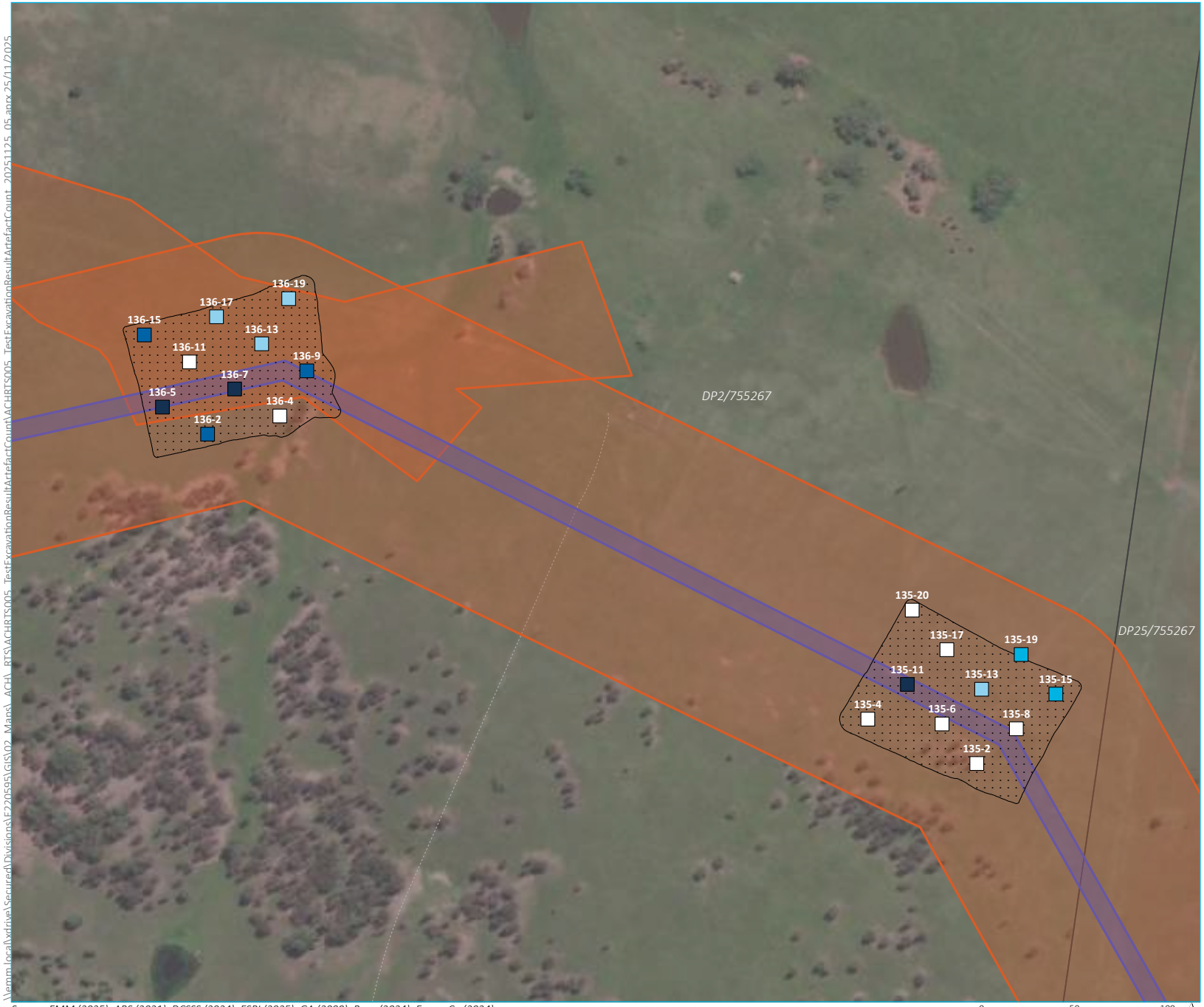
0 50 100 m

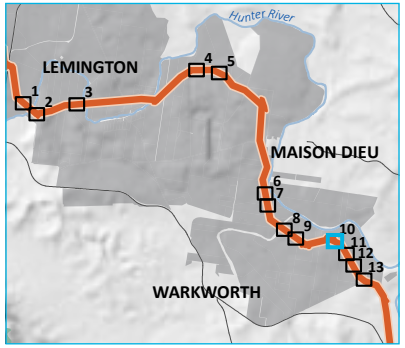
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025

creating opportunities





KEY

Hunter Valley Operations

Investigation area

Excavated test pit (artefact count)

0

1

2

3

4

Project impact area

HTP corridor

Access track

Existing environment

Vehicular track

INSET KEY

Hunter Valley Operations

HTP corridor

Major road

Named watercourse

Test excavation results
Map 10 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

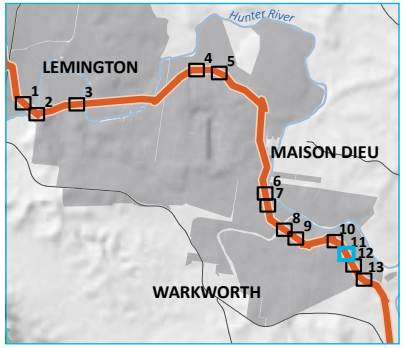
Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 3
- 24

Project impact area

- HTP corridor
- Access track

Existing environment

- Minor road
- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

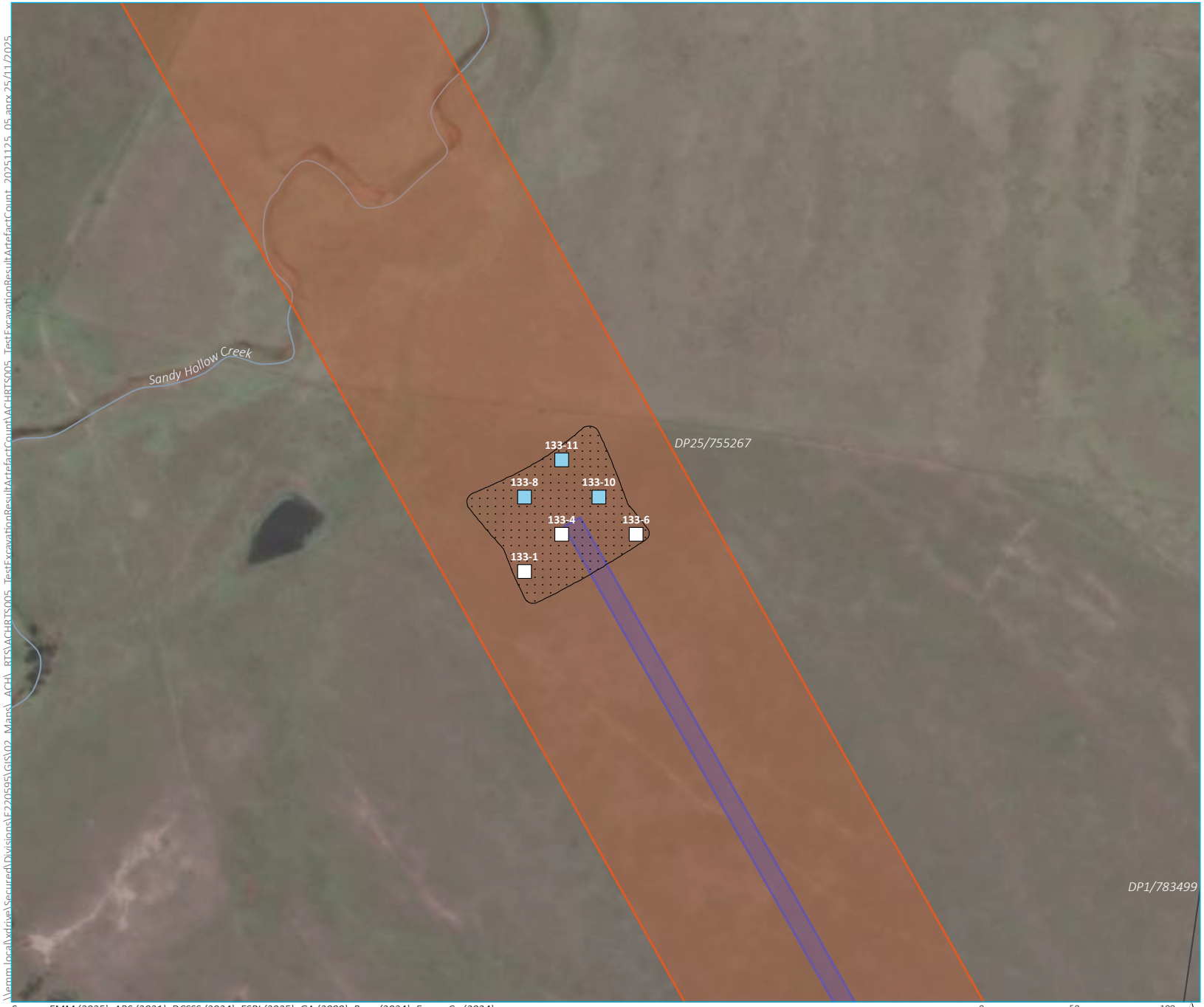
N

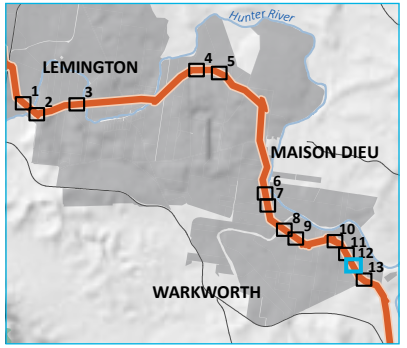
Test excavation results
Map 11 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1

Project impact area

- HTP corridor
- Access track

Existing environment

- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

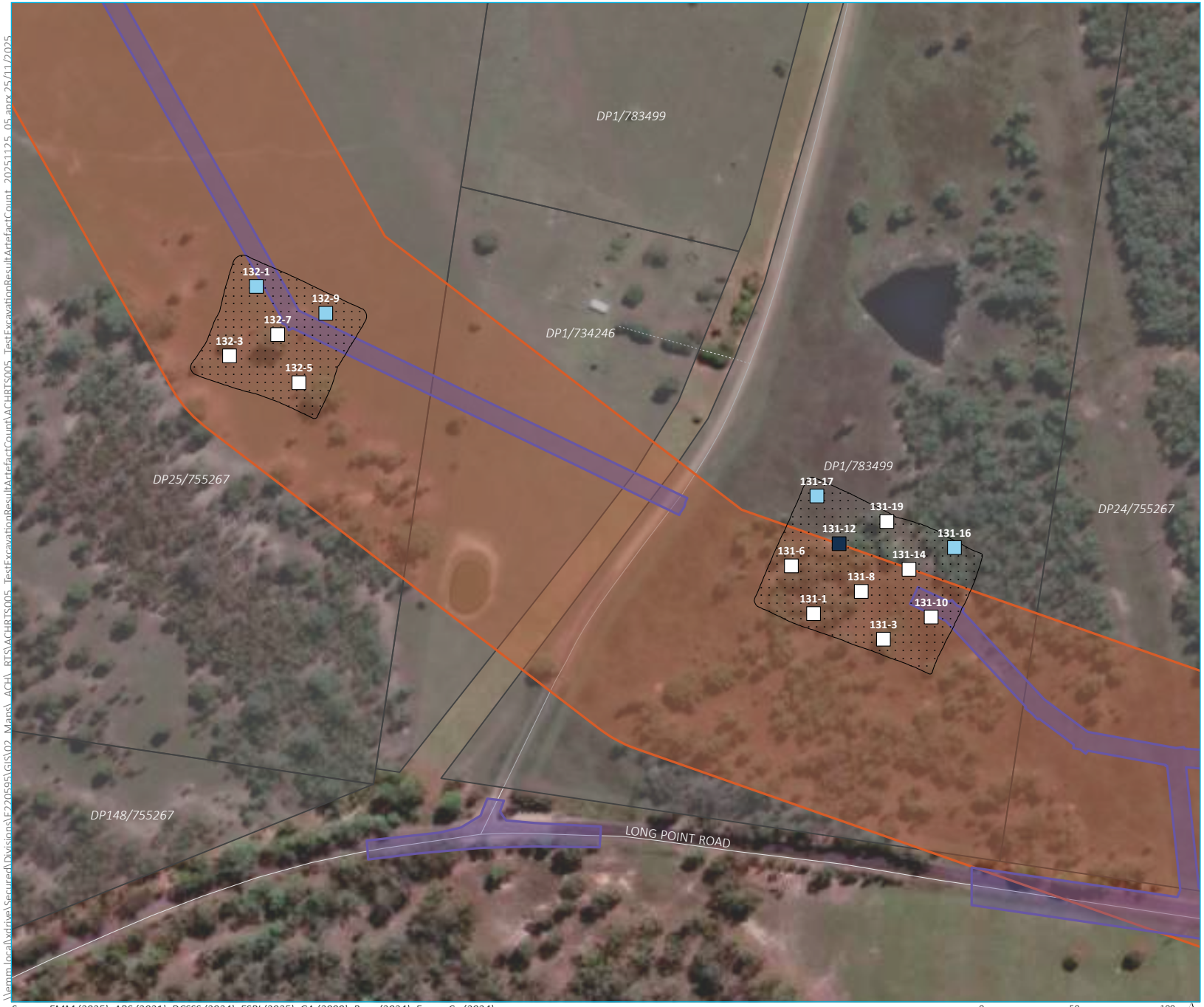
GDA2020 MGA Zone 56

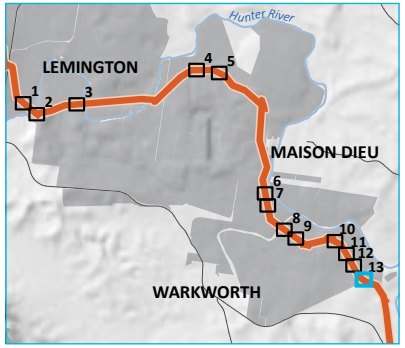
N

Test excavation results
Map 12 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 4

Project impact area

- HTP corridor
- Access track

Existing environment

- Minor road
- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

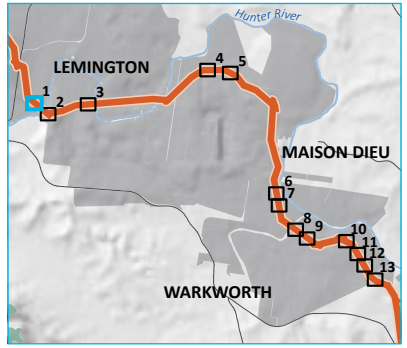
N

Test excavation results
Map 13 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.5

EMM
creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS005_TestExcavationResultArtefactCount\ACHRTS005_TestExcavationResultArtefactCount_20251125_05.aprx 25/11/2025



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m²

- 0

Project impact area

- HTP corridor
- Access track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

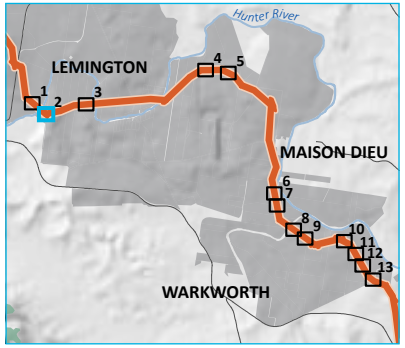
\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS006_TestExcavationResultArtefactDensity\ACHRTS006_TestExcavationResultArtefactDensity_20251125_05.aprx 25/11/2025

Test excavation results- per m²

Map 1 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM
creating opportunities



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0
- 8
- 12

Project impact area

- HTP corridor
- Access track

Existing environment

- Minor road
- Vehicular track
- Named watercourse
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

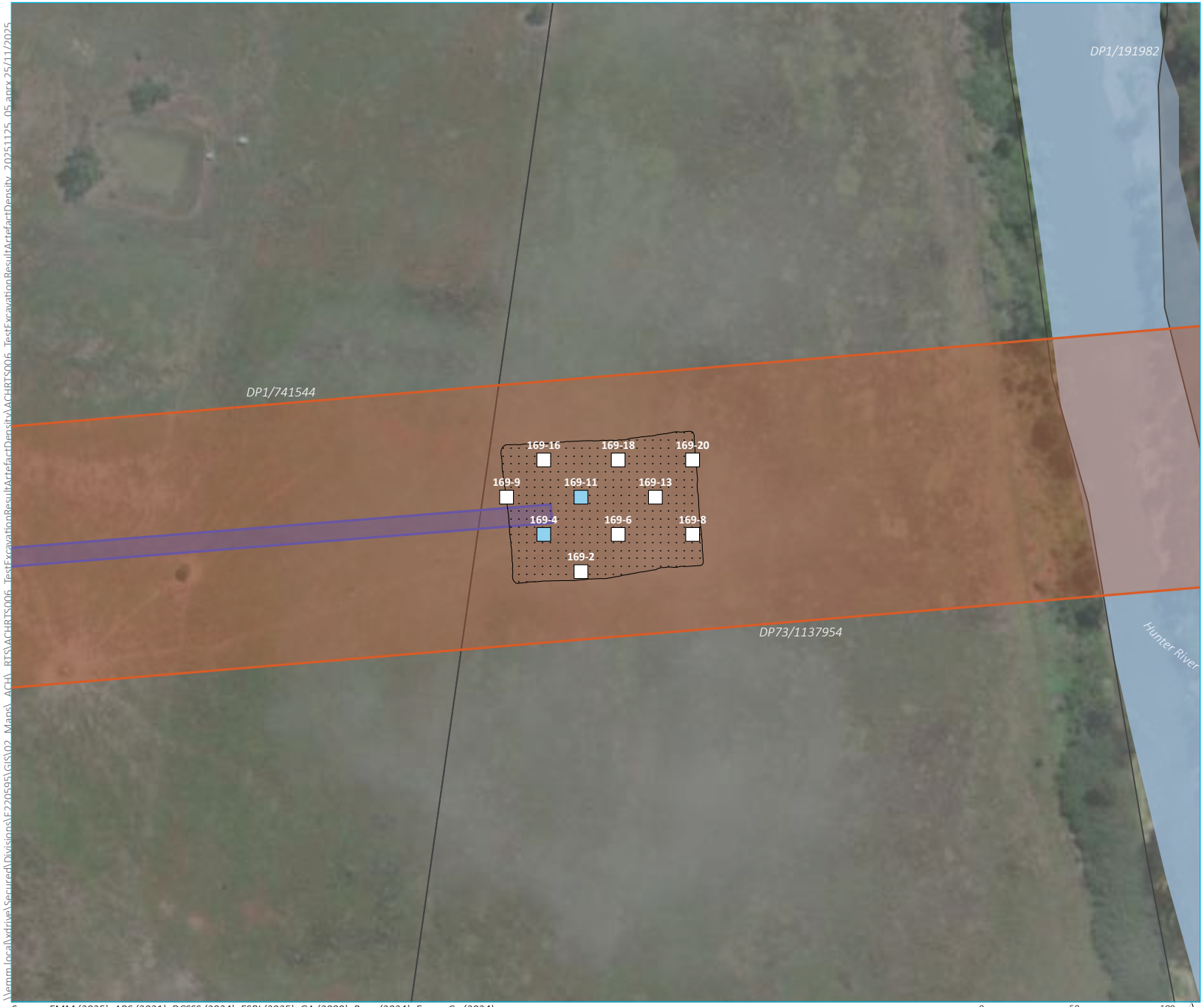
N

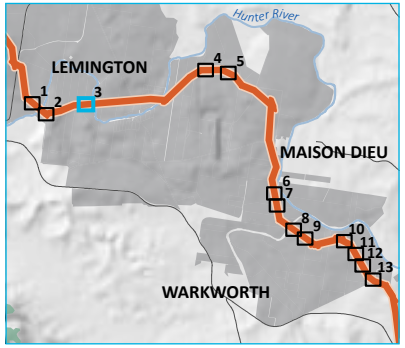
Test excavation results- per m^2

Map 2 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m²

- 0
- 4

Project impact area

- HTP corridor
- Access track

Existing environment

- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

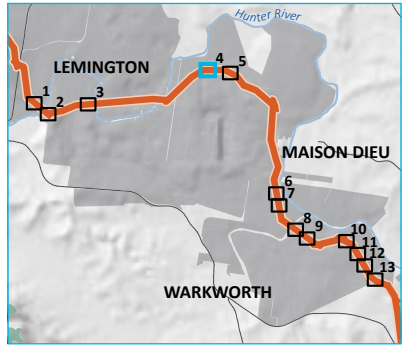
N

Test excavation results- per m²

Map 3 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities



KEY

Hunter Valley Operations

Investigation area

Excavated test pit- artefact count per m^2

- 0
- 4
- 8
- 12
- 16
- 19
- 31
- 39
- 50

Project impact area

HTP corridor

Access track

Existing environment

Vehicular track

Named watercourse

INSET KEY

Hunter Valley Operations

HTP corridor

Major road

Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS006_TestExcavationResultArtefactDensity\ACHRTS006_TestExcavationResultArtefactDensity_20251125_05.aprx 25/11/2025

Test excavation results- per m^2

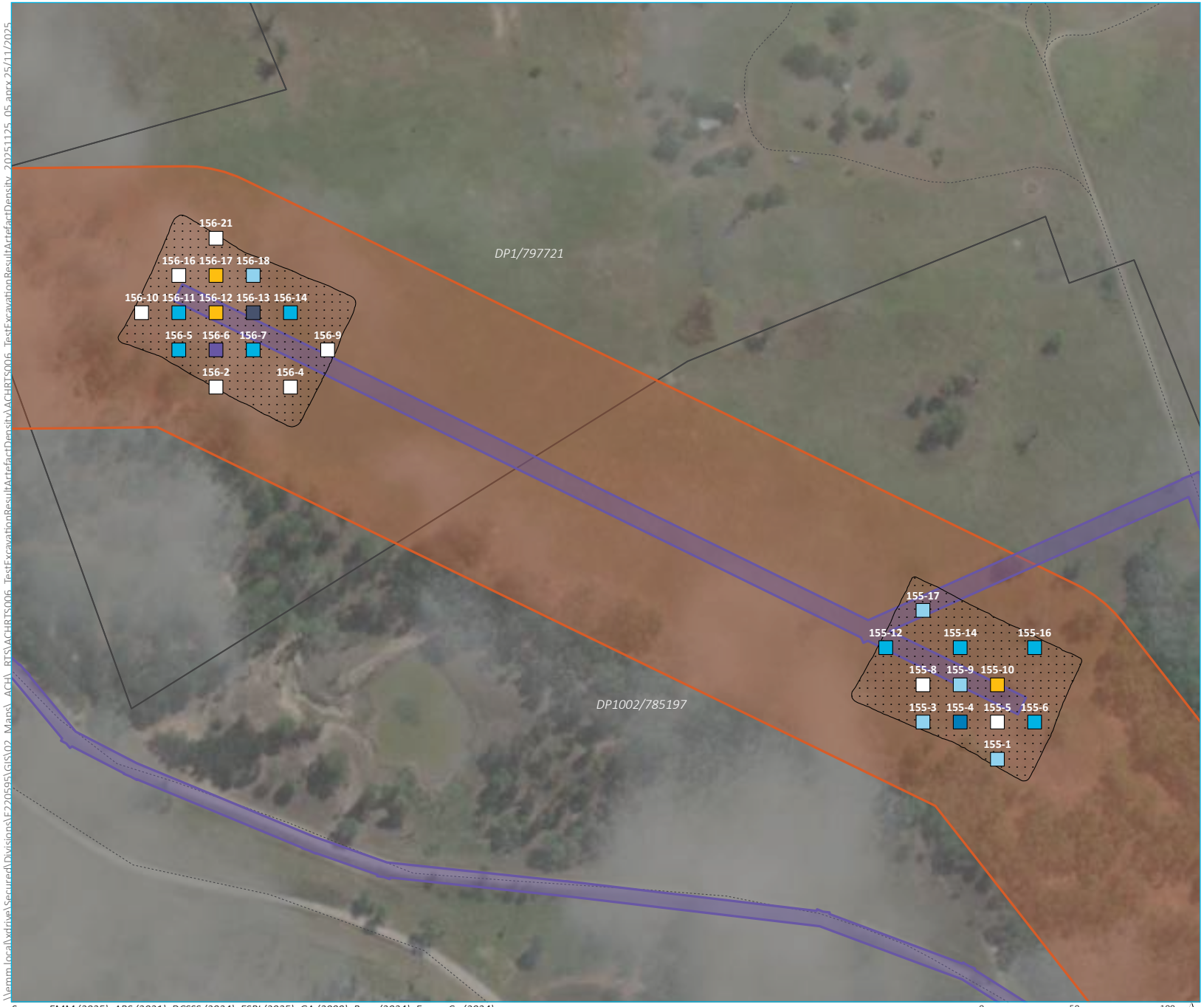
Map 4 of 13

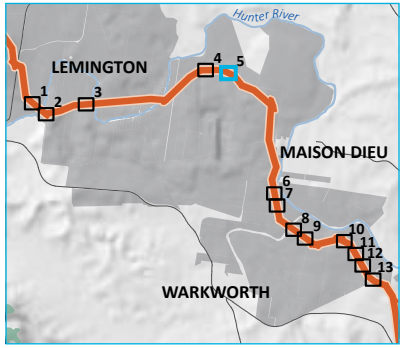
Hunter Transmission Project

Aboriginal Cultural Heritage Assessment Addendum

Figure 5.6

EMM creating opportunities





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0
- 4
- 8
- 9
- 12
- 16
- 22

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

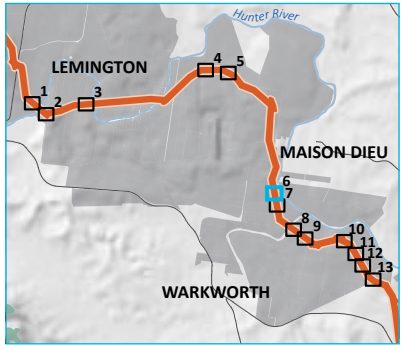
N

Test excavation results- per m^2

Map 5 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

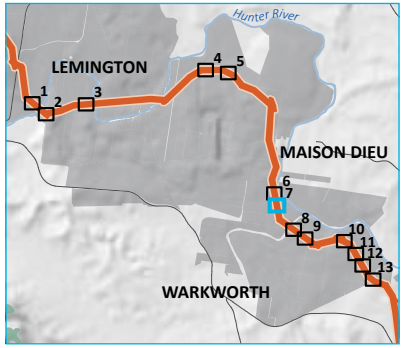
N

Test excavation results- per m^2

Map 6 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0

Project impact area

- HTP corridor
- Access track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

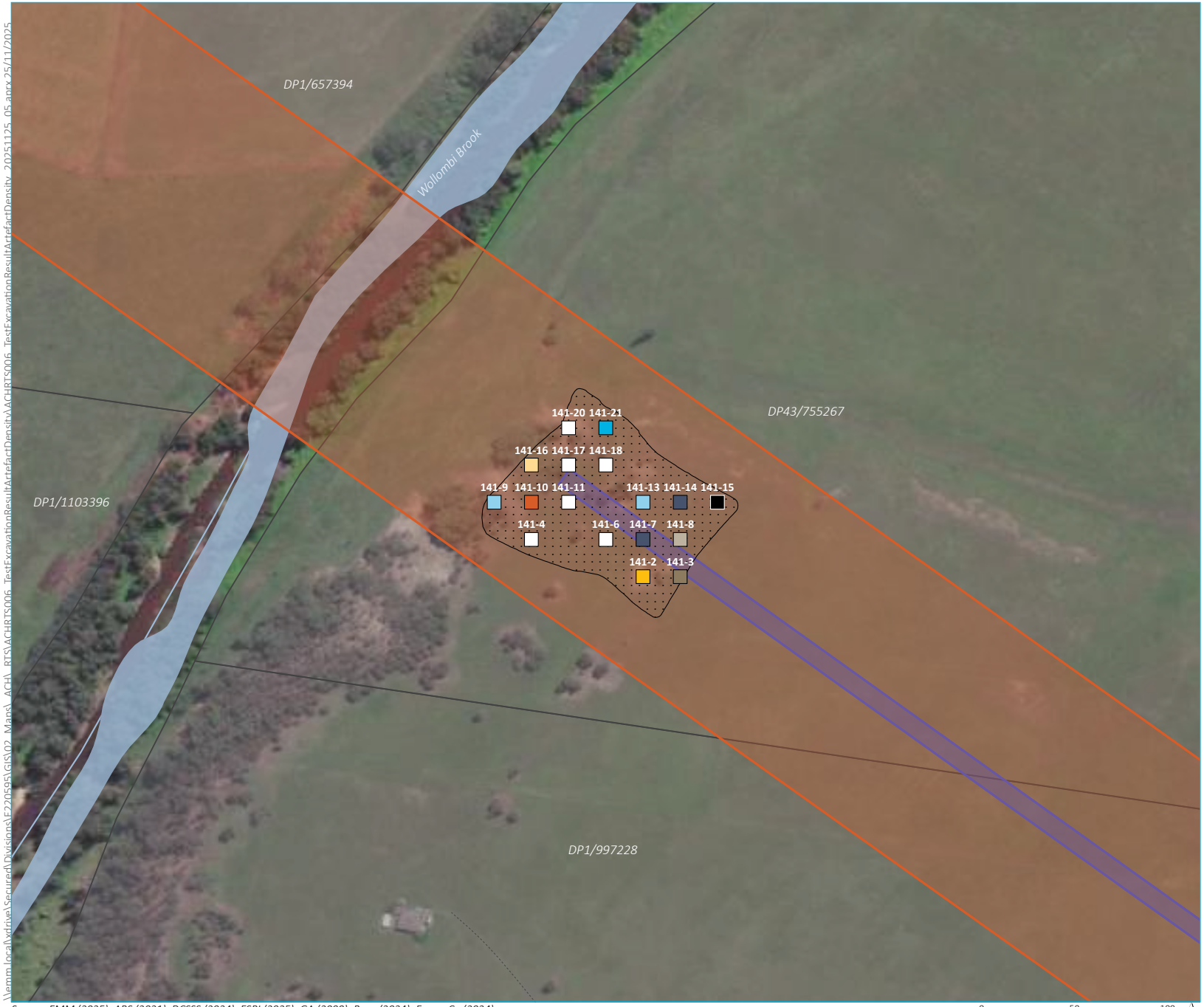
Test excavation results- per m^2

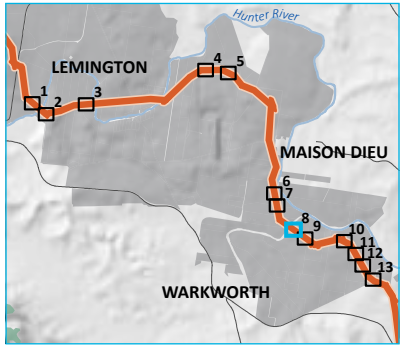
Map 7 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS006_TestExcavationResultArtefactDensity\ACHRTS006_TestExcavationResultArtefactDensity_20251125_05.aprx 25/11/2025





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0
- 4
- 8
- 12
- 14
- 16
- 28
- 35
- 38
- 92

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track
- Named watercourse
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

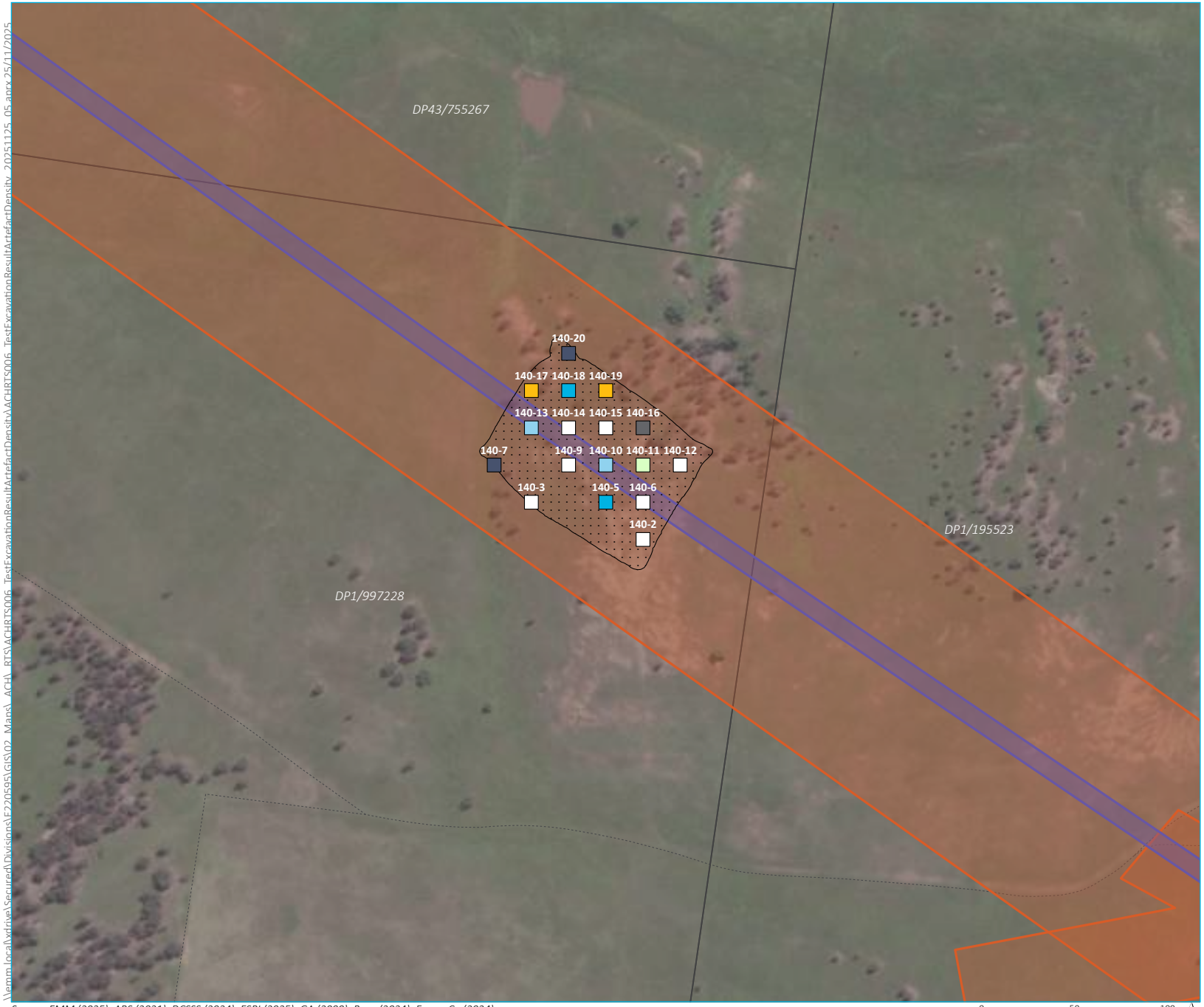
N

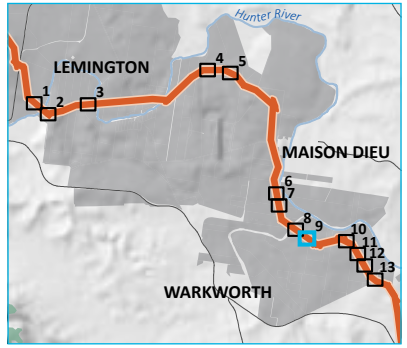
Test excavation results- per m^2

Map 8 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0
- 4
- 8
- 12
- 16
- 29
- 33

Project impact area

- HTP corridor
- Access track

Existing environment

- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

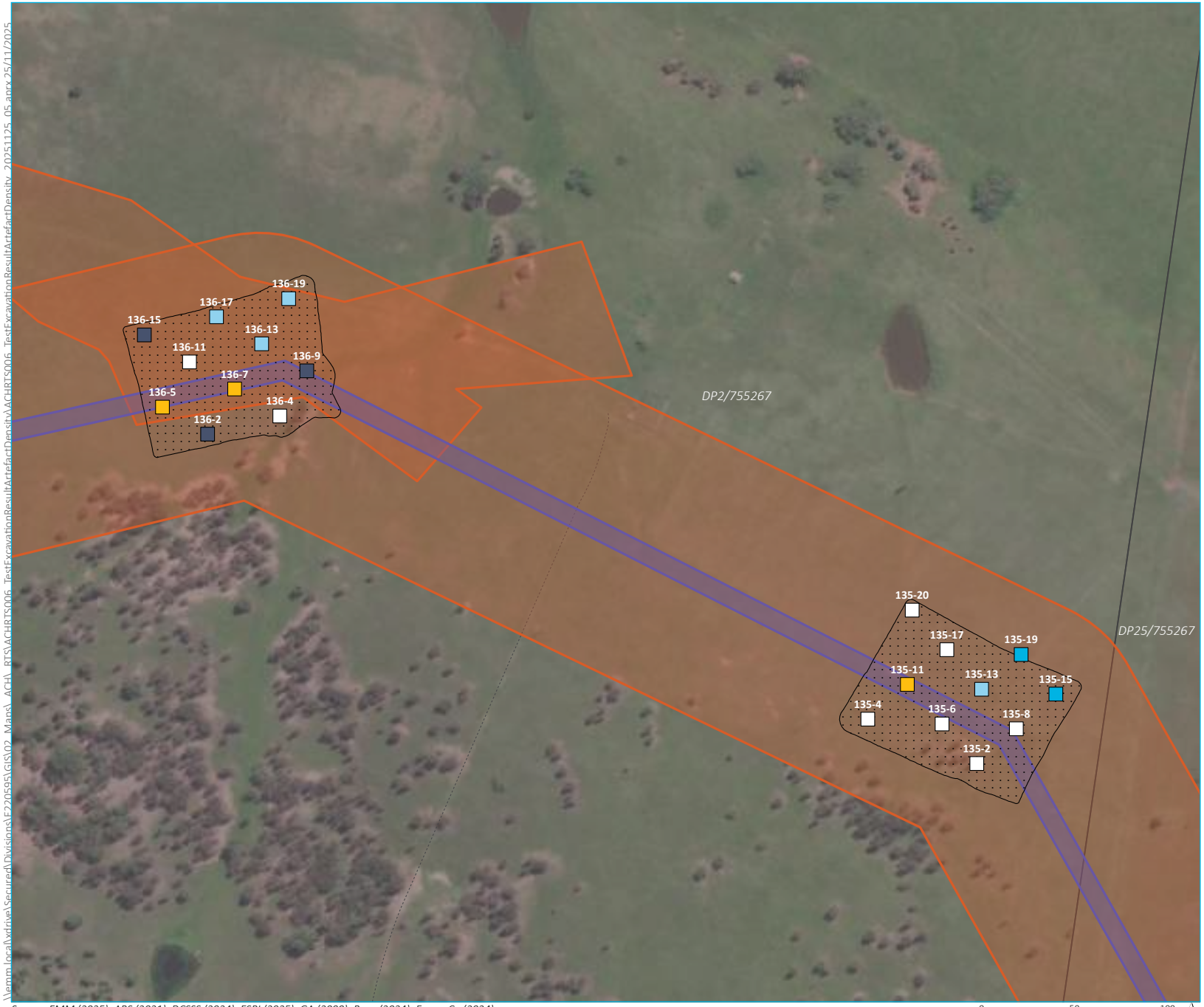
N

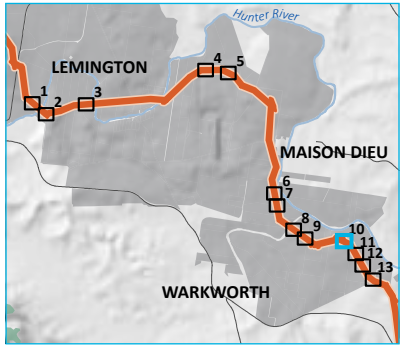
Test excavation results- per m^2

Map 9 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities





KEY

Hunter Valley Operations

Investigation area

Excavated test pit- artefact count per m^2

0

4

8

12

16

Project impact area

HTP corridor

Access track

Existing environment

Vehicular track

INSET KEY

Hunter Valley Operations

HTP corridor

Major road

Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

Test excavation results- per m^2

Map 10 of 13

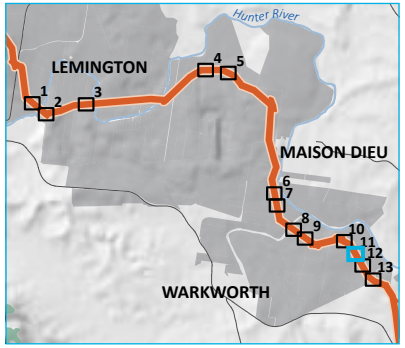
Hunter Transmission Project

Aboriginal Cultural Heritage Assessment Addendum

Figure 5.6

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS006_TestExcavationResultArtefactDensity\ACHRTS006_TestExcavationResultArtefactDensity_20251125_05.aprx 25/11/2025



KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m²

- 0
- 4
- 12
- 24

Project impact area

- HTP corridor
- Access track

Existing environment

- Minor road
- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

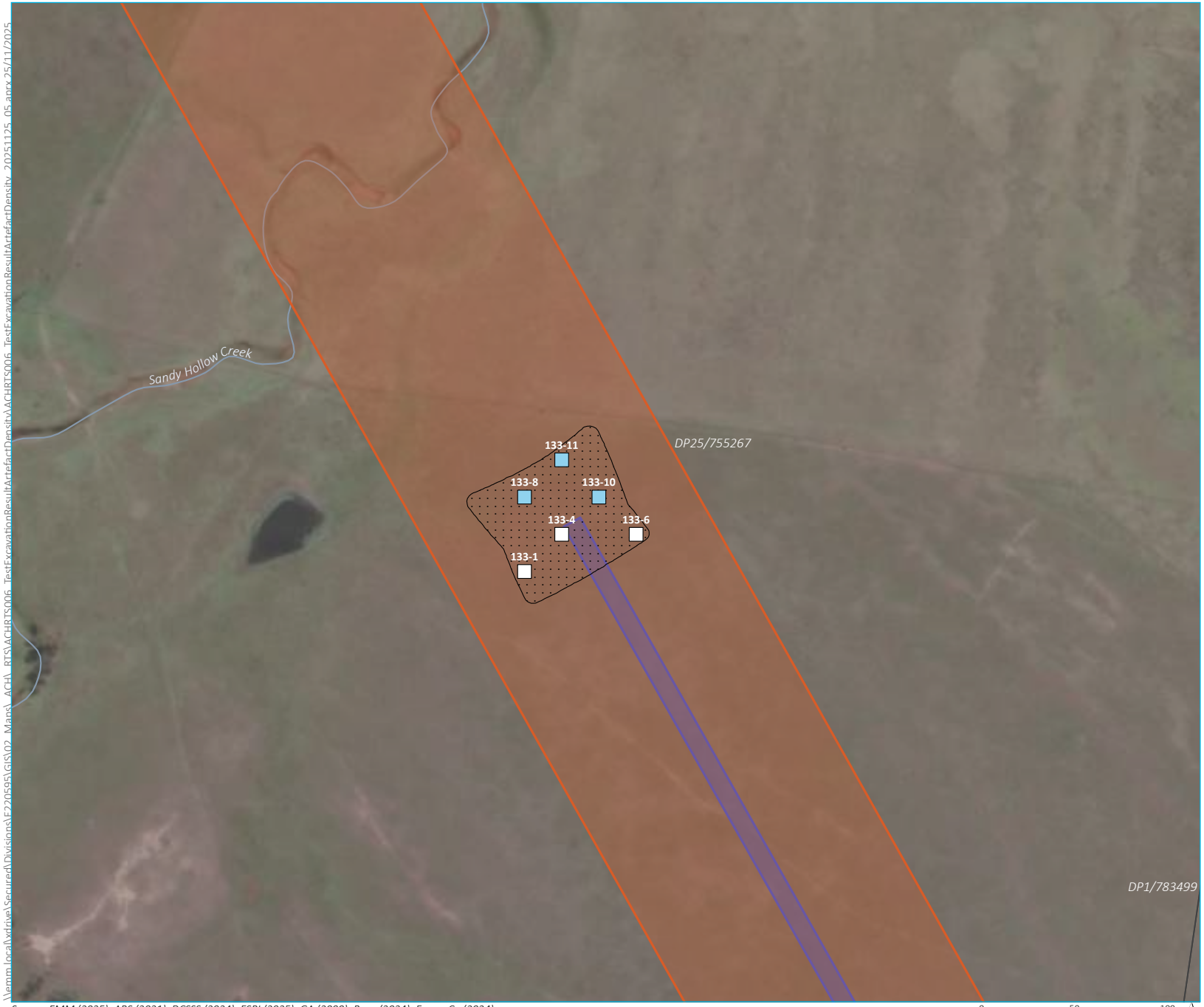
N

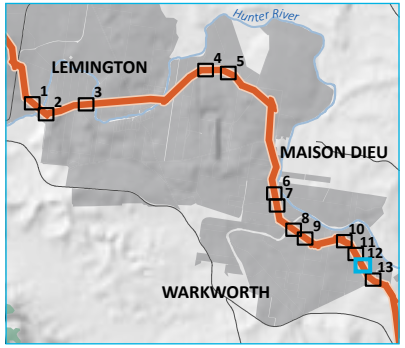
Test excavation results- per m²

Map 11 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0
- 4

Project impact area

- HTP corridor
- Access track

Existing environment

- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

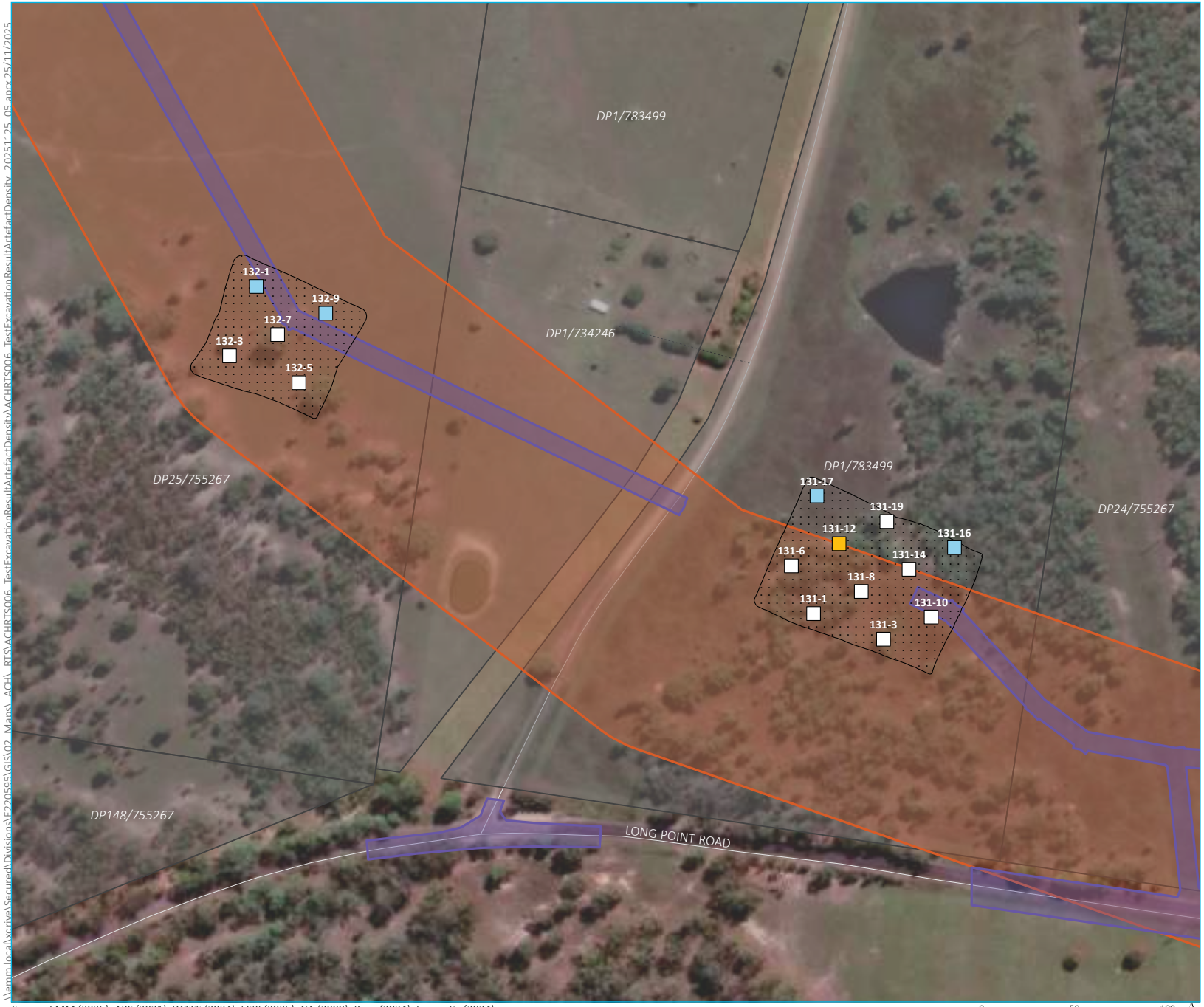
N

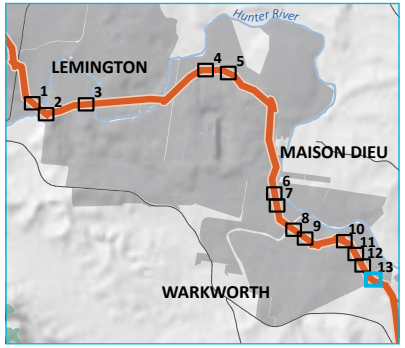
Test excavation results- per m^2

Map 12 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities





KEY

- Hunter Valley Operations
- Investigation area

Excavated test pit- artefact count per m^2

- 0
- 4
- 16

Project impact area

- HTP corridor
- Access track

Existing environment

- Minor road
- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

Test excavation results- per m^2

Map 13 of 13

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.6

EMM creating opportunities

a Sedimentology

The excavations revealed four distinct soil profiles across the 17 locations. These profiles are contained to the four landforms encountered across the investigations.

The soil profiles and associated landforms comprised:

1. on floodplains - a disturbed silty topsoil (A1 horizon), overlying a silty clay loam (A2 horizon), with increasing clay content with depth (refer to Plate 5.34). Test pits with the prefix 143, 144, 169 and 173 are within this soil profile and most test pits excavated here were culturally sterile. Excavation within this profile generally ceased at ~50 centimetres due to lack of cultural material, however a small number of test pits were excavated to 1 metre to confirm that the soil profile remained unchanged at depth. Given the formation process, it is reasonable to assume that this landform has been heavily disturbed and/or truncated from flooding from the Hunter River over time, which may have affected its ability to retain cultural deposits (if ever present)

2. on elevated terraces and associated slopes - a disturbed silty topsoil (A1 horizon), overlying a silty clay loam (A2 horizon) with a clear horizon onto indurated heavy orange/brown clay (B2 horizon). This soil profile was typically found within terrace and rise landforms within ~300 metres of the floodplain (refer to Plate 5.35). Test pits with the pre-fix 131-136, 141 and 140 are located within this soil profile, with 140 and 141 containing an abundance of gravel in the A2 horizon which is not reflected at the other locations. This soil profile contained the majority of artefacts recovered with test pits averaging depth of ~30 centimetres

3. on source bordering dunes - a disturbed loamy topsoil (A1 horizon), overlying a deep layer of loose brown sand (A2 horizon), diffusing into sandy clay and/or light clay (B2 horizon) (refer to Plate 5.36). Test pits with the pre-fix 155, 156, 157, and 158 are located in this soil profile and were among the deepest test pits excavated during the program, averaging 80 cm below current surface and often exceeding 1 metre below current surface. Notably, one test pit, 141-20, potentially contains the Warkworth Sands system, which may continue north of this pad onto the floodplain

4. hillcrests and upper slopes - a disturbed but mostly absent topsoil (A1 horizon), overlying a very shallow clayey loam (A2 horizon), with a clear horizon onto indurated heavy orange/brown clay (B2 horizon) or bedrock (R horizon) (refer to Plate 5.37). This profile is constrained to proposed Test pits with the pre-fix 172 overlooking the Hunter River. Excavation in this area averaged ~15 centimetres, reaching a maximum of 25 centimetres below ground surface. No artefacts were recovered from this soil profile.

Plate 5.34 Floodplains — TP143-7 north section

Plate 5.35 Terraces and associated slopes — TP134-5 north section

Plate 5.36 Source bordering dunes — TP155-9 north section

Plate 5.37 Hillcrests and upper slopes — TP172-3 north section

b Chronology

To provide a chronology of the deposits, a number of samples were collected for OSL dating. Forty-nine samples were collected from test pits containing dense cultural materials and/or where the deepest deposits were reached; of these, 21 were analysed. These samples focussed on four locations where substantive cultural material was encountered (test pits with the pre-fix 141 and 143) and/or where the Warkworth Sands system was observed (test pits with the pre-fix 156 and 158). The aim of the sampling was to provide both an initial understanding of the formation history of the terrace and source bordering dune landforms extending along the Hunter River and the age of cultural materials found within them.

All samples were processed by Vicus Pty Ltd and analysed by Dr Luke Gliganic and are reported in detail in Appendix C.2.3. The samples were processed using the single grain technique, which calculates the age from a large number of quartz grains, each of which is individually measured to determine their age. This method presents a large number of individual ages for a sample that can then be interrogated to determine which is the most suitable based on a range of factors. Typically, the approach will provide a minimum age, incorporating the youngest sand grains in a given sample, a central age or an average result, and a finite mixture model/s that use statistical techniques to identify discrete age populations within the sample that may be more suitable than the other methods. This approach is more time-intensive, and has a range of limitations, but is often adopted in academic and/or research projects.

The OSL age estimates are presented for all samples in Table 5.4. These show a bioturbated soil profile, with several samples returning multiple age populations. Overall, they suggest a probable mixing of much older material from lower in the soil profile with more recent sediments near the surface. This subsequently results in a mixture of older and younger populations presented in several of the recovered samples. Despite this, an overall formation of the soil profile can be discerned.

For the terraces and associated slopes upon which duplex soil profiles were typically encountered, they appear to have formed in the late Holocene (<5,000 years [5 ka]). Specifically, the lowest samples collected from these soil profiles was at the base of test pits 141-1 to 141-21 (55 centimetres below surface; base of A2 horizon) and returned an age of ~2.5 ka (VCS-25005-004). A suite of ages recovered in both test pits 141-1 – 141-21 and 143-2 to 143-18 between 20 and 30 centimetres (A1 horizon) suggest formation at ~1.3 to 2.2 ka (e.g. VCS-25005-005, VCS-25005-009). While the uppermost samples near the current surface return ages just prior to colonial invasion at ~0.23 ka (VCS-25005-006). The cultural assemblage in test pits 141-1 to 141-21 were generally found between 0 and 20 cm and therefore suggest deposition after ~1.3 ka (refer to Plate 5.38; Table 5.5). This aligns well with a range of tool types and raw materials recovered that are more prevalent at <1.5 ka (refer to *section 5.4.2ivc*).

In the case of proposed test pits 156-2 to 156-21 and 158-2 to 158-24, encountered Warkworth Sands system are of Pleistocene age (>10 ka), and align well with other nearby studies in the locale (Hughes et al. 2014). Specifically, the lowest samples recovered from depths of 150 centimetres below current surface indicate initial formation of the geological unit between ~52 and 72 ka (VCS-25005-013, VCS-25005-021). This formation occurs in Marine Isotope Stage 4, which is well documented as cool, arid and windy (De Dekker et al. 2019), and would have promoted formation of aeolian deposits adjacent to major water sources as was observed here. Other examples include those along the Hawkesbury River in Pitt Town, and similarly formed and accumulated during this period (Williams et al. 2014).

While there is some minor variation between test pits 156-2 to 156-21 and 158-2 to 158-24 (refer to Plates 5.32 and 5.33; Table 5.5), the soil profile between ~30 to 100 centimetres appears to aggrade continuously from the initial formation primarily between ~10 to 50 ka. The upper most ~30 centimetres of the soil profile returns extremely young ages in the order of <1 ka, and appears to reflect extensive mixing that has been previously reported in these deposits by Gliganic et al. (2016). However, in contrast to Gliganic et al.'s findings that the upper 50 centimetres appeared to reflect modern mixing, the results here suggest such mixing is slightly shallower, with substantive age sample populations evident in most samples below 45 centimetres (e.g. VCS-25005-008, VCS-25005-004).

When aligning the ages of the deposit to the cultural assemblage, activities at 156-2 to 156-21 suggest low levels of activities occurred from up to 42 ka through the Contact period. Minor peaks are evident in the late Holocene (spit 3) and prior to the Last Glacial Maximum (spit 8) (refer to Table 5.5). However, the assemblage is relatively small and as such likely to be highly susceptible to bioturbation and movement, and as such these interpretations must be viewed with caution. The majority of the assemblage, regardless of discrete peaks, was recovered from the upper 50 centimetres, and which may suggest deposition primarily over the last ~17 ka is more probable. Such values align closely with previous findings at W14 Sandsheet [#37-6-0946], CM-CD1 [#32-2-1877]) that suggest a terminal Pleistocene use of this locale.

In the case of test pits 158-2 to 158-24, cultural materials are encountered from depths dated to between ~50 ka and present. Here to, limited cultural material in the lowermost spits may suggest some level of bioturbation has occurred, and these earliest dates should be treated with caution. However, when considering the peak of the assemblage at spits 4 and 5, past use and visitation of the region may have extended between ~13 up to 38 ka. As outlined above, visitation in the terminal Pleistocene is evident at numerous other sites in the locale, but evidence of pre-LGM human activity is sparse; and as such this site may reflect very early use of the Hunter Valley (see also Hughes et al. 2014). As outlined in previous Section 5.4.2iv, there is some uncertainty due to bioturbation of the sand unit where the age of the sediment may not directly reflect the age of the cultural material.

Table 5.4 Summary of OSL ages recovered from the test excavations

Test pit	Sample #	Lab code	Spit	Depth (cm below surface)	Soil unit	Age model	Age (ka)
134-9	16	VCS-25005-009	3	22	Terraces - A2	FMM-1 (88%) FMM-2 (8%) FMM-3 (4%)	**2,260±130** 7,450±1,010 350±80
141-15	6	VCS-25005-006	1	5	Terraces - A1	MAM	230±10
141-15	7	VCS-25005-005	2	20	Terraces - A2	FMM-1 (72%) FMM-2 (25%) FMM-3 (3%)	**1,350±100** 4,880±400 200±60
141-20	2	VCS-25005-003	2	20	Dunes - A2	CAM	60±1
141-20	4	VCS-25005-002	4	40	Dunes - A2	CAM	70±1
141-15	8	VCS-25005-007	3	30	Terraces - A2	FMM-1 (48%) FMM-2 (42%) FMM-3 (6%) FMM-4 (4%)	5,820±400 **2,410±170** 15,380±2,840 34,920±5,910
141-15	9	VCS-25005-008	5	45	Terraces - A2	FMM-1 (74%) FMM-2 (26%)	**2,240±120** 5,280±410
141-15	10	VCS-25005-004	6	55	Terraces - B1	FMM-1 (86%) FMM-2 (14%)	**2,430±150** 6,540±940
144-2	49	VCS-25005-001	10	98	Floodplain - B1	MAM	750±40
156-12	40	VCS-25005-019	3	25	Dunes - A2	MAM	720±40
156-12	43	VCS-25005-020	9	85	Dunes - A2	FMM-1 (62%) FMM-2 (38%)	**39, 900±2,700** 9,240±750
156-12	46	VCS-25005-021	15	150	Dunes – B1	FMM-1 (83%) FMM-2 (18%)	**71,800±5,580** 18,730±3,050
158-9	33	VCS-25005-014	2	15	Dunes - A2	MAM	560±30
158-10	20	VCS-25005-010	2	20	Dunes - A2	MAM	850±50
158-9	35	VCS-25005-015	6	55	Dunes - A2	FMM-1 (62%) FMM-2 (18%) FMM-3 (12%) FMM-4 (8%)	**48,000±2,650** 5,400±580 12,100±1,550 2,070±300

Test pit	Sample #	Lab code	Spit	Depth (cm below surface)	Soil unit	Age model	Age (ka)
158-10	22	VCS-25005-011	6	60	Dunes - A2	FMM-1 (64%) FMM-2 (23%) FMM-3 (13%)	**43,670±2,520** 4,690±380 12,060±1,730
158-9	36	VCS-25005-016	8	77	Dunes - A2	CAM	52,950±2,780
158-9	37	VCS-25005-017	10	95	Dunes - A2	CAM	49,860±2,690
158-10	24	VCS-25005-012	11	102	Dunes - A2	CAM	47,280±2,560
158-9	38	VCS-25005-018	11	108	Dunes – B1	CAM	56,200±2,930
158-10	26	VCS-25005-013	15	146	Dunes – B1	CAM	52,120±2,780

Notes: All uncertainties in age are quoted at 1σ confidence. Further details of this technique are presented in notes below. Bold indicates preferred age for the sample.

MAM = minimum age model; CAM = central age model (effectively average of all grains); FMM = finite mixture model - these models reflect a discrete statistically determined portion of the sample, and the age that this portion of the sample returns when processed. The number of models provide a coarse indication of the level of movement and bioturbation within the soil profile.

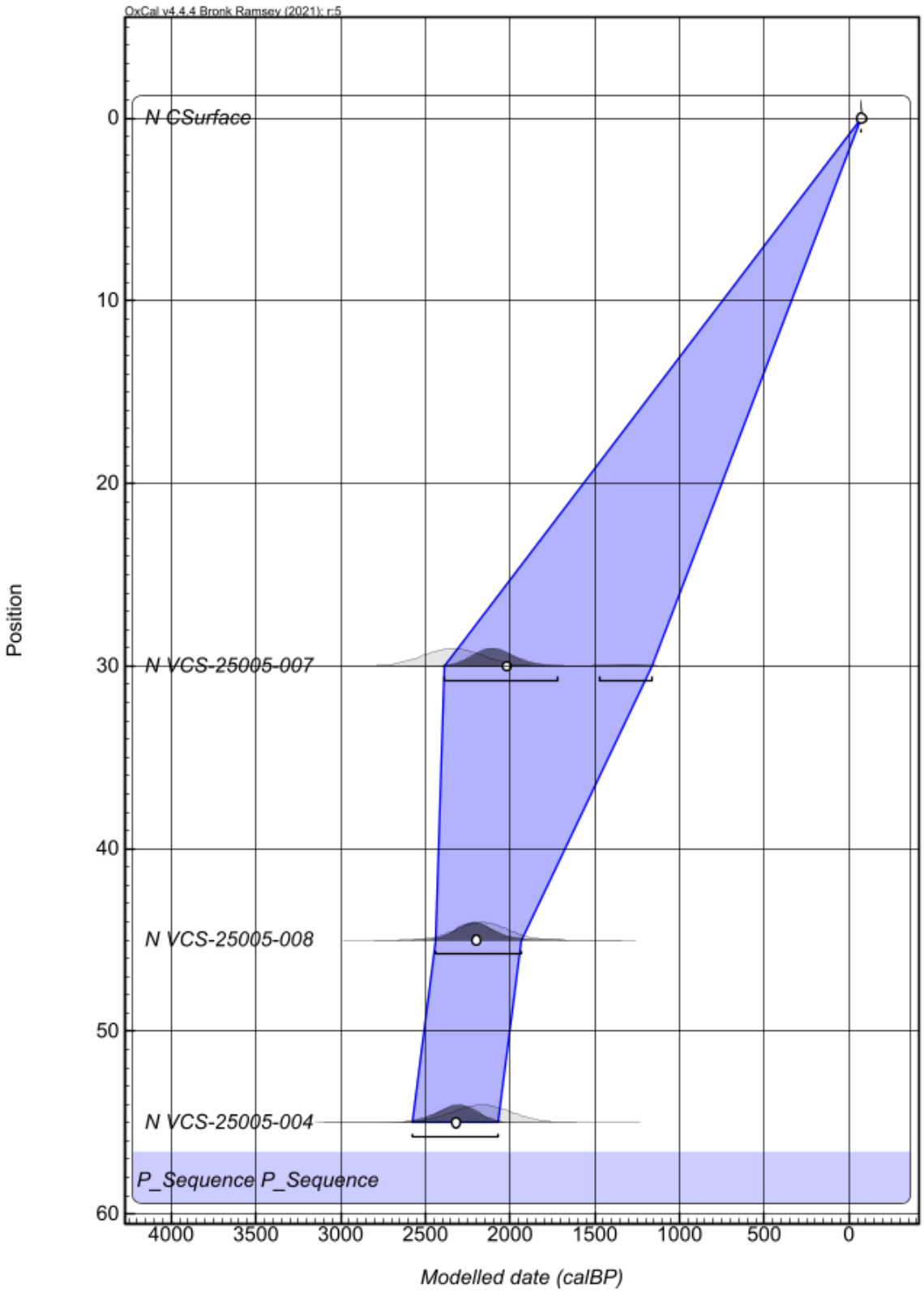


Plate 5.38 **Test pit 141-15 and 141-20 - age-depth model developed from ages in Table 5.4 using Oxcal (v.4.4) and P-Sequencedeposition model (Bronk Ramsey, 2008, 2009a, 2009b; Bronk Ramsey and Lee, 2013)**

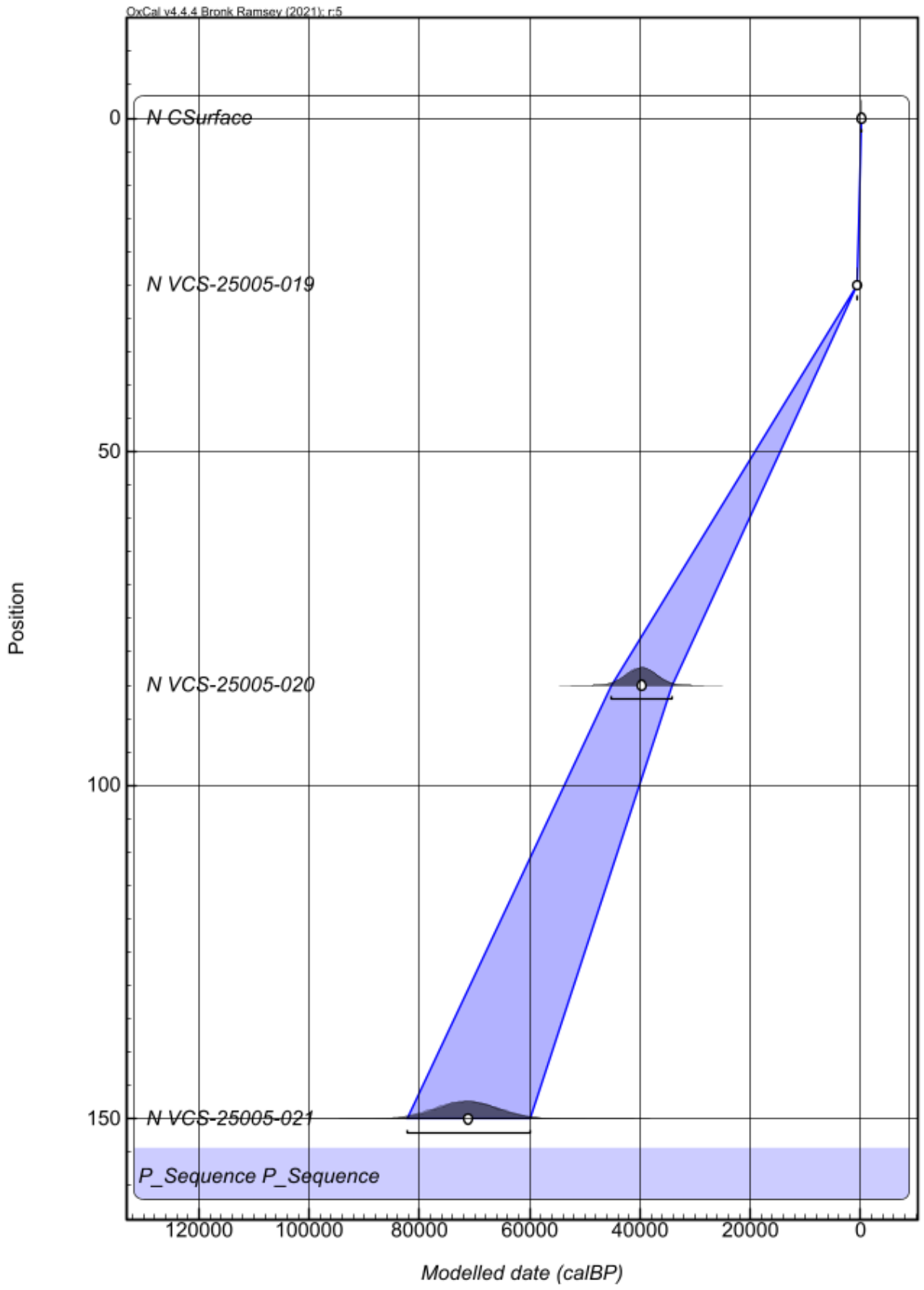


Plate 5.39 **Test pit 156-12 - age-depth model developed from ages in Table 5.4 using Oxcal (v.4.4) and P-Sequencedeposition model (Bronk Ramsey, 2008, 2009a, 2009b; Bronk Ramsey and Lee, 2013)**

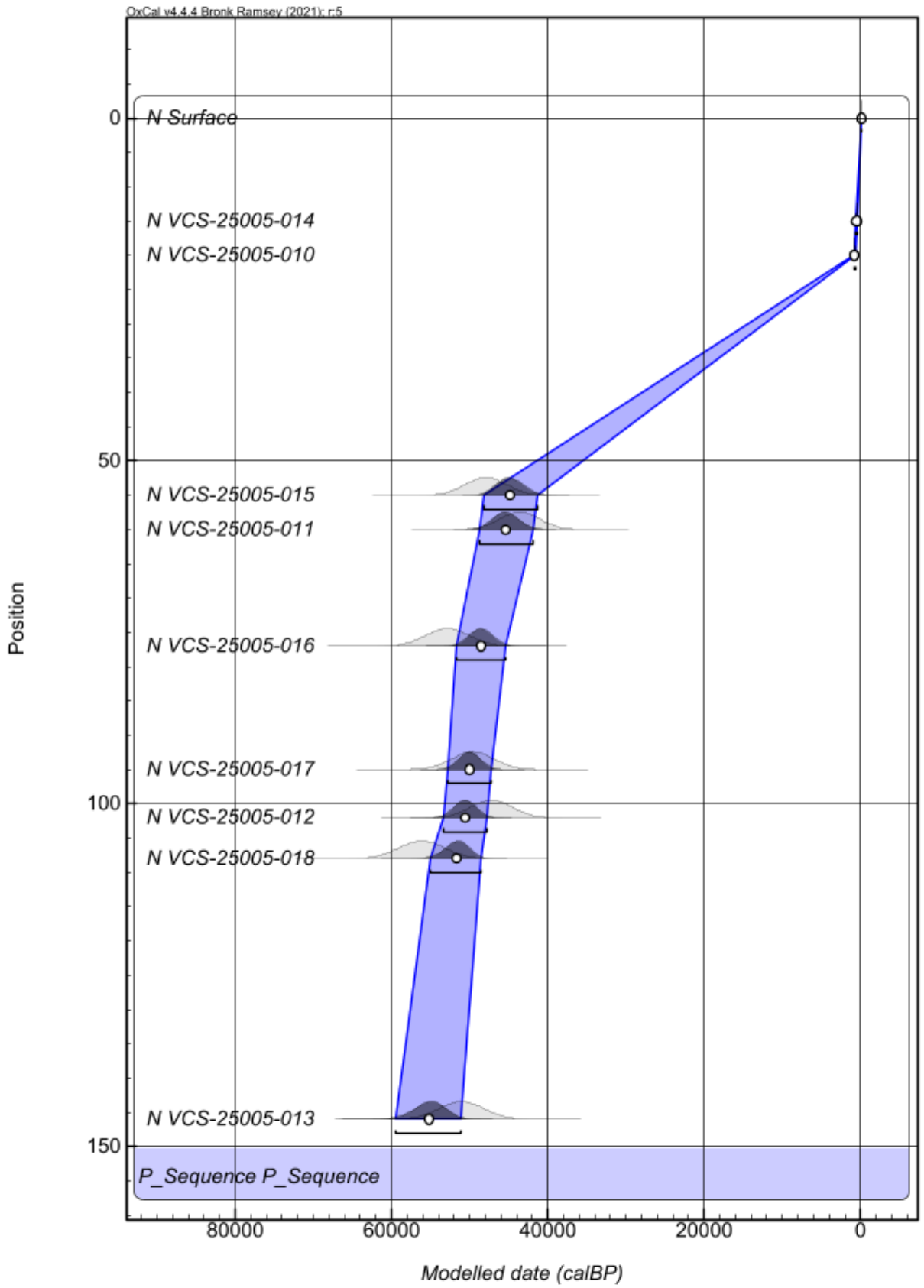


Plate 5.40 **Test pits 158-9 and 158-10 - age-depth model developed from ages in Table 5.4 using Oxcal (v.4.4) and P-Sequencedeposition model (Bronk Ramsey, 2008, 2009a, 2009b; Bronk Ramsey and Lee, 2013)**

Table 5.5 Interpolated ages of test pits from 141-15, 141-20, 156-12, 158-9 and 158-10 based on age-depth models presented in Plates 5.37 to 5.39 inclusive; and cultural materials recovered from the same depths

Depth (cm)	Spit	Test pit 141-15/141-20 – average age (ka)	Test pit 141-1 – 141-20 – artefacts per spit (n)	Test pit 156-22 – average age (ka)	Test pit 156-2 – 156-22 – artefacts per spit (n)	Test pit 158-9/158-10 – average age (ka)	Test pit 158-2 – 158-24 – artefacts per spit (n)
0-10	1	0-0.62	134	0-0.21	2	0-0.30	3
10-20	2	0.62-1.32	67	0.21 – 0.50	3	0.30-0.77	10
20-30	3	1.32 -2.02	11	0.50-3.90	10	0.77-13.35	11
30-40	4	2.02-2.18	1	3.9-10.41	7	13.35-25.93	21
40-50	5	2.18-2.26	5	10.41-16.92	6	25.93-38.50	50
50-60	6	-	-	16.92-23.43	3	38.50-45.36	11
60-70	7	-	-	23.43-29.96	9	45.36-47.24	12
70-80	8	-	-	29.96-36.44	5	47.24-48.79	13
80-90	9	-	-	36.44-42.12	4	48.79-49.61	9
90-100	10	-	-	42.12-46.96	0	49.61-50.44	0
100-110	11	-	-	46.96-51.80	0	50.44-51.89	0
110-120	12	-	-	51.80-56.62	0	51.89-52.81	0
120-130	13	-	-	56.62-61.48	0	52.81-53.74	0
130-140	14	-	-	61.48-66.32	0	53.74-54.67	0
140-150	15	-	-	66.32-71.17	0	-	-

c Lithics

Lithic analysis was undertaken by Dr Trudy Doelman (full report presented in *Appendix C – Field investigations*). A summary is provided below.

A total of 563 artefacts were catalogued and analysed. The analysis found noticeable differences between the assemblages of the elevated terraces and associated slopes (test pits with prefixes 131 to 136, and 140 to 141) and those of the source bordering dunes considered to reflect the Warkworth Sands system (test pits with prefixes 155 to 158). Most of the assemblage was collected from these landforms (98.9%). Silcrete (32.8%) and indurated mudstone (53.7%) dominated the assemblage, with smaller proportions of crystal quartz, milky quartz, quartzite, volcanic, chalcedony, chert, silicified wood, and glass. The cortex present on indurated mudstone, quartz and quartzite suggests that these materials were from nearby secondary, water-rolled sources, whilst the lack of cortex present on silcrete suggests it is from further afield.

There were systematic cores present, including burin-blade cores, radial-bifacial cores and prismatic cores. These cores are typically associated with preparation and planning in manufacture.

A significant proportion of heat-treated fragments were also found (n=31) from both landforms. Artefacts from floodplain and hillcrests landforms account for the remainder (1.1%) of the assemblage.

Terrace and associated slopes

In these landforms, most material was collected from spits 1 and 2 (n=283, 86.5%). The comparison of maximum lengths of artefacts per spit in this landform suggest some size sorting has taken place. Indurated mudstone and silcrete were the dominant raw materials. There was evidence that silcrete had been heat treated.

Whilst the artefacts present on this landform were dominated by complete and broken flakes; cores, core fragments and angular fragments were also present in relatively high numbers. There were also several tools present (n=21) including backed artefacts. A glass artefact also implies that these locations were in use through into the contact period.

The heat shattered material within these landforms was all silcrete, and consistent with the heat treatment to improve flaking qualities. Based on the raw material and technologies present, the sites on these landforms were likely mid to late Holocene. Processing tools identified are typically indicative of longer-term occupation. It is also suggested that these locations were used to 'gear up' in the manufacture and production of backed artefacts.

Source bordering dunes/Warkworth Sands system

The largest proportion of lithics in this landform were collected from spits 4 and 5 of test pits 158-2 to 158-24 (n=84, 41.1%), the sediments of which date to between ~13,000 and 38,000 years ago. Differences in weights and maximum lengths within this landform below spit 7 suggest downward movement or size sorting of material at these depths; and therefore activity before 38 ka is considered improbable. The assemblage suggests two different phases of activity, with higher proportions of silcrete in the upper spits (1 to 4), while lower spits (5 to 10) were dominated by indurated mudstone, which accounted for over 80% of the artefacts. This further supports the early use of the region, with Pleistocene assemblages typically dominated by indurated mudstone raw material in this region.

The artefacts within the source bordering dune were dominated by complete and broken flakes, with few tools present (n=8). Backed artefacts were collected from spits 3 and 4 of TP156-6. There were some large scrapers in the lower spits (4 to 10) – a tool more commonly found in terminal Pleistocene assemblages. Anvils/mullers and a hammerstone were also present.

The heat-treated material within these landforms consisted of a variety of materials, including volcanic, quartzite, mudstone and indurated mudstone, and is consistent with being hearth material. Heat fractured artefacts in these landforms were prominent in spits 5 to 10 and often displayed chemical weathering. Concretions had formed on some artefacts retrieved from lower depths. These artefacts were also rounded and weathered. The flake forms and tool types present in spits 1 to 4 of the source bordering dunes are more aligned with mid to late Holocene, whilst spits 5 to 10 suggest at least early Holocene and more probably Pleistocene occupation – a finding consistent with the OSL samples.

Conclusions

The analysis of the cultural material collected from these test excavations concludes that there are distinct assemblages associated with the two prominent landforms. Based on the raw materials and artefact/tool types within terrace and associated slopes landforms, these locations are likely mid to late Holocene in nature and typical of longer-term occupation and/or visitation. Whilst the upper units (spits 1 to 4) of the assemblage from the source bordering dunes contain are also associated with mid to late Holocene, the material at lower depths (5 to 10) are associated with earlier activity.

v Identified sites from the test excavations

As a result of the test excavations, a total of 20 sites were either newly recorded or updated (refer to Table 5.6, Figure 5.7). These sites consist of several focus areas amalgamated from test pits containing high densities of

stone artefacts and/or the presence of extremely old cultural materials (n=5), low density artefact scatters (≤20) with cultural deposits (n=13), or isolated stone artefacts with cultural deposits (n=2).

As detailed in *section 5.4.2.ivc*, the cultural material associated with these sites consisted of lithic scatters, with indurated mudstone and silcrete the dominant raw materials. Of the five focus areas identified through the test excavation, three are on terrace and associated slopes landforms and two are within source bordering dunes/Warkworth Sands system.

The majority of sites were associated with isolated or low-density sites containing less than 20 artefacts, and representing areas of transient use/activity. Focus areas were identified and were typically located on prominent landforms near the confluence of watercourses (e.g. HVO-1267[#37-6-3384]) and / or on terrace landforms (e.g. HVO-1262 [#37-6-3380], HVO-1266 [#37-6-3383]). Alternatively, focus areas located within the source bordering dunes landforms were also in close proximity to watercourses such as the Hunter River and Hobden Gully (e.g. HTP-N-FA02 [#37-6-4668]). Where the same or similar site types had been previously recorded in the immediate vicinity, the subsurface assemblages have been added to those existing sites (including sites recorded in the exhibited ACHA).

Based on the chronological samples and results of the lithics analyses, there is a high likelihood that artefacts recovered from spit 5 or lower at HTP-N-FA01 and HTP-N-FA02 are Pleistocene in age. Indeed, HTP-N-FA02 aligns with the broader Warkworth Sands system deposits and reflects early visitation and use of the Hunter Valley . Chronological samples and the typologies of artefacts from sites located on terrace landforms suggest activity over the last few thousand years, with the single glass artefact collected from HVO-1267 (#37-6-3384) suggesting that this occupation continued into the Contact period.

Table 5.6 Discrete Aboriginal sites identified from test excavations

Site name	Test pits associated with the site	Site type	Number of artefacts
HTP-N-FA01 (#37-6-4671)	156-5, 6, 7, 11, 12, 13, 14, 17	Focus area	49
HTP-N-FA02 (#37-6-4668)	158-3, 8, 9, 10, 11, 13, 15, 16, 17, 20, 22, 24	Focus area	149
HTP-N-FA04 (#37-6-4670)	140-16	Focus area	25
HTP-N-FA05 (#37-6-4672)	134-9	Focus area	22
HVO-1267 (#37-6-3384)	141-3, 8, 10, 15	Focus area	181
HTP-N-IF78 (#37-6-4660)	131-16	Isolated find, cultural deposit	1
HTP-N-IF81 (#37-6-4659)	172-20	Isolated find, cultural deposit	1
HTP-N-AS79 (#37-6-4676)	131-8, 12, 17	Low density artefact scatter (≤20), cultural deposit	5
2010-HVOSE-08 (#37-6-4043)	132-1, 9	Low density artefact scatter (≤20), cultural deposit	2
2010-HVOSE-04 (#37-6-4035)	133-8, 10, 11	Low density artefact scatter (≤20), cultural deposit	3

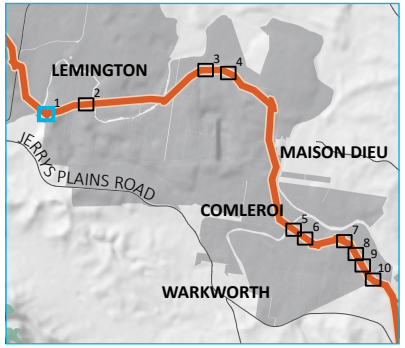
Site name	Test pits associated with the site	Site type	Number of artefacts
HVO-1691 (#37-6-4069)	134-2, 3, 5, 10, 11	Low density artefact scatter (≤20), cultural deposit	5
HTP-N-AS27 (#37-6-4641)	135-11, 13, 15, 19	Low density artefact scatter (≤20), cultural deposit	9
HVO-1342 (#37-6-3484)	136-2, 5, 7, 13, 15, 17, 19	Low density artefact scatter (≤20), cultural deposit	14
HVO-1229 (#37-6-3345)	140-5, 11, 17, 19	Low density artefact scatter (≤20), cultural deposit	13
HVO-1262 (#37-6-3380)	141-2, 7, 13, 14	Moderate density artefact scatter (20-50), cultural deposit	30
HVO-1266 (#37-6-3383)	141-9	Moderate density artefact scatter (20-50), cultural deposit	1
HTP-N-AS80 (#37-6-4677)	155-1, 4, 6, 9, 10, 12, 14	Low density artefact scatter (≤20), cultural deposit	20
HTP-N-AS81 (#37-6-4675)	157-4, 10, 12, 14, 16	Low density artefact scatter (≤20), cultural deposit	4
HTP-N-AS69 (#37-5-0995)	169-4, 11	Low density artefact scatter (≤20), cultural deposit	2
HTP-N-AS82 (#37-5-0996)	172-10	Low density artefact scatter (≤20), cultural deposit	4

vi Implications for the Warkworth Sands system predictive model

The results of the test excavation broadly aligned with the results of the predicted distribution of Warkworth Sands system developed for the exhibited ACHA (refer to EMM 2025, Figure 5.4). Based on the model, it was predicted that the sand deposits may be present within the Hunter Valley Operations mining complex in or near test pits with prefixes 134 to 136 and, more probably at 155 to 158. In the case of the former, the model actually predicted the sand unit would abut, but not encroach into the project impact area.

These findings proved to be the case, with Warkworth Sands system deposits encountered in test pits with prefixes 155 to 158, but not within 134 to 136. A single test pit, TP141-20 documented a thin unit of sand on the bank of Wollombi Brook, and which may reflect the Warkworth Sands system. This location is not predicted to contain the sand unit, but given its proximity the findings may reflect localised levee bank or other alluvial deposits, and not necessarily suggest inaccuracies in the model.

As such, the model now represented in Figure 5.8 is considered to remain robust for the purposes of management in subsequent stages of the project. Overall, this suggests 117 hectares of predicted Warkworth Sands system is within the amended project impact area. This is an increase from the 88 hectares previously outlined in the exhibited ACHA, but reflects amendments, and further refinement of the model as part of the ACHA addendum. Refinement of potential impacts outlined in *Chapter 8 (Potential and cumulative impacts)* outlines that substantive portions of the deposits would be unaffected by the project.



KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 2
  - 3

Existing environment

- Minor road
- Vehicular track
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

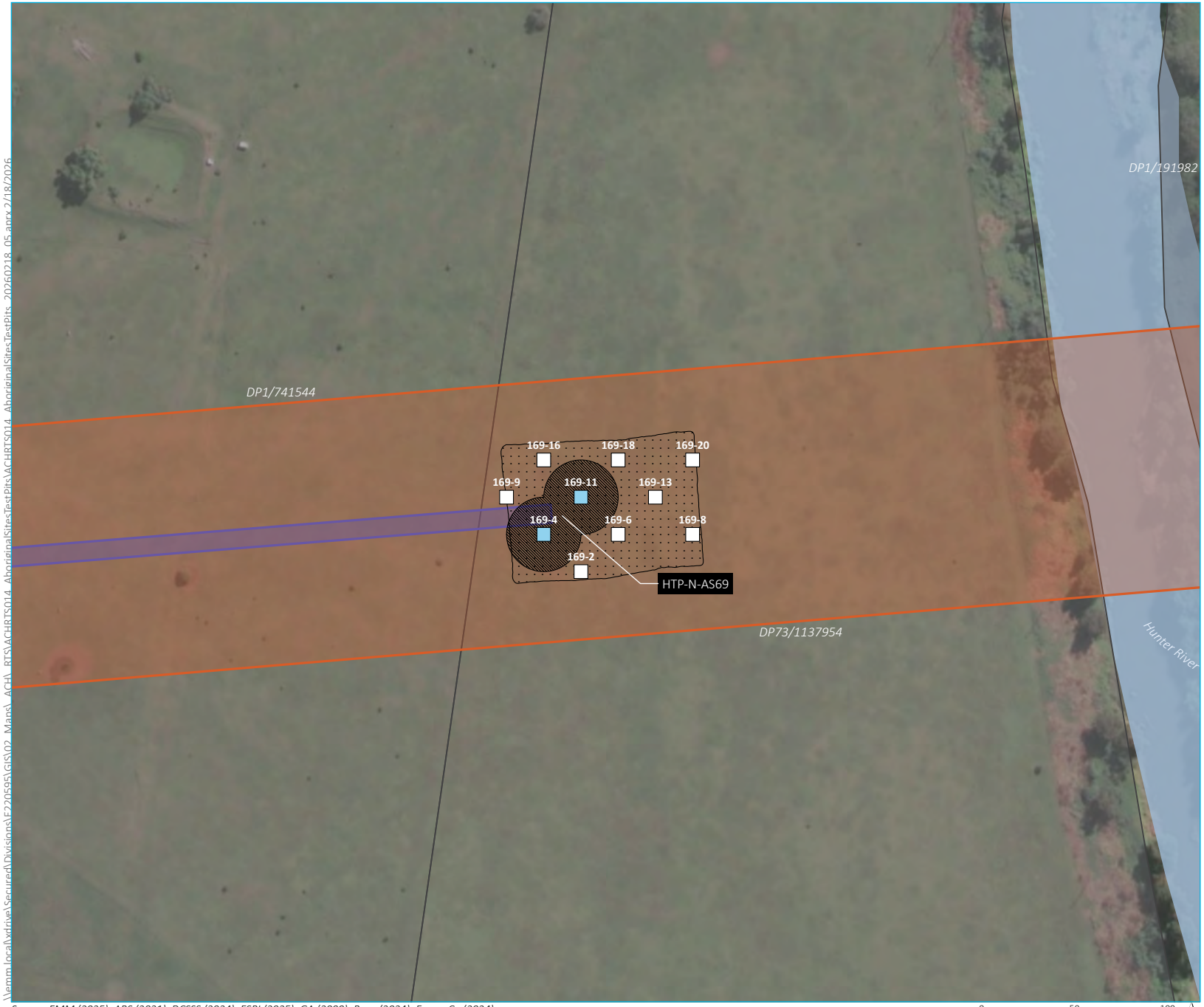
\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

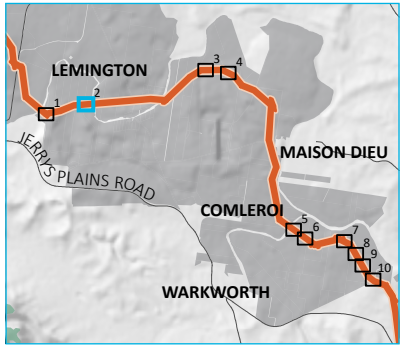
Aboriginal sites identified during the test excavations

Map 1 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM
creating opportunities





KEY

Hunter Valley Operations

Project impact area

HTP corridor

Access track

Identified Aboriginal site

Investigation area

Excavated test pit (artefact count)

0

1

Existing environment

Named waterbody

INSET KEY

Major road

HTP corridor

Hunter Valley Operations

Map extent

PlacePoint_DCSSS_2023

Flora reserves

Named watercourse

State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

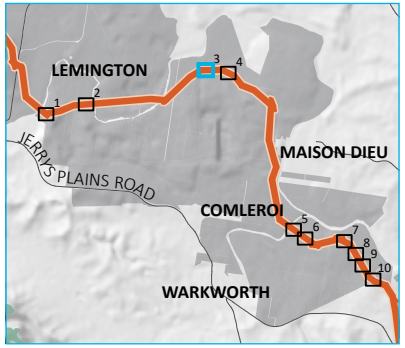
\\emm.local\wdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

Aboriginal sites identified during the test excavations

Map 2 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM
creating opportunities



KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 1
  - 2
  - 3
  - 4
  - 19
  - 31
  - 39
  - 50
- Existing environment
  - Vehicular track
  - Named watercourse

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

\\emm.local\xdrive\Secured\Divisions\EF220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

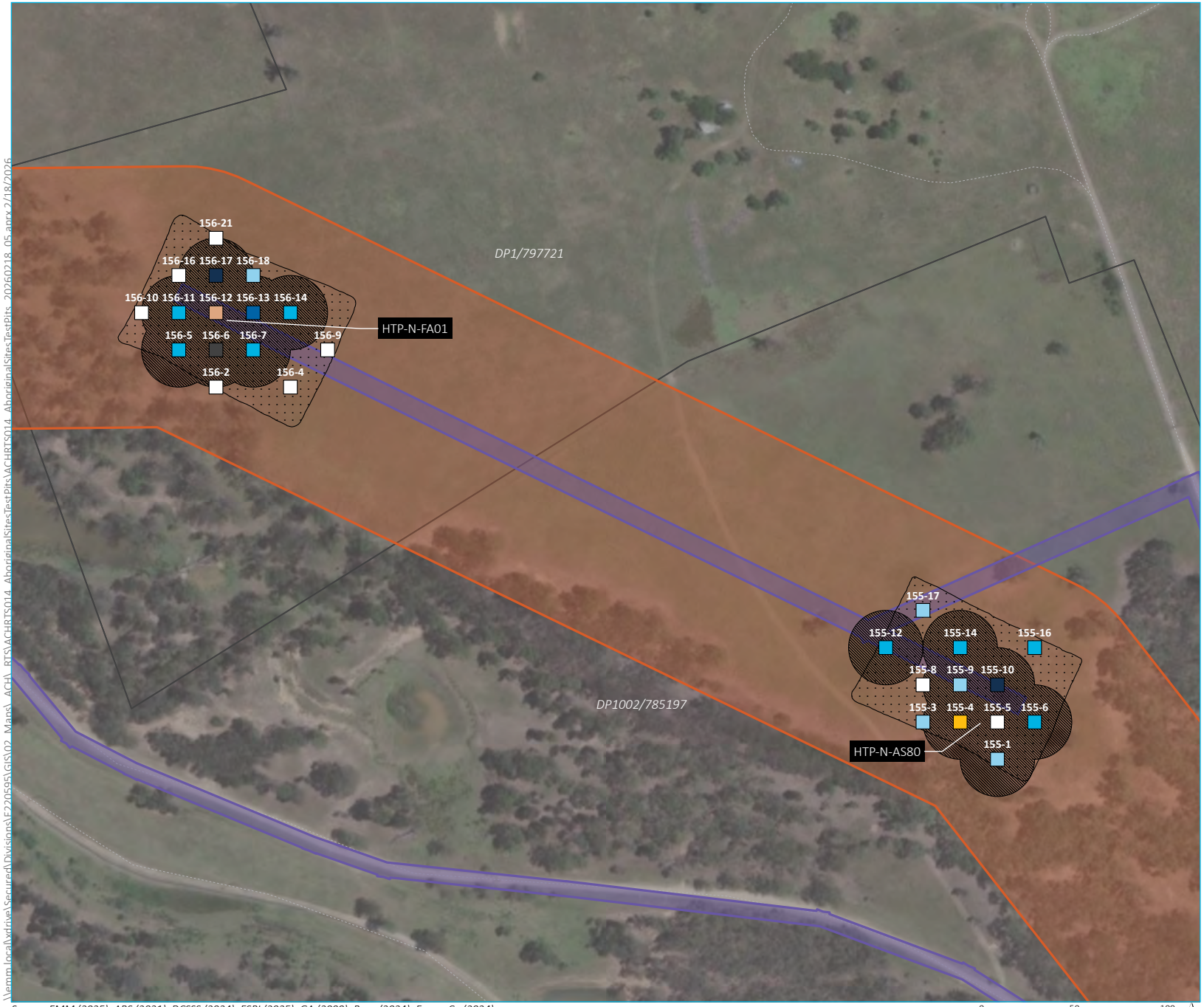
GDA2020 MGA Zone 56

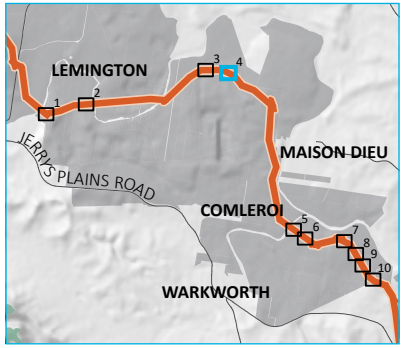
N

Aboriginal sites identified during the test excavations
Map 3 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM
creating opportunities





KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 1
  - 2
  - 3
  - 4
  - 9
  - 16
  - 22
- Existing environment
  - Vehicular track

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

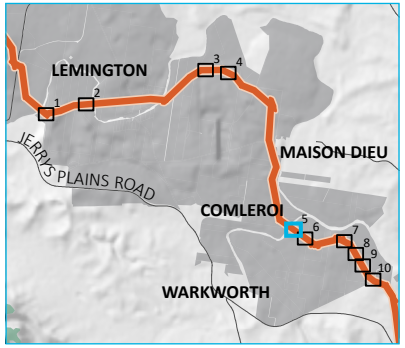
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

Aboriginal sites identified during the test excavations
Map 4 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM
creating opportunities



KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 1
  - 2
  - 3
  - 12
  - 14
  - 16
  - 28
  - 35
  - 38
  - 92
- Existing environment
  - Vehicular track
  - Named watercourse
  - Named waterbody

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

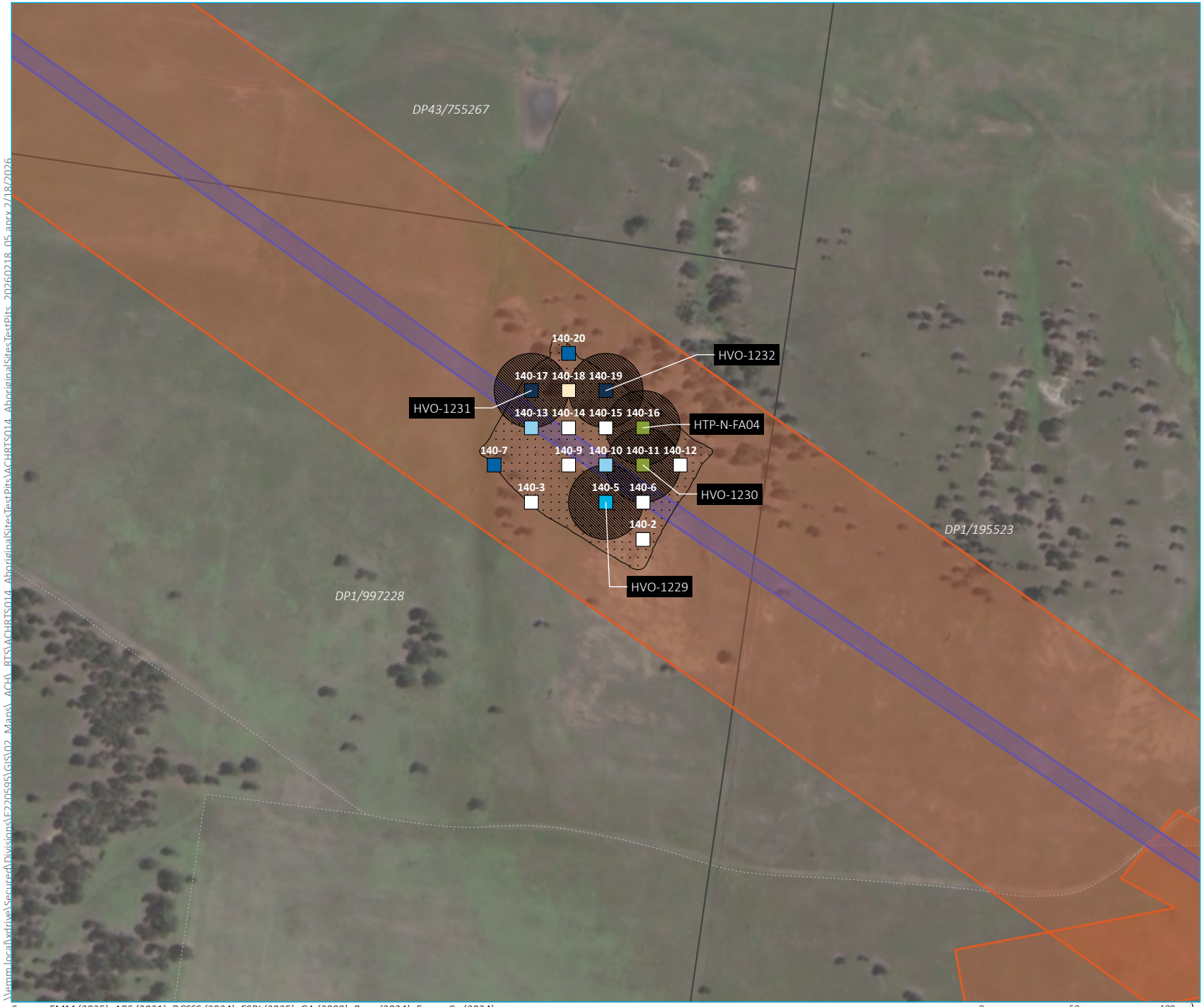
GDA2020 MGA Zone 56

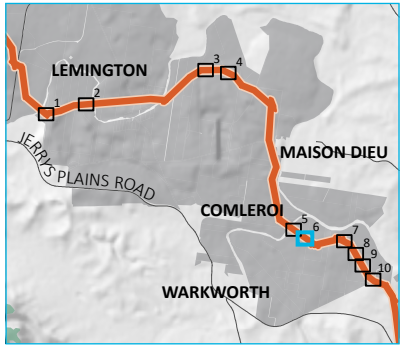
N

Aboriginal sites identified during the test excavations
Map 5 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM creating opportunities





KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 1
  - 2
  - 3
  - 4
  - 8
  - 29
  - 33
- Existing environment
  - Vehicular track

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

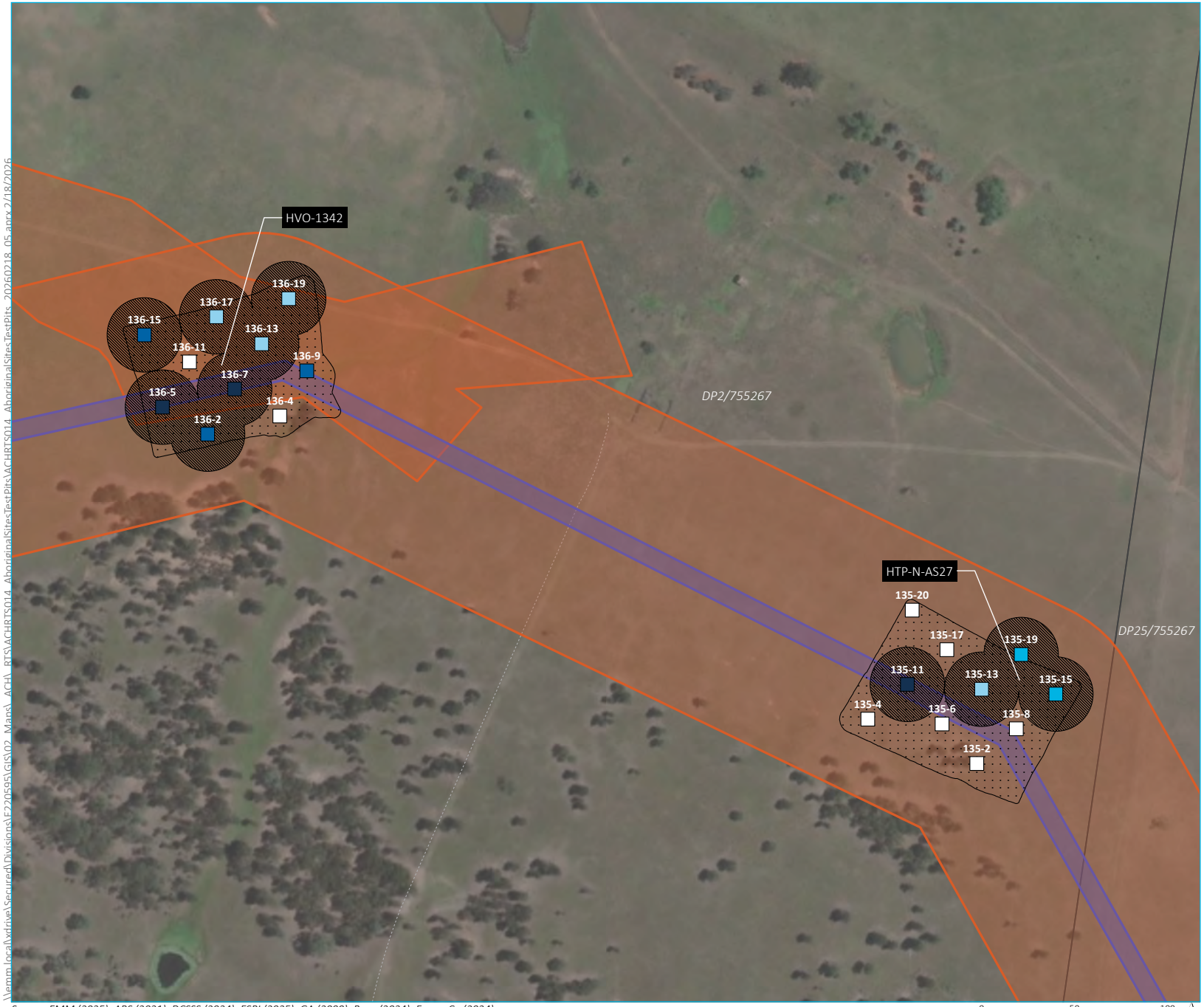
N

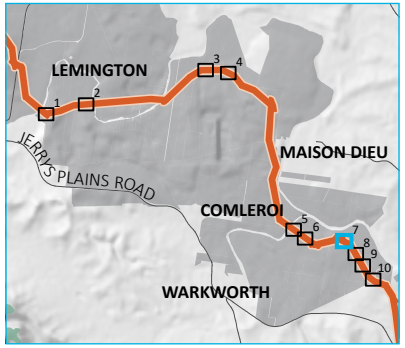
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

Aboriginal sites identified during the test excavations
Map 6 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM
creating opportunities





KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 1
  - 2
  - 3
  - 4
- Existing environment
  - Vehicular track

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

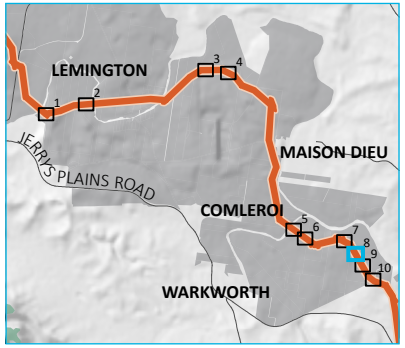
N

Aboriginal sites identified during the test excavations
Map 7 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026



KEY

Hunter Valley Operations

Project impact area

HTP corridor

Access track

Identified Aboriginal site

Investigation area

Excavated test pit (artefact count)

0

1

3

24

Existing environment

Minor road

Named watercourse

INSET KEY

Major road

HTP corridor

Hunter Valley Operations

Map extent

PlacePoint_DCSSS_2023

Flora reserves

Named watercourse

State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

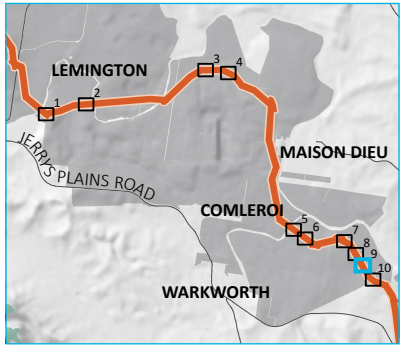
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

Aboriginal sites identified during the test excavations
Map 8 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM
creating opportunities



KEY

- Hunter Valley Operations
- Project impact area
  - HTP corridor
  - Access track
- Identified Aboriginal site
- Investigation area
- Excavated test pit (artefact count)
  - 0
  - 1
- Existing environment
  - Named watercourse

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

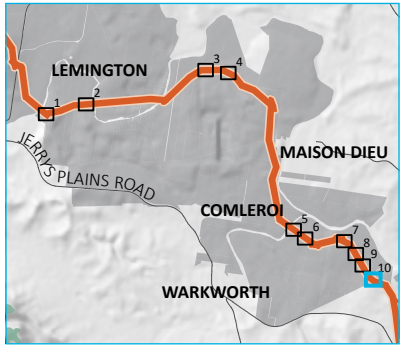
N

Aboriginal sites identified during the test excavations

Map 9 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM creating opportunities



KEY

- Hunter Valley Operations Project impact area
- HTP corridor
- Access track
- Identified Aboriginal site
- Investigation area

Excavated test pit (artefact count)

- 0
- 1
- 4

Existing environment

- Minor road
- Vehicular track

INSET KEY

- Major road
- HTP corridor
- Hunter Valley Operations
- Map extent
- PlacePoint_DCSSS_2023
- Flora reserves
- Named watercourse
- State forest

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

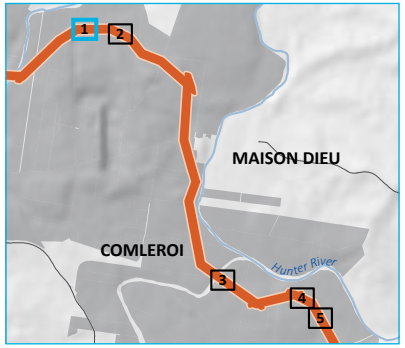
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS014_AboriginalSitesTestPits\ACHRTS014_AboriginalSitesTestPits_20260218_05.aprx 2/18/2026

Aboriginal sites identified during the test excavations

Map 10 of 10

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.7

EMM creating opportunities



KEY

- Hunter Valley Operations

Project impact area

- HTP corridor
- Access track
- Test pit with Warkworth Sand present
- Test pit without Warkworth Sand present
- Investigation area
- Potential Warkworth Sand (Umwelt 2023)

Existing environment

- Vehicular track
- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

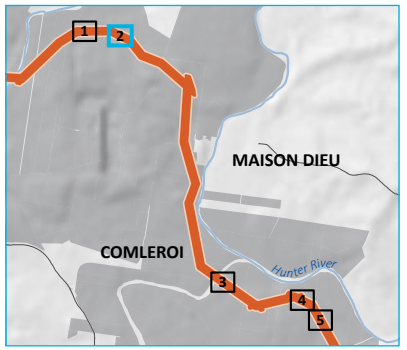
GDA2020 MGA Zone 56

N

Revised Warkworth sands modelling based on findings from the test excavations- Map 1 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.8

EMM creating opportunities



KEY

- Hunter Valley Operations

Project impact area

- HTP corridor
- Access track
- Test pit with Warkworth Sand present
- Investigation area
- Potential Warkworth Sand (Umwelt 2023)

Existing environment

- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

\\emm.local\vdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS007_WarkworthSands\ACHRTS007_WarkworthSands_20251125_05.aprx 25/11/2025

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

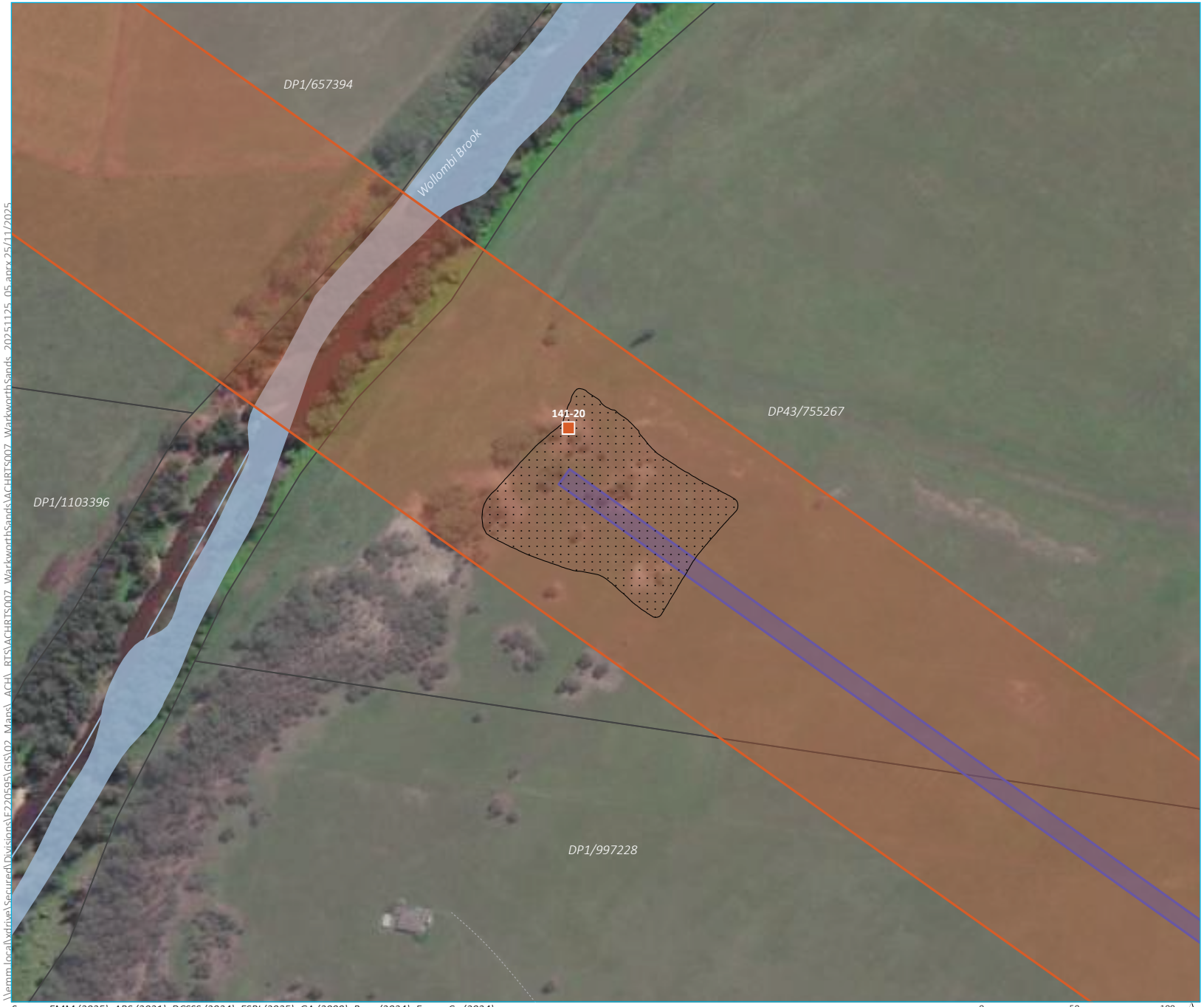
GDA2020 MGA Zone 56

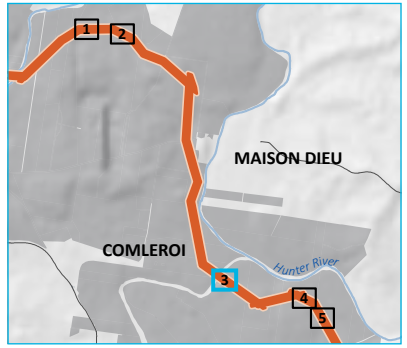
N

Revised Warkworth sands modelling based on findings from the test excavations- Map 2 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.8

EMM creating opportunities





KEY

- Hunter Valley Operations

Project impact area

- HTP corridor
- Access track
- Test pit with Warkworth Sand present
- Investigation area

Existing environment

- Vehicular track
- Named watercourse
- Named waterbody

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

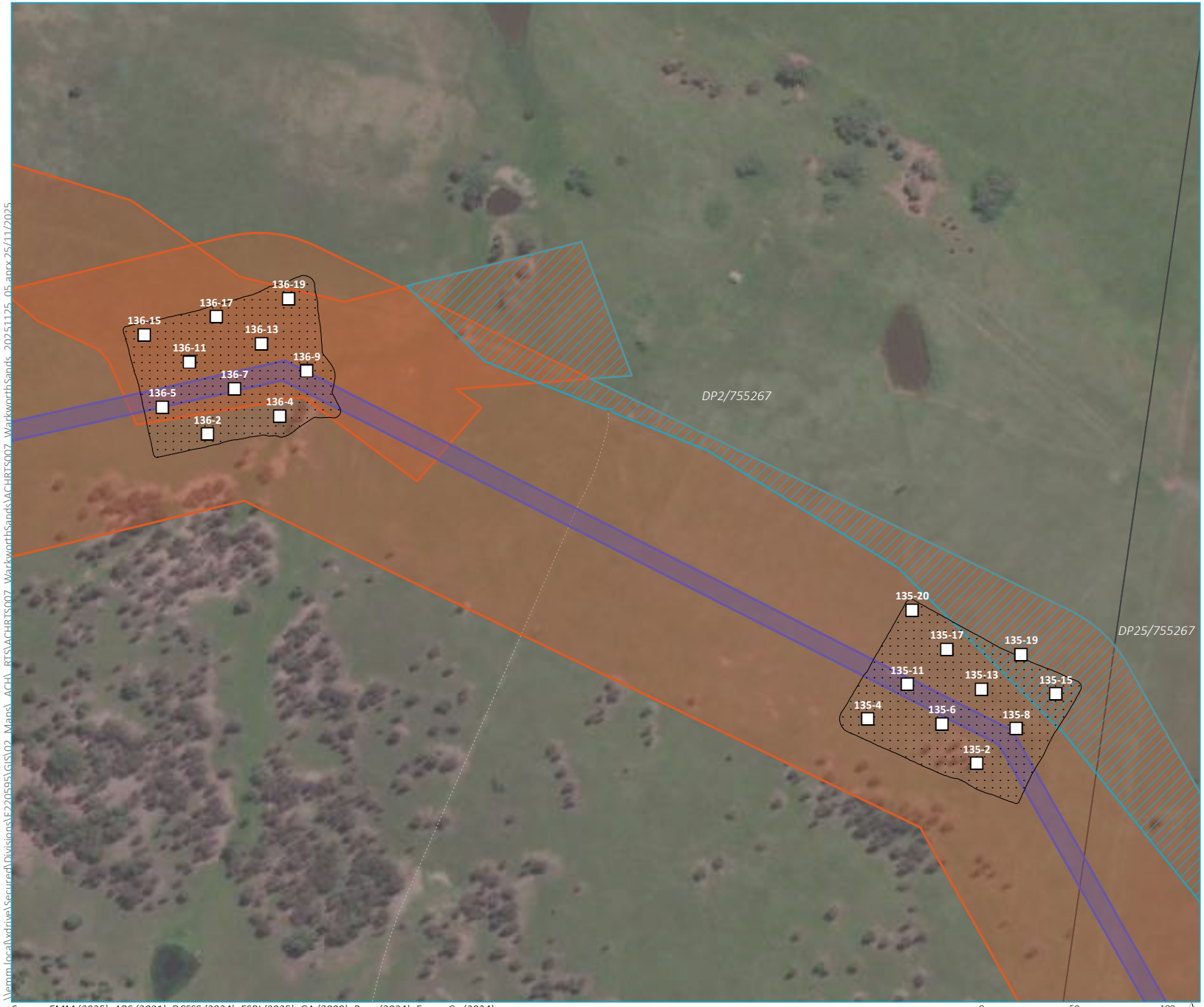
N

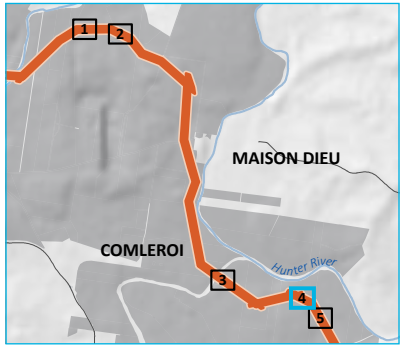
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS007_WarkworthSands\ACHRTS007_WarkworthSands_20251125_05.aprx 25/11/2025

Revised Warkworth sands modelling based on findings from the test excavations- Map 3 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.8

EMM
creating opportunities





KEY

- Hunter Valley Operations

Project impact area

- HTP corridor
- Access track
- Test pit without Warkworth Sand present
- Investigation area
- Potential Warkworth Sand (Umwelt 2023)

Existing environment

- Vehicular track

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

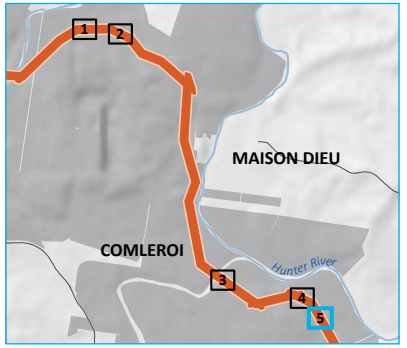
N

Revised Warkworth sands modelling based on findings from the test excavations- Map 4 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage
Assessment Addendum
Figure 5.8

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS007_WarkworthSands\ACHRTS007_WarkworthSands_20251125_05.aprx 25/11/2025



KEY

- Hunter Valley Operations

Project impact area

- HTP corridor
- Access track
- Test pit without Warkworth Sand present
- Investigation area
- Potential Warkworth Sand (Umwelt 2023)

Existing environment

- Minor road
- Named watercourse

INSET KEY

- Hunter Valley Operations
- HTP corridor
- Major road
- Named watercourse

Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 50 100 m

GDA2020 MGA Zone 56

N

Revised Warkworth sands modelling based on findings from the test excavations- Map 5 of 5

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 5.8

EMM creating opportunities

6 The archaeological resource

6.1 Summary of this chapter

- This ACHA addendum report refines and updates the previous findings from the exhibited ACHA following additional investigations, notably large-scale test excavations within the Hunter Valley Operations mining complex.

- The exhibited ACHA identified 32 discrete sites and places along with a continuous and complex distribution of surface and shallowly buried stone artefacts distributed across the project impact area that combined 191 discrete site listings. A further 379 were documented outside, but within 200 metres of the project impact area.

- In response to comments on the exhibited ACHA, the cultural assemblage was reviewed, including further consideration of Aboriginal objects, sites and places: 1) identified as previously destroyed; 2) outside but on the periphery of the project impact area; 3) increasing detail of those outside, but within 55 metres of the project impact area where indirect impacts may occur; 4) the separation of the background scatter sites that amalgamated discrete listings and to rather present them separately; and 5) inclusion of cultural materials some distance beyond the project impact area, but potentially affected through the project mitigation measures. When applying these requirements, the cultural assemblage totals:

    - Within the amended project impact area: 303 Aboriginal objects, sites and places, including 13 rockshelters, six grinding grooves, eight cultural places, three culturally modified trees, three stone arrangements, nine high density stone artefact scatters, eleven moderate density stone artefact scatters, eight subsurface cultural deposits, 121 low density artefact scatters and 121 isolated stone artefacts.

    - Outside, but within 55 metres of the amended project impact areas: 146 Aboriginal objects, sites and places, including five rockshelters, seven grinding grooves, three resource and gathering sites, four culturally modified trees, two stone arrangements, five high density stone artefact scatters, ten moderate density stone artefact scatters, one hearth, 50 low density artefact scatters and 59 isolated stone artefacts.

    - Outside the amended project impact area, but may be impacted through the mitigation measures of the project, which propose Aboriginal led research that may include investigation and recovery of cultural materials: three rockshelters.

- Several cultural landscapes, including view-lines and -scapes, identified in the exhibited ACHA continue to remain relevant to the amended project. These typically represent concentrated areas of cultural sites and materials, and broader view-lines between Dreaming places (primarily promontories) across the broader region.

6.2 Summary of the exhibited ACHA findings

The exhibited ACHA undertook ratification of the cultural materials encountered across the project impact area through existing desktop information, field survey and a limited test excavation program. This concluded that the following cultural assemblage was present within the project impact area:

- ten moderate or high-density surface artefact scatters – HVO-1258 (#37-6-3376), HVOCP TR47-AS3 (#37-2-6514), BOP-OS8 (#37-6-2842), HVO-1267 (#37-6-3384), 2010-HVOSE-15 (#37-6-4023), HTP-N-AS01 (#37-2-6667), HTP-N- AS15 (#37-2-6666), HTP-N-AS30 (#37-6-4488), HTP-N-AS32 (#37-6-4487), and HTP-N-AS71 (#37-2-6665), all within HTP North

- three subsurface stone artefact deposits associated with Congewai Creek – HTP-C-FA01 (#37-6-4490), HTP-C-FA02 (#37-6-4489), and HTP-C-FA03 (#37-6-4491) in HTP Central
- three grinding groove sites – HTP-C-GG03 (#37-6-4484), and HTP-C-GG05 (#45-3-5006) in HTP Central, and HTP-S-GG01 (#45-3-5005) in HTP South
- five rockshelters – DEEP CK MOTHER SWA (#37-6-3714) and HTP-C-RS02 (#37-6-4492) in HTP Central, and HTP-S-RS16 (#45-3-5007), HTP-S-RS19 (#45-3-5008), and HTP-S-RS20 (#45-3-5004) in HTP South
- six cultural places and/or resource and gathering sites – Hunter crossings (HTP-N-CVM01 [#37-6-4493]) in HTP North; Watagan Creek ACD (#45-3-4623), HTP-C-AR01 (#37-6-4486), HTP-C-AR02 (#37-6-4485), Flat Rock lookout (HTP-C-CP01 [#45-3-5003]) in HTP Central; and a wishing well (HTP-C-CS01 [#45-3-5009]) in HTP South
- one culturally modified tree –HTP-C-CMT05 (#37-6-4483) in HTP Central
- one [redacted]
- a broader background scatter of isolated Aboriginal objects and/or low-density artefact scatters (<20/m²) found disparately across the project (HTP-N-BS1; HTP-C-BS1; HTP-S-BS1). This is presented as three discrete listings that cumulatively incorporate 191 previously documented and/or newly identified site recordings.

The exhibited ACHA identified several significant sites and places outside, but within 10 metres of the project impact area. These include three high or moderate density artefact scatters, four grinding grooves, two stone arrangements, three resource and gathering sites, and two culturally modified trees. Further, Table G.2 of the exhibited ACHA included the archaeological resource that extended immediately beyond the project impact area, and which included 90 discrete sites and places, as well as a background scatter containing 289 discrete listings of isolated objects and/or low-density stone artefact sites.

In addition to specific Aboriginal and/or cultural sites and places listed above, a number of broader landscape values were also documented within and surrounding the project impact area. These include:

- Warkworth sand system – a geological deposit known to contain significant cultural materials and found in the general vicinity of Wollombi Brook. Investigations of the deposit were limited as part of the exhibited ACHA, but desktop information and field investigations suggest the deposit is likely to be present within the southern portions of the Hunter Valley Operations mining complex and along the Hunter River east of the Mount Thorley Warkworth mining complex.
- Cultural view-lines and view-scapes – a number of view-lines and/or view-scapes between major regional promontories are bisected by the project impact area. These are noticeably between Mount Yengo and Mount Sugarloaf and bisect the project impact area in the vicinity of Flat Rock but include a range of other vicinities and locations. There are differing views within the local Aboriginal community as to the specific value of these view-lines and/or view-scapes or the potential impact that the project would have upon them. However, it was generally concluded that the project may adversely affect the local Aboriginal community's ability to undertake cultural education (i.e. by blocking or obstructing the views across Country from the top of one or more of these promontories) and/or by impacting a 'connection' between Dreaming places.

- Dora Pinnacles, Dora Creek, Flat Rock and Trig Road cultural landscapes – where numerous significant archaeological sites were encountered, typically in the form of rockshelters with art motifs and stories and/or stone arrangements, also related to ceremonial activities. The local Aboriginal community have sought to encompass these sites within a localised 'cultural landscape', which is considered to retain natural resources, view-lines, view-scapes and other connections between the sites. These sites were identified during the project field investigations in the vicinity of Trig Road, Flat Rock lookout, across Dora Creek, and the Dora Pinnacles near Watagan Road, of which two (Flat Rock and Trig Road cultural landscapes) extend into the project impact area.

6.3 Additional desktop information and analysis

Following public exhibition of the exhibited ACHA, a number of responses were received on the analysis and interpretation of the cultural assemblage outlined in *section 6.2* (refer to *Appendix A – Public exhibition comments*). These primarily came from Heritage NSW, and included:

1. revisiting the amalgamation of low density and isolated stone artefacts into a background scatter encompassing the project impact area, and a request to present each site as a discrete recording requiring consideration and management

2. providing further information and focus on Aboriginal objects, sites and places outside, but within 55 m of the project impact area, and which may be subject to indirect impacts. This included more extensive mapping of cultural materials with a number recorded on the periphery of the project impact area, and which may need to be further considered as within the project when size and/or buffers are applied

3. providing further information and justification of Aboriginal objects, sites and places that were considered destroyed based on the outcomes of the field investigations

4. revisiting the classification of rockshelters identified as part of the field investigations where additional investigations of nearby soil profiles may enable their validation

5. incorporating Aboriginal objects, sites and places that were identified to be further investigated as part of the cultural values mitigation strategy recommended in the mitigation measures (refer to *section 9.5*). While outside the project impact area, they may be directly affected as a result of actions from the project and therefore require inclusion.

In relation to (1) and (2), Table D.1 and Table D.2 and *section 6.5* now present all cultural materials encountered within the amended project impact area, and outside, but within 55 metres of the amended project impact area, including low density artefact scatters and isolated objects previously amalgamated into the broader listing of the background scatter. To avoid confusion, HTP-N-BS1 (#37-5-0991), HTP-C-BS1 (#45-3-5011), and HTP-S-BS1 (#45-5-5012), that were sites specifically developed to capture this broader amalgamation have now also been declassified within the Heritage NSW AHIMS database. To address other clarifications from Heritage NSW, Table D.1 and Table D.2 now also includes further spatial and descriptive information on all sites within the project impact area. This demonstrates that a number of sites that are on the periphery, may extend into the amended project impact area when further consideration of their size and shape is undertaken (buffers to account for mapping and recording errors also propagate these findings).

For (3), 82 Aboriginal objects, sites and places within the project impact area were considered to have been destroyed in the exhibited ACHA. These sites were primarily previously documented sites that were considered destroyed following an inspection of the recorded site location by a team of archaeologists and Aboriginal participants, which failed to identify the reported cultural materials. Table D.4 and Figure 6.1 undertake further review of sites previously identified as destroyed within the addendum project impact area. Of these, ten are documented as previously destroyed on their site cards or other documentary information and are continued to

be assumed destroyed in this ACHA addendum as a result; and the remainder are now included as valid sites in *section 6.5*. With the exception of two high density artefact scatters (#37-6-3376 and #37-6-4022) and two moderate density artefact scatters (#37-6-0720 and #37-2-6514), these sites consisted of 41 isolated stone artefacts and 27 low density artefact scatters often identified in disturbed contexts, such as access tracks, unsealed roads, dams, etc. While it is still believed that these sites are highly likely to be destroyed given these conditions and the inability for several experienced heritage professionals to identify them, they have nonetheless been included in the extant assemblage (refer to *section 6.5*) for further consideration and management as part of the project. It is acknowledged that visibility was generally poor during the field investigation constraining the findings, and several of the sites included a portion of potential archaeological deposit that cannot be robustly discounted based entirely on surface observations.

In the case of (4), 93 caves and overhangs were encountered during the exhibited ACHA and which were assessed against regional criteria to determine whether they were cultural – many containing no clear evidence of past use. Criteria included the presence of art or engraved motifs, their size, their relationship with other cultural materials, and knowledge of the site by the Aboriginal participants. Where three of these criteria were met, the site was considered cultural and identified as an Aboriginal site. Where criteria were not met, the feature was considered non-cultural. Heritage NSW suggested the inclusion of the ability to further investigate those that may have cultural deposits in their general vicinity (e.g. talus slope in front of the site). Table D.4 presents a re-consideration of the caves and overhangs where the field team identified the presence or potential archaeological deposit or other soil profile that could be investigated to inform and/or validate their past use. While the inclusion of this criterion does not elevate any of the previously documented caves and overhangs above three criteria to validate their cultural origin, it nonetheless identifies 11 that can be further investigated. These are primarily found on the periphery of the amended project impact area, with several (3) outside the amended project impact area, but within 55 metres. As such, these additional sites have now been incorporated into the cultural assemblage outlined in *section 6.5*.

In relation to (5), one of the proposed actions from the cultural values mitigation strategy recommended in *section 9.5* is to undertake Aboriginal led research of a small number of significant sites, primarily rockshelters, including HTP-C-RS14 (#45-3-5-5013), Corrabare State Forest Road 2 (#45-3-3582), Corrabare State Forest Western Side of Langans Rd SWA (#45-3-3583), and Corrabare (#45-3-2140) (refer to Table D.3). With the exception of HTP-C-RS14, these sites are all more than 55 metres from the amended project impact area, and would not be directly or indirectly impacted by the project. However, while the exact activities associated with the Aboriginal-led research has yet to be developed, it is probable that some form of invasive research may occur, such as small-scale excavation and/or sampling of art motifs. Given these activities would be considered a harm to cultural materials (despite their purpose) and would be associated with the project, they require consideration as part of the cultural assemblage in *section 6.5* and potential impacts as outlined in *Chapter 8 (Potential and cumulative impacts)*.

6.4 Review of additional field investigations

Further field survey was undertaken of project amendments since the EIS as well as areas not covered by field survey during preparation of the exhibited ACHA, which is outlined in *section 5.4*. This was a relatively small program that typically focussed on any gaps or omitted areas within HTP Central and HTP South. Overall, it added a further ~160 kilometres of pedestrian survey investigation to the project, and increases overall coverage to 82.5% of the amended project impact area. A further 7% is considered unfeasible or unnecessary to investigate due to being dangerous or established sealed roads. However, the field survey identified limited additional cultural material (refer to *section 5.4.1iv*). Specifically, 13 previously undocumented sites were identified (and several previously documented sites revisited), which were dominated by isolated stone artefacts. These have now all been included in the cultural assemblage outlined in *section 6.5*.

In addition to field survey, a large-scale archaeological test excavation program was undertaken of several locations in the vicinity of the Wollombi Brook and Hunter River. The aim of these excavations was primarily to investigate the presence/absence of the Warkworth Sands system predicted to be present in this general region. Overall, 180 test pits (totalling 60 m²) were undertaken across 17 locations within the HTP corridor. Cultural materials were encountered within most of these locations, and they have variously been identified as low, moderate or high-density artefact scatters in *section 6.5*. Of note was the findings within test pits 156-2 to 156-21 and 158-2 to 158-24, both of which were situated in the Warkworth Sands system, within which cultural materials of significant age were encountered. Specifically, at test pits 156-2 to 156-21, the assemblage appears to reflect visitation over the last 17 ka, while at test pits 158-2 to 158-24 visitation may have initially occurred at 38 ka and continuing to ~13 ka. While cautious interpretation is needed given the bioturbation and mixing evident in the Warkworth Sands system, if accurate, this would be the earliest evidence of human activity in the Hunter Valley documented to date. Regardless, while beginning to become more common (e.g. W14 Sandsheet [#37-6-0946], CM-CD1 [#32-2-1877]), cultural materials >10,000 years are still rare in the Hunter Valley, and as such these specific sites are considered of high research potential and significance in subsequent sections of this ACHA addendum.

Importantly, the test excavations also validated the predicted model of Warkworth Sands system presented in the exhibited ACHA. This is most evident in areas south of Wollombi Brook/east of the Mount Thorley and Bulga Mining Complexes where the predicted sand system abuts but does not extend into the project impact area, and investigations of three locations over ~800 metres did indeed fail to identify the deposit. The model highlights the sand system is predominantly found on elevated landforms north of Wollombi Brook and Hunter River (and broadly following the alignment of Archerfield Road), as well as smaller pockets elsewhere. Overall, this suggests that ~117 hectares of the Warkworth Sands system are within the amended project impact area.

6.5 Updated cultural assemblage of the project

This section outlines an updated cultural assemblage for the amended project impact area, as well as information on Aboriginal objects, sites and places within 55 metres of the amended project impact area. It also includes additional Aboriginal objects, sites and places that are a greater distance from the amended project impact area, but that would be affected through the activities proposed in the cultural values mitigation strategy.

The number of Aboriginal objects, sites and places has substantively increased from those presented in the exhibited ACHA (refer to *section 6.2*) for several reasons, including:

- the inclusion of additional parts of the amended project impact area, notably numerous access tracks on which a number of stone artefacts have been documented (refer to *section 1.3*)
- the inclusion of Aboriginal objects, sites and places that are on the periphery of the project impact area, and through consideration of spatial recording limitations (e.g. hand-held GPS' that have 10 metre accuracy), conservative interpretation of their spatial extents, and/or minor buffers around the cultural features are now conservatively included within the amended project impact area for the purposes of assessment
- the separation of previously proposed background scatter sites that were used to combine the presentation of large numbers of isolated and low-density stone artefact sites. These sites are now presented individually
- further consideration and inclusion of Aboriginal object, sites and places that are outside the amended project impact area, but within 55 metres, and which may be indirectly affected by the project. These were discussed in the exhibited ACHA, but not subject to detailed assessment.

With the exception of above changes, the cultural assemblage also considered administrative and analytical approaches outlined in the exhibited ACHA. This notably included the removal of sites and places not considered to be cultural (e.g. scarred trees and caves further analysed and determined to be non-cultural), combining any duplicate recordings where evident, and removing those identified as destroyed in various databases.

When reviewing desktop information and field investigations undertaken for the project, 303 Aboriginal objects, sites and places (refer to Table D.1 and Figure 6.2) are within the amended project impact area. A further 146 Aboriginal objects, sites and places are outside the amended project impact area, but located within 55 metres (refer to Table D.2 and Figure 6.2). A further three are incorporated as a result of proposed cultural values investigations, and which therefore require consideration in this ACHA addendum (refer to Table D.3).[5] These can be summarised as follows:

- Within the amended project impact area:
    - thirteen rockshelters – DEEP CK MOTHER SWA (#37-6-3714), HTP-C-RS02 (#37-6-4492), HTP-C-RS03 (#37-6-4679), HTP-C-RS17 (#37-6-4562), HTP-C-RS18 (#37-6-4683), HTP-C-RS24 (#37-6-4682), HTP-C-RS44 (#37-6-4554), HTP-C-RS45 (#37-6-4674), HTP-C-RS61 (#45-3-5034), HTP-S-RS13 (#45-3-5046), HTP-S-RS16 (#45-3-5007), HTP-S-RS19 (#45-3-5008), HTP-S-RS20 (#45-3-5004)
    - six grinding groove sites – CORROBARE STATE FOREST RD 1 (#37-6-2780), Monkey Place Creek / Broken Back Trail (#37-6-0552/#37-6-0809), TRGG GRINDING GROOVE SITE (#45-3-2456), HTP-N-GG01 (#37-6-4528), HTP-C-GG03 (#37-6-4484), HTP-S-GG01 (#45-3-5005)
    - eight cultural places and/or resource and gathering sites – Watagan Creek ACD (#45-3-4623), HTP-C-AR01 (#37-6-4486), HTP-C-AR02 (#37-6-4567), HTP-C-AR03 (#37-6-4567), HTP-S-AR01 (#45-3-5028), HTP-S-CS01 (#45-3-5009), HTP-N-CVM01 (#37-6-4493), and HTP-C-CP01 (#45-3-5003)
    - three culturally modified trees – Campbells Spring Track; (#37-6-0553), HTP-N-CMT02 (#37-2-6769) and HTP-C-CMT05 (#37-6-4502)
    - three stone arrangement sites – HTP-C-SA02 (#37-6-4555), HTP-C-SA04 (#37-6-4556), and [redacted]
    - nine high density artefact scatters – 2010-HVOSE-14 (#37-6-4022), 2010-HVOSE-15 (#37-6-4023), HVO-1258 (#37-6-3376), P16; (#37-2-0811), HTP-N-AS01 (#37-2-6667), HTP-N-AS15 (#37-2-6666), HTP-N-AS28 (#37-6-4513), HTP-N-AS30 (#37-6-4488), and HTP-N-AS32 (#37-6-4487); three of these sites are associated with areas of subsurface archaeological potential - P16; (#37-2-0811), HTP-N-AS15 (#37-2-6666), and HTP-N-AS32 (#37-6-4487)
    - eleven moderate density artefact scatters – BMP 1;Jerrys Plain; (#37-2-0500), BOP-OS8 (#37-6-2842), BR B1; (#37-6-0720), HTP24-AS1 (#37-2-6616), HVO-1273 (#37-6-3390), HVOCP TR47-AS2 (#37-2-6497), HVOCP TR47-AS3 (#37-2-6514), Long Point Rd_2; (#37-6-0615), MD2; (#37-3-0286), United Open Site-1 (United OS-1) (#37-5-0704), and HTP-N-AS71 (#37-2-6665); five of these sites are associated with areas of subsurface archaeological potential – BOP-OS8 (#37-6-2842), HVOCP TR47-AS2 (#37-2-6497), Long Point Rd_2; (#37-6-0615), HVOCP TR47-AS3 (#37-2-6514), and HTP-N-AS71 (#37-2-6665)

[5] This value excludes HTP-C-RS14, which is already captured in the values associated with the Aboriginal objects, sites and places outside, but within 55m of the project impact area.

- eight subsurface stone artefact deposits – HTP-C-FA01 (#37-6-4490), HTP-C-FA02 (#37-6-4489), HTP-C-FA03 (#37-6-4491), HTP-N-FA01 (#37-6-4671), HTP-N-FA02 (#37-6-4668), HTP-N-FA04 (#37-6-4670), HTP-N-FA05 (#37-6-4672), HVO-1267/HTP-N-FA06 (#37-6-3384)

- a broader background scatter of 121 isolated Aboriginal objects and 121 low-density artefact scatters, which are outlined in further detail in Table D.1. Of these, 46 were considered to also have potential archaeological deposits and/or established cultural deposits (through test excavation undertaken for this project). Of these, potential post contact materials – potential glass artefacts - were observed at one site (FF 6; [#37-6-0724]) on Broken Back Road in Pokolbin State Forest.

- Outside, but within 55 metres of the amended project impact area:

  - five rockshelters – CABANS RD CLIFF SWA (#45-3-4516), SWEETMANS CK OCHRE BOULDER SWA (#37-6-3782), HTP-C-RS14 (#45-3-5013), HTP-C-RS15 (#37-6-4557), and HTP-C-RS16 (#37-6-4558)

  - seven grinding groove sites – Corrobare State Forest cnr of Langdans Road (#45-3-3619), Null Road 2 (#45-3-3018), Olney CPT 75/76 Douglas Pt GDG (#45-3-4543), Pokolbin SF_C-345 AGG (#37-6-3967), HTP-C-GG01 (#37-6-4566), HTP-C-GG04 (#37-6-4506), and HTP-C-GG05 (#45-3-5006)

  - three resource and gathering sites – Congewai Creek Native Cherry ARG (#37-6-4165), Shamrock Hill; (#38-4-0221), and HTP-C-AR04 (#37-6-4568)

  - four culturally modified trees – Watagan/Olney ST/Scar Tree (Morisset)/Scar Tree (Morisset). (#45-3-4562/#45-3-3378/#45-3-3381), HTP-N-CMT01 (#37-6-4529), HTP-C-CMT10 (#37-6-4510), and HTP-C-CMT11 (#37-6-4503)

  - two stone arrangement sites – HTP-C-SA01 (#37-6-4538) and HTP-C-SA03 (#37-6-4537)

  - five high density artefact scatters – 2010-HVOSE-03 (#37-6-4034), HVS 37 (#37-5-0261), BMP 4; Jerrys Plain; (#37-2-0503), RW46 (Camberwell) (#37-3-0781), and Liddell; Tinkers Creek; (#37-2-0063)

  - ten moderate density artefact scatters – BAYS-AS1-2020 (#37-2-6626), HVO-1265 (#37-6-3411), HVO-1274 (#37-6-3391), HVO-1327 (#37-6-3470), HVOCP TR49-AS1 (#37-2-6512), MAS 134;Mt Arthur South; (#37-2-0487), P22; (#37-2-0818), RW48 (Camberwell) (#37-3-0783), WB 13 (#37-6-0711), and HTP-N-AS11 (#37-2-6675)

  - one hearth site – CORROBARE STATE FOREST CNR OF LANGDAN'S & CABANS RD (#45-3-3581)

  - a broader background scatter of 59 isolated Aboriginal objects and 50 low-density artefact scatters[6], which are outlined in further detail in Table D.2. Of these, ten were considered to also have potential archaeological deposits. No post-contact materials were encountered within these sites.

- Outside the amended project impact area, but may be affected as a result of mitigation measures associated with the project:

  - three rockshelters - Corrabare State Forest Road 2 (#45-3-3582), Corrabare State Forest Western Side of Langans Rd SWA (#45-3-3583), and Corrabare (#45-3-2140).

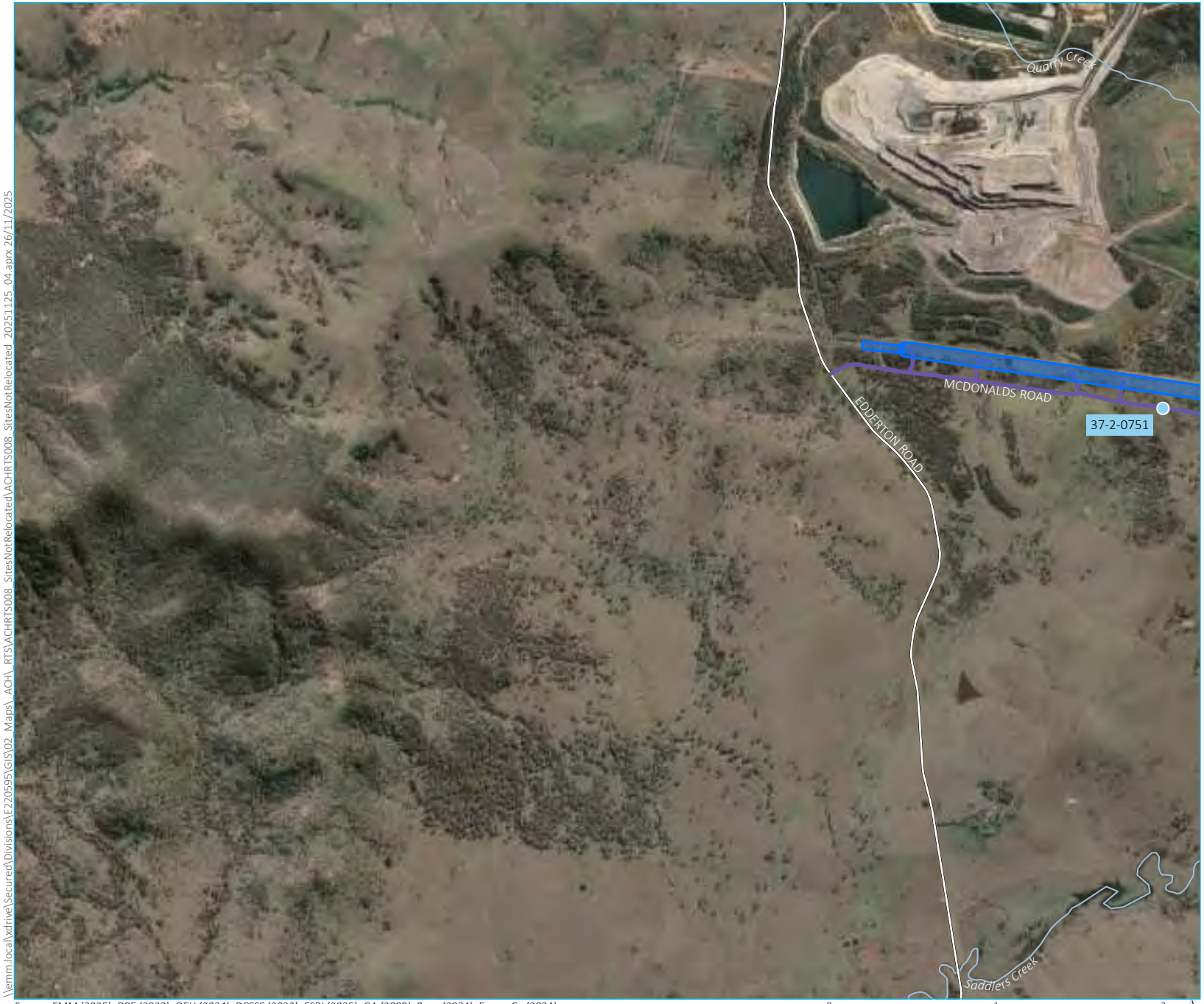
[6] This number includes three AHIMS sites where the information on the site card is limited and that were not investigated as part of this assessment.

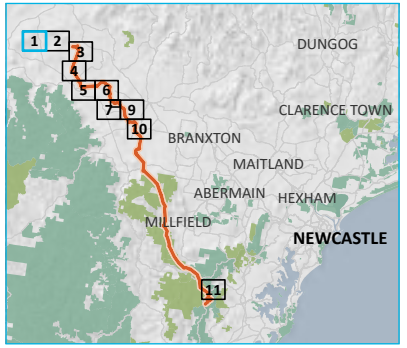
The project also continues to intersect and/or be in close proximity to broader cultural landscape and view-scapes previously identified in the exhibited ACHA, including:

- Warkworth sand system – a geological deposit known to contain significant cultural materials and found in the general vicinity of Wollombi Brook. Additional investigations demonstrate that these are likely to be present in the southern parts of the Hunter Valley Operations mining complex, as well as smaller pockets elsewhere in the amended project impact area.

- Cultural view-lines and view-scapes – a number of view-lines and/or view-scapes between major regional promontories are bisected by the amended project impact area. These are noticeably between Mount Yengo and Mount Sugarloaf and bisect the amended project impact area in the vicinity of Flat Rock but include a range of other vicinities and locations. There are differing views within the local Aboriginal community as to the specific value of these view-lines and/or view-scapes or the potential impact that the project would have upon them. However, it was generally concluded that the project may adversely affect the local Aboriginal community's ability to undertake cultural education (i.e. by blocking or obstructing the views across Country from the top of one or more of these promontories) and/or by impacting a 'connection' between Dreaming places.

- Dora Pinnacles, Dora Creek, Flat Rock and Trig Road cultural landscapes – where numerous significant archaeological sites were encountered, typically in the form of rockshelters with art motifs and stories and/or stone arrangements, also related to ceremonial activities. The local Aboriginal community have sought to encompass these sites within a localised 'cultural landscape', which is considered to retain natural resources, view-lines, view-scapes and other connections between the sites. These sites were identified during the project field investigations in the vicinity of Trig Road, Flat Rock lookout, across Dora Creek, and the Dora Pinnacles near Watagan Road, of which two (Flat Rock and Trig Road cultural landscapes) extend into the amended project impact area.





KEY

Previously destroyed sites

- Site registered as destroyed on AHIMS

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Aboriginal objects, sites and places previously destroyed
Map 1 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities

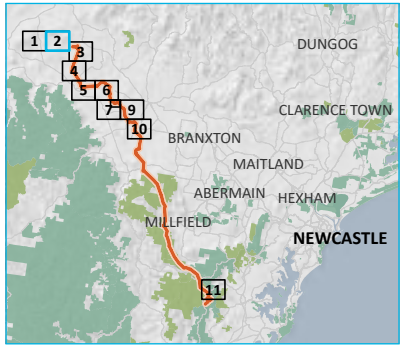
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025



KEY

Previously destroyed sites

- Site registered as destroyed on AHIMS
- Site which could not be relocated during field survey

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

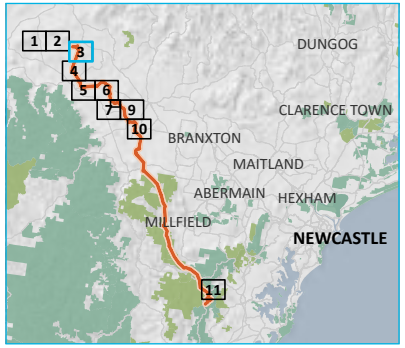
N

Aboriginal objects, sites and places previously destroyed
Map 2 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025



KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site
- Adjustment to existing transmission line (lines 31 and 32)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Aboriginal objects, sites and places previously destroyed
Map 3 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities

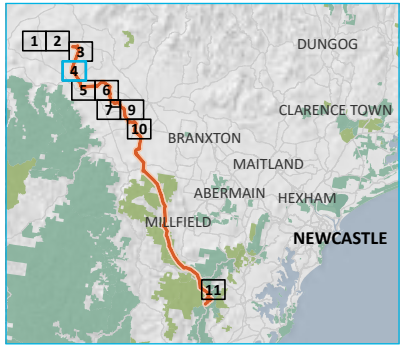
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025



KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

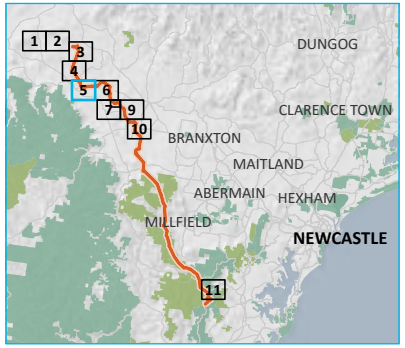
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025

Aboriginal objects, sites and places previously destroyed
Map 4 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities



KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

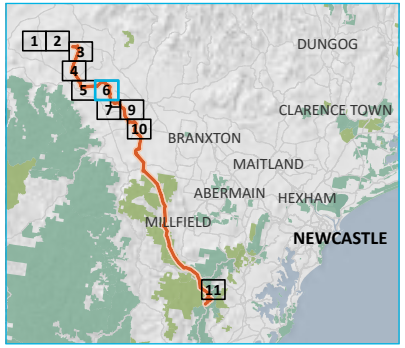
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025

Aboriginal objects, sites and places previously destroyed
Map 5 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM
creating opportunities



KEY

Previously destroyed sites

- Site registered as destroyed on AHIMS
- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

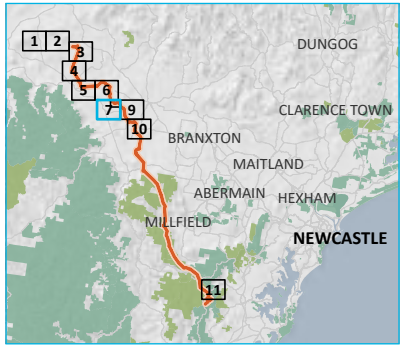
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025

Aboriginal objects, sites and places previously destroyed
Map 6 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities



KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

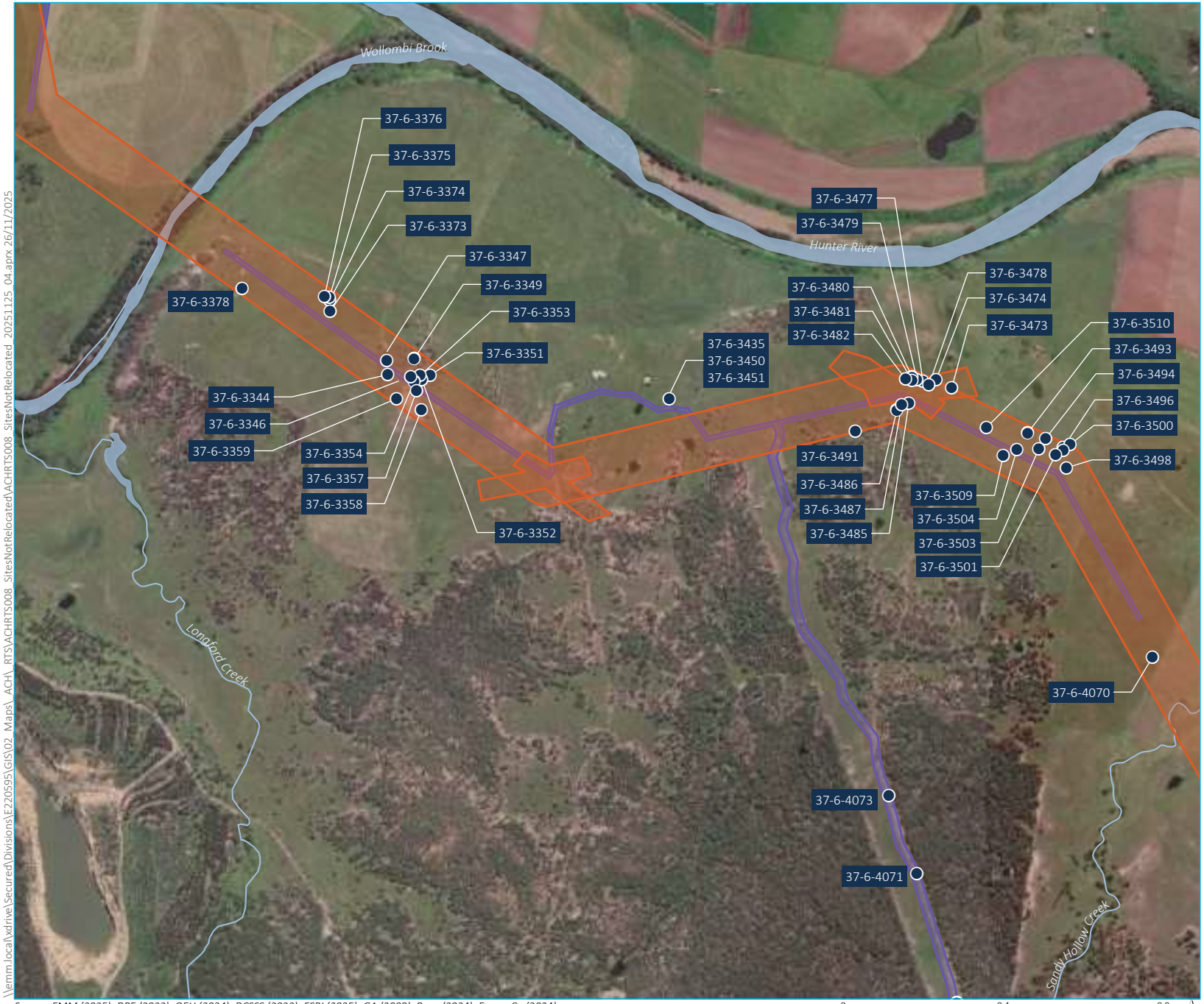
N

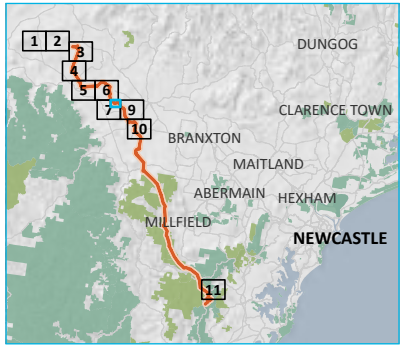
Aboriginal objects, sites and places previously destroyed
Map 7 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025





KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Access track

Existing environment

- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 0.4 0.8 km

GDA2020 MGA Zone 56

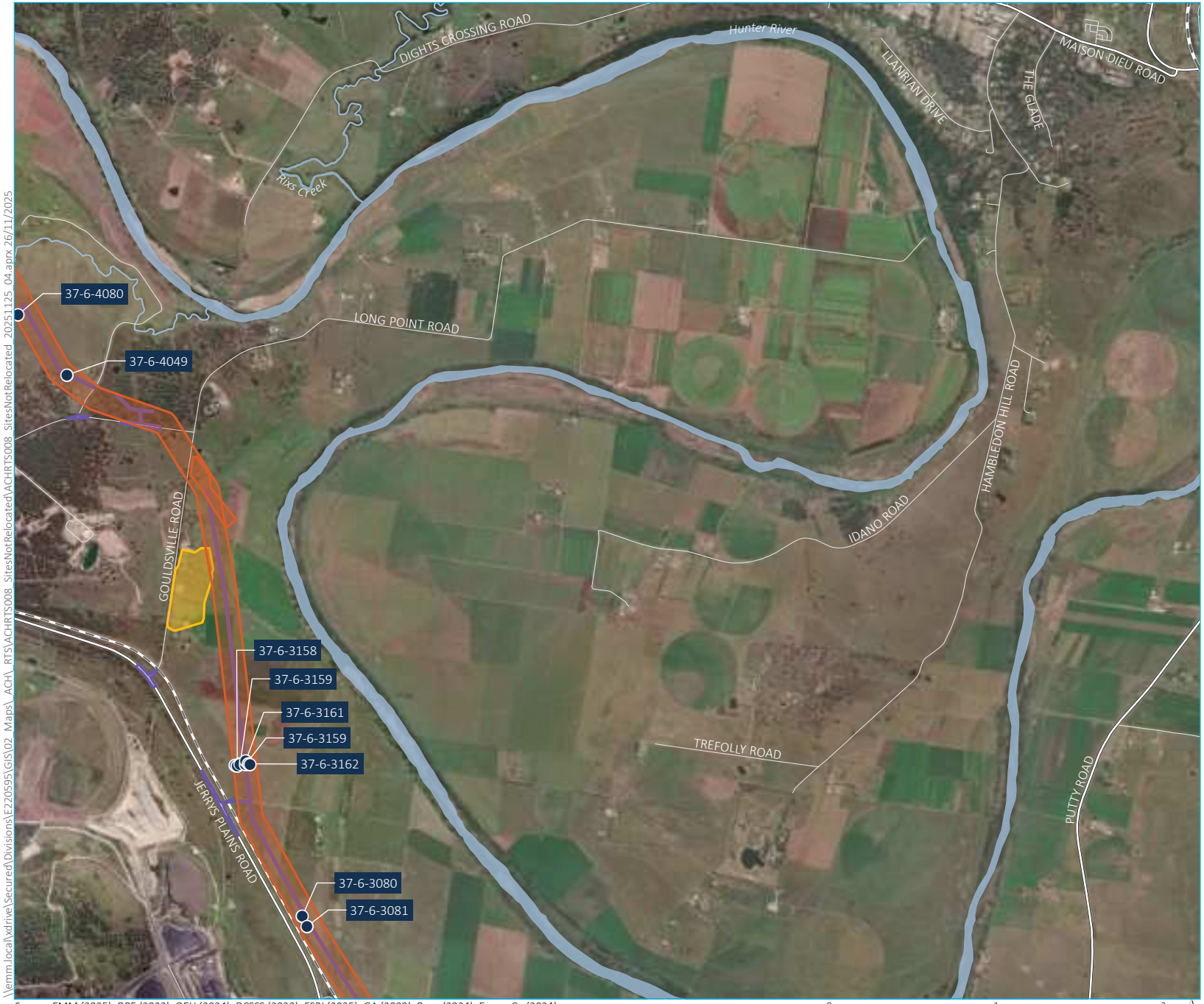
N

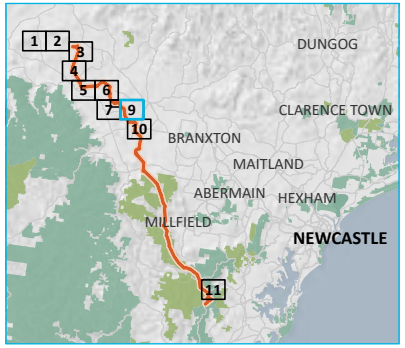
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025

Aboriginal objects, sites and places previously destroyed
Map 8 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities





KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Construction support site
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

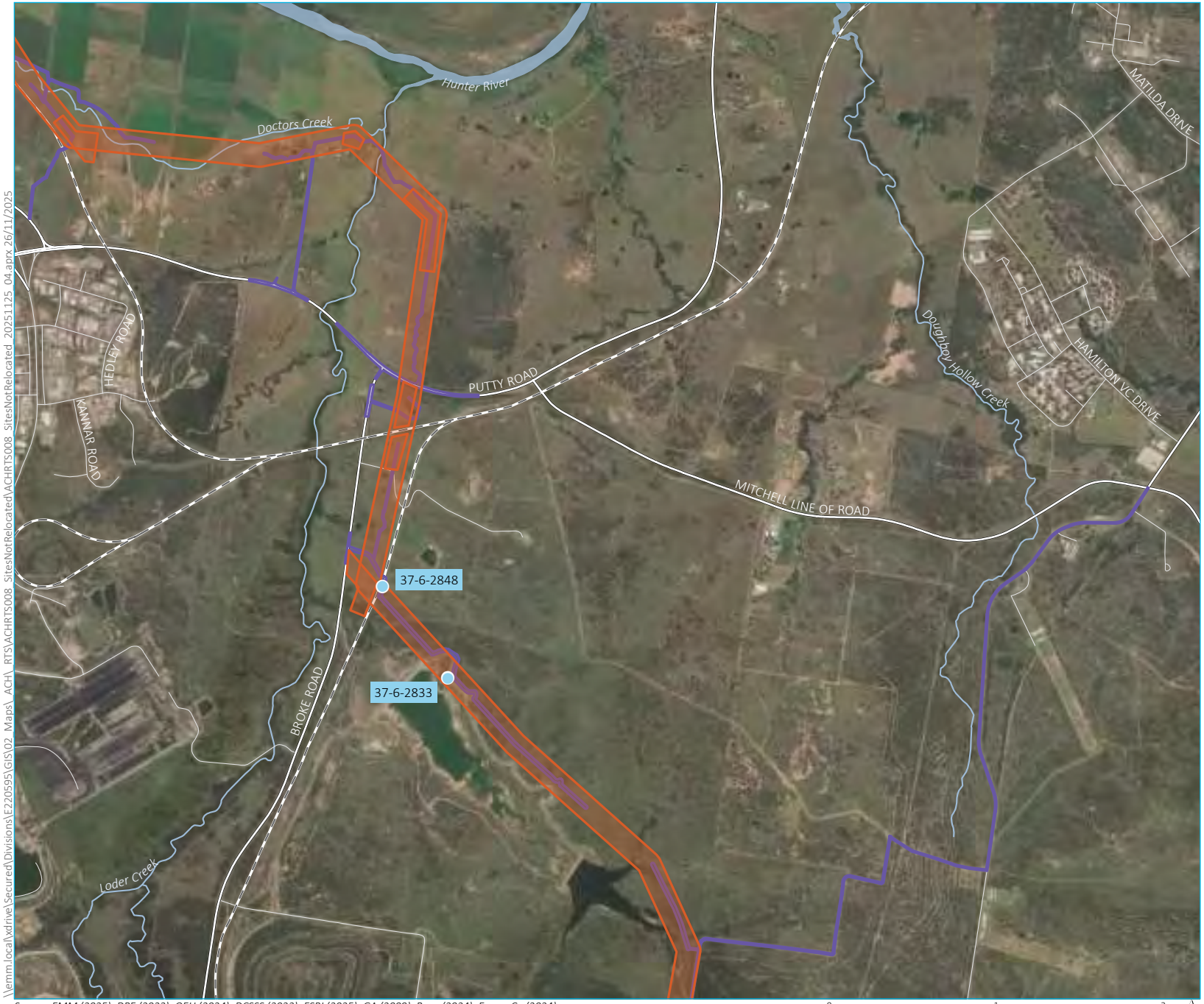
N

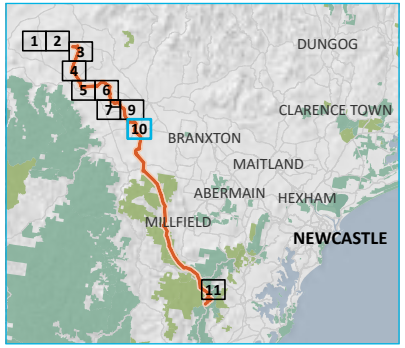
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025

Aboriginal objects, sites and places previously destroyed
Map 9 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM
creating opportunities





KEY

Previously destroyed sites

- Site registered as destroyed on AHIMS

Project impact area

- HTP corridor
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

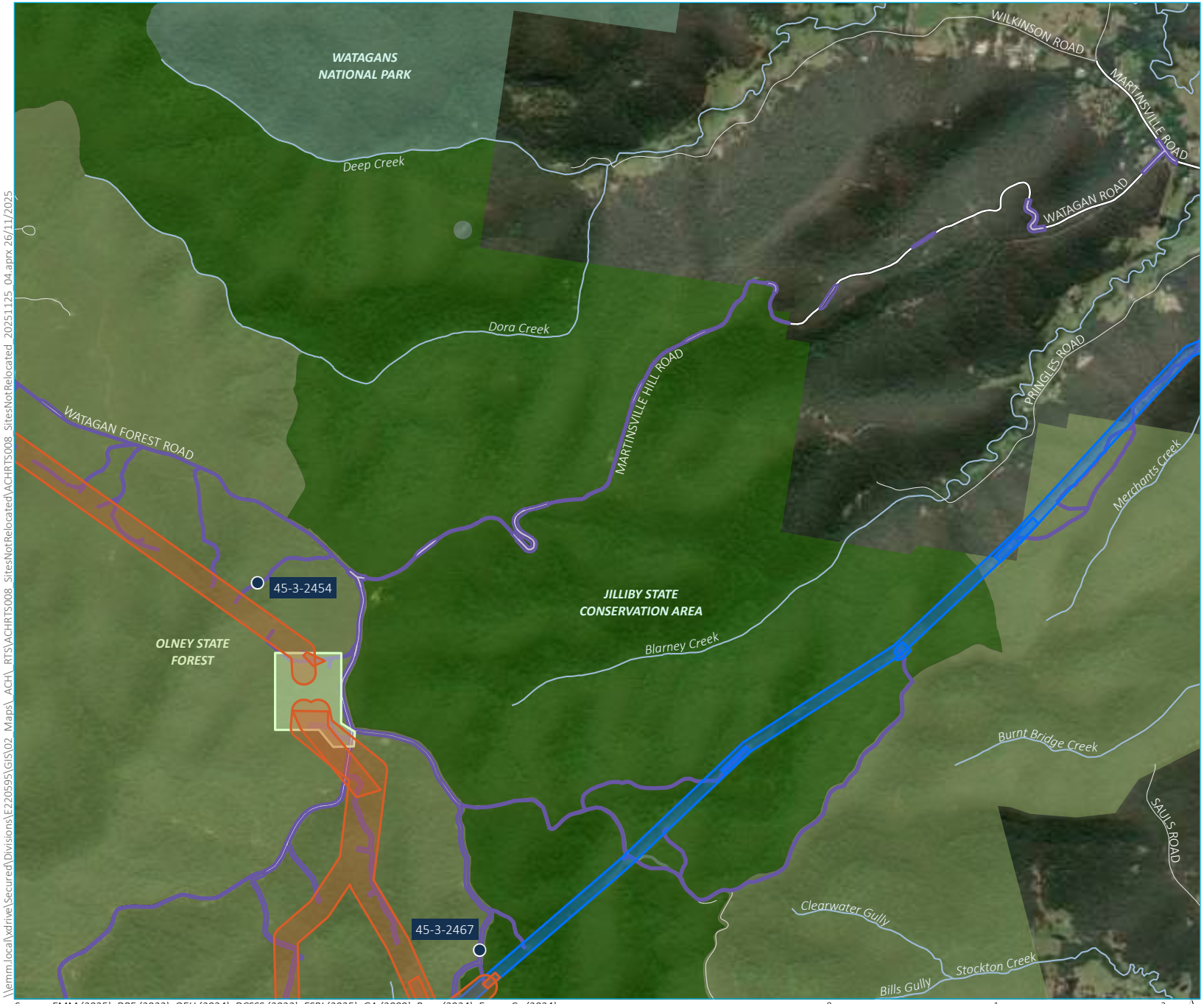
GDA2020 MGA Zone 56

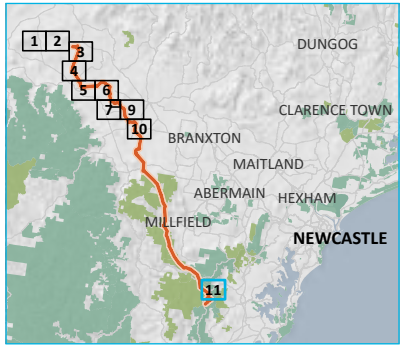
N

Aboriginal objects, sites and places previously destroyed
Map 10 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities





KEY

Previously destroyed sites

- Site which could not be relocated during field survey

Project impact area

- HTP corridor
- Olney switching station
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Aboriginal objects, sites and places previously destroyed
Map 11 of 11

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.1

EMM creating opportunities

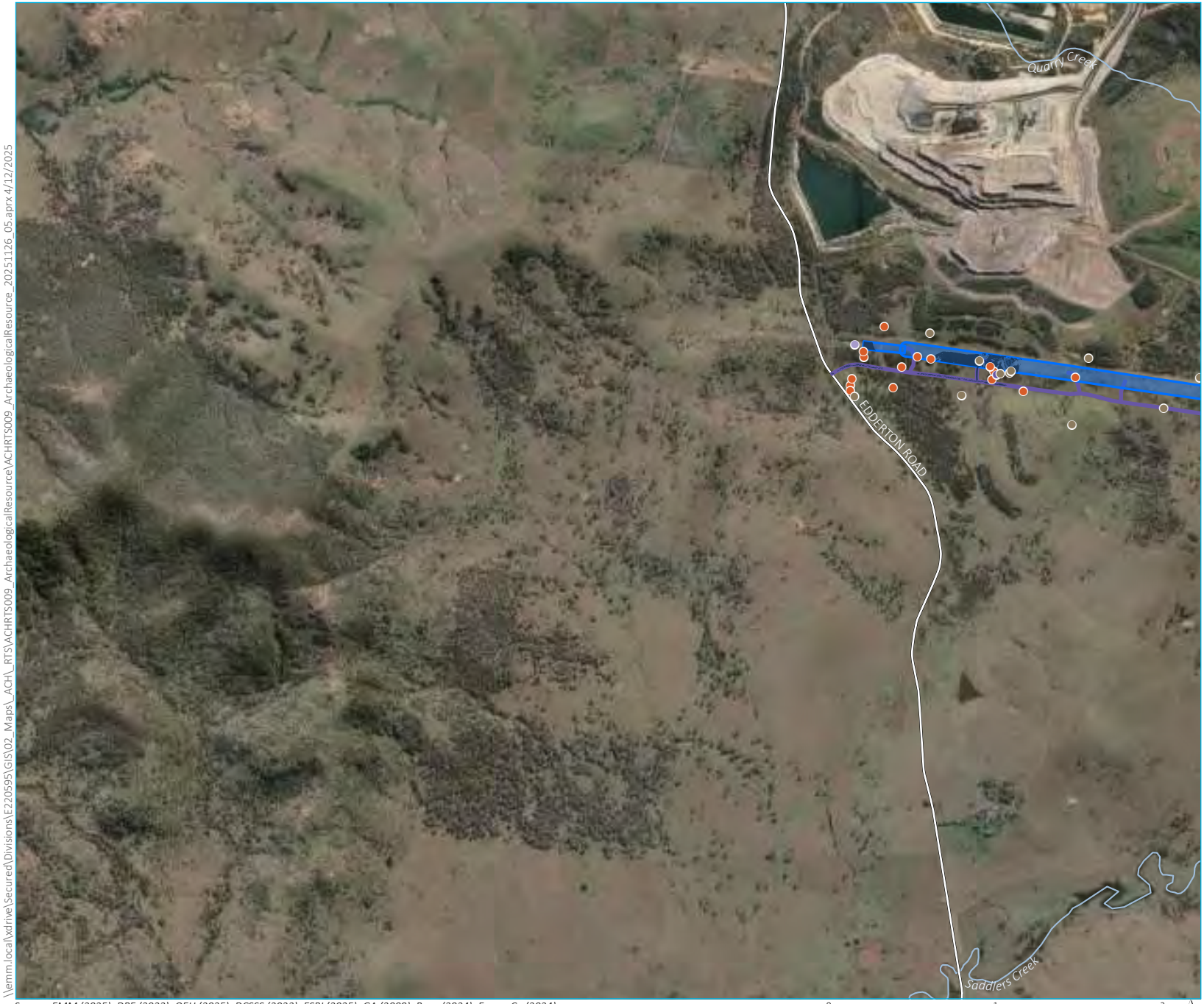
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

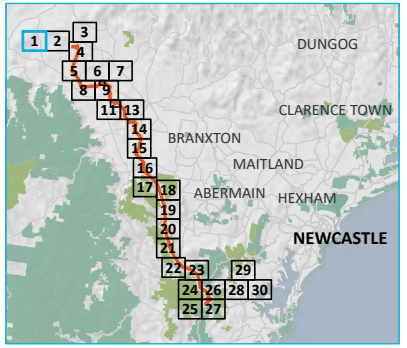
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS008_SitesNotRelocated\ACHRTS008_SitesNotRelocated_20251125_04.aprx 26/11/2025





KEY

Archaeological resource

- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

The updated archaeological resource of the amended project impact area
Map 1 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

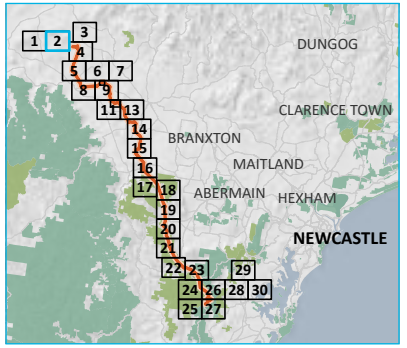
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

creating opportunities



KEY

Archaeological resource

- Culturally modified tree (carved or scarred)
- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

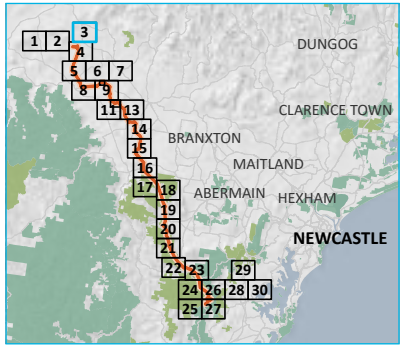
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 2 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource
- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Purported massacre site

Project impact area
- Construction support site
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

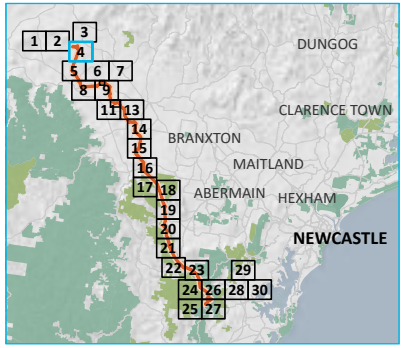
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 3 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities



KEY

Archaeological resource

- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)

Project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site
- Adjustment to existing transmission line (lines 31 and 32)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

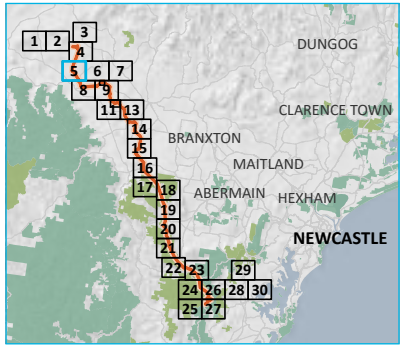
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area

Map 4 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities



KEY

Archaeological resource

- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)

Project impact area

- HTP corridor
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

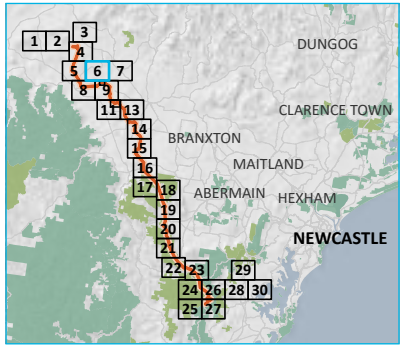
- Major road
- HTP corridor
- NPWS reserve
- State forest

The updated archaeological resource of the amended project impact area
Map 5 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N



KEY

Archaeological resource
- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)

Warkworth Sands
- Potential Warkworth Sand (Gippel 2023)

Project impact area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

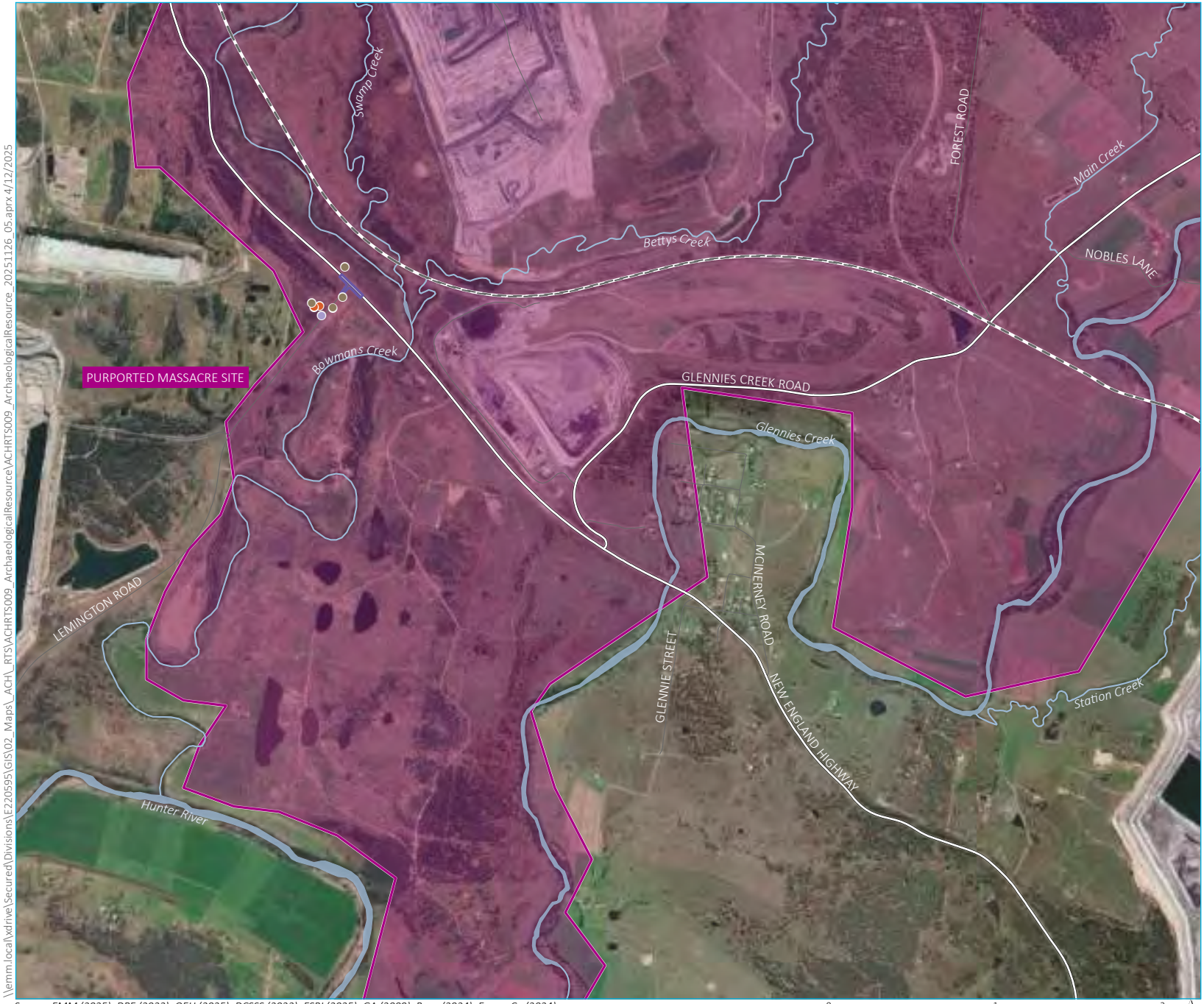
GDA2020 MGA Zone 56

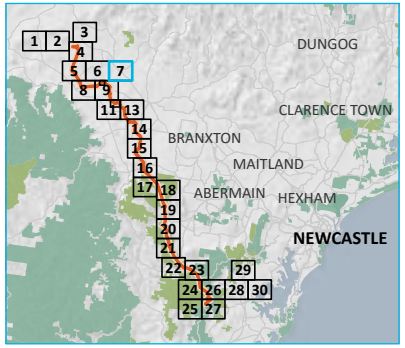
N

The updated archaeological resource of the amended project impact area
Map 6 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaeological resource
- Isolated find
- High density artefact scatter (>50)
- Low density artefact scatter (≤20)
- Purported massacre site

Project impact area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

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

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

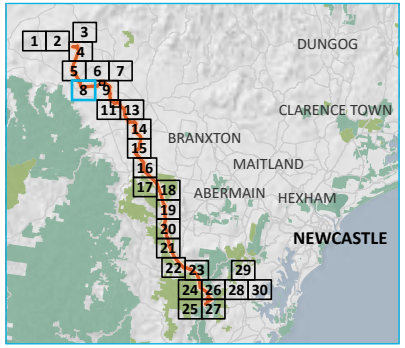
GDA2020 MGA Zone 56

N

The updated archaeological resource of the amended project impact area
Map 7 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource

- Isolated find
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Undefined artefact site

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)

Project impact area

- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

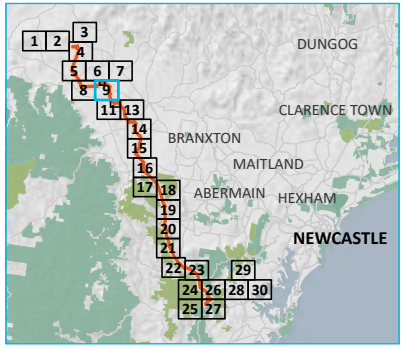
GDA2020 MGA Zone 56

N

The updated archaeological resource of the amended project impact area
Map 8 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource

- Culturally modified tree (carved or scarred)
- Focus area
- Isolated find
- High density artefact scatter (>50)
- Low density artefact scatter (≤20)

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)
- Potential Warkworth Sand (Umwelt 2023)
- Purported massacre site

Project impact area

- HTP corridor
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

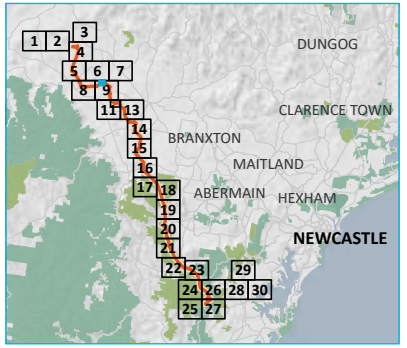
N

The updated archaeological resource of the amended project impact area

Map 9 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource

- Culturally modified tree (carved or scarred)
- Focus area
- Isolated find
- High density artefact scatter (>50)
- Low density artefact scatter (≤20)

Warkworth Sands

- Potential Warkworth Sand (Umwelt 2023)

Project impact area

- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 0.2 0.4 km

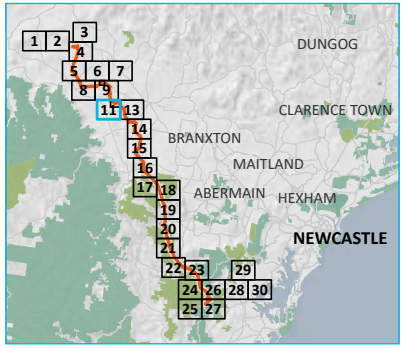
GDA2020 MGA Zone 56

N

The updated archaeological resource of the amended project impact area
Map 10 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource

- Cultural place
- Focus area
- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Undefined artefact site

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)
- Potential Warkworth Sand (Umwelt 2023)

Project impact area

- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

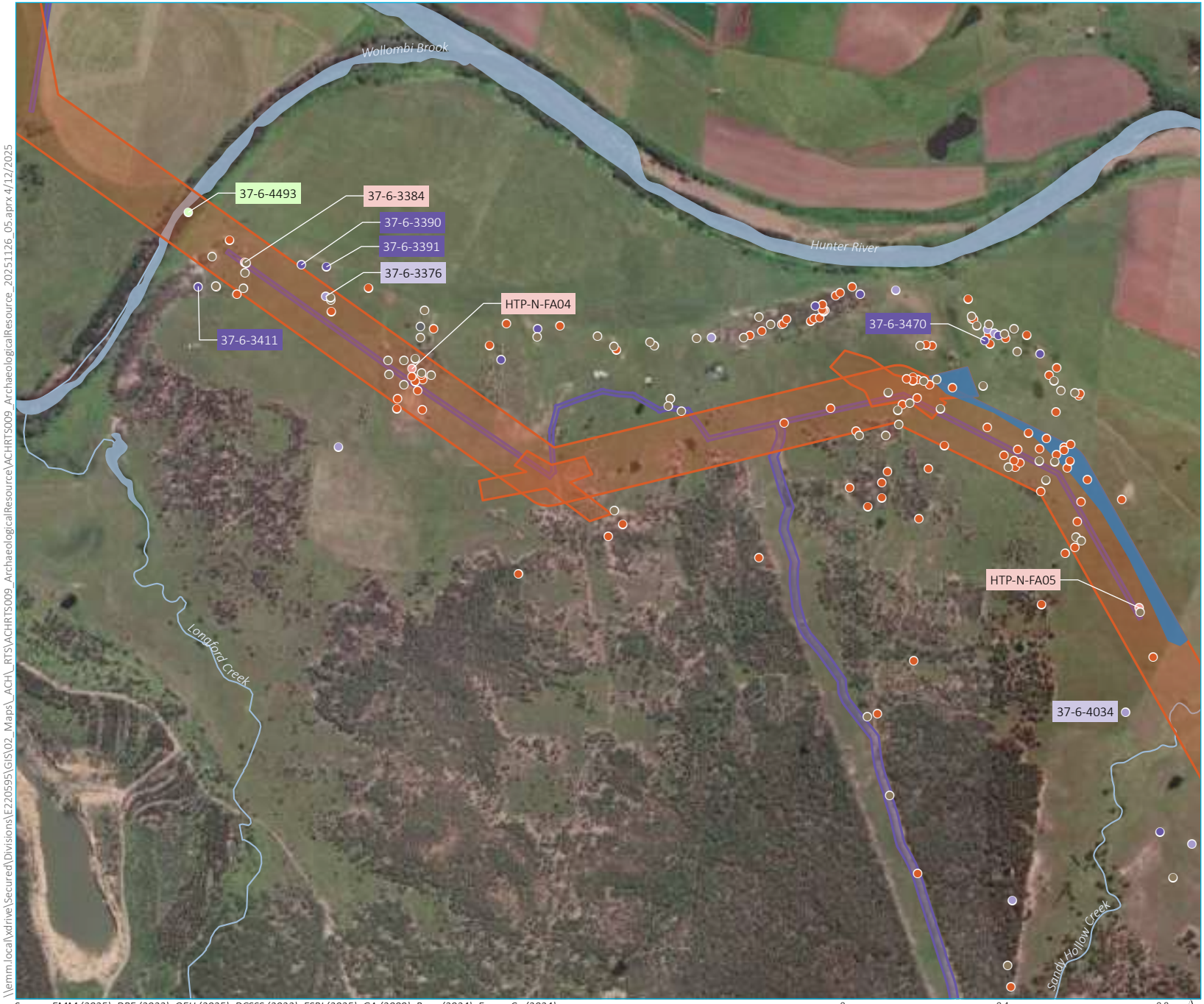
N

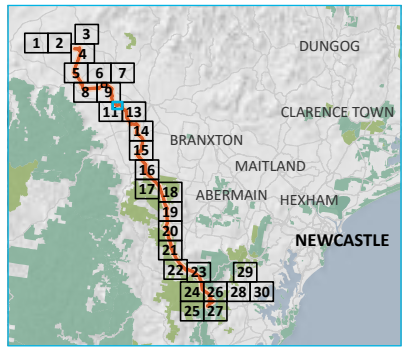
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 11 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaeological resource

- Cultural place
- Focus area
- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Undefined artefact site

Warkworth Sands

- Potential Warkworth Sand (Umwelt 2023)

Project impact area

- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

The updated archaeological resource of the amended project impact area
Map 12 of 30

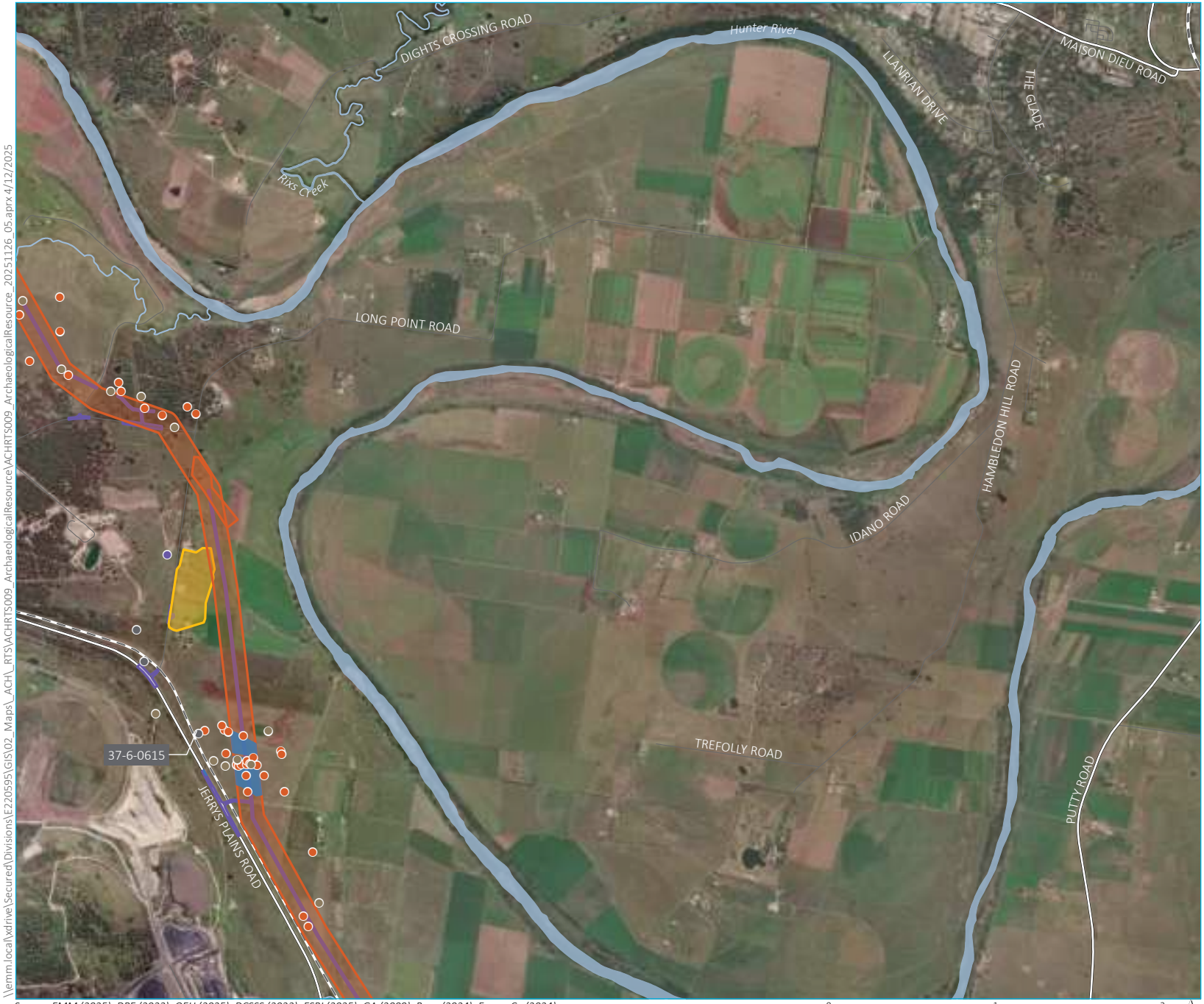
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

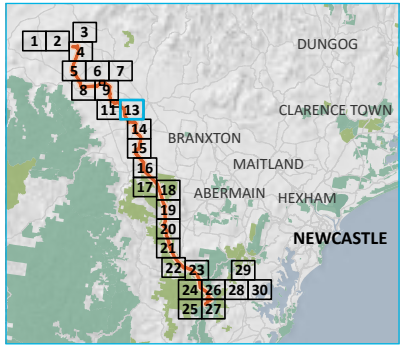
Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 0.4 0.8 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

creating opportunities





KEY

Archaeological resource

- Isolated find
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Undefined artefact site

Warkworth Sands

- Potential Warkworth Sand (Umwelt 2023)

Project impact area

- HTP corridor
- Construction support site
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

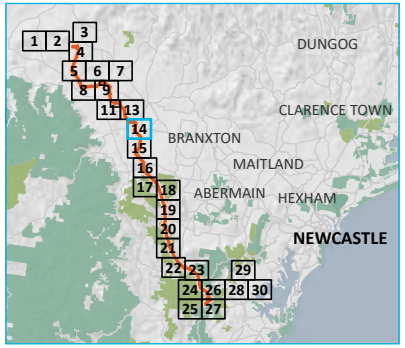
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area

Map 13 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource

- Culturally modified tree (carved or scarred)
- Isolated find
- High density artefact scatter (>50)
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Undefined artefact site

Warkworth Sands

- Potential Warkworth Sand (Gippel 2023)

Project impact area

- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

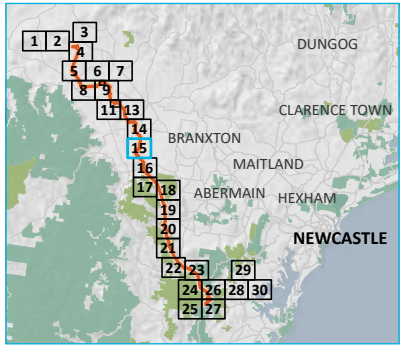
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 14 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource
- Isolated find
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)

Warkworth Sands
- Potential Warkworth Sand (Gippel 2023)

Project impact area
- HTP corridor
- Adjustment to existing transmission line (line 81)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

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

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

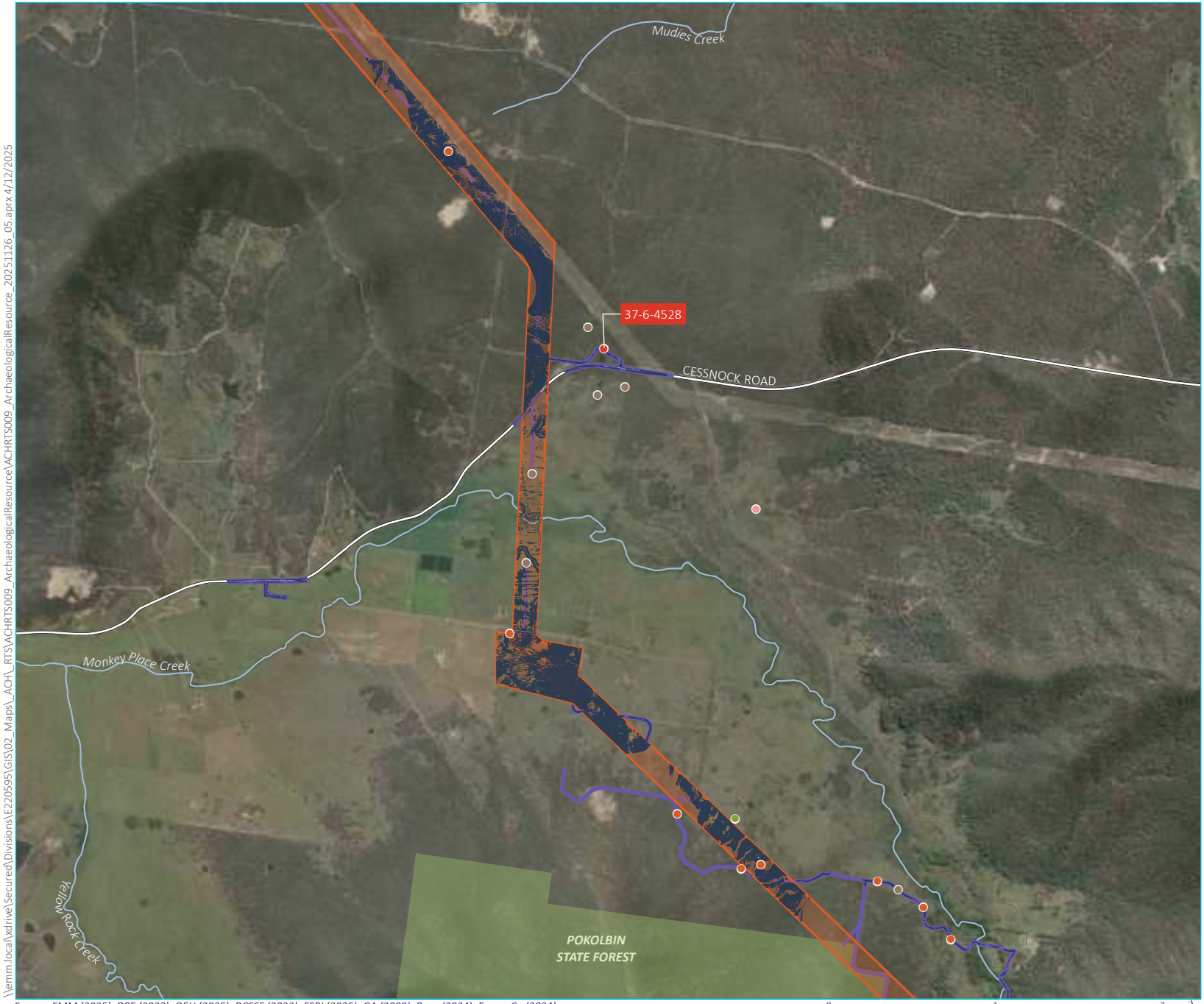
N

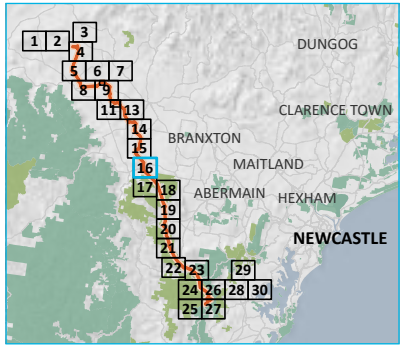
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 15 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaeological resource
- Culturally modified tree (carved or scarred)
- Focus area
- Grinding groove
- Isolated find
- Low density artefact scatter (≤20)

Warkworth Sands
- Potential Warkworth Sand (Gippel 2023)

Project impact area
- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Major road
- Minor road
- Named watercourse
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

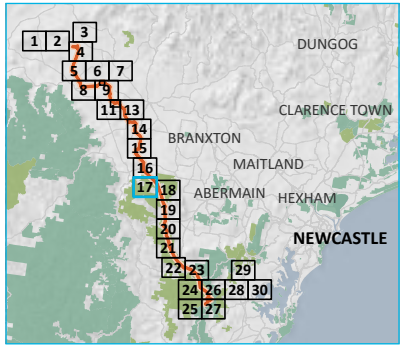
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area

Map 16 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource
- Culturally modified tree (carved or scarred)
- Isolated find
- Low density artefact scatter (≤20)

Warkworth Sands
- Potential Warkworth Sand (Gippel 2023)

Project impact area
- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Named watercourse
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

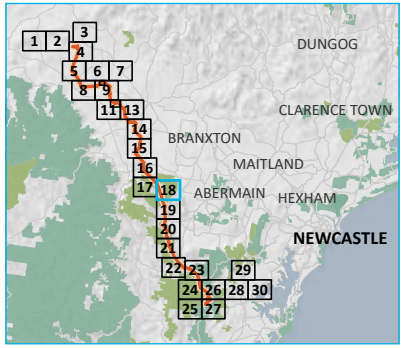
GDA2020 MGA Zone 56

N

The updated archaeological resource of the amended project impact area
Map 17 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities



KEY

Archaelogical resource

- Grinding groove
- Moderate density artefact scatter (21-50)
- Low density artefact scatter (≤20)
- Rockshelter

Project impact area

- HTP corridor
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

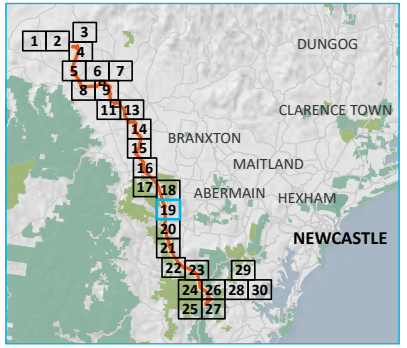
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 18 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities



KEY

Archaeological resource

- Aboriginal resource and gathering site
- Focus area
- Low density artefact scatter (≤20)
- Rockshelter
- Water hole

Project impact area

- HTP corridor
- Construction support site
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

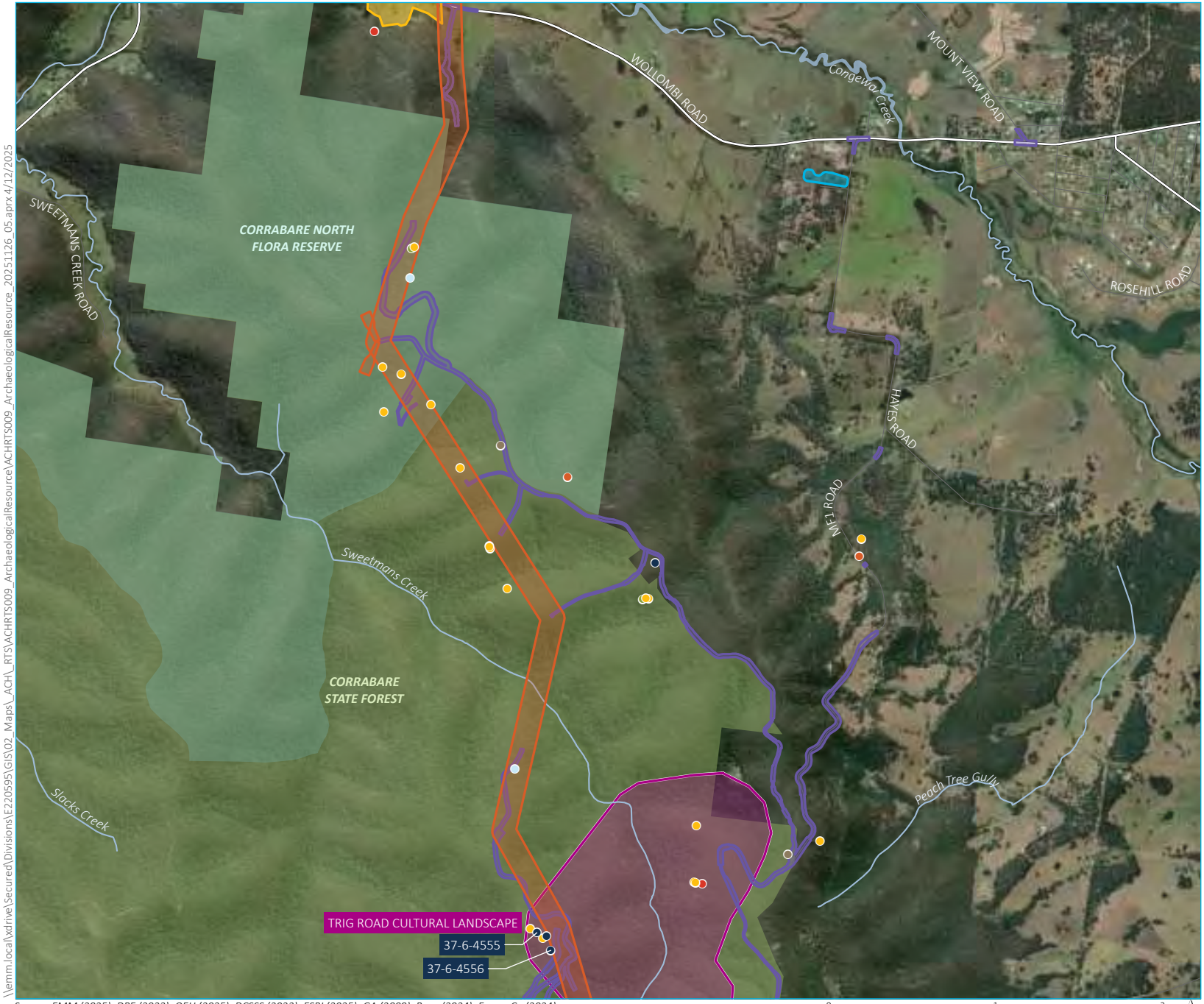
N

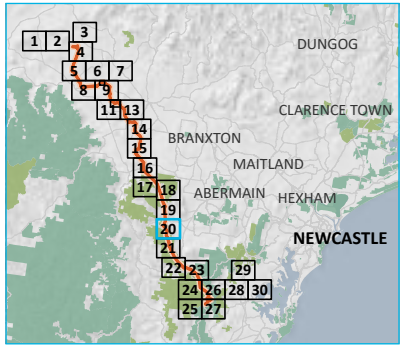
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 19 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities





KEY

Archaeological resource

- Aboriginal resource and gathering site
- Culturally modified tree (carved or scarred)
- Grinding groove
- Isolated find
- Low density artefact scatter (≤20)
- Rockshelter
- Stone arrangement
- Trig Road cultural landscape

Project impact area

- HTP corridor
- Construction support site
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

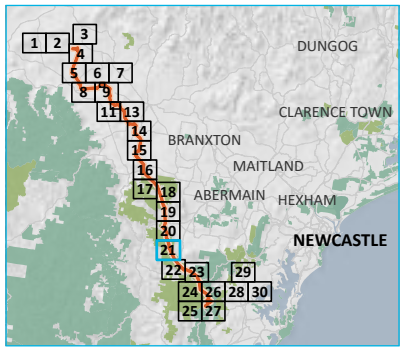
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 20 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities



KEY

Archaeological resource

- Aboriginal resource and gathering site
- Culturally modified tree (carved or scarred)
- Grinding groove
- Isolated find
- Low density artefact scatter (≤20)
- Rockshelter
- Trig Road cultural landscape

Project impact area

- HTP corridor
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Minor road
- Named watercourse
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

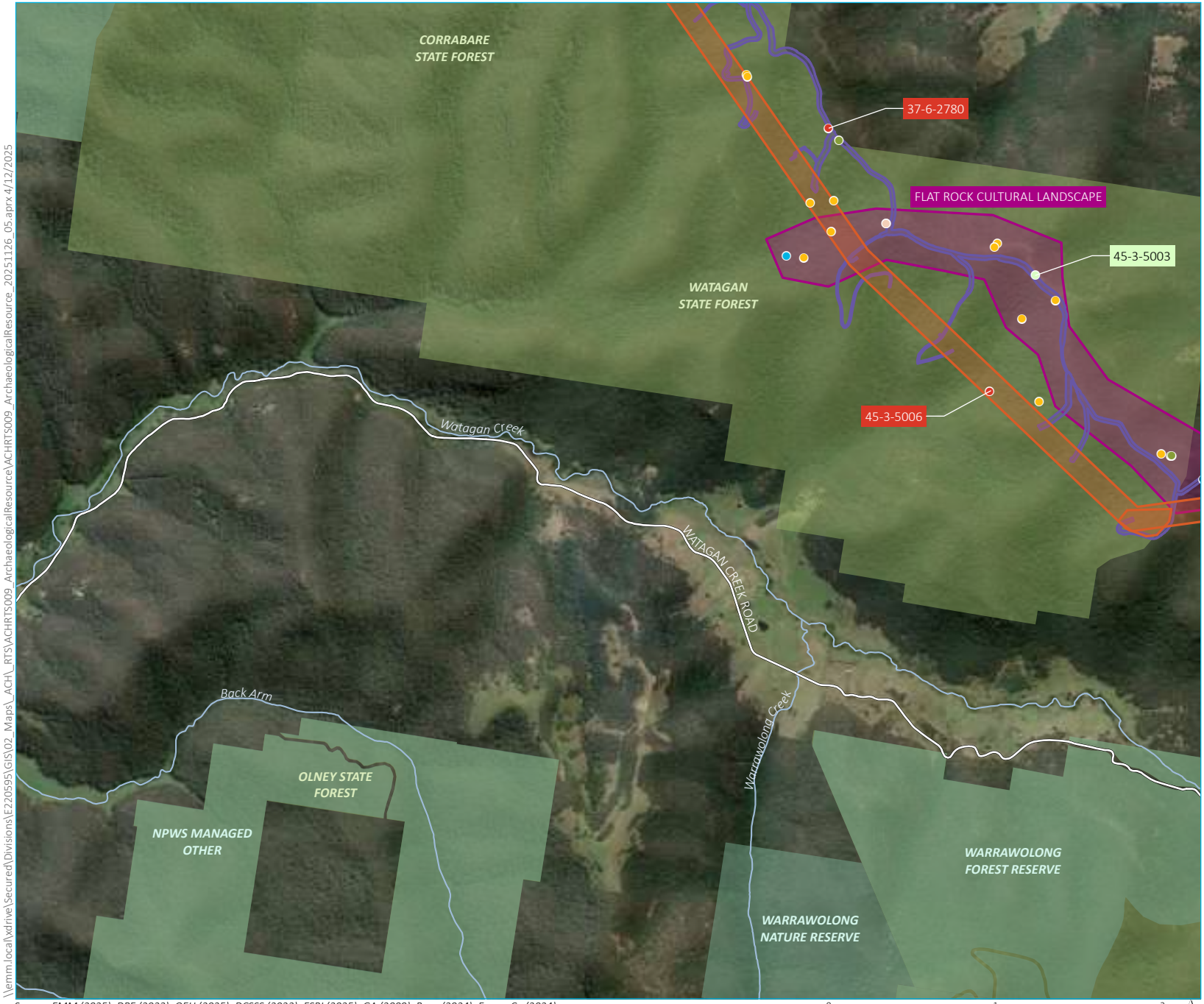
N

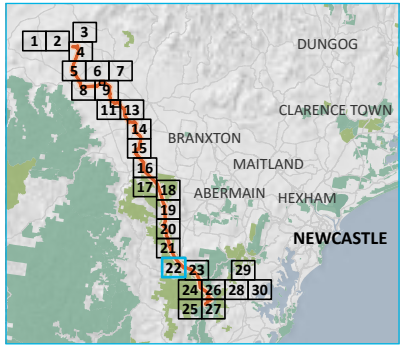
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

The updated archaeological resource of the amended project impact area
Map 21 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM
creating opportunities





KEY

Archaeological resource
- Cultural place
- Culturally modified tree (carved or scarred)
- Grinding groove
- Hearth
- Rockshelter
- Stone arrangement
- Water hole
- Flat Rock cultural landscape

Project impact area
- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Major road
- Named watercourse
- NPWS reserve
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

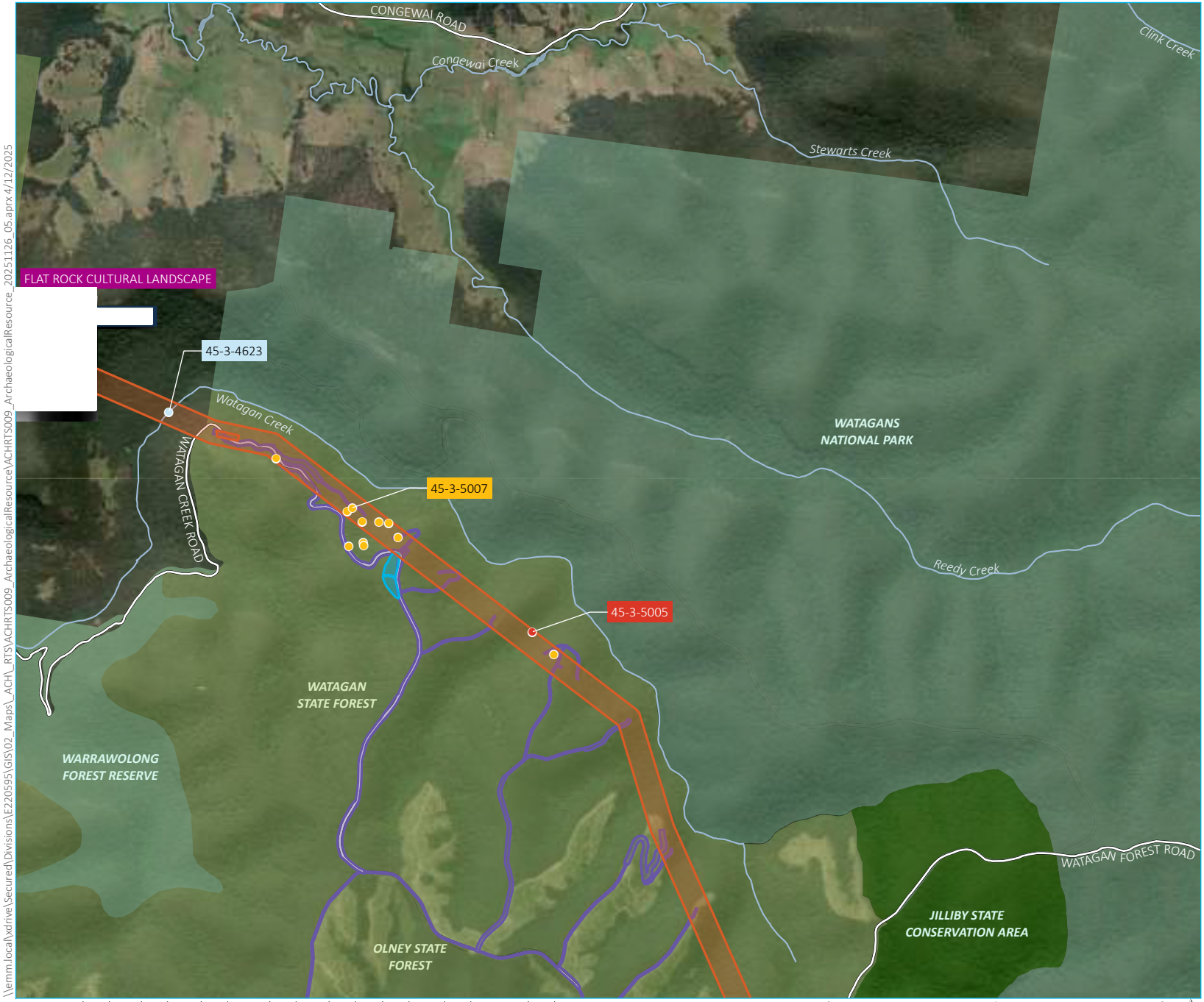
GDA2020 MGA Zone 56

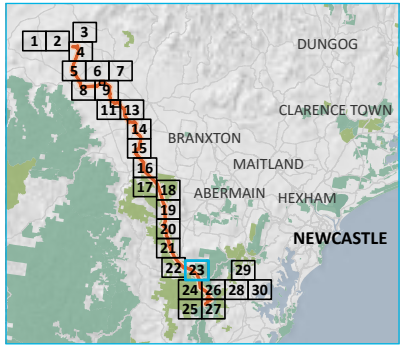
N

The updated archaeological resource of the amended project impact area
Map 22 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaelogical resource

- Aboriginal resource and gathering site
- Grinding groove
- Rockshelter
- Stone arrangement
- Flat Rock cultural landscape

Project impact area

- HTP corridor
- Laydown area
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

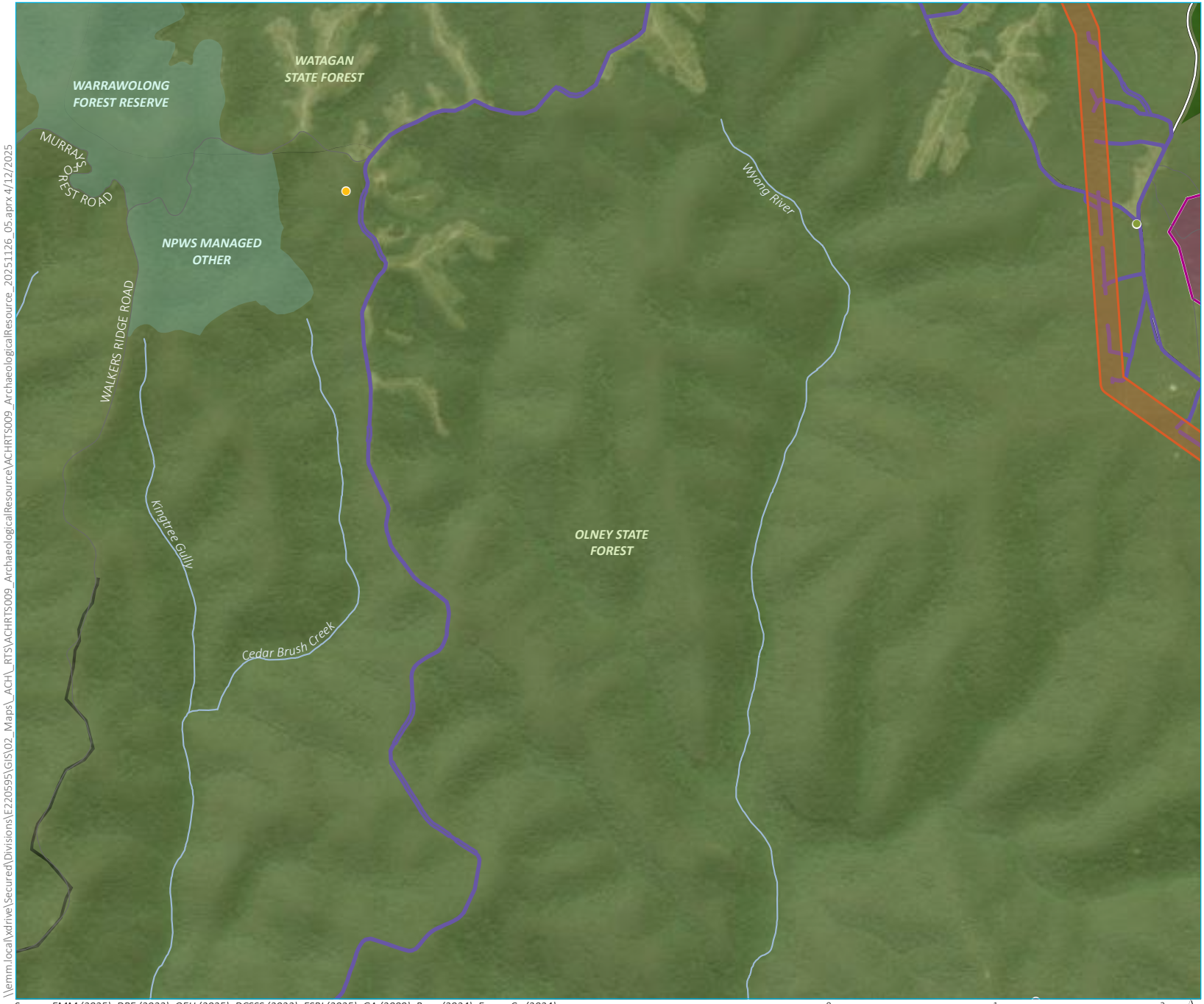
GDA2020 MGA Zone 56

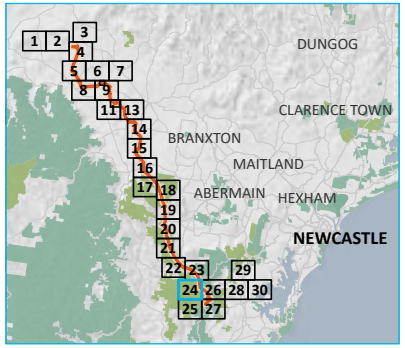
N

The updated archaeological resource of the amended project impact area
Map 23 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaelogical resource
- Culturally modified tree (carved or scarred)
- Grinding groove
- Rockshelter
- Abbots Falls cultural landscape

Project impact area
- HTP corridor
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Major road
- Minor road
- Named watercourse
- NPWS reserve
- State conservation area
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

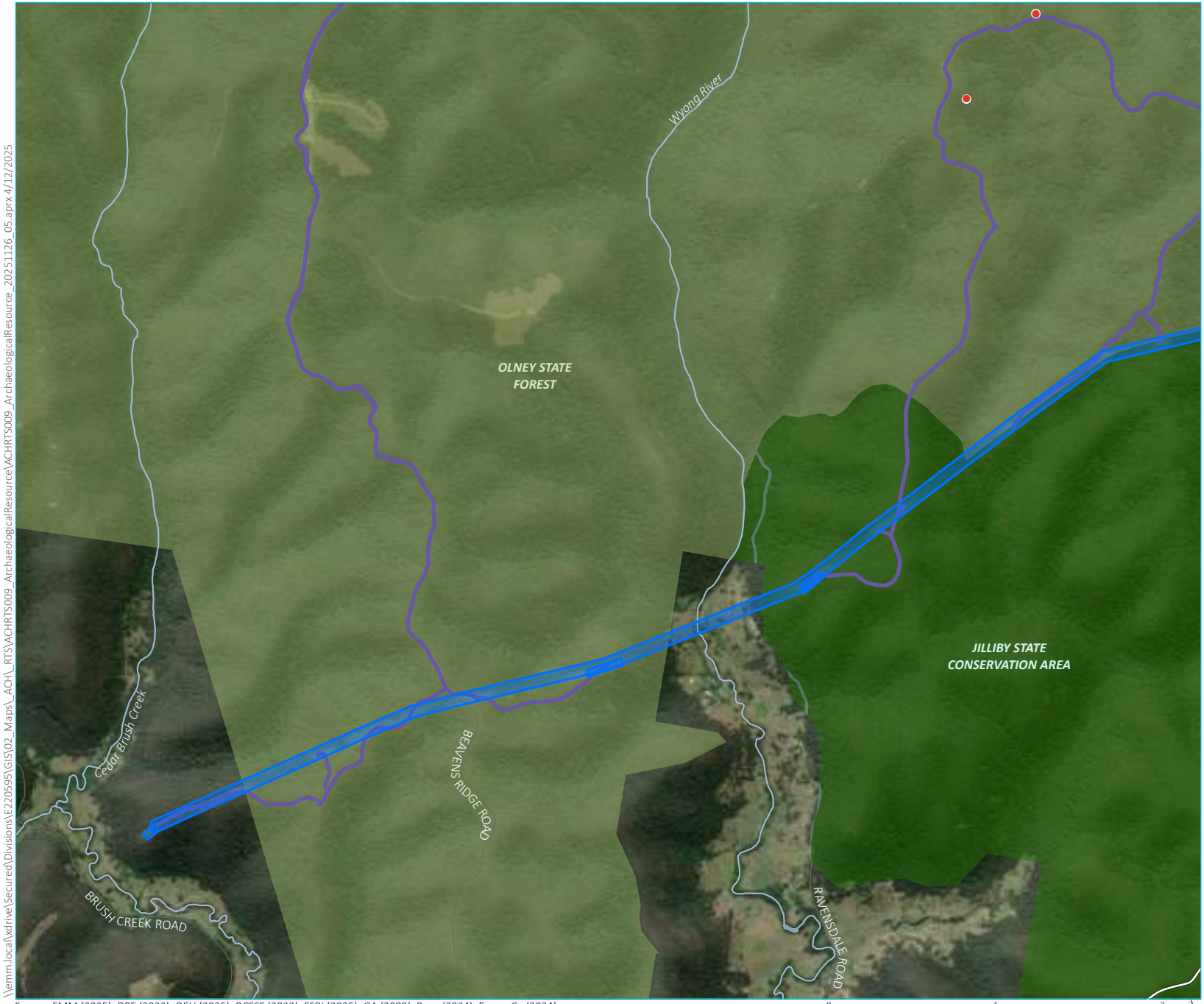
GDA2020 MGA Zone 56

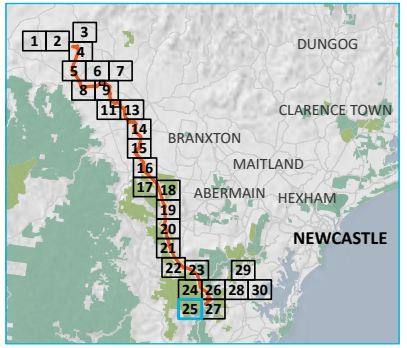
N

The updated archaeological resource of the amended project impact area
Map 24 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaelogical resource

- Grinding groove

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

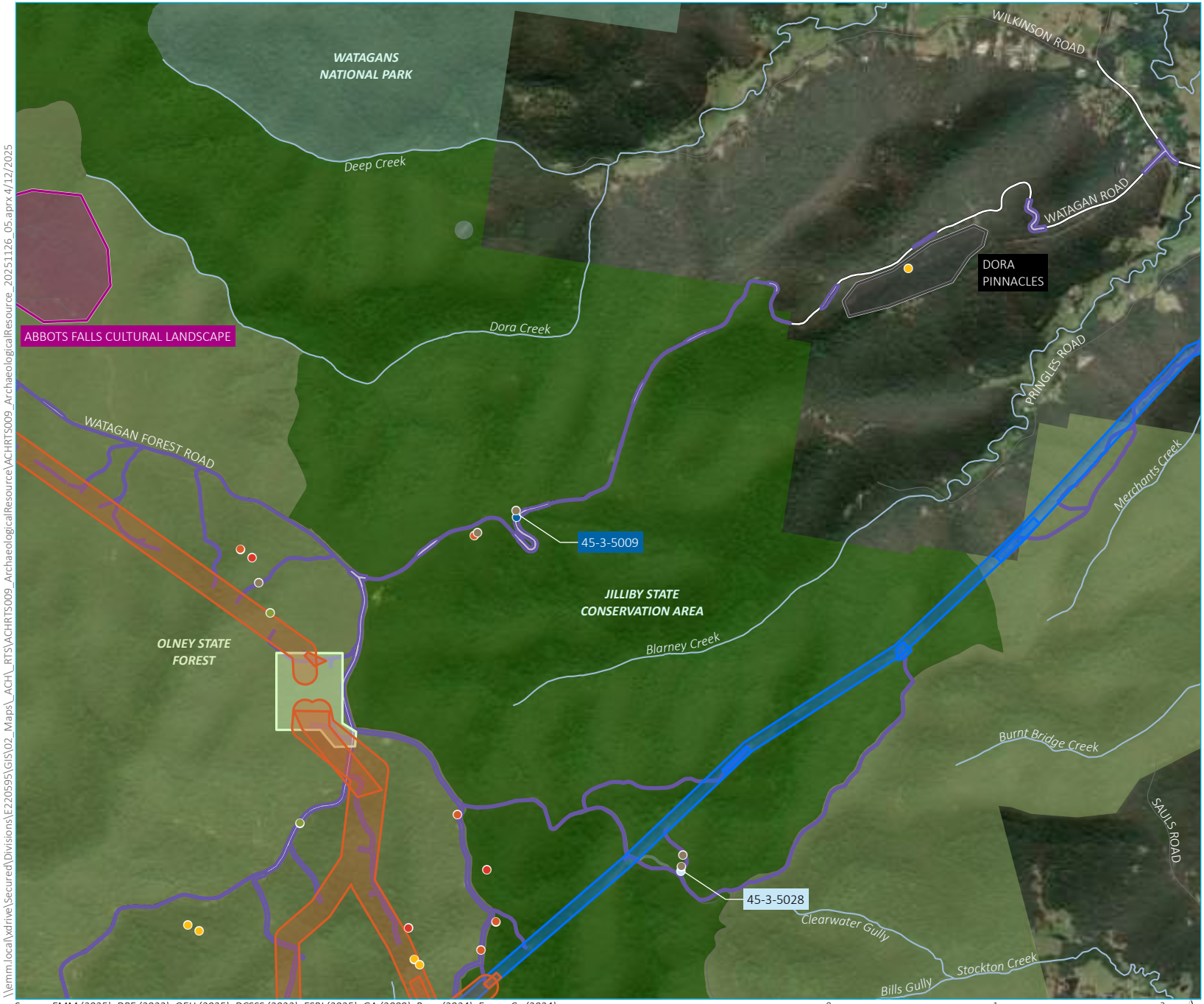
GDA2020 MGA Zone 56

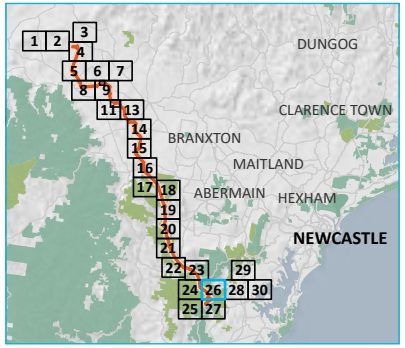
N

The updated archaeological resource of the amended project impact area
Map 25 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaeological resource

- Aboriginal resource and gathering site
- Contemporary site (wishing well)
- Culturally modified tree (carved or scarred)
- Grinding groove
- Isolated find
- Low density artefact scatter (≤20)
- Rockshelter
- Abbots Falls cultural landscape
- Dora Pinnacles

Project impact area

- HTP corridor
- Olney switching station
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

The updated archaeological resource of the amended project impact area
Map 26 of 30

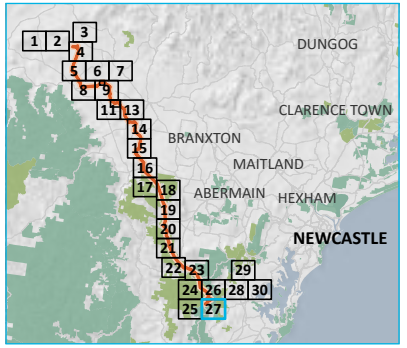
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

creating opportunities



KEY

Archaeological resource
- Rockshelter

Project impact area
- HTP corridor
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Major road
- Minor road
- Named watercourse
- NPWS reserve
- State conservation area
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

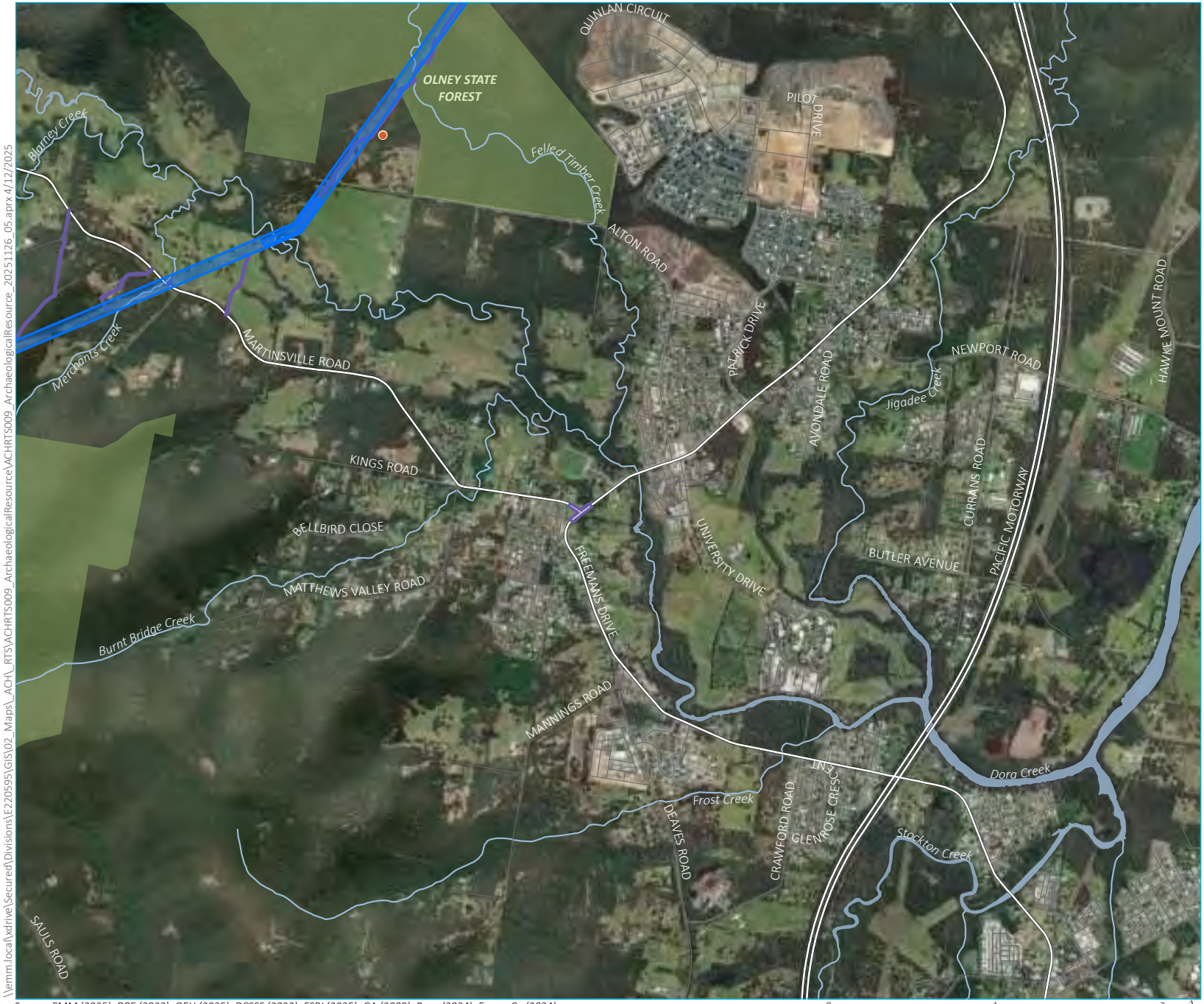
GDA2020 MGA Zone 56

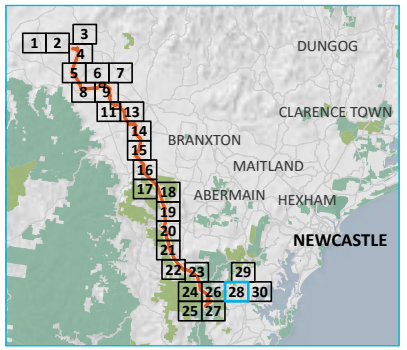
N

The updated archaeological resource of the amended project impact area
Map 27 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaeological resource

- Isolated find

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

The updated archaeological resource of the amended project impact area
Map 28 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities

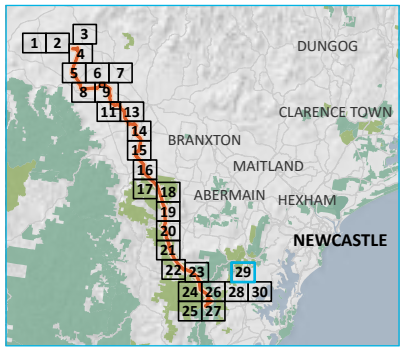
Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025



KEY

Archaeological resource
- Isolated find
- Low density artefact scatter (≤20)

Project impact area
- Construction support site
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment
- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY
- Major road
- HTP corridor
- NPWS reserve
- State forest

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

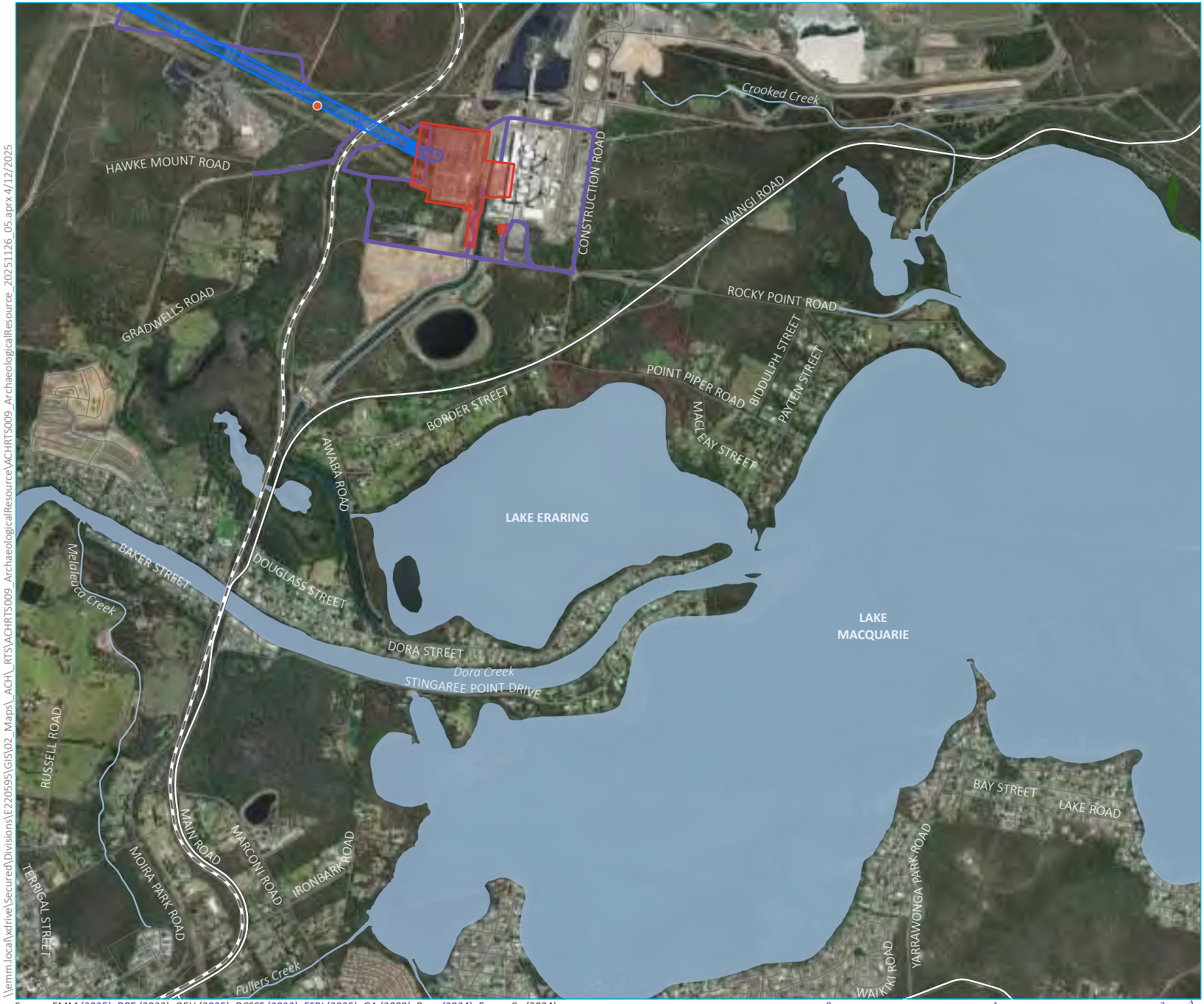
GDA2020 MGA Zone 56

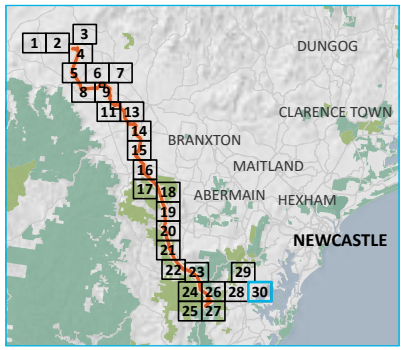
N

The updated archaeological resource of the amended project impact area
Map 29 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities





KEY

Archaeological resource

- Isolated find

Project impact area

- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Unlabelled sites reflect isolated objects or low density artefact scatters or destroyed sites

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State conservation area

INSET KEY

- Major road
- HTP corridor
- NPWS reserve
- State forest

Source: EMM (2025); DPE (2023); OEH (2025); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

The updated archaeological resource of the amended project impact area
Map 30 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 6.2

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS009_ArchaeologicalResource\ACHRTS009_ArchaeologicalResource_20251126_05.aprx 4/12/2025

7 Significance assessment

7.1 General

A summary of the significance assessment process is provided in the exhibited ACHA (EMM 2023, p. 401), and the subsequent section continues to adopt this approach.

7.2 Statement of significance

The significance assessment developed for the exhibited ACHA remains applicable for majority of the sites, despite the increasing number evident as a result of changes outlined in *Chapter 6 (The archaeological resource)*. While the cultural assemblage has increased, the site types and their features remain largely unchanged with rockshelters, grinding grooves, culturally modified trees, cultural places, and various densities of stone artefacts all found in the ACHA and this ACHA addendum. Specifically, the exhibited ACHA states:

> At a general level, when considering scientific significance, a number of the sites can be considered to have moderate (local) or high (regional) significance with the ability to provide information on the past activities of the area (research potential). With specific reference to the cultural assemblage of the project impact area, rarity and aesthetic values are also prevalent in determining a site's significance. These sites can primarily be divided into the following main categories:
>
> Rockshelters that would have been used for habitation in the past. These sites form the foundational information for past Aboriginal populations, behaviour and activity across Australia, and are therefore of high scientific significance. Commonly, they include art and other cultural deposits that make them extremely important to the local Aboriginal community as well. This is indeed the case for the 'Deep Ck Mother SWA' (#37-6-3714) rockshelter, which has over 146 art motifs, and which has significant opportunity to explore social, economic and ceremonial activities at this location, as well as opportunities to explore relative and absolute chronologies from the art. However, in the case of HTP-C-RS02 and HTP-C-RS16, these sites consist of low overhang with no cultural activity and no deposit, and as such can provide limited further understanding of its use, or the broader region's use, by people in the past. Indeed, these sites only meet the size requirements associated with the criteria to define them as having the potential to be used in the past. This is a similar case for HTP-S-RS19 and HTP-S-RS20, although here some deposits in the base of the sites were observed, and which may be subject to further investigation to allow further validation. Although, it is highlighted that some Aboriginal participants consider that all overhangs and caves encountered during the field program were considered to have been used in the past, irrespective of material evidence, and therefore retain significance.
>
> Grinding grooves reflect the maintenance and curation of stone tools, primarily spears and/or hand axes, used by the local Aboriginal people. While historically of limited research value aside from determining the types of tools that may have been sharpened (through size and shape of the groove), more recent chemical extractive processes (e.g. Fullagar R, Stephenson B, Hayes E 2017; Smith MA, Hayes E, Stephenson B 2015) have enabled more extensive resource exploitation to be obtained (e.g. the recovery of microscopic blood of animals hunted by the sharpened tool for example). As such, these sites increasingly have significant research value that can contribute to our understanding of the past use and visitation of a region. They also meet a number of other significance criteria. They commonly have some form of aesthetic values, being prevalent on sandstone platforms and near running water or natural billabongs and lakes, etc. – all environmental factors that are critical to their formation and, therefore, contribute to this value. They are also frequently highlighted as important to the local Aboriginal community, being one of the few enduring site types that visually demonstrate the longevity of Aboriginal people's use and visitation to a place. In the case of the project impact area, grinding grooves have some level of ranking based on the above factors, as well as their rarity and representativeness. Both HTP-N-

GG01 and TRGG (#45-3-2456) consisting of impacted grinding grooves in the Singleton Military Area and some 70 grooves near Trigg Road in the Corrabare State Forest, respectively, were both avoided through project redesign due to their local rarity and/or regional representativeness. Three grinding groove sites are within the project impact area, HTP-C-GG03, HTP-C-GG05, and HTP-S-GG01, all of which consist of a small number of grooves (≤5). These are found in locales where significant numbers of groove sites are documented, many with substantially more grooves and/or other cultural materials present. As such, these sites are classified as having moderate scientific values when compared in the broader context, being of limited representative or research potential, but acknowledging the general rarity of these sites more generally. In the cases of both HTP-C-GG03 and GTP-C-GG05, Aboriginal community views considered them of greater value, and their significance has been elevated [to high significance]….

Stone arrangements relate to either hunting activities (e.g. hunting hides) or ceremonial activities often associated with Dreaming places and stories. In other parts of Australia, they may also relate to habitation (e.g. stone huts (McNiven I, Dunn JE, Crouch J. 2017)). Given the cultural landscape the project impact area is within, encountered stone arrangements are considered to more likely reflect ceremonial activities. As such, these sites have strong cultural importance to the local Aboriginal community, being one of the few anthropogenic structures that can be connected back to pre-contact Aboriginal societies and their ceremonial activity. Such sites also have various research potential, either directly where the nature of their construction and/or where cultural deposits are present and can be explored for activities and timing, and/or indirectly through their spatial location, view-lines and connection to/from other places. In the case of the project impact area, only HTP-CVM08 is within the project impact area, which is only known because of traditional knowledge and a contemporary use of the site, and is hence considered of high cultural value. The general sparsity of such features in the broader region also results in the site having high research values, being both rare and representative of the locale.

Culturally modified trees indicate the use and manipulation of the cultural landscape by Aboriginal people in the past. While typically of limited scientific significance, they are increasingly rare in the region due to land clearance, especially in HTP North. Following further specialist investigations, only a single culturally modified tree remains within the project impact area that is indicative of traditional scarring. These site types are typically important to the local Aboriginal community and have a moderate level of cultural value.

Cultural places are highly variable and encountered across the project impact area. They include archaeological, traditional, historical and contemporary places and values, some of which have a physical place, some reflect an analogy of a broader landscape feature, and others have limited spatial definition. Many have some level of research value from an anthropological perspective in understanding the behaviours, concerns and/or views of contemporary Aboriginal people. In the case of the project impact area, Flat Rock Lookout (HTP-C-CP01) comprises a place of substantial significance to the contemporary Aboriginal community largely due to a density of archaeological findings and reported association with the ritual domain, as well as opportunities to investigate pre-contact behaviours. The Hunter River crossings (HTP-N-CVM01) may also retain some research value, although this identification is based on a prediction of ancestral remains in these areas, rather than necessarily knowledge of their presence. The remaining sites reflect analogies to broader resources and gathering activities, which are widely known, and which likely have comparable flora and fauna across the region and/or reflect contemporary places (e.g. HTP-S-CS01), which has no specific cultural knowledge, but a modern belief it may have been used in the past. Such sites are identified as having cultural importance but limited, if any, research value.

High and moderate density artefact scatters – both surface and sub-surface – that indicate the occupation and/or repeat visitation of a locale by people in the past. A significant portion of the cultural assemblage consisted of surface and/or subsurface stone artefactual material (>20 per square metre), which encompassed 10 (31%) of the 32 discrete sites within the project impact area. In most instances,

these sites only just exceed thresholds above the background scatter, and are frequently in disturbed areas, such as 2010-HVOSE-15 (#37-6-4023) which is truncated by an existing transmission easement. Of note is the prevalence of moderate and high-density sites in the vicinity of Parnells Creek which, while individually reflect only moderate research value, collectively may suggest a more important cultural assemblage reflecting more extensive use in the past. Several have indications of buried cultural deposits, such as HVOCP TR47-AS3 (#37-2-6514), HVO-1267 (#37-6-3384) and HTP-N-AS71 (#37-2-6665), and which can be explored to inform procurement, technological behaviours, and inform temporal change if *in situ*. None of the sites encountered may be considered rare, primarily being in HTP North where the regional assemblage is dominated by stone artefact sites and, given the general disturbance along the project [impact area], none hold representative qualities. Given this, most of these sites are assigned a moderate research value, being more marginal in what types of information can be obtained.

All of the Aboriginal objects, places and sites referenced in the exhibited ACHA extract above continue to be located within the amended project impact area and therefore remain relevant. In addition, the amendments and changes to the cultural assemblage have incorporated additional sites into these over-arching significance categories. This notably includes:

- the inclusion of additional rockshelters (a further eight within the amended project impact area, and five outside but within 55 metres of the amended project impact area, three outside the amended project impact area but may be affected). Those identified within the amended project impact area are typically caves and overhangs identified by the field survey, which have limited evidence of cultural materials (e.g. HTP-C-RS03 [#37-6-4679], HTP-C-RS15 [#37-6-4557], HTP-C-RS16 [#37-6-4558], HTP-C-RS17 [#37-6-4562], HTP-C-RS18 [#37-6-4683], HTP-C-RS24 [#37-6-4682], HTP-C-RS44 [#37-6-4554], HTP-C-RS45 [#37-6-4674], HTP-C-RS61 [#45-3-5034], HTP-S-RS20 [#45-3-5004]). They are included here primarily since they have soil profiles in or nearby that could be investigated to further validate their use, and as such have research potential. These are generally considered of moderate significance. The eight rockshelters outside the amended project impact area, either within 55 metres or part of the proposed cultural values mitigation strategy, are primarily previously documented as containing various art motifs and/or cultural deposits, and in most instances are identified as significant to the local Aboriginal community (CABANS RD CLIFF SWA [#45-3-4516], SWEETMANS CK OCHRE BOULDER SWA [#37-6-3782], HTP-C-RS14 [#45-3-5013], Corrabare State Forest Road 2 [#45-3-3582], Corrabare State Forest Western Side of Langans Rd SWA [#45-3-3583], and Corrabare [#45-3-2140]).[7] As such, all of these sites are considered to have high significance, being able to substantively contribute to our past understanding of the region

- the inclusion of additional grinding grooves (a further three within the amended project impact area, and seven outside but within 55 metres of the project impact area). These include two highly significant grinding groove sites that were avoided in the exhibited ACHA (e.g. TRGG GRINDING GROOVE SITE [#45-3-2456], Monkey Place Creek / Broken Back Trail [#37-6-0552/#37-6-0809]), and which being on the periphery of the amended project impact area have now been considered. However, the majority of the additional sites reflect individual or small numbers of grooves and/or features limiting their research potential; and as such are typically identified as being of moderate significance

[7] These values exclude HTP-C-RS15 (#37-6-4557) and HTP-C-RS16 (#38-4-0221) that are outside the amended project area, but retain limited evidence of cultural materials, engravings or art. They do contain soil profiles that can be investigated. As such, they align more closely with those moderately valued sites outlined here, and which can be further validated through additional investigations where required.

- the inclusion of additional stone arrangements (a further two within the amended project impact area, and two outside, but within 55 metres of the amended project impact area). These include a number of significant stone arrangements that early refinements of the project avoided due to their significance (e.g. HTP-C-SA01 [#37-6-4538]; HTP-C-SA04 [(#37-6-4556]), but which are now within larger buffers and considerations of this ACHA addendum. Only HTP-C-SA03 (#37-6-4537) is considered of more moderate scientific significance, since it has been subject to substantial disturbance and is in poor condition, but is still considered of high overall significance due to its importance to the Aboriginal community

- the inclusion of culturally modified trees (a further two within the amended project impact area, and four outside, but within 55 metres of the amended project impact area). All but one of these have not been subject to specialist investigation (and validation) but are typically considered of moderate significance given their rarity as outlined above

- the inclusion of additional cultural places and/or resource and gathering places (a further two within the amended project impact area, and three outside, but within 55 metres of the amended project impact area). These are typically various locales of flora, fauna, or water identified as being of important to the Aboriginal community. These sites are relatively common and have limited scientific value, but are considered to have cultural significance

- the inclusion of high and moderate artefact scatters and/or associated cultural deposits (a further 10 within the amended project impact area, and 12 outside but within 55 metres of the amended project impact area). These sites primarily reflect a number of artefact scatters on the periphery of the amended project impact area and encountered during the field survey, and/or the findings of the archaeological test excavations outlined in *Chapter 5 (Field investigations)*. In terms of significance, they primarily align with extract above. However, of note was the recovery of deeply buried stone artefacts within test pits 156-2 to 156-21 and 158-2 to 158-24 (now classified as HTP-N-FA01 and HTP-N-FA02, respectively) and within the Warkworth Sands system. While the densities of artefacts recovered is relatively limited compared with some documented sites in the cultural assemblage, the chronological samples recovered from the soil profile within which they were recovered suggest that they reflect occupation over the last 17,000 years, and potentially as early as 38,000 years ago. As such, these cultural deposits may reflect extremely early visitation of the Hunter Valley, and therefore are considered rare and having high research potential; and therefore of high significance.

With few exceptions, the remaining identified sites consist of isolated or low-density stone artefact scatters, which are considered to have limited, if any, research potential. While important in demonstrating the longevity and continued use of the region by Aboriginal people in the past, it is considered that little further information can be obtained from additional investigation of these sites, places and objects. These sites are generally identified as of low significance. The exceptions to this include sites where potential archaeological deposits and/or post-Contact material have been documented, and which increase their research potential or historical value, respectively. In these instances, these sites are generally assigned a moderate significance.

In addition to the discrete sites and places, a number of cultural landscapes, view-lines and view-scapes were identified through the field activities. These are typically associated with important cultural places, Dreaming stories, and/or places of contemporary practises. These cannot be easily encompassed within Table D.6 and Table D.7 since they are spatially poorly defined and both their values and meanings are variable within the Aboriginal community. These values are perhaps best assessed as having both significant aesthetic and cultural significance to the broader Aboriginal community, being associated with prominent landforms, views, and dense bushland.

Table D.6 and Table D.7 provides a summary of the significance values for each of the 303 Aboriginal objects, sites identified within the amended project impact area, 146 Aboriginal objects, sites and places outside, but within 55 metres of the amended project impact area, and three outside the amended project impact area, but would be affected as part of the project.

Overall, these indicate that 23 Aboriginal objects, sites and places considered of high significance are within the amended project impact area. These are dominated by the site types discussed above, including rockshelters, grinding grooves, stone arrangements and cultural places. It also notably includes some of the cultural deposits encountered through the test excavations. 81 moderate significant Aboriginal objects, sites and places are also documented, which include a range of stone artefact materials, as well as other site types outlined above, but potentially having limited research potential and/or were in poor condition. The remaining 199 Aboriginal objects, sites and places within the amended project area were considered of low significance, and are dominated by surface isolated or low-density stone artefacts.

When considering areas outside, but within 55 metres of the amended project impact area, 17 highly significant Aboriginal objects, sites and places, are present; 27 of moderate significance; and 102 of low significance.

8 Potential and cumulative impacts

8.1 Summary of this chapter

This chapter outlines the proposed impacts associated with the project, and the specific impacts this would have on the archaeological resources of the amended project impact area as described in the preceding chapters. In summary:

- The project would result in localised ground disturbance and vegetation clearance within the amended project impact area. Following completion of construction, there are impacts that would continue throughout the operation and maintenance of the transmission line, primarily in the form of vegetation management in the easement.

- In response to comments received during the public exhibition, the ACHA addendum adopts disturbance areas as outlined in the biodiversity values in *Appendix E – Revised biodiversity development assessment* report of the amendment report, rather than assume complete impact of the amended project impact area. In so doing, this has substantively reduced the potential impacts to the cultural assemblage. In addition, some 20 highly significant Aboriginal objects, sites and places within the amended project area are now committed for avoidance (an increase from five) (Figure 8.1). These include all documented grinding groove and stone arrangement site types within or near the amended project impact area. Further refinement is also being explored of project elements in the vicinity of significant cultural deposits, HTP-N-FA01 and HTP-N-FA02.

- Overall, 232 Aboriginal objects, sites and/or places will be directly or indirectly impacted by the project. These include:

    - 217 Aboriginal sites and places are within disturbance areas A and B and would be either completely or partially impacted by the project. These include five rockshelters, five cultural sites (primarily resource and gathering), two culturally modified trees, two grinding groove sites, 26 surface and sub surface stone artefact sites of moderate to high density, and 177 low density artefact scatters and isolated finds

    - a further 12 Aboriginal objects, sites and places within the amended project impact area but outside of disturbance areas A and B, but which are prone to indirect impacts, such as vibration and/or hydrological changes

    - three sites outside the project impact area (>55 m) would be partially impacted as a result of Aboriginal led research outlined in the mitigation measures in Chapter 9 (Management)

- These values are an increase in potential impacts from the exhibited ACHA (n=223) by nine additional identified sites and/or places. The remaining cultural assemblage, consisting of 69 Aboriginal objects, site and places within the amended project impact area and 131 outside, but within 55 metres of the project impact area, are unlikely to be affected by the project.

- Of the 117 hectares of predicted Warkworth sand system within the amended project impact area, ~50 hectares (43%) are situated within areas where ground disturbance is not predicted, and would be unaffected by the project. Potential impacts to cultural landscapes, view-lines and – scapes as reported in the exhibited ACHA would remain unchanged.

- The project would continue to result in cumulative impacts on elements of the regional cultural assemblage, particularly through potential harm to HTP-N-FA02 (#37-6-4668)—a highly significant cultural deposit within the Warkworth Sands system—and an additional culturally modified tree. Refinements to impact assessment and an expanded set of Aboriginal objects, sites and places committed for avoidance help reduce cumulative effects where feasible. Potential impacts on sightlines, scenic landscapes, and localised cultural areas would contribute to the region's increasing urbanisation, which in turn may alter traditional practices and teaching. This is expected to lead to some loss of cultural knowledge across generations. Mitigation measures in *Chapter 9 (Management)* are proposed to offset some of these impacts.[8]

8.2 Summary of the exhibited ACHA findings

This section outlines the avoidance and impact minimisation and potential impacts as documented in the exhibited ACHA. The report concluded that:

- the project has undergone multiple refinements, informed by Aboriginal participants and fieldwork, to avoid or minimise cultural impacts. This includes avoiding a significant CMT at Hunter Valley Operations, key rockshelters and stone arrangements in Corrabare and Watagan State Forests, minimising visual prominence near Flat Rock Lookout, and siting the switching station in Olney State Forest to avoid Martinsville

- thirty-two Aboriginal sites and places occur in the project impact area. Five highly significant sites are committed for full avoidance, 12 are expected to experience only minor or partial impacts, and 19 may be variably affected. Approximately 88 hectares of the Warkworth sands system may also be impacted, although large areas between towers are unlikely to experience deep disturbance

- Aboriginal participants advised that the project would interrupt view-lines and cultural sightlines between key promontories linked to Dreaming stories and contemporary cultural practice. Localised cultural landscapes at Trig Road, Dora Pinnacles and Flat Rock may also be affected

- the project would result in cumulative impacts to some components of the regional cultural assemblage, notably a culturally modified tree in HTP Central, and through the potential disturbance of some 88 hectares of the Warkworth sand system documented to contain significant cultural materials. Any impacts to the five high significant sites currently committed for avoidance would also result in regionally significant impacts. Potential impacts on sightlines, scenic landscapes, and localised cultural areas would contribute to the region's increasing urbanisation, which in turn may alter traditional practices and teaching. This is expected to lead to some loss of cultural knowledge across generations. Mitigation measures are proposed to offset some of these impacts.

8.3 Avoidance and minimisation of impacts through design refinements

Commitments made by EnergyCo presented in the exhibited ACHA for the potential avoidance of sites of high and moderate significance within, and near the project impact area remain in place. It must however be highlighted that following the inclusion of areas on the periphery of the project impact area, and areas within 55 metres of the project, several highly significant Aboriginal objects, sites and places outlined in the exhibited ACHA are now formally included in the impact assessment presented in this ACHA addendum. Where this occurs, the project has committed to their avoidance in *Chapter 9 (Management)*.

[8] This section addresses cumulative impacts as required by Heritage NSW *Code of Practise for Archaeological Investigation of Aboriginal Objects in NSW* guidelines. Aboriginal heritage cumulative impacts in accordance with broader EIS guidelines are addressed separately in Chapter 23 of the EIS.

In this ACHA addendum, additional avoidance and/or impact minimisation, included:

- further consideration of proposed project elements in the vicinity of test pits 141-1 to 141-20 and 158-2 to 158-24, due to the density of cultural materials, and/or their deep antiquity. Both are in areas of constraint for the project, a river crossing and sharp bend, respectively, and complete avoidance is not feasible. However, efforts will be made to reduce ground disturbance footprints in these locations to maximise retention of the cultural deposits wherever feasible during detailed design

- the exhibited ACHA proposed complete impact within the project impact area. In this ACHA addendum, further refinement of potential impacts has now been undertaken by adopting the ecological disturbance areas, and which results in substantive avoidance of a large number of Aboriginal objects, sites and places (n=199)

- the project continues to commit avoidance to a large number of Aboriginal objects, sites and places of high and/or moderate significance within and/or within 55 metres of the amended project impact area. This has increased from five previously proposed in the exhibited ACHA to 20 in the ACHA addendum. These are dominated by significant rockshelters, and includes the majority of documented stone arrangements and grinding grooves in or near the amended project impact area.

Aside from the above, no further avoidance and/or minimisation of impacts through design refinements have been considered since the completion of the exhibited ACHA.

8.4 Potential impacts from the project

8.4.1 Overview

Generally, two types of potential impact are considered in relation to cultural materials – direct and indirect. Direct impacts relate to the project removing, truncating and/or disturbing the ground surface. This would include the removal of vegetation, removal or modification of geological outcropping and the removal or disturbance of the upper soil profile, within which cultural materials are normally encountered. Indirect impacts are the result of both construction and operational activities that may result in environmental changes that would affect cultural material within, or near the project. General examples of indirect impact may include vibration-induced structural damage, the changing view-lines to a site where visibility to/from it is part of its values, or an increase in dust being blown into a rock shelter and negatively affecting art motifs should they be present.

Table 12.2 of the exhibited ACHA provides a summary of the proposed development activities within the construction impact area, and how they may intersect with Aboriginal heritage. These are unchanged for this ACHA addendum and include a range of vegetation and ground disturbance activities depending on the specific project element and/or activity. However, comments received during the public exhibition of the EIS (*Appendix A – Public exhibition comments*) sought further consideration of potential impacts by the project in relation to identified Aboriginal objects, sites and places. As such, adoption of the disturbance areas as identified in the biodiversity values in *Appendix E – Revised biodiversity development assessment report* of the amendment report is considered here, rather the assuming complete impact of the amended project impact area. Specifically, the disturbance area divides the amended project impact area into five categories – A and A centreline, B, hazard tree removal, no-go zones, and remainder of the amended project impact area. The definitions of these zones are focussed on impact to biodiversity, primarily vegetation clearance. While this is pertinent to culturally modified trees and some of the natural resource locales encountered through the project, it does not directly transfer to potential impacts to several Aboriginal objects, sites and places. As such, the following definitions are applied to each of these disturbance areas to inform the potential impacts to Aboriginal objects, sites and places:

- Disturbance area A and A (centreline) – encompassing the main development activities areas (e.g. tower pads, construction support sites and laydown areas, etc.) and requiring vegetation clearance, ground disturbance and frequent vehicle movement, this zone is likely to result in significant impact to cultural materials where present. Where cultural materials are present within this zone, they are typically considered to be directly impacted. The degree of harm is determined by how much of the cultural materials are within the disturbance area. Generally, for isolated cultural materials, or where a site has more than 20% of its curtilage within the disturbance area, it is assumed to be completely harmed.

- Disturbance area B – encompassing activities on the adjacent to the transmission line (disturbance area A) where partial vegetation clearance is proposed, and ground disturbance and infrequent vehicle movement is required, this zone is likely to result in localised impacts to cultural materials where present. Where cultural materials are present within this zone, they would be directly impacted. The degree of harm is determined by how much of the cultural materials are within the disturbance area. Generally, for isolated cultural materials, or where a site has more than 20% of its curtilage within the disturbance area, it is assumed to be completely harmed.

- Disturbance area hazard tree zone – encompassing the removal of targeted trees that may be in excess of height restrictions that may intersect the transmission line along the HTP corridor. These activities are proposed to be intermittent and infrequent. As such, only culturally modified trees would be adversely affected by this activity where they intersect.

- No-clearing – encompasses areas where no vegetation clearance is proposed, and requiring limited, if any, ground disturbance or vehicle movements. Where cultural materials are present within this zone, they are unlikely to be directly impacted by the project. Indirect impacts may still need to be considered for some site types, which will still remain in close proximity to proposed development activities.

- Amended project impact area not within areas above - encompasses areas where no development activity is currently proposed. Where cultural materials are present within this zone, they are unlikely to be directly impacted by the project. Indirect impacts may still need to be considered for some site types, which will still remain in close proximity to proposed development activities.

Further information on disturbance areas is included in *Appendix A (Updated project description)* and *Appendix E (Revised biodiversity development assessment report)* of the amendment report. Consideration of potential impacts in *section 8.4.2* and *section 8.4.3* adopt these disturbance areas in determining whether cultural materials would be adversely affected by the project. When considering the Aboriginal object, sites and places, several are of a size that extends across the disturbance areas. Where this occurs, the disturbance area classification within which the majority of the site is situated is adopted to identify potential impact. Typically, where more than 20% of a site's curtilage is within a disturbance zone, it is assigned that classification, and level of impact. However, Table D.9 and Table D.10 provides a percentage breakdown of the site's extent across a given disturbance area to allow further interpretation as needed.

Given the large cultural assemblage within and in close proximity to the amended project impact area, consideration of indirect impacts is also required. This was also a focus of several of the comments received during the public exhibition of the EIS (*Appendix A – Public exhibition comments*). Indirect impacts to Aboriginal cultural heritage likely to result from the project include:

- vibration impacts that may result in de-stabilisation of cultural materials beyond the construction impact area. Applying the German Standard DIN 4150-2016 Vibration in Buildings - Part 3: Effects on Structures criteria for sensitive heritage structures – the closest comparison available to the identified cultural materials – would indicate values within 55 metres of the construction impact area may be subject to vibration impacts. It is considered that not all cultural materials would be affected by vibration. For example, buried stone artefacts are unlikely to be moved or harmed as a result of vibration, nor would

culturally modified trees that have evolved to withstand strong winds and storms that would result in far greater movement than activities proposed by the project. Therefore, for the purposes of this ACHA addendum, only rockshelters, stone arrangements and grinding grooves are considered to be potentially subject to vibration impacts where within 55 m of the project impact area

- obstruction and/or interruption of important view-lines and view-scapes as a result of the project elements, including transmission towers which are proposed to be up to 85 metres in height

- impacts to the broader cultural landscape within which archaeological and cultural places are situated. While these areas are often in State forests, and have likely been subject to past clearing, these areas reflect a largely natural cultural landscape that inform the significance of key sites and places

- through the increased access to cultural materials as a result of maintaining an operational transmission line easement through vegetation clearance. Currently, many of the cultural materials are hard to access and this provides a form of protection from the general public. This inaccessibility may be compromised as a result of the project, leading to impacts to sites and places remaining within and/or near the project impact area.

8.4.2 Construction impacts

i Committed for avoidance

The project commits to avoiding a number of high and moderately significant sites. The focus of this avoidance has been towards site types that are typically rarer in the region and more prone to impacts by the project, including rockshelters, stone arrangements and grinding grooves within or near the amended project impact area. Of the remaining high significant Aboriginal objects, sites and places, the majority were characterised as buried stone artefactual material. Some of these are being explored for avoidance (refer to *section 8.3)*, while the remainder are considered both less prone to development activities and/or can more readily be recovered under mitigation measures. As such, none of this site type is specifically proposed for avoidance, although mitigation measures in *Chapter 9 (Management)* continue to require consideration and revisiting of potential project impacts throughout detailed design and construction.

The project has already been designed to avoid many of these Aboriginal, objects, sites and places with the majority in no-clearing areas and/or outside but within 55 m of the amended project impact area; only six of those outlined are in disturbance area A.

Sites committed for avoidance include:

- within the amended project impact area:
    - one rockshelter - DEEP CK MOTHER SWA (#37-6-3714)
    - one cultural place - Flat Rock Lookout (HTP-C-CP01) (#45-3-5003)
    - one [redacted]
    - two grinding grooves –and TRGG GRINDING GROOVE SITE (#45-3-2456) and Monkey Place Creek/Broken Back Trail (#37-6-0552/#37-6-0809)
- within no-clearing areas, amended project impact area outside disturbance areas, and/or outside, but within 55 metres, of the amended project impact area:
    - two rockshelters – CABANS RD CLIFF SWA (#45-3-4516), SWEETMANS CK OCHRE BOULDERS SWA (#37-6-3782)

- four stone arrangements – HTP-C-SA01 (#37-6-4538), HTP-C-SA02 (#37-6-4555), HTP-C-SA03 (#37-6-4537), HTP-C-SA04 (#37-6-4556)

- nine grinding grooves – Corrobare State Forest, cnr of Langdans Road (#45-3-3619), HTP-C-GG01 (#37-6-4566), HTP-C-GG03 (#37-6-4484), HTP-C-GG04 (#37-6-4506), HTP-GG-05 (#45-3-5006), HTP-S-GG01 (#45-3-5005), Null Road 2 (#45-3-3018), Olney CPT 75/76 Douglas Pt GDG (#45-3-4543), Pokolbin SF_C-345 AGG (#37-6-3967).

ii Potential impacts

Table D.10 and Table D.11 provide a review of each of the Aboriginal objects, sites and places within and/or within 55 metres of the project impact area, and their potential impacts based on the project design. When considering the proposed construction activities, the following is concluded:

- 178 Aboriginal objects, sites and places are **within disturbance area A and A (centreline)** and would be completely (n=128) or partially (n=50) impacted by the project. These include:

  - three rockshelters – HTP-S-RS16 (#45-3-5007), HTP-C-RS24 (#37-6-4682), and HTP-C-RS61 (#45-3-5034),

  - four cultural sites – HTP-N-CVM01 (#37-6-4493), HTP-S-CS01 (#45-3-5009), HTP-S-AR01 (#45-3-5028) and HTP-C-AR02 (#37-6-4485)

  - a culturally modified tree – Campbells Spring Track (#37-6-0553)

  - two grinding groove sites - CORROBARE STATE FOREST 1 (#37-6-2780) and HTP-N-GG01 (#43-5-5005)[9]

  - eight high density artefact scatters – 2010-HVOSE-14 (#37-6-4022), 2010-HVOSE-15 (#37-6-4023), HTP-N-AS01 (#37-2-6667), HTP-N-AS28 (#37-6-4513), HTP-N-AS30 (#37-6-4488), HTP-N-AS15 (#37-2-6666), HTP-N-AS32 (#37-6-4487), and P16 (#37-2-0811)

  - eight moderate density artefact scatters – BMP 1;Jerrys Plain; (#37-2-0500), BR B1; (#37-6-0720), HTP24-AS1 (#37-2-6616), MD2; (#37-3-0286), United Open Site-1 (#37-5-0704), Long Point Road_2 (#37-6-0615), HVOCP TR47-AS2 (#37-2-6497), and HTP-N-AS71 (#37-2-6665)

  - eight subsurface stone artefact deposits – HTP-C-FA01 (#37-6-4490), HTP-C-FA02 (#37-6-4489), HTP-C-FA03 (#37-6-4491), HTP-N-FA01 (#37-6-4671), HTP-N-FA02 (#37-6-4668), HTP-N-FA04 (#37-6-4670), HTP-N-FA05 (#37-6-4672), HVO-1267/HTP-N-FA06 (#37-6-3384)

  - a broader background scatter of 64 isolated Aboriginal objects and 80 low-density artefact scatters, which are outlined in further detail in Table D.9. Of these, 29 were considered to also have potential archaeological deposits and/or established cultural deposits (through test excavation undertaken for this project). These values also include the sole site with post Contact materials documented, FF 6; [#37-6-0724], although this has been revisited in *Appendix A (Public exhibition comments)*).

[9] While HTP-N-GG01 (#43-5-5005) is included here, the site is characterised as a series of previously disturbed sandstone boulders on which grooves are documented. In some instances, the boulders have been left on the edge of the access track, which would require upgrades for the project, and necessitate their relocation (refer to Mitigation measures in *Appendix E (Post-approval requirements – updated guiding principles)*). Given the site is previously disturbed, and careful relocation in close consultation with the Traditional Owners is proposed, it is not considered that this impact would result in a loss of value to the site.

- 39 Aboriginal objects, sites and places are **within disturbance area B** and would be completely (n=29) or partially (n=10) impacted by the project. These include:
    - two rockshelters – HTP-S-RS13 (#45-3-5046) and HTP-C-RS18 (#37-6-4683)
    - one cultural places and/or resource and gathering sites –HTP-C-AR01 (#37-6-4486)
    - a culturally modified tree – HTP-C-CMT05 (#37-6-4502)
    - a high-density artefact scatter – HVO-1258 (#37-6-3376)
    - a moderate density artefact scatter – HVOCP TR47-AS3 (#37-2-6514)
    - a broader background scatter of 21 isolated Aboriginal objects and 12 low-density artefact scatters, which are outlined in further detail in Table D.1. Of these, seven were considered to also have potential archaeological deposits and/or established cultural deposits (through test excavation undertaken for this project)
- 12 Aboriginal objects, sites and places **within or within 55 m of the amended project impact area but outside of disturbance areas A and B**, which have the potential to be indirectly affected by vibration or other activities.[10] These include:
    - 10 rockshelters –HTP-C-RS14 (#45-3-5013),[11] HTP-C-RS02 (#37-6-4492), HTP-C-RS03 (#37-6-4679), HTP-C-RS15 (#37-6-4557), HTP-C-RS16 (#37-6-4558), HTP-C-RS17 (#37-6-4562), HTP-C-RS44 (#37-6-4554), HTP-C-RS45 (#37-6-4674), HTP-S-RS19 (#45-3-5008), and HTP-S-RS20 (#45-3-5004)
    - two cultural places – Shamrock Hill (#38-4-0221) and Watagan Creek ACD (#45-3-4623), both as a result of having water features that may be adversely affected through vibration and/or hydrological changes that may occur through the project.
- 69 Aboriginal objects, sites and places are **within no-clear zones and/or within the remainder of the amended project impact area where no disturbance is proposed**, and would be unlikely to be affected by the project. These include:
    - one resource and gathering site – HTP-C-AR03 (#37-6-4567)
    - one culturally modified tree – HTP-N-CMT02 (#37-2-6769)
    - two moderate density artefact scatters – HVO-1273 (#37-6-3390) and BOP-OS8 (#37-6-2842)
    - a broader background scatter of 36 isolated Aboriginal objects and 29 low-density artefact scatters, which are outlined in further detail in Table D.1. Of these, eight are considered to also have potential archaeological deposits and/or established cultural deposits (through test excavation undertaken for this project).
- three Aboriginal, sites and places that are **outside the amended project impact area, but would be partially impacted** as part of the proposed cultural values mitigation strategy outlined in *Chapter 9 (Management)*. Importantly, it is considered that there would be no loss of heritage value from these

[10] The remaining 131 Aboriginal objects, sites and places documented within 55 m of the amended project impact area are considered unlikely to be adversely affected by indirect impacts from the project.

[11] This site is proposed to be subject to partial harm as a result of Aboriginal led research, recommended in *Chapter 9 (Management)*.

activities, since they are proposed to inform the significance of the site and cultural importance to the local Aboriginal community. These include:

- three rockshelters – Corrabare State Forest Road 2 (#45-3-3582), Corrabare State Forest Western Side of Langans Rd SWA (#45-3-3583), and Corrabare (#45-3-2140)

Based on the values above, and when considering those committed for avoidance, 217 Aboriginal objects, sites and places (178 within disturbance area A and 39 within disturbance area B) would be either completely (n= 157) or partially (n= 60) impacted by the project. A further 12 Aboriginal objects, sites and places are outside the project development activities, but are prone to indirect impacts, such as vibration; and a further three sites outside the project impact area would be partially impacted as a result of Aboriginal led research outlined in the mitigation measures in *Chapter 9 (Management)*. The remaining cultural assemblage, consisting of 69 Aboriginal objects, site and places within the amended project impact area and 131 outside, but within 55 m of the project impact area, are considered unlikely to be affected by the project.

In the case of the Warkworth Sands system, around 117 hectares are within the amended project impact area. However, following a refined approach for the impact assessment, only 43 hectares is within disturbance area A and 24 hectares in disturbance area B, amounting to the total of 67 ha. The remainder of the Warkworth Sand system, around 50 hectares (43%), would be unaffected by the project.

8.4.3 Operational impacts

Table D.9 and Table D.10 provide a review of each of the Aboriginal objects, sites and places within and/or within 55 metres of the project impact area, and their potential impacts based on the project design. These impacts would have occurred primarily within the construction phase of the project, with vegetation clearance, ground disturbance and vehicle movements having already adversely affected cultural materials where present. As such, additional direct impacts to Aboriginal objects, sites and places through operational activities are considered improbable.

Management during operation would require the ongoing consideration of Aboriginal objects, sites and places that remain following construction and/or have been partially impacted by the project. At this stage, the exact numbers of these cannot be fully determined, although as outlined in *section 8.4.2*, 72 Aboriginal objects, sites and places are predicted to be only partially affected by the project and may remain within disturbance areas A and B. Indirect impacts would also need to continue to be considered and managed, with 12 Aboriginal objects, sites and places outlined in *section 8.4.2* still at risk to impacts from vibration and increased access following construction.

The 20 high and moderate significant Aboriginal objects, sites and places outlined in *section 8.4.2* continue to be committed for avoidance into operation, and would remain unaffected by the project.

8.5 Cumulative impacts

Ecologically sustainable development, or intergenerational equity, is the principle whereby the current generation should maintain the health, diversity and longevity of the environment for the benefit of future society. For Aboriginal heritage management, intergenerational equity can be considered primarily in terms of the cumulative impacts to Aboriginal objects, sites and/or places in a region. If few Aboriginal objects and places remain in a region (e.g. due to development impacts), there are fewer opportunities for future generations of Aboriginal people and the broader community to enjoy the cultural benefits. Understanding the integrity, rarity, and significance of Aboriginal objects, sites, and places that might be affected is important. This information helps explain how Aboriginal people used and occupied the land in the past and is essential for considering intergenerational equity and the project's cumulative impacts.

The exhibited ACHA concluded the following in relation to cumulative impacts for the project:

Despite a regional cultural assemblage of several thousand Aboriginal sites and places being documented in close proximity to the project impact area, only a small number are likely to be adversely affected…. extensive efforts have been made to avoid significant or rare sites where encountered near the construction impact area … With few exceptions, it is considered therefore that the overall impact from the project would be low.

In HTP North, the majority of encountered sites were composed of surface and/or shallowly buried stone artefact scatters, often in disturbed or eroding contexts. While development within the Hunter Valley is making such sites more infrequent, few of the identified sites would be considered representative or rare even in this context with many only just meeting thresholds above the broader background scatter. Indeed, the Aboriginal Heritage Information Management System (AHIMS) database… indicates that around 1695 of such (extant) site types are present within the broader region... It is, therefore, considered that limited cumulative impact would result to these types of sites across the project impact area. Although finding ancestral remains at the Hunter crossings (HTP-N-CVM01) would be rare in the Hunter Valley, and any impacts would likely have regional and cumulative significance, there is currently no evidence of such remains in these areas.

Conversely, in HTP North, the Warkworth sand system is a finite geological unit, which has been found to disparately contain significant cultural materials … the deposit is finite and regionally significant, and impacts are considered to have a regional cumulative impact.

The most significant sites within HTP Central and HTP South, including rockshelters, stone arrangements and grinding grooves, have been committed for avoidance. Impacts to any of these sites, and notably Deep Ck Mother SWA (#37-6-3714) – a rockshelter containing over 140 art motifs – would result in regionally significant impacts. Similarly in the case of only 3 previous sites of this type are within the AHIMS data. Acknowledging that several more such sites were found as part of the project– and in most cases avoided –the loss of would still have a regional cumulative impact on an extremely rare site type in the region ... The potential loss of one culturally modified tree would reflect 11% of the regional assemblage of this site type based on the AHIMS data. While this site type comprises only a tenth of identified sites in the region, the rarity of this find within the State forest – a working landscape – would be considered a regionally significant loss, and as such the site would be avoided.

With the exception of Flat Rock Lookout (HTP-C-CP01), none of the cultural places proposed for impact within the construction disturbance area would result in cumulative impact … In the case of Flat Rock Lookout, this site relates to a unique Dreaming story within a highly ceremonial landscape and, therefore, any impacts would result in intergenerational loss. However, the works are not likely to destroy the Flat Rock Lookout, which extends beyond the project impact area, and the views to Mount Sugarloaf are unlikely to be changed by the project.

In the case of HTP South, only a historical wishing well (HTP-S-CS01) would be impacted by the project. Here to, like HTP-S-AR01 and HTP-S-AR02, the site reflects a former spring that may have been used by Aboriginal people in the past. The site does not reflect specific knowledge of a past activity, and the presence of other springs and water sources across the State forests is considered probable. As such the loss of this site is not considered to result in cumulative impact.[12]

[12] There are ongoing discussions regarding the long-term management of HTP-S-CS01, with relocation of elements of the site being probable. With respect to the Aboriginal cultural heritage value of the site that focus on the under-lying spring, it is considered that this would result in total loss of value based on the potential inaccessibility of the spring as a result of the project. The spring being the primary value of the site as indicated by Aboriginal participants. As such, this assessment of the site remains valid at this time, but discussions to best manage the site remain ongoing, and detailed management of the site is proposed in Appendix E.

> The project would also have impacts on broader intangible values, such as view-lines and view-scapes, and localised cultural landscapes. It must be highlighted that few of these landscapes are pristine nor reflect pre-contact environments, with historical conurbations and other infrastructure, including transmission lines, present throughout the region ... it must be concluded that the project would result in some intergenerational loss to the local Aboriginal community through impacts to view-lines and view-scapes.
>
> The project would also have impacts on broader intangible values, such as view-lines and view-scapes, and localised cultural landscapes… consultation with Aboriginal participants has indicated that ongoing development, which would include the project, is having an impact on their ability to practise and teach traditional lifeways. Based on this, it must be concluded that the project would result in some intergenerational loss to the local Aboriginal community through impacts to view-lines and view-scapes.

The majority of the information outlined in the exhibited ACHA remains accurate, with many of the Aboriginal objects, sites and places referenced in the exhibited ACHA extract above remaining within the amended project impact area, and the same management and mitigation measures still proposed for them.

Despite updating the cultural assemblage of the project in *Chapter 6 (The archaeological resource)*, it is considered that the previous cumulative impact assessment outlined above remains robust for the project. The level of potential impact has slightly increased from the exhibited ACHA – 232 Aboriginal objects, site and places compared with 223 – but ongoing and expanded commitments for avoidance of high and moderate significant sites has maintained, if not reduced the potential regional impacts of the project. Specifically, 20 Aboriginal objects, sites and places including rockshelters with art motifs and cultural deposits, grinding grooves, stone arrangements and cultural places, are now proposed for avoidance, compared with five proposed in the exhibited ACHA.

This includes all identified grinding groove sites and stone arrangements within or near the amended project impact area; and regionally significant sites, such as TRGG GRINDING GROOVE SITE (#45-3-2456) consisting of 74 grooves within Corrabare North Flora Reserve, and DEEP CK MOTHER SWA (#37-6-3714), a rockshelter with large numbers of art motifs within Pokolbin State Forest. The project continues to primarily impact isolated and/or low densities of stone artefacts (n=174 or 57% of the cultural assemblage), and which are considered to be well represented across the region.

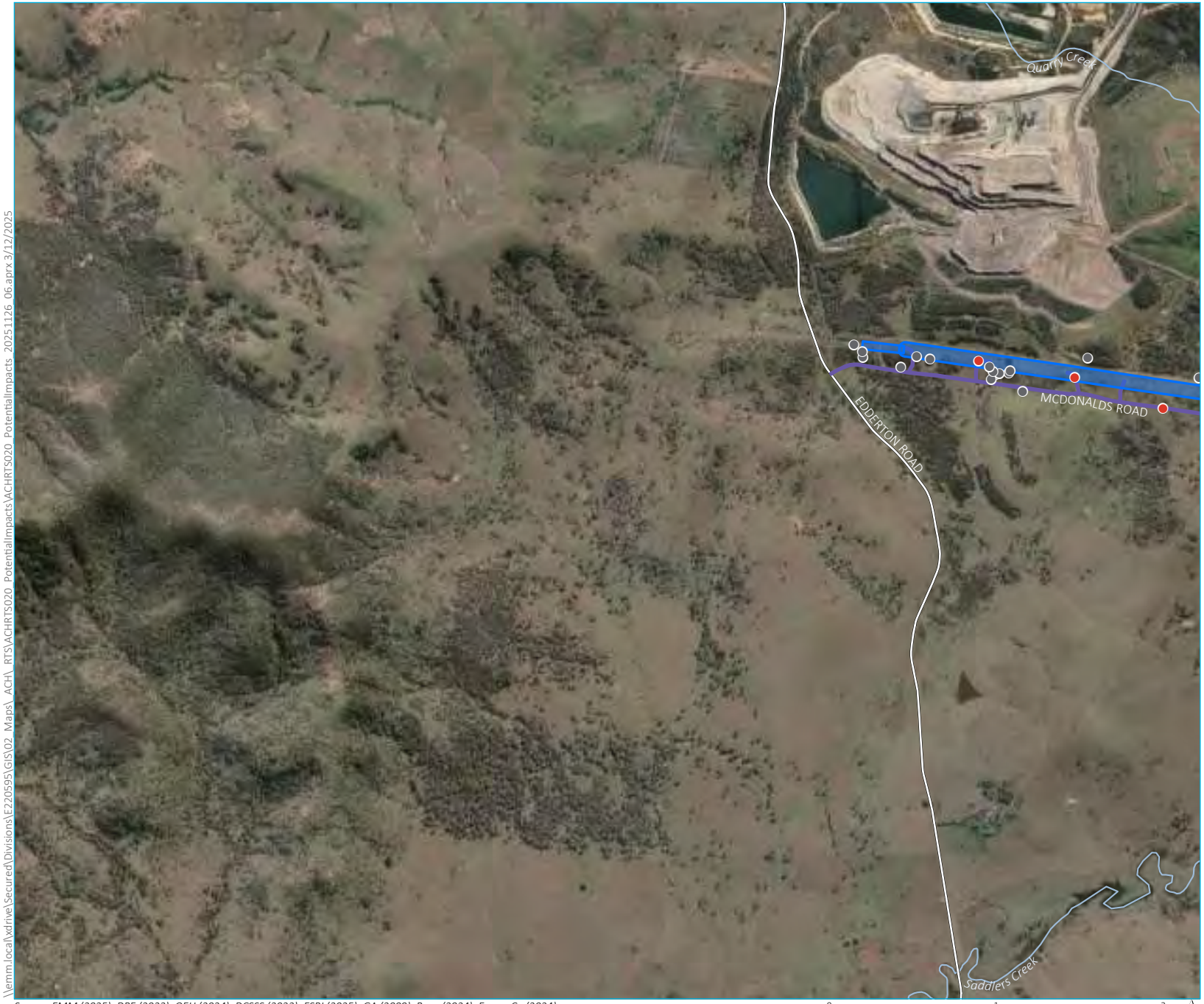
The project does potentially increase its impact of highly significant buried cultural deposits with eight such sites being adversely affected within disturbance area A. For the most part, such sites are common in the region, and through careful archaeological excavation can be conserved ex situ. However, the findings of HTP-N-FA02 are potentially unique to the Hunter Valley, highly significant; and impacts to this site would result in regional cumulative impact. This cultural deposit contains evidence of people visiting the Hunter Valley between 17,000 and potentially up to 38,000 years ago, making the recovered cultural materials some of the earliest in the region. While other portions of the Warkworth Sands system have encountered old cultural materials, none are of these ages, and in most cases have since been destroyed by mining activities. While there is potential for HTP-N-FA02 to extend beyond its current curtilage and beyond the amended project impact area, this has yet to be demonstrated. The project is seeking to further refine the design to avoid HTP-N-FA02, but as currently proposed would impact the site and result in loss of a highly significant cultural deposit. More broadly, while there would be cumulative impacts to the Warkworth Sands system, the amended project does reduce the potential impacts to the broader Warkworth Sands system, with some 43% (~50 hectares) of these deposits unlikely to be impacted by the amended project impact area compared with the values presented in the exhibited ACHA (~88 hectares).

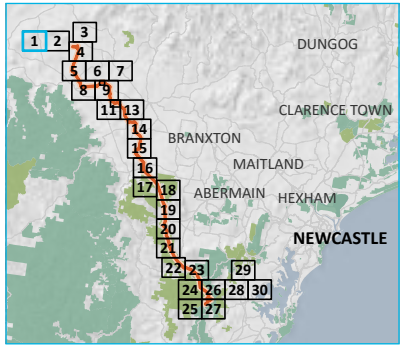
The inclusion of an additional culturally modified tree also contributes to the regional cumulative impact for the project. As outlined above, the loss of a single tree in HTP Central was predicted to result in an 11% loss of this site type documented in the AHIMS system. Adding a further site of this type therefore would result in a greater contribution to the loss of this site type in this region. It must, however, be highlighted that this site has the potential to be under-recorded in the region, with several further culturally modified trees identified as part of the field investigations undertaken for this project, which represents a fairly small portion of the extensive State forests and National Parks in this region.

In relation to other site types, the project has the potential to directly and indirectly impact several rockshelters. However, those not committed for avoidance are typically overhangs or caves where evidence of past occupation is sparse, including HTP-S-RS13 (#45-3-5046) and HTP-C-RS18 (#37-6-4683), HTP-C-RS61 (#45-3-5034), HTP-C-RS24 (#37-6-4682), and HTP-C-RS16 (#45-3-5007). Investigation of these sites was not supported by stakeholders as part of the exhibited ACHA or ACHA addendum, but were sought to be included further as part of the comments received during public exhibition of the EIS (refer to *Appendix A (Public exhibition comments)*). Given the lack of cultural materials evident at these sites, and absence of motifs, engravings and other features, it is considered that harm to any of the sites within disturbance areas A and B would not result in cumulative impact. Only three rockshelters contain evidence of past occupation (Corrabare State Forest Road 2 [#45-3-3582], Corrabare State Forest Western Side of Langans Rd SWA [#45-3-3583], and Corrabare [#45-3-2140]), and which are all highly significant. These sites have been selected for Aboriginal-led research by the Awabakal Traditional Owners as part of a cultural values mitigation strategy proposed in *Chapter 9 (Management)*. It can be argued that these activities while technically considered a harm in the ACHA addendum will actually contribute to past understanding of the region and reconciliation more broadly. Such impacts of these sites are therefore not considered to constitute cumulative impact.

Of the remaining cultural assemblage, there are two grinding groove sites and several resource and gathering sites that may be adversely affected. In the case of grinding groove sites, one reflects a poorly documented single groove (CORROBARE STATE FOREST 1 [#37-6-2780]), and which may still be avoided through the project, while the other (HTP-N-GG01 [#43-5-5005]) is a series of already disturbed boulders on which grooves are documented; and which mitigation measures proposed here are hoped to result in returning them to an improved cultural landscape as determined by the Traditional Owners. The resource and gathering sites primarily reflect various flora of importance to the Traditional Owners, and which are highly probable to be prevalent throughout the State forests and National parks. Mitigation measures are also proposed to recover and relocate flora of value as part of the project.

Overall, the project would result in cumulative impacts to the regional cultural assemblage, including important sites and places, and result in some intergenerational loss. However, management and mitigation measures outlined in *Chapter 9 (Management)* and further in *Appendix E (Post-approval mitigation requirements – updated guiding principles)* are proposed to offset, minimise or avoid such impacts wherever feasible.





KEY

- Direct impact
- No impact

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 1 of 30

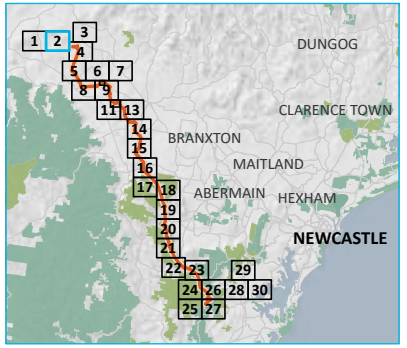
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM
creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- No impact

Project impact area

- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

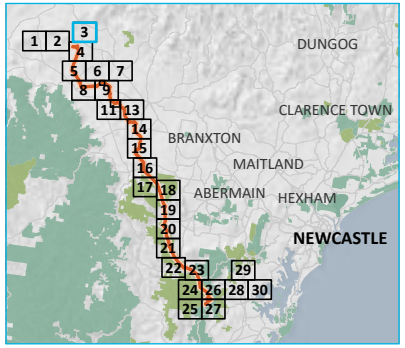
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025

Updated potential impacts in relation to the addendum project
Map 2 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM
creating opportunities



KEY

- Direct impact
- No impact

Project impact area

- Construction support site
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 3 of 30

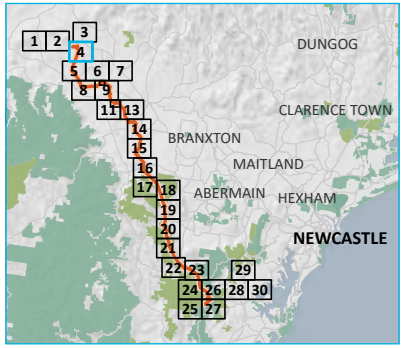
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site
- Adjustment to existing transmission line (lines 31 and 32)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 4 of 30

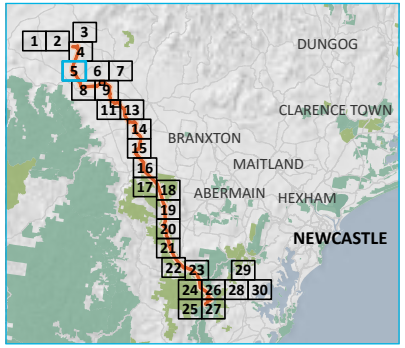
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 5 of 30

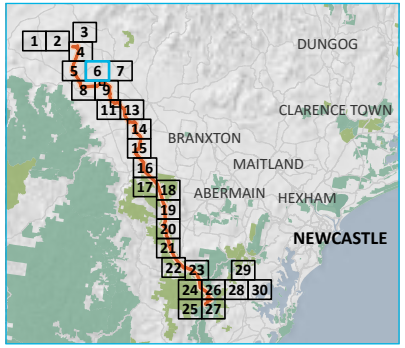
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- No impact

Project impact area

- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 6 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

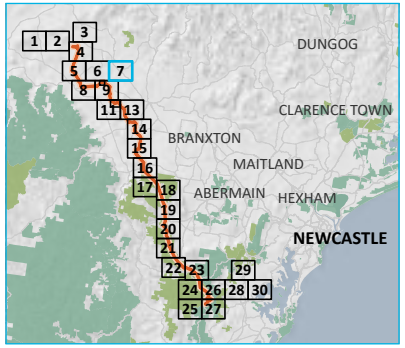
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- No impact

Project impact area

- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 7 of 30

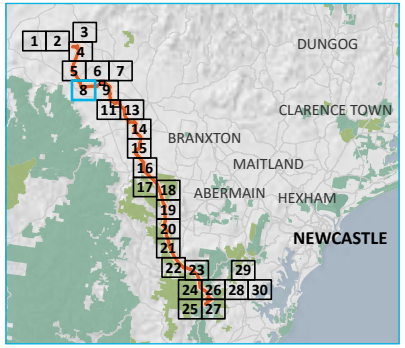
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTSVACHRTS020_PotentialImpacts\VACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025

creating opportunities



KEY

- Direct impact
- No impact

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 8 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

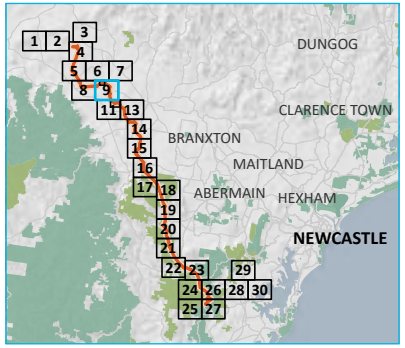
EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 9 of 30

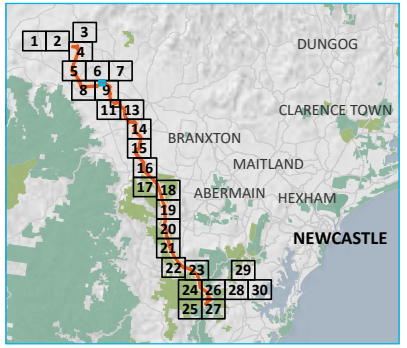
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Access track

Existing environment

- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 0.2 0.4 km

GDA2020 MGA Zone 56

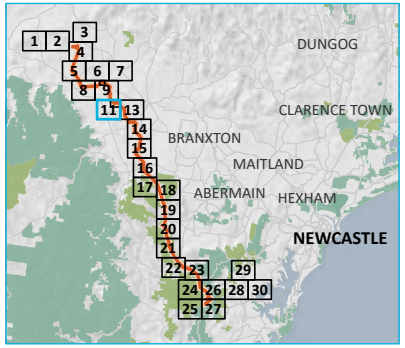
N

Updated potential impacts in relation to the addendum project
Map 10 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 11 of 30

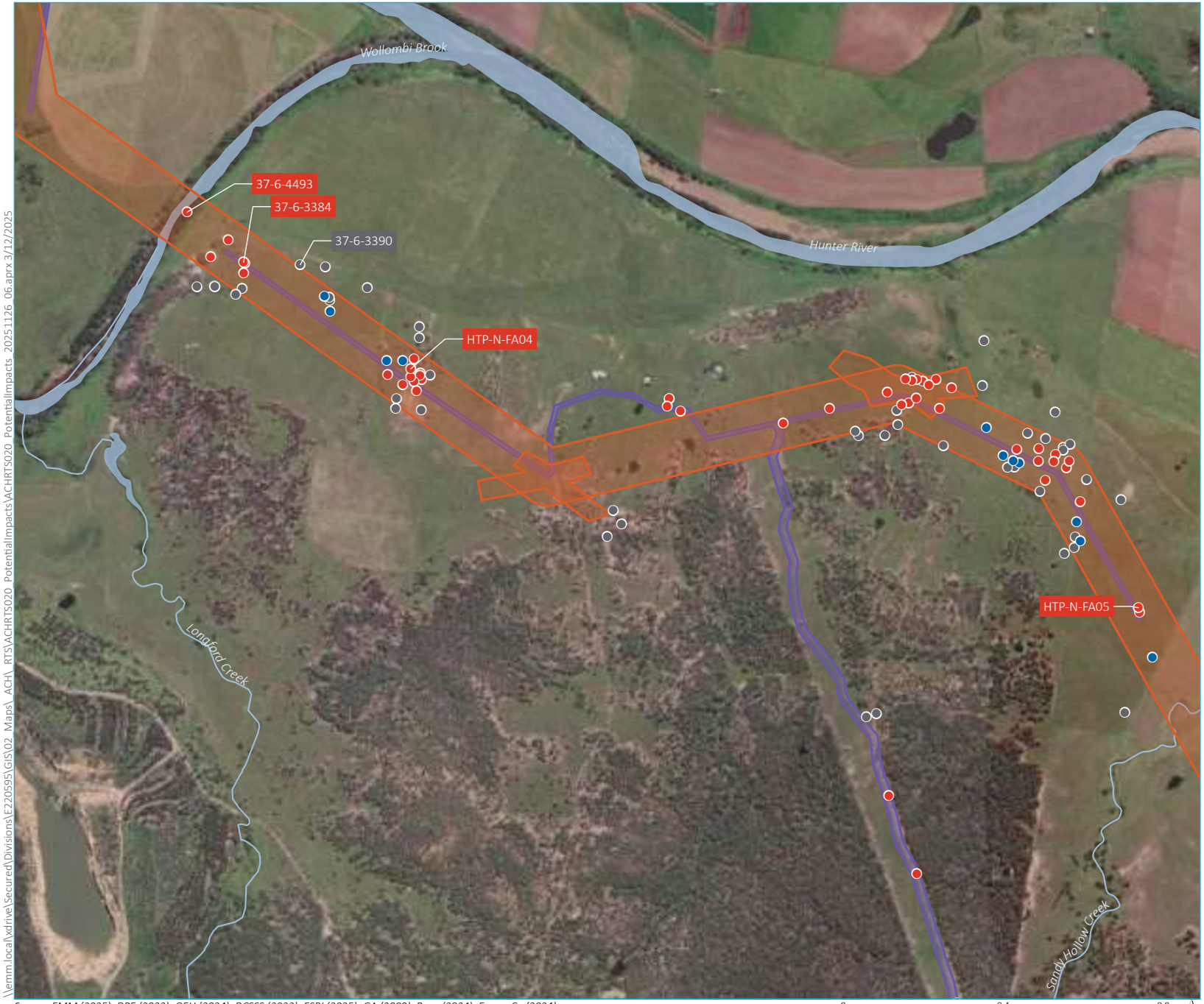
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

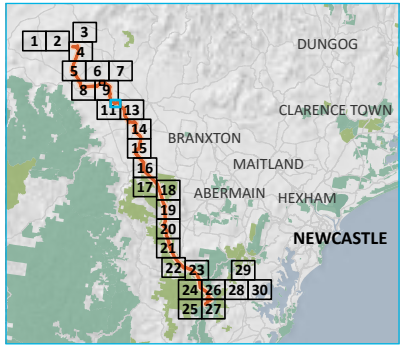
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Access track

Existing environment

- Named watercourse
- Named waterbody

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 0.4 0.8 km

GDA2020 MGA Zone 56

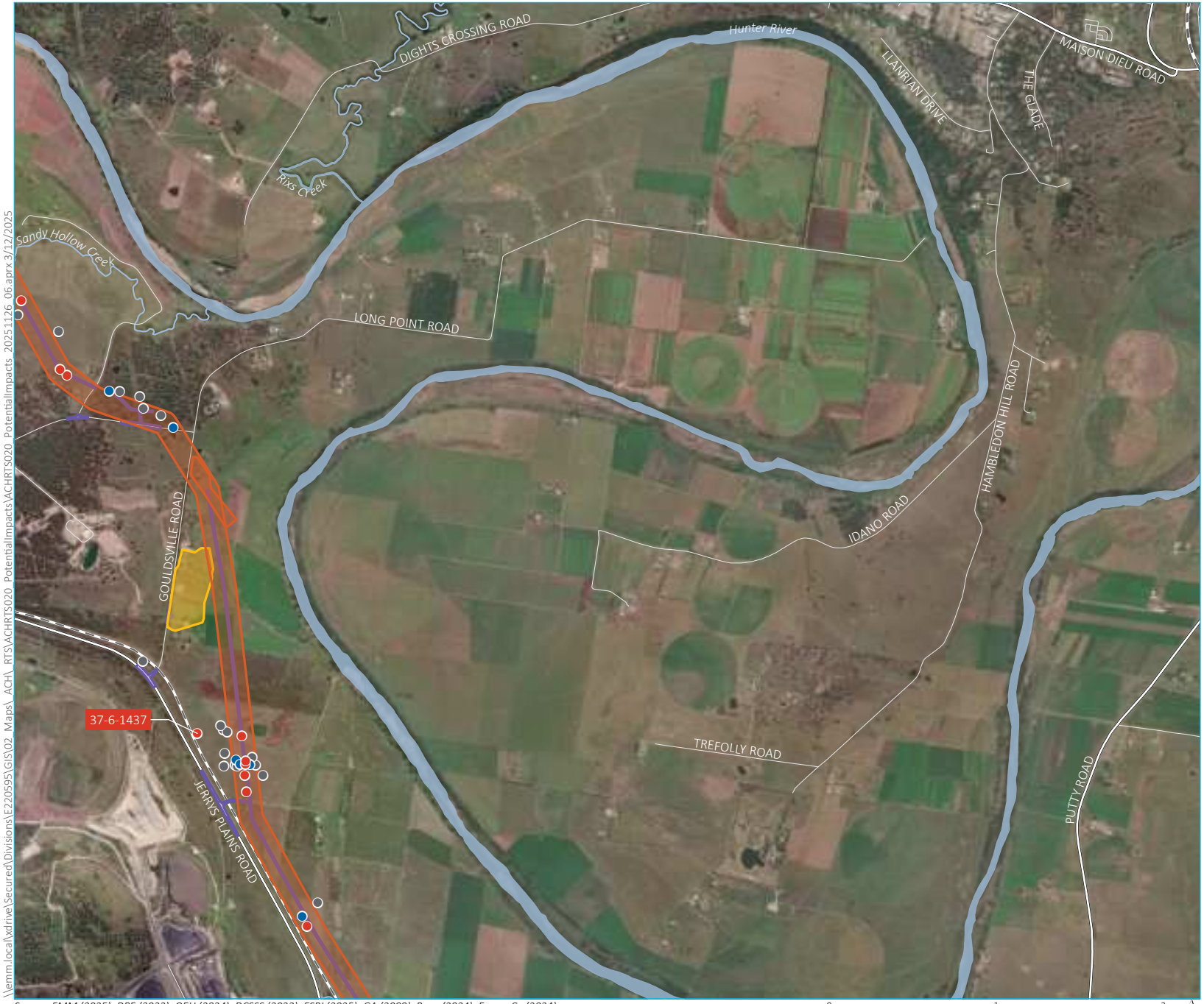
N

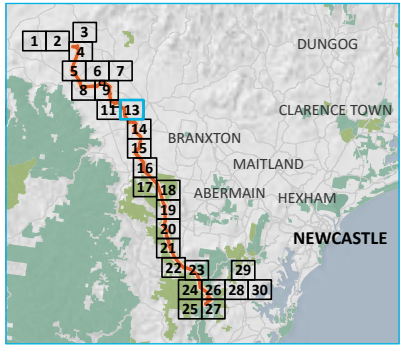
\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025

Updated potential impacts in relation to the addendum project
Map 12 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities





KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Construction support site
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 13 of 30

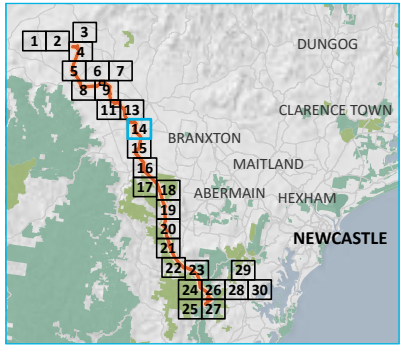
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025

creating opportunities



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Access track

Existing environment

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

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 14 of 30

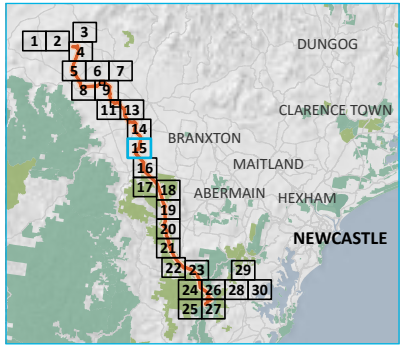
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Partial impact
- No impact

Project impact area

- HTP corridor
- Adjustment to existing transmission line (line 81)
- Access track

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 15 of 30

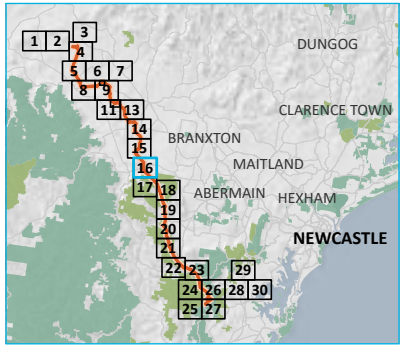
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 16 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

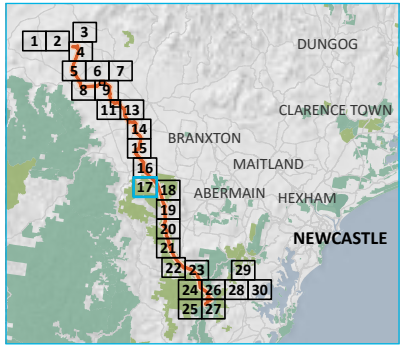
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTSVACHRTSO20_PotentialImpacts\VACHRTSO20_PotentialImpacts_20251126_06.aprx 3/12/2025

creating opportunities



KEY

- Direct impact
- No impact

Project impact area

- HTP corridor
- Access track

Existing environment

- Named watercourse
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 17 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

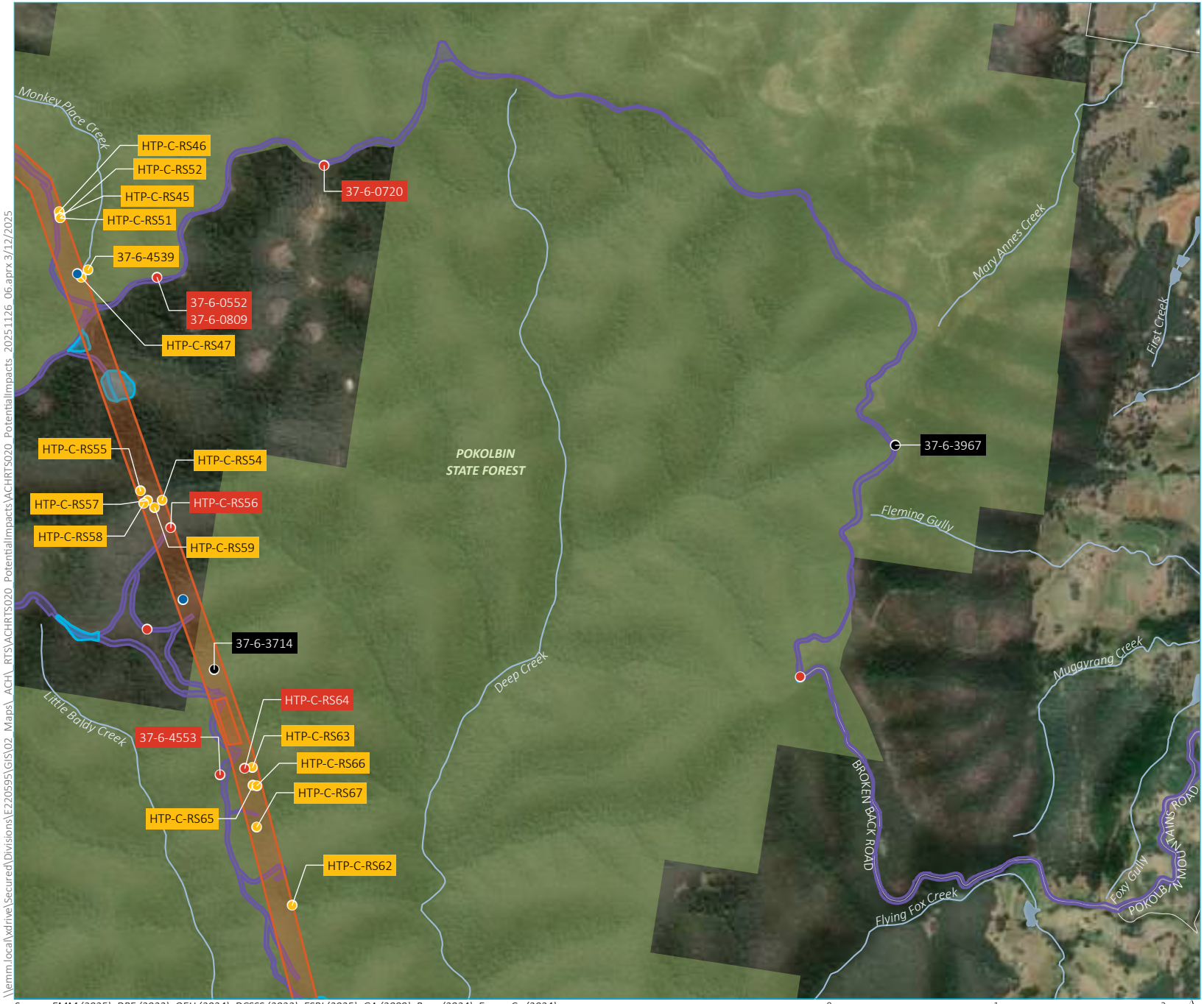
EMM creating opportunities

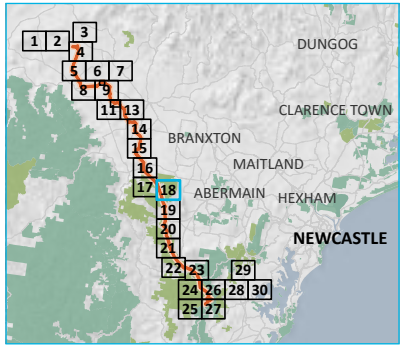
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Partial impact
- Indirect impact
- Committed for avoidance

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 18 of 30

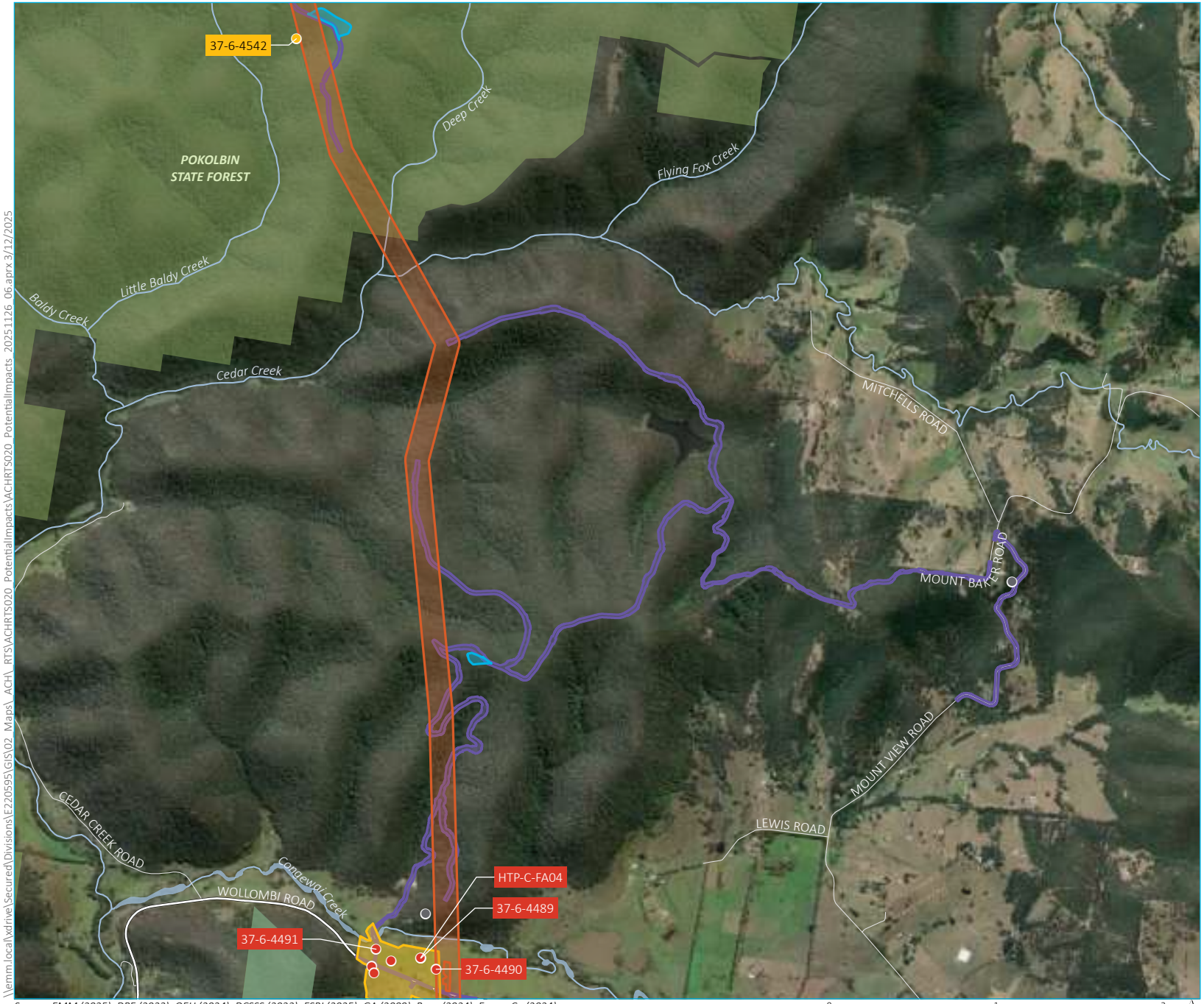
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

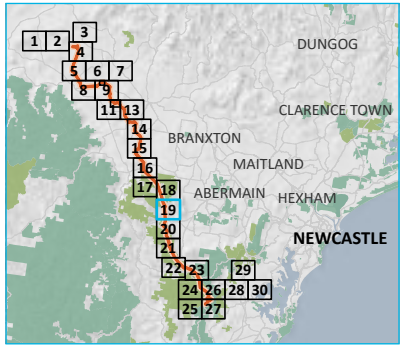
EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Indirect impact
- No impact

Project impact area

- HTP corridor
- Construction support site
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 19 of 30

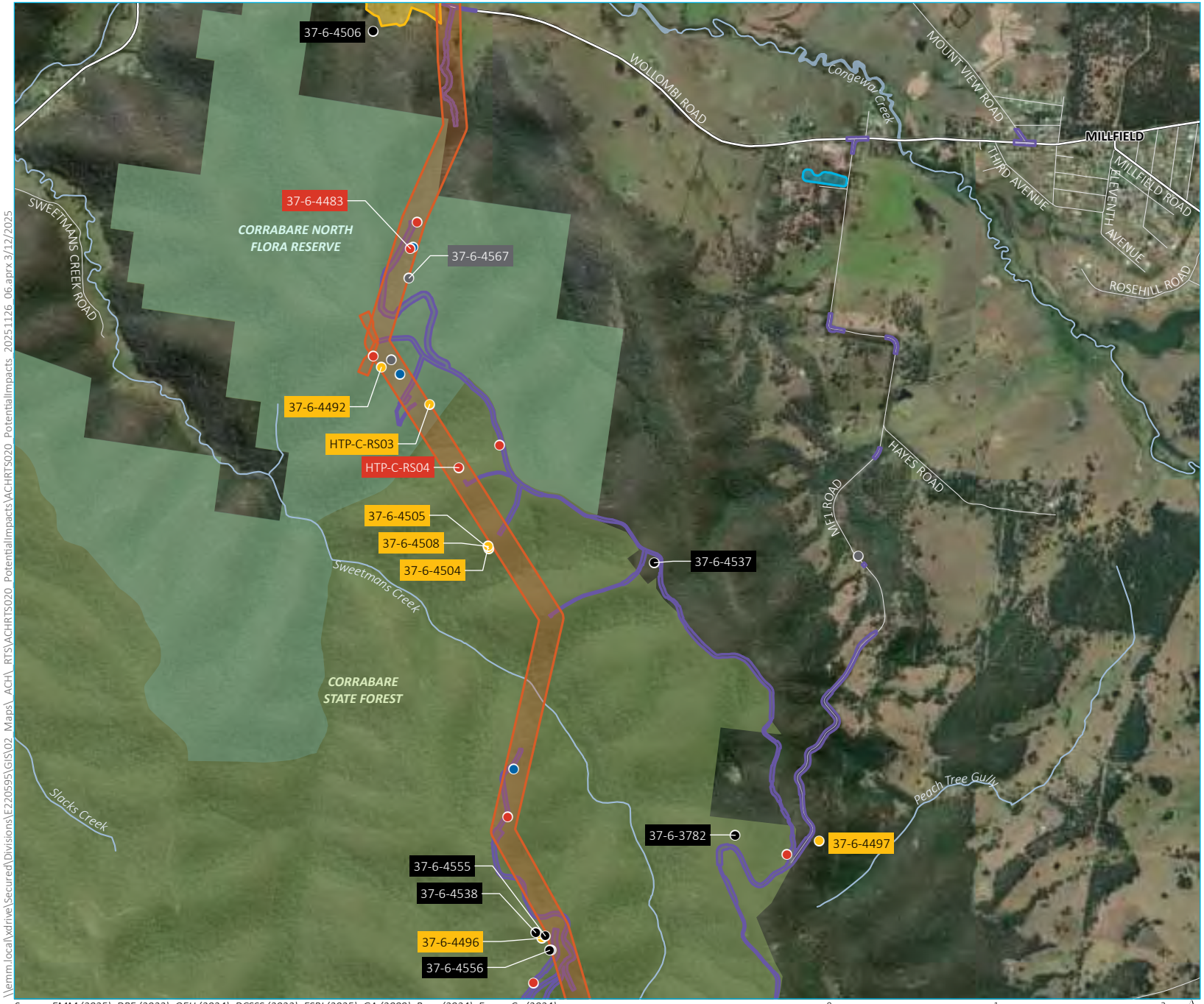
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

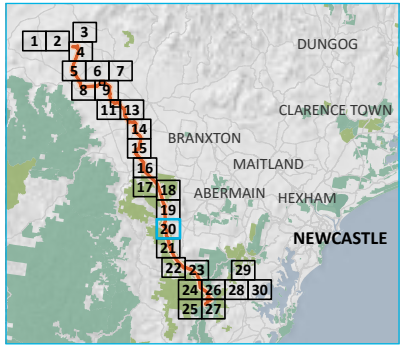
EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Partial impact
- Indirect impact
- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Construction support site
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

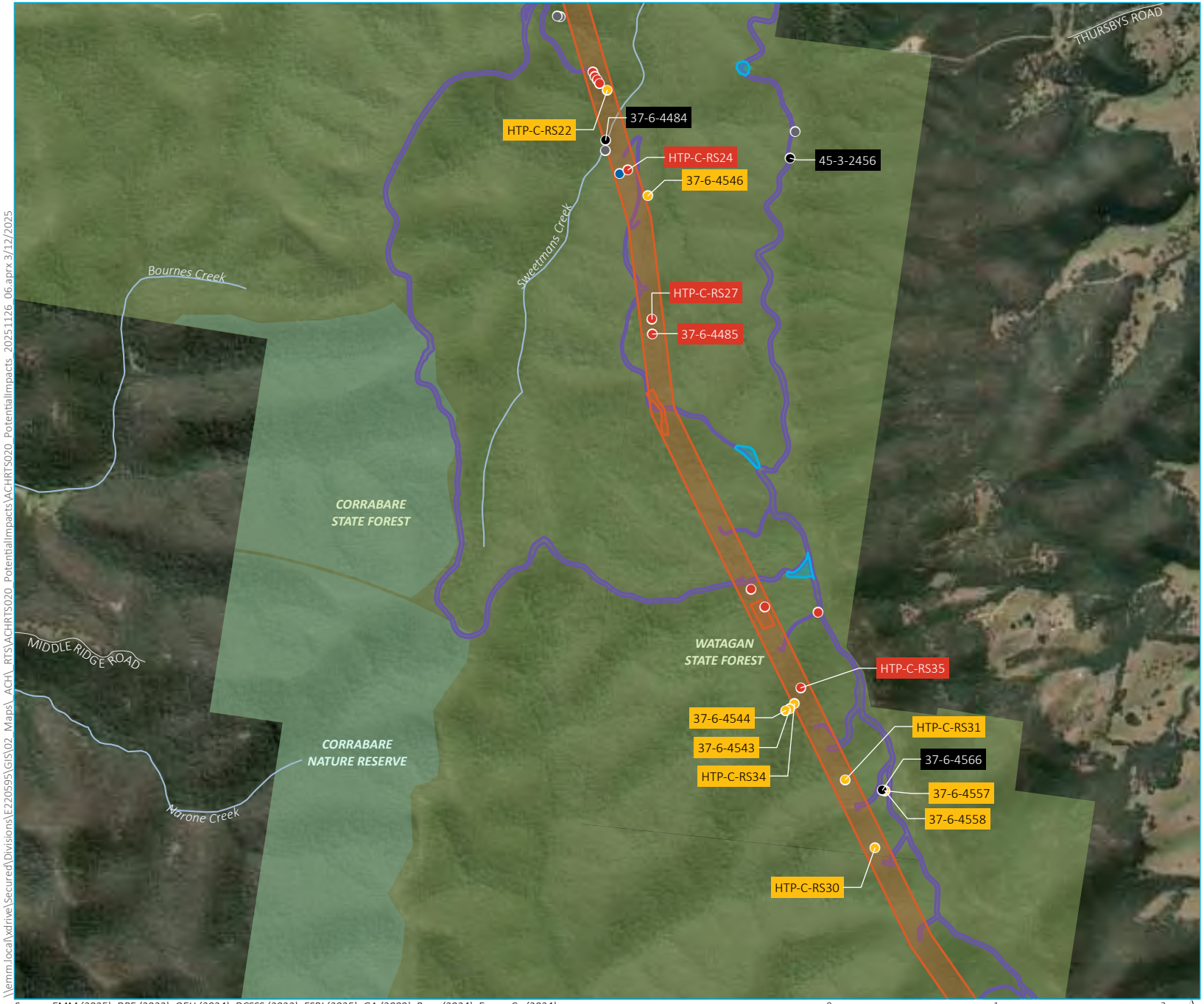
Updated potential impacts in relation to the addendum project
Map 20 of 30

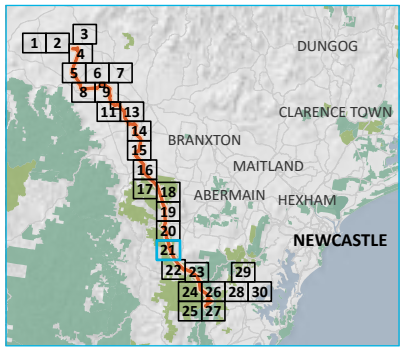
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Partial impact
- Indirect impact
- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Minor road
- Named watercourse
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 21 of 30

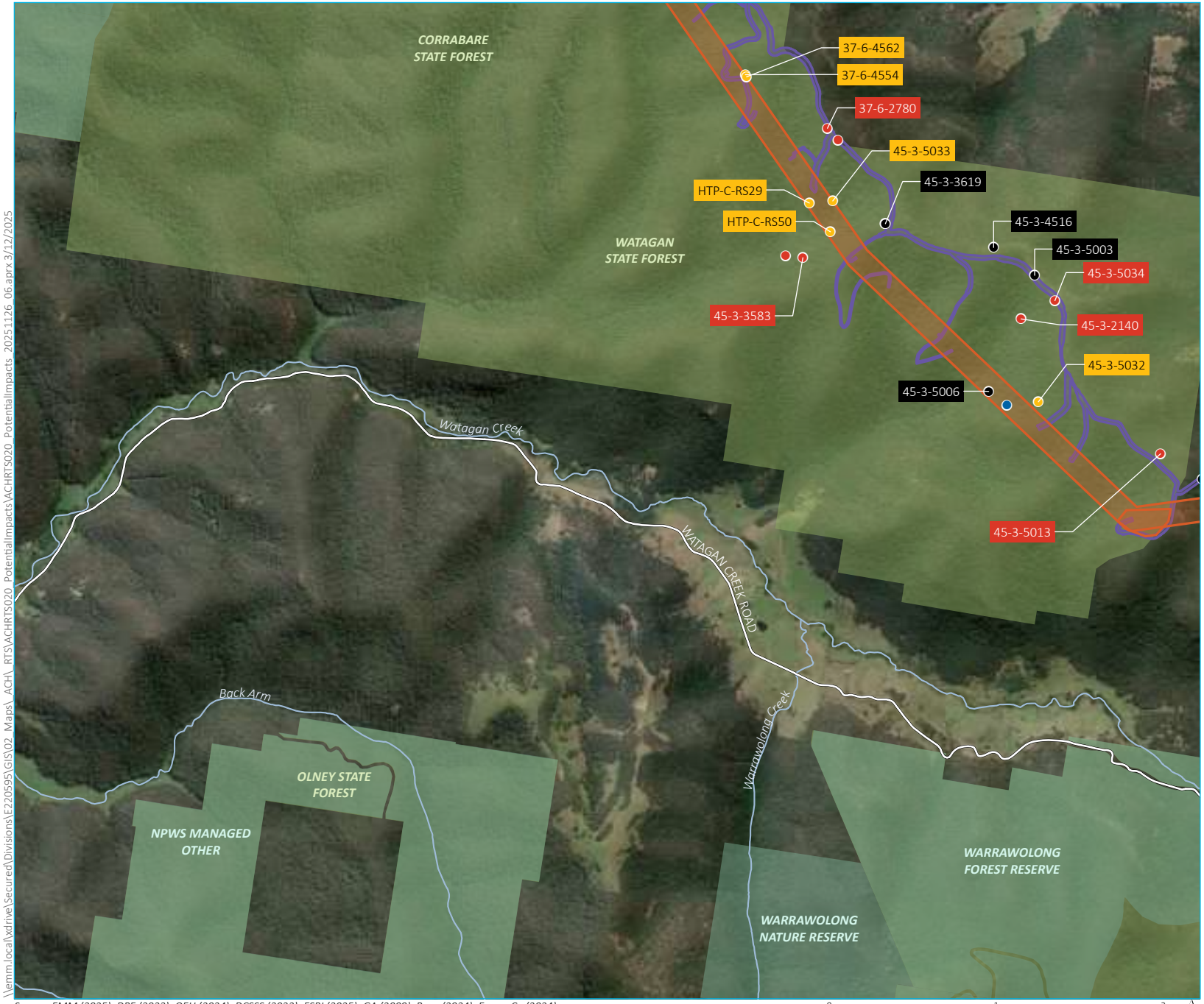
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

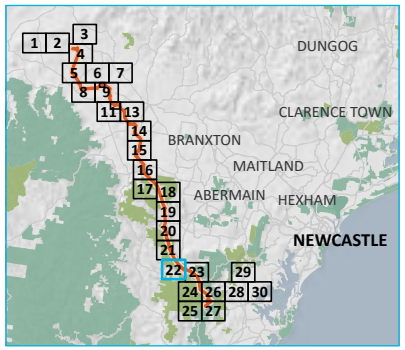
EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Partial impact
- Indirect impact
- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Named watercourse
- NPWS reserve
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 22 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

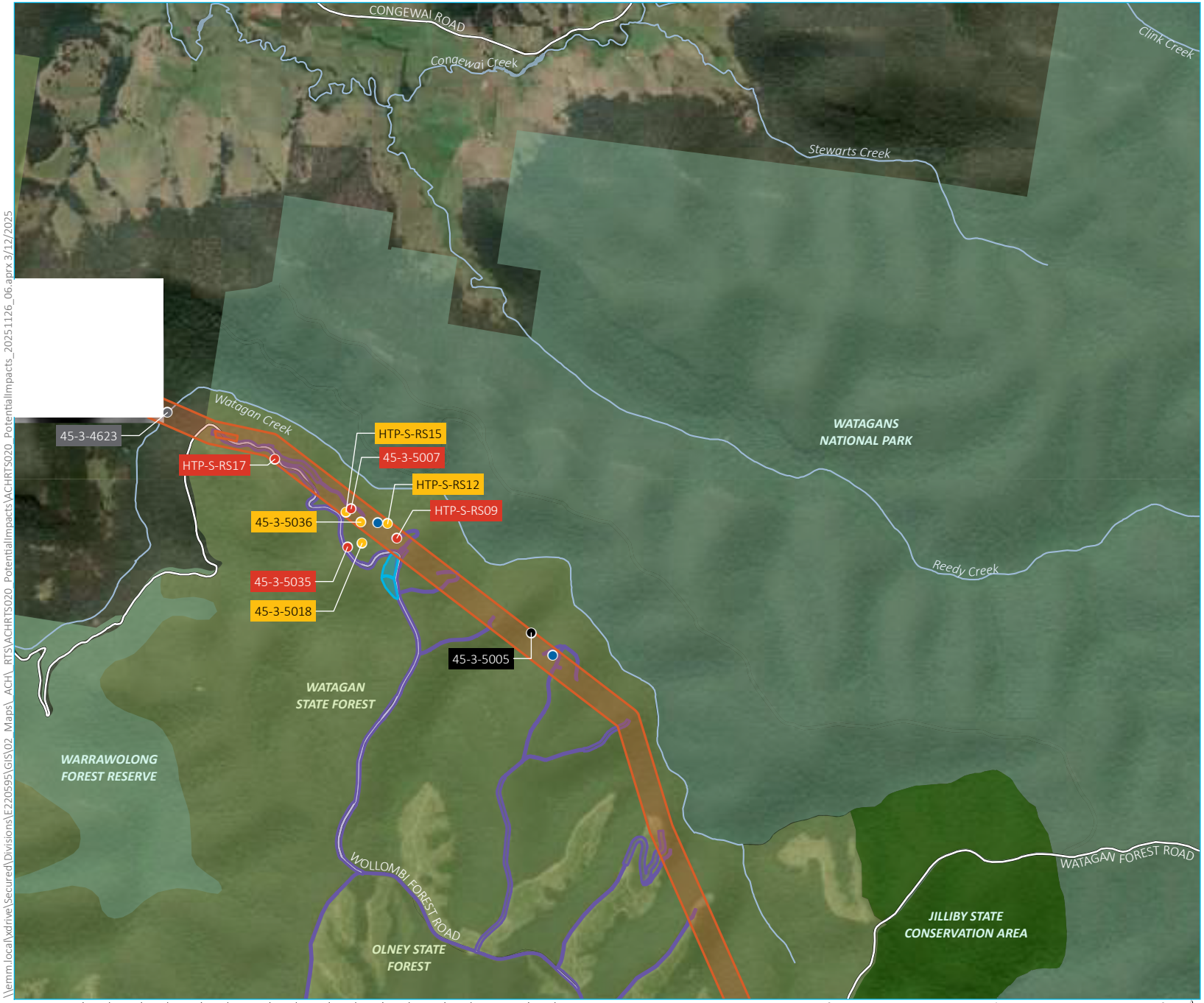
EMM creating opportunities

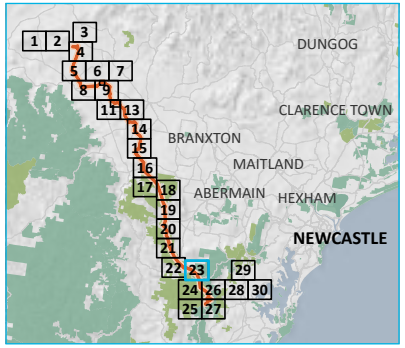
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Direct impact
- Partial impact
- Indirect impact
- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Laydown area
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 23 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

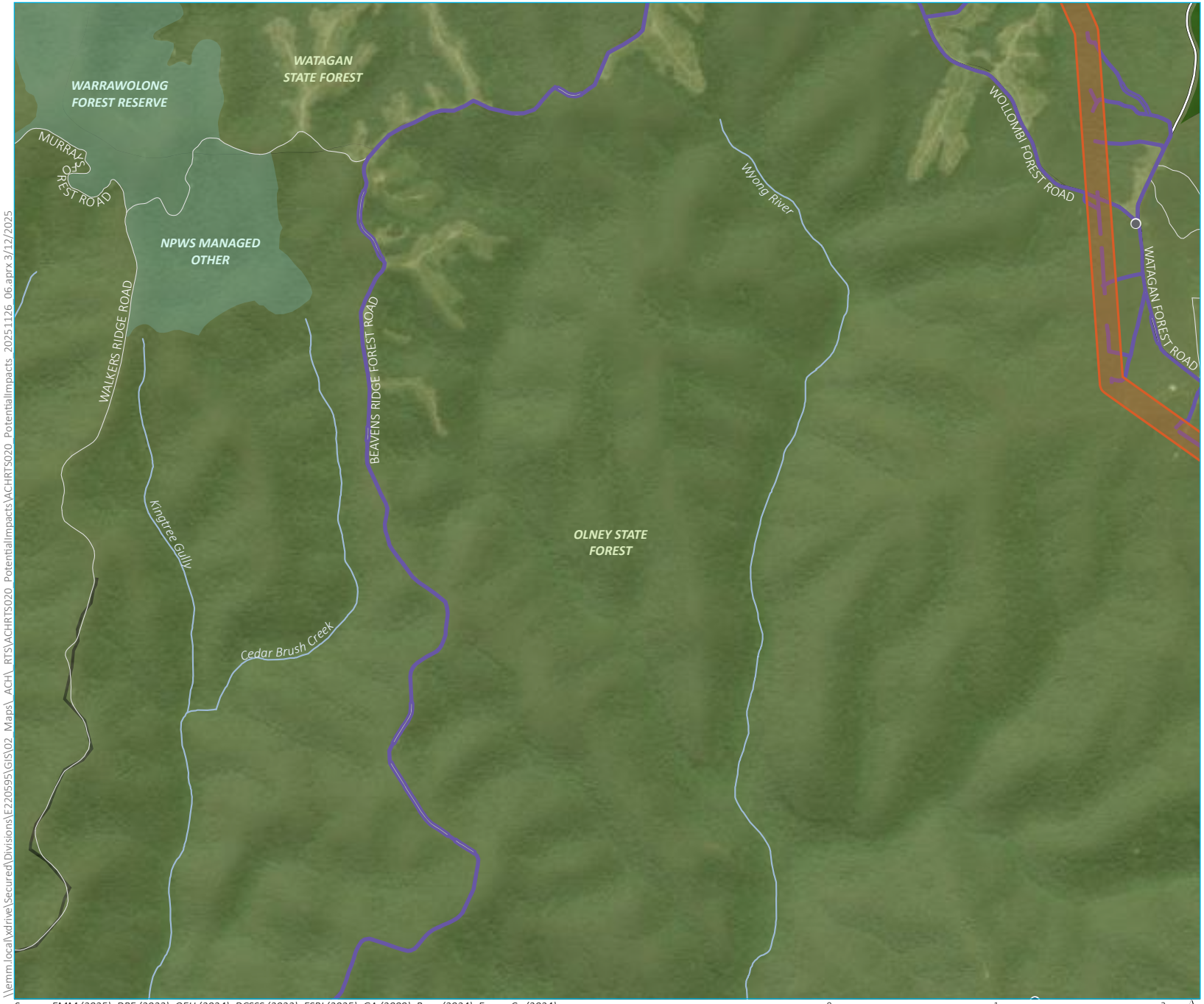
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

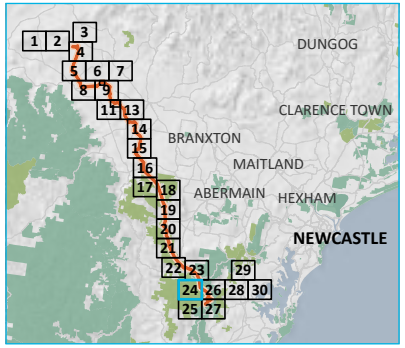
0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 24 of 30

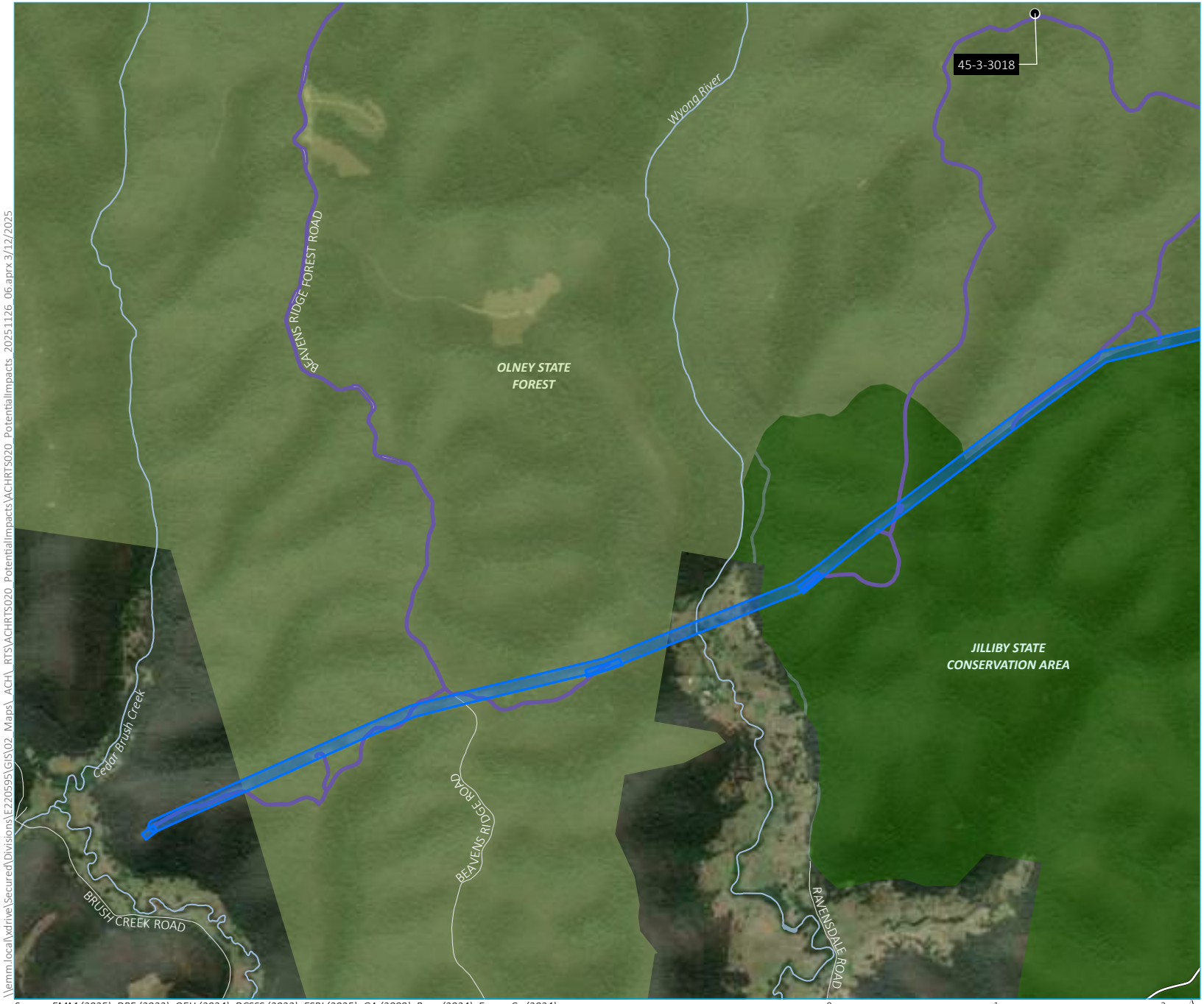
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

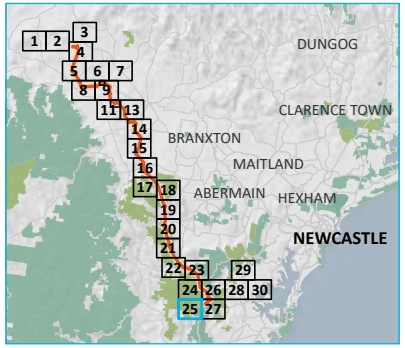
EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- Committed for avoidance

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 25 of 30

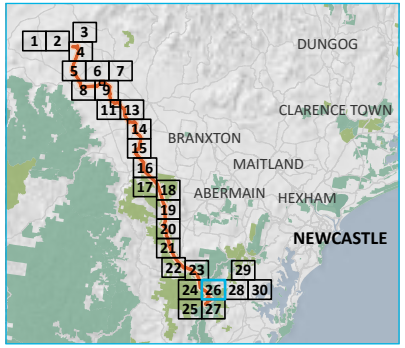
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTSVACHRTS020_PotentialImpacts\VACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Direct impact
- Indirect impact
- No impact
- Committed for avoidance

Project impact area

- HTP corridor
- Olney switching station
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 26 of 30

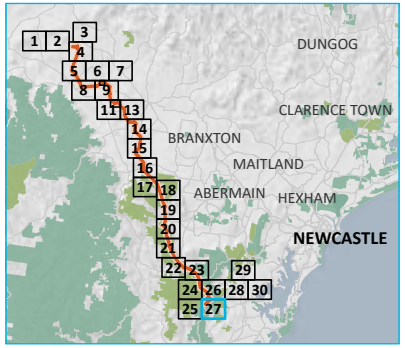
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- Indirect impact

Project impact area

- HTP corridor
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 27 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

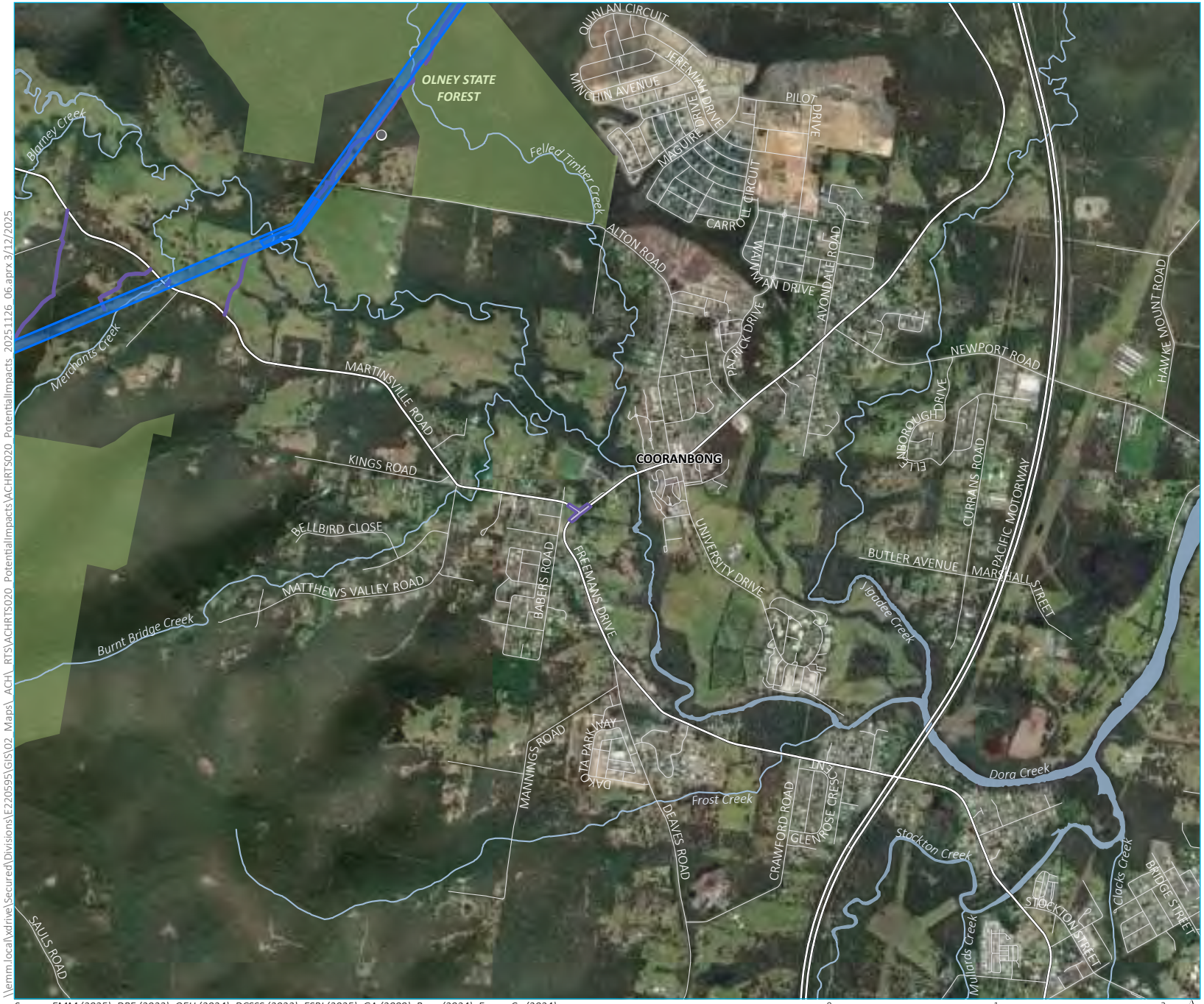
EMM creating opportunities

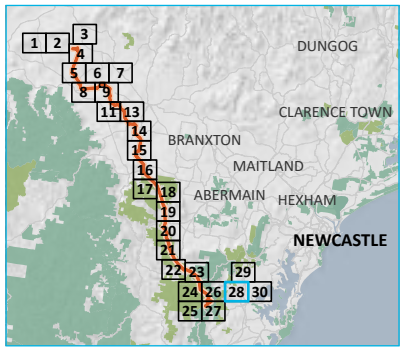
Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- No impact

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

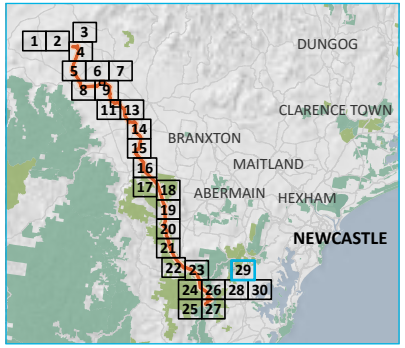
N

Updated potential impacts in relation to the addendum project
Map 28 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

EMM creating opportunities

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025



KEY

- No impact

Project impact area

- Construction support site
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

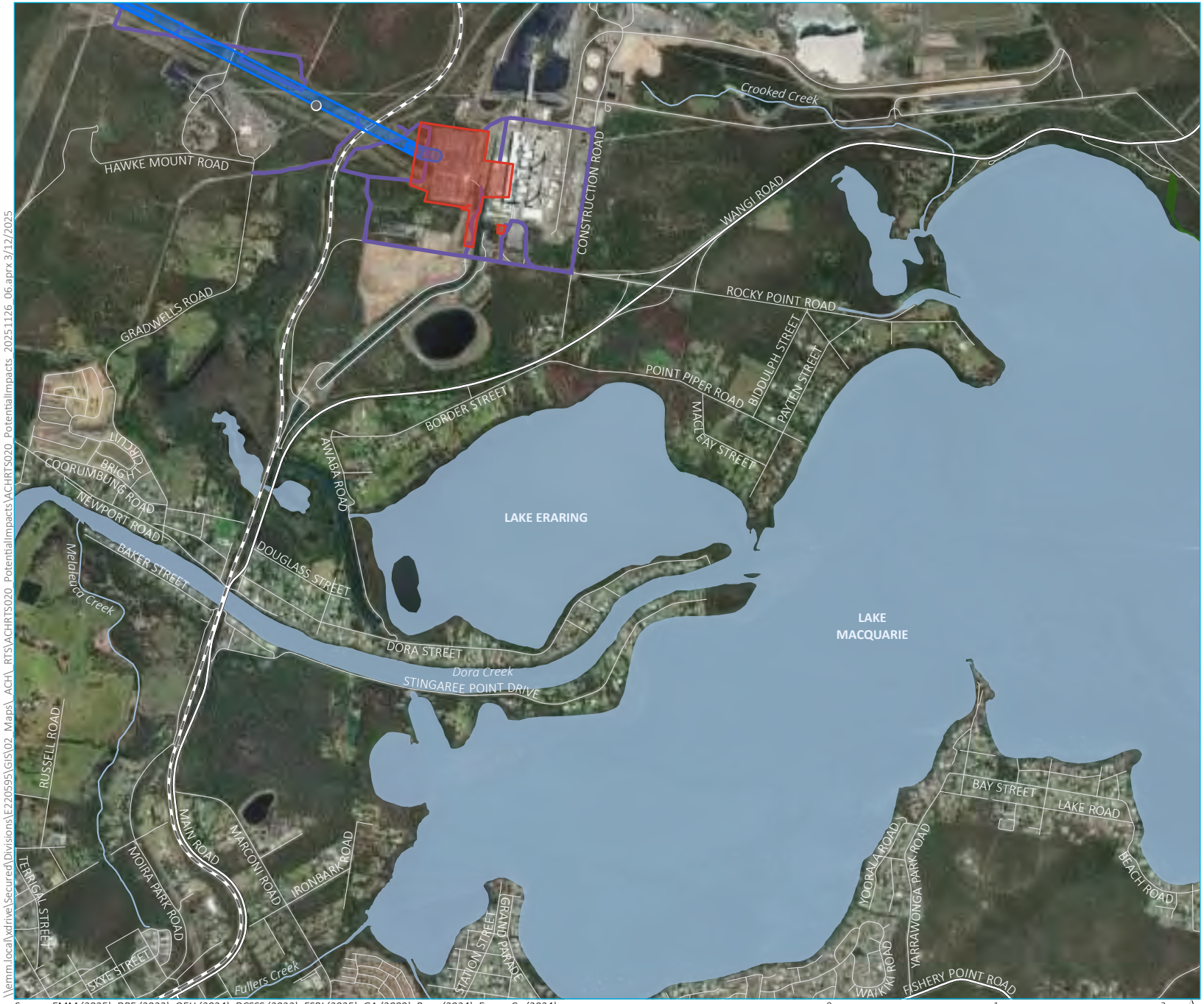
Updated potential impacts in relation to the addendum project
Map 29 of 30

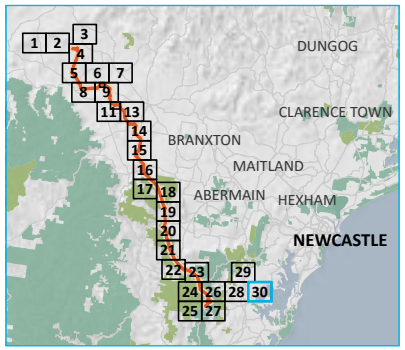
Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km
GDA2020 MGA Zone 56
N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025





KEY

- No impact

Project impact area

- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Rail line
- Major road
- Minor road
- Named watercourse
- Named waterbody
- State conservation area

INSET KEY

- Major road
- HTP corridor
- State forest
- NPWS reserve

Unlabelled sites reflect isolated objects or low density artefact scatters

Updated potential impacts in relation to the addendum project
Map 30 of 30

Hunter Transmission Project
Aboriginal Cultural Heritage Assessment Addendum
Figure 8.1

Source: EMM (2025); DPE (2023); OEH (2024); DCSSS (2023); ESRI (2025); GA (2009); Beca (2024); EnergyCo (2024)

0 1 2 km

GDA2020 MGA Zone 56

N

\\emm.local\xdrive\Secured\Divisions\E220595\GIS\02_Maps_ACH_RTS\ACHRTS020_PotentialImpacts\ACHRTS020_PotentialImpacts_20251126_06.aprx 3/12/2025

9 Management

9.1 Summary of this chapter

This chapter discusses the management strategy and recommendations relating to Aboriginal cultural heritage for the project:

- This ACHA addendum concludes that 303 Aboriginal objects, sites and places are within the amended project impact area, with a further 146 outside, but within 55 m of the amended project impact area. Of these, 23 sites dominated by rockshelters, stone arrangements, grinding grooves and cultural places are considered highly and moderately significant, with 20 of these committed for avoidance by the project. Applying a refined potential impact footprint based on biodiversity disturbance areas, 217 Aboriginal objects, sites and places would be directly impacted by the project, with a further 12 indirectly affected by vibration activities and/or hydrological changes. Three further rockshelters are also considered, being proposed for Aboriginal led research in the mitigation measures; and are also considered to be directly impacted as a result. Approximately 67 hectares of the Warkworth sand system is also within disturbance areas A and B and may be adversely impacted. The amended project impact area also bisects a significant cultural and ceremonial landscape and has the potential to indirectly affect important view-lines and view-scapes.

- This section outlines a number of established projects and places intersecting with the project impact area that have existing management requirements and processes for cultural materials. Wherever feasible, these are now incorporated into the proposed management of cultural materials for the project.

- Recommendations are proposed for inclusion in the project approval to guide post-approval requirements for Aboriginal heritage. These include ongoing consideration for the avoidance and minimisation of impacts as the project design continues to be refined prior to construction, the development of an Aboriginal cultural heritage management plan (ACHMP) to provide a framework for implementation of the proposed project, completion of outstanding test excavation requirements, development of a cultural values impact strategy in discussion with Elders and knowledge-holders to offset adverse impacts to cultural places and values, and the development of an interpretation strategy and plan to provide acknowledgement and other visual/educational opportunities for the Aboriginal and broader local community.

9.2 Updated summary of findings and impacts

Following public exhibition of the exhibited ACHA, additional survey and test excavation were undertaken to refine the cultural assemblage. This included field survey of previously uninspected areas and targeted test excavations, particularly across predicted Warkworth Sands deposits near the Hunter River/Wollombi Brook confluence. Of 40 proposed test excavation locations, 17 have now been completed.[13]

In total, ~160 kilometres of additional survey identified 13 new Aboriginal objects/sites (mostly isolated or low-density artefacts, plus a potential culturally modified tree). Combined with the exhibited ACHA results, 266 new Aboriginal sites, objects or places have been recorded, 164 within the amended project impact area. Following field surveys carried out as part of this ACHA addendum, survey coverage of the amended project impact area has increased to 82.5%.

A further 180 test pits were excavated across 17 locations (60 m^2/31.26 m^3), bringing the total to 284 test pits (89 m^2). Two soil profiles were recorded: shallow duplex soils (<50 centimetres) and deeper Warkworth Sands (>1 metre). The latest phase recovered 563 artefacts (3.4/m^2). Two areas (TPs 141-1–21 and 158-2–24) produced

[13] At the time of finalisation of the ACHA addendum, test excavations remain ongoing, with a further three completed. These will be reported upon separately to this report.

the highest densities (>30/m²), with activity dated to the last 1 to 2 ka and 13 to 38 ka respectively. In total, 20 new or refined Aboriginal sites were identified through excavation.

The exhibited ACHA originally identified 32 significant Aboriginal places and a background scatter of 191 low-density sites within the project impact area, plus 379 records within 200 metres of the project impact area. Following review, the assemblage was refined to: reconsider previously destroyed sites; include peripheral sites; separate amalgamated scatters; and add sites up to 55 m outside the impact area and those potentially affected by recommendations.

The refined assemblage now includes 303 Aboriginal objects, sites and places within the amended project impact area, 146 within 55 metres of the amended project impact area, and three further sites potentially affected as a result of mitigation measures. These include rockshelters, grinding grooves, cultural places, culturally modified trees, stone arrangements, and various densities of surface and subsurface stone artefacts. Of these, 23 Aboriginal objects, sites and places considered of high significance, 81 of moderate significance, and 199 as of low significance within the amended project area.

Twenty of the high and moderate significant sites are committed for avoidance by the project, which includes several rockshelters and the majority of stone arrangement and grinding groove site sites within or in close proximity to the amended project impact area. The remaining high significant sites are dominated by subsurface cultural deposits, of which only two have been recommended for further consideration, HTP-N-FA01 and HTP-N-FA02. Given the constrained nature of the project at these locations, commitment to avoid these sites cannot be made at this time, but ongoing refinement is actively being explored to minimise harm wherever feasible.

Overall, 217 Aboriginal sites and places are within disturbance areas A and B and would be either completely or partially impacted by the project. A further 12 Aboriginal objects, sites and places are within or within 55 m of the amended project impact area but outside of disturbance areas A and B, which may be subject to indirect impacts, such as vibration; and a further three sites outside the project impact area would be partially impacted as a result of Aboriginal led research outlined in the mitigation measures in *section 9.4*. Around 67 hectares of predicted Warkworth sand system would also be adversely affected by the project.

9.3 Existing approval for the management of the cultural assemblage

Appendix D.4 presents a review of established approval and management plans that intersect the amended project impact area and provide existing guidance on the management of cultural materials. These include ACHMPs for Hunter Valley Operations and Mount Thorley/Bulga Mining Complex, plans of management for national parks and operational plans for State Forests. Several are not publicly available, and could not be obtained from their respective owners nor reviewed, including Singleton Military Area and a small number of the State forests.

While each of these documents has some variation, they all have the following general principles:

- ensure the management of any cultural materials is undertaken only once suitable approvals and/or permits are in place to allow the works to proceed
- any activities should be undertaken in consultation with the Aboriginal community. These variously identify Aboriginal individuals and/or organisations, many of which are involved in this project
- active management and mitigation of any cultural materials to be adversely affected, which typically focusses on surface collection of stone artefacts regardless of their size or significance
- ensuring suitable management of recovered cultural materials, which typically includes direction from the Aboriginal community and/or return to Country.

Proposed recommendations in the exhibited ACHA largely aligned with the above approaches, with some deviation in the overall management of cultural materials, especially low significant stone artefacts that were not proposed for mitigation and not defining long term curation parameters of recovered materials. This ACHA addendum has now revisited the proposed mitigation measures to more closely align with the established approach and methods above, and most notably the active management and mitigation of all cultural materials within the amended project impact area. This is outlined further in the mitigation measures (refer to *section 9.5*) and guiding principles (refer to *Appendix E – Post approval requirements – updated guiding principles*).

There does however remain some misalignment primarily where cultural materials have been proposed for avoidance by established protocols, but which would be adversely affected by the project. These are primarily found within the Hunter Valley Operations mining complex where the amended project impact area extends through undeveloped and/or unused areas that enabled identified cultural materials to be avoided. While some of these sites would still be avoided, most notably including a culturally modified tree (#37-6-3024) that prompted project refinement, avoidance has not always been achievable.

9.4 Post approval requirements

The post approval requirements for the project remain similar to those outlined in the exhibited ACHA. These include the development of an ACHMP to provide a post-approval framework for the management of Aboriginal objects, sites and places in and near the amended project impact area, the development of a cultural values mitigation strategy to apply socio-economic outcomes for impacts to cultural places, the development a heritage interpretation strategy, and post-construction reporting to further inform the long-term management of cultural materials. A range of commitments to avoid and/or minimise impacts to the cultural assemblage prior to and during detailed design and construction also remain.

While a number of comments were provided as part of the public exhibition of the exhibited ACHA (refer to Appendix A), these primarily sought additional information or further direction in terms of the post-approval management of the project, rather than changes to the mitigation measures (refer to *section 9.5*). As such, many of these comments have been addressed in *Appendix E – Post approval requirements – updated guiding principles* of this ACHA addendum, which provides further guidance, approaches and methods in the development of the proposed post-approval documentation and activities at or near Aboriginal objects, sites and places. This specifically includes:

- further consideration of avoidance and minimising impact to Aboriginal objects, sites and places as the project continues to be refined during detailed design and pre-construction. While the ACHA addendum outlines the extent of potential impacts to the cultural assemblage, this is based on an evolving project design that continues to be informed and refined, and which may result in changes to the level of adverse impacts to cultural materials. While this process was proposed and continues to be established within the proposed ACHMP, mitigation measures now include AH01 that specifically proposes to revisit the potential impacts once a detailed project design is developed. In so doing, it will more proactively enable avoidance and/or impact minimisation to the cultural assemblage than may be achieved through the ACHMP

- further consideration of Aboriginal objects, sites and places outside, but within 55 metres of the amended project impact area, and which may be indirectly affected by the project. While discussed in the exhibited ACHA, they were not subject to formal review or management, being considered outside of probable impacts by the project

- further involvement in the development of post-approval documents with key stakeholders, including Aboriginal Traditional Owners, Forestry Corporation of NSW and NSW National Parks and Wildlife Service. While the exhibited ACHA proposed consultation with several of these individuals and/or organisations, this ACHA addendum now outlines a more extensive process of co-design development of key documents with the Aboriginal Traditional Owners, and formalises consultation with Forestry Corporation of NSW and NSW National Parks and Wildlife Service to ensure they can provide input and direction on the management of cultural materials

- further detail on the approaches and methods in the development of the post-approval documents, and the management and mitigation of Aboriginal objects, sites and places within and near the amended project impact area. While these approaches and methods are still proposed to be developed in the ACHMP when a greater understanding of the specific development activities at each site is more fully understood, nonetheless additional information and directions are now provided. Specific sections are also included to provide direction on the management of the Warkworth Sands system within the amended project impact area, locations proposed for test excavations during the exhibited ACHA and ACHA addendum that remain incomplete currently, and cultural sites and places

- various minor administrative and/or specific site comments and requirements outlined in the various submissions are also updated throughout *section 9.5* and *Appendix E – Post approval requirements – updated guiding principles* (e.g. exclusion of sites proposed for avoidance from mitigation measure components).

9.5 Mitigation measures

Table 9.1 provides a series of recommendations to be implemented for the project. These should be read in conjunction with the updated guiding principles in *Appendix E – Post approval requirements – updating guiding principles*.

Table 9.1 Updated management and mitigation measures for Aboriginal cultural heritage (to be read in conjunction with Appendix E)

Reference	Impact	Mitigation measure	Timing	Applicable location
AH01	Impact avoidance and minimisation	All potential impacts to Aboriginal objects, sites and places will be reviewed once a final project design is available. Any validated sites and/or cultural materials will be avoided or impacts minimised during construction planning, wherever practicable. The findings of this review would be provided to the registered Aboriginal parties and Heritage NSW. Management of these sites would be integrated into AH02, AH03 and AH04, with approaches and methods in broad accordance with *Appendix E – Post approval requirements – updated guiding principles*.	Detailed design	• All Aboriginal objects, sites and places within, and within 55 m of, the amended project impact area
AH02	Impact avoidance and minimisation	Direct and indirect impacts to all highly significant identified Aboriginal objects, sites and places and their immediate environment within, and within 55 m of, the project impact area will be avoided. Some guiding principles for avoidance of Aboriginal objects, sites and places are presented in *Appendix E – Post approval requirements – updated guiding principles*. Any site-specific avoidance measures developed to address this commitment would be integrated into AH04.	Detailed design Construction Operation	• DEEP CK MOTHER SWA (#37-6-3714), Flat Rock Lookout (HTP-C-CP01), [redacted] TRGG GRINDING GROOVE SITE (#45-3-2456), Monkey Place Creek/Broken Back Trail (#37-6-0552/#37-6-0809), CABANS RD CLIFF SWA (#45-3-4516), SWEETMANS CK OCHRE BOULDERS SWA (#37-6-3782), HTP-C-SA01 (#37-6-4538), HTP-C-SA02 (#37-6-4555), HTP-C-SA03 (#37-6-4537), HTP-C-SA04 (#37-6-4556), Corrobare State Forest, cnr of Langdans Road (#45-3-3619), HTP-C-GG01 (#37-6-4566), HTP-C-GG03 (#37-6-4484), HTP-C-GG04 (#37-6-4506), HTP-C-GG05 (#45-3-5006), HTP-S-GG01 (#45-3-5005), Null Road 2 (#45-3-3018), Olney CPT 75/76 Douglas Pt GDG (#45-3-4543), Pokolbin SF_C-345 AGG (#37-6-3967)

Reference	Impact	Mitigation measure	Timing	Applicable location
AH03	Impact avoidance and minimisation	The project will investigate the micro-siting of project infrastructure and construction activities in consultation with an Aboriginal heritage specialist and Wonnarua, Awabakal and Darkinjung Traditional Owners (as outlined in Appendix B.2 of the exhibited ACHA) to avoid or minimise impacts to all identified Aboriginal objects, sites and places within the project impact area. Some guiding principles for avoidance of Aboriginal objects, sites and places during construction of the project are outlined in *Appendix E – Post approval requirements – updated guiding principles*. Any site-specific avoidance measures developed to address this commitment will be integrated into AH04.	Detailed design Construction	• All identified Aboriginal objects, sites and places presented in *Chapter 6 (The archaeological resource)*
AH04	Cultural heritage management	An Aboriginal cultural heritage management plan (ACHMP) will be developed by an Aboriginal heritage specialist, co-designed with Wonnarua, Awabakal and Darkinjung Traditional Owners (as outlined in Appendix B.3), and in consultation with Forestry Corporation of NSW and NSW National Parks and Wildlife Service. The ACHMP will provide the post-approval framework for managing and mitigating identified, potential and unexpected Aboriginal objects, sites and places during detailed design, construction and operation of the project. The ACHMP will be developed following guiding principles in *Appendix E – Post approval requirements – updated guiding principles*, and include direction on Aboriginal consultation, avoidance and impact minimisation processes, methods and mitigation measures for adversely affected cultural materials (including the wishing well [HTP-S-CS01], test excavation locations within the HTP corridor not assessed by the exhibited ACHA or ACHA addendum and predicted Warkworth Sands system deposits), unexpected find and ancestral remain protocols, and long term cultural material curation, analysis and reporting.	Detailed design Construction	• All identified Aboriginal objects, sites and places within the amended project impact area as identified in Chapter 6 (The archaeological resource), and HTP-C-RS14 (#45-3-5013), HTP-C-RS02 (#37-6-4492), HTP-C-RS03 (#37-6-4679), HTP-C-RS15 (#37-6-4557), HTP-C-RS16 (#37-6-4558), HTP-C-RS17 (#37-6-4562), HTP-C-RS44 (#37-6-4554), HTP-C-RS45 (#37-6-4674), HTP-S-RS19 (#45-3-5008), HTP-S-RS20 (#45-3-5004), Shamrock Hill (#38-4-0221), Watagan Creek ACD (#45-3-4623), Corrabare State Forest Road 2 (#45-3-3582), Corrabare State Forest Western Side of Langans Rd SWA (#45-3-3583), and Corrabare (#45-3-2140) •
AH05	Cultural heritage management	Prior to construction impact and with consent of relevant landowners, archaeological excavations of investigation areas not completed during the exhibited ACHA or ACHA addendum and presented in Figure E.1 will be carried out. Test excavations will adopt approaches and methods outlined in *Appendix C.2.1.*	Detailed design	• Incomplete test pits outlined in Figure E.1

Reference	Impact	Mitigation measure	Timing	Applicable location
AH06	Aboriginal objects outside the project impact area	Additional assessment will occur in accordance with approaches and investigative methods developed in AH04 for areas where ground disturbance activities are required in locations outside of the previously assessed area. Where required, additional heritage surveys will be carried out with the RAPs prior to ground disturbance activities occurring in any such areas (including areas where only visual inspection has been undertaken). If no Aboriginal objects, sites and places are found or if they are found but would not be adversely impacted, then a letter report will be prepared by an Aboriginal heritage specialist that documents the findings and gives clearance to proceed. This would be provided to the RAPs for their information and records. Any identified Aboriginal objects, sites and places would be integrated and managed in AH04 and associated guiding principles presented in *Appendix E – Post approval requirements – updated guiding principles*.	Construction Operation	• Activities outside of the amended project impact area
AH07	Cultural heritage management	A cultural values mitigation strategy will be developed in consultation with the Awabakal and Wonnarua Elders and key knowledge-holders who participated in the cultural values mapping study for the project. This will be undertaken to explore mitigations for the perceived social and cultural impacts to important view-lines and view-scapes between major promontories in HTP Central, and localised cultural landscapes at Trig Road, Flat Rock, Dora Creek and the Dora pinnacles. The strategy will include, but not be limited to: • implementation of Aboriginal-led cultural inductions throughout the project impact area • support for cultural monitoring of development activities through the Trig Road cultural landscape, Flat Rock cultural landscape, and within 200 m of the Dora pinnacles and Dora Creek. This will include approaches and methods for cultural monitors to be able to relay concerns to the project for consideration and subsequent management • undertake traditional ecological knowledge investigations through Pokolbin State Forest and Corrabare North Flora Reserve • support for an Aboriginal-led research program to investigate cultural areas of interest and associated Aboriginal sites and places at Trig Road cultural landscape and Flat Rock cultural landscape. This will include but not be limited to: HTP-C-RS14 (#45-3-5-5013), Corrabare State Forest Road 2 (#45-3-3582), Corrabare State Forest Western Side of Langans Rd SWA (#45-3-3583), and Corrabare (#45-3-2140). Some guiding principles are provided in *Appendix E – Post approval requirements – updated guiding principles* to provide further direction on the development of this strategy and potential methods for research activities that may adversely affect Aboriginal object, sites and places.	Construction	• Flat Rock cultural landscape, Trig Road cultural landscape, Dora Creek, Dora pinnacles, HTP-C-RS14 (#45-3-5-5013), Corrabare State Forest Road 2 (#45-3-3582), Corrabare State Forest Western Side of Langans Rd SWA (#45-3-3583), and Corrabare (#45-3-2140)

Reference	Impact	Mitigation measure	Timing	Applicable location
AH08	Cultural heritage management	Where possible, the clearing of vegetation between significant cultural viewing locations and the project impact area will be minimised in discussion with Awabakal traditional owners. Where practicable, any intervening vegetation will be protected to reduce the potential for views of the project from Flat Rock lookout, including the view from the top of the rock as well as the setting and access track.	Detailed design Construction	• Flat Rock Lookout (HTP-C-CP01 [#45-3-5504]) • Other important cultural view-lines and view-scapes, including but not limited to SL5 and SL8
AH09	Cultural heritage management	Where practicable, project elements will be positioned to maximise the distance from and/or minimise their visibility within culturally important view-lines, notably SL5, in consultation with the Awabakal traditional owners.	Detailed design Construction	• Important cultural view-lines and view-scapes, including but not limited to SL5
AH10	Cultural heritage management	Following construction of the project, all Aboriginal sites and objects unharmed and/or partially impacted would be subject to a site condition assessment (including mapping and recording in GIS systems) by a heritage specialist in consultation with the RAPs. The site condition assessment will identify management requirements for the future conservation and protection of all documented cultural materials in the context of future operation and maintenance of the operation impact area. This will include consideration of increased access to Aboriginal sites and places as a result of the establishment and maintenance of the transmission easement.	Construction Operation	• Within, and within 55 m of, the amended project impact area, and all identified Aboriginal objects, sites and deposits identified in *Chapter 6 (The archaeological resource)* that will be adversely impacted by the project
AH11	Heritage interpretation	A heritage interpretation strategy will be developed by a heritage specialist to identify the Aboriginal heritage values throughout the project impact area, and to provide direction for potential interpretive opportunities for the project or off-site (e.g. at Broke, Cessnock or Martinsville). This strategy will be undertaken in consultation with Wonnarua, Awabakal and Darkinjung Traditional Owners (as outlined in Appendix B.3). Following consultation and feedback on the strategy, a heritage interpretation plan will refine the strategy with content (visual and textual) and design details in order to allow the implementation of the plan. Some guiding principles are provided in *Appendix E – Post approval requirements – updated guiding principles* to provide further direction on the development and content of this strategy.	Construction	• All locations
AH12	Consultation	The Aboriginal community consultation process for this project will continue throughout detailed design and construction.	Detailed design Construction	N/A
AH13	Consultation	A copy of the ACHA addendum and all relevant AHIMS site recording forms and information for the project will be lodged with Heritage NSW and provided to each of the RAPs, as relevant.	Detailed design	N/A

References

AMBS. 2002. Archaeological Assessment of Aboriginal Heritage: Lemington to Warkworth Heavy Equipment Access Track. Unpublished report for Coal & Allied Operations Pty Ltd.

Archives Authority of NSW. 1998. A Guide to the New South Wales State Archives Relating to Aboriginal People. Sydney: The Authority.

Arrow Heritage Solutions. 2019. Mitchell Pit Aboriginal Cultural Heritage Site Salvage and Excavation Program–AHIP C0002193. Unpublished report prepared for HVO Pty Ltd.

Attenbrow, Val. 2004. What's Changing: Population Size or Land Use Patterns? The Archaeology of Upper Mangrove Creek, Sydney Basin. Terra Australis 21. Canberra, ACT: The Australian National University Press.

Australian Cultural Heritage Management. 2016. United Wambo Open Cut Coal Project: Aboriginal Cultural Values Assessment Report. Unpublished report prepared for Glencore/Peabody Energy.

Australian Museum Business Services. 2000. Archaeological Site Assessment: Howick Coal Mine, Hunter Valley, NSW. Unpublished report for Coal and Allied.

Australian Museum Business Services. 2001. Howick Coal Mine Archaeological Salvage Excavations, Hunter Valley, NSW Main Report (Volume 1 of a 2 Volume Report). Vol. 1. Unpublished report for Coal and Allied.

Australian Museum Business Services. 2005. Aboriginal Heritage Study: Newcastle Local Government Area.

Awabakal Language Program. n.d. "Awabakal Stories." Awabakal Language Program Online. Retrieved March 7, 2024 (https://awabakallanguage.org.au/awabakal-language/awabakal-stories).

Baker, N. 1992. New South Wales Parks and Wildlife Service Hunter Valley Aboriginal Sites Project: Stone Artefact Assessment and Analysis Recording Techniques and Methodology.

Bickford A, Brayshaw H and Proudfoot H (1998) 'Thematic Forest History And Heritage Assessment (Non-Indigenous) UNE/LNE CRA Regions', *NSW CRA/RFA Steering Committee*.

Biosis Pty Ltd. 2011. Proposed Mitchell Line Feeder Duplication: Aboriginal Cultural Heritage Archaeological Report.

Bowdler, Sandra. 1970. "Bass Point: The Excavation of a South East Australian Shell Midden Showing Cultural and Economic Change." Sydney University.

Bowler, James M., Harvey Johnston, Jon M. Olley, John R. Prescott, Richard G. Roberts, Wilfred Shawcross, and Nigel A. Spooner. 2003. "New Ages for Human Occupation and Climatic Change at Lake Mungo, Australia." Nature 421(6925):837–40. doi: 10.1038/nature01383.

Bradshaw, Corey J. A., Sean Ulm, Alan N. Williams, Michael I. Bird, Richard G. Roberts, Zenobia Jacobs, Fiona Laviano, Laura S. Weyrich, Tobias Friedrich, Kasih Norman, and Frédérik Saltré. 2019. "Minimum Founding Populations for the First Peopling of Sahul." Nature Ecology & Evolution 3(7):1057–63. doi: 10.1038/s41559-019-0902-6.

Brayshaw, Helen. 1981. "Archaeological Survey of Proposed Extensions to Howick-Liddell Open Cut Coal Mine."

Brayshaw, Helen. 1983. "Archaeological Survey of Proposed Mining Extension at Buchanan Borehole Collieries Mine at Lemington near Warkworth in the Hunter Valley."

Brayshaw, Helen. 1986. "Archaeological Survey at the CSR Lemington Mine Hunter Valley, NSW."

Brayshaw, Helen. 1987. Aborigines of the Hunter Valley: A Study of Colonial Records. Scone, NSW: Bicentennial Publication No 4, Scone and Upper Hunter Historical Society.

Brayshaw, Helen. 1989. Archaeological Survey of Proposed Southern Extension [A72] Howick Mine Near Liddell, NSW. Unpublished report for BP Coal Australia.

Brayshaw, Helen, and Laila Haglund. 1981. Archaeological Survey of the Site for the Proposed Hunter Valley No. 2 Opencut Coal Mine, Warkworth, N.S.W. Unpublished report to Coal & Allied Operations Pty Ltd.

Brenton, William Henry. 1835. Excursions in New South Wales, Western Australia, and Van Dieman's Land, during the Years 1830, 1831, 1832, and 1833. 2nd Editio. London: Richard Bentley, New Burlington Street.

Burnett, G., Neal, C., Reid, T., Mason, J., Doelman, T., Frolich, A., Fermor, D., Talbott, S., Mayers, W., Williams, A.N. (2025) An archaeological signature of frontier violence in the New England Tableland, New South Wales, Australia. *Journal of Archaeological Science: Reports, 67:* 105363.

Butlin, N. G. 1983. Our Original Aggression: Aboriginal Populations of Southeastern Australia, 1788-1850. Sydney; Boston: Allen & Unwin.

Callen, T. 1994. Bar Safe: History of Newcastle Harbour and Its Entrance. Newcastle, NSW: Newcastle Region Maritime Museum.

Central Queensland Cultural Heritage Management Pty Ltd. 2014. Warkworth Continuation 2014 Proposal Aboriginal Cultural Heritage Assessment. Vol. 2. Unpublished report prepared for Warkworth Mining Limited.

Central Queensland Cultural Heritage Management Pty Ltd. 2016. Aboriginal Cultural Heritage Assessment Report for the Hunter Valley Operations: Mitchell Pit Development Aboriginal Heritage Impact Permit (AHIP) Application. Unpublished report prepared for HVO Pty Ltd.

Clarke, Philip. 2021. Hunter Valley Operations: Aboriginal Cultural Values Mapping Report. Unpublished confidential report prepared for EMM Consulting.

Clive Lucas, Stapleton and Partners Pty Ltd. 2013. Hunter Estates: A Comparative Heritage Study of Pre 1850s Homestead Complexes in the Hunter Region. Volume I: Historical Context and Survey of Sites.

Clouten, K. 1967. Reid's Mistake: The Story of Lake Macquarie from Its Discovery until 1890. Lake Macquarie Shire Council.

Colonial Secretary. 1883. "Copies of Minutes and Memorandums Received."

Cooksey. 1926. "Aboriginal Flakes and Tools of Newcastle (N.S.W.) and District." Virtual Sourcebook for Aboriginal Studies in the Hunter Region.

Darkinjung Aboriginal Land Counci. 2020. "Culture & Heritage." Retrieved March 7, 2024 (https://www.darkinjung.com.au/culture-and-heritage/).

DCCEEW (Department of Climate Change, Energy, the Environment and Water (2020) Interim Biographic Regionalisation for Austrtalia v. 7, DCCEEW, Australian Government.

Dean-Jones P, Peter B and Mitchell B (1993) 'Hunter Valley Aboriginal Sites Assessment Project: Environmental Modelling for Archaeological Site Potential in the Central Lowlands of the Hunter Valley'.

DECCW (Department of Environment, Climate Change and Water) (2010a) Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW, DECCW, Australian Government.

DECCW (Department of Environment, Climate Change and Water) (2010b) Aboriginal Cultural Heritage Consultation Requirements for Proponents, DECCW, Australian Government.

De Deckker, P., Arnold, L.J., van der Kaars, S., Bayon, G., Stuut, J-B.W., Perner, K., Lopes dos Santos, R., Uemura, R., Demuro, M. (2019) Marine Isotope Stage 4 in Australasia: A full glacial culminating 65,000 years ago – Global connections and implications for human dispersal. *Quaternary Science Reviews*, 204: 187-207.

Department of Climate Change Energy the Environment and Water. 2020. Interim Biogeographic Regionalisation for Australia v. 7 (IBRA).

Dortch, C. E. 1979. "New Perceptions of the Chronology and Development of Aboriginal Fishing in South-Western Australia." World Archaeology 29(1):15–35.

Dunn, M. 2015. “A Valley in a Valley: Colonial Struggles over Land and Resources in the Hunter Valley, NSW 1820-1850.” UNSW.

Dunn, M. 2020. The Convict Valley - the Bloody Struggle on Australia’s Early Frontier. Allen & Unwin Pty Ltd.

Dyall, L. K. 1972. “Aboriginal Occupation in the Dudley-Jewells Swamp Area.” Hunter Natural History 4(3):168–77.

EMM (EMM Consulting Pty Ltd) (2022) Aboriginal Cultural Heritage Assessment: HVO Continuation Project, prepared for HV Operations Pty Ltd, EMM.

EMM (EMM Consulting Pty Ltd) (2023) HVO Continuation Project Aboriginal Cultural Heritage Assessment Addendum. Report prepared for HV Operations Pty Ltd.

Environmental Resources Management Australia Pty Ltd. 2004. Substation Access Road: Statement of Enviromental Effects. Unpublished report for Coal and Allied Operations Pty Ltd.

Environmental Resources Management Australia Pty Ltd. 2005. Carrington Extension, Hunter Valley Operations: Cultural Heritage Assessment. Unpublished report for Coal and Allied Pty Ltd.

ERM Mitchell McCotter Pty Ltd. 1995. “Archaeology and Anthropology: Authorisation 72 Howick Coal Mine.”

ERM Mitchell McCotter Pty Ltd. 1997. Extension of Mining Operations at Ravensworth Mine EIS (Volume 2). Unpublished report prepared for Peabody.

ERM Mitchell McCotter Pty Ltd. 1999a. Carrington Mine Environmental Impact Statement. Unpublished report prepared for Coal & Aliied Operations Pty Ltd.

ERM Mitchell McCotter Pty Ltd. 1999b. Carrington Mine Environmental Impact Statement Supplementary Archaeological Information. Unpublished report for Coal & Allied Operations Pty Ltd.

Fawcett, J. W. 1898. “Customs of the Wonnah-Ruah Tribe, and Their Dialect or Vocabulary Continued.” Science, 180–81.

Find and Connect. 2023. “Aborigines Protection Board (1883 - 1940).” Retrieved March 7, 2024 (https://www.findandconnect.gov.au/guide/nsw/NE00034).

Fitzsimmons, K. E., C. Spry, and N. Stern. 2019. “Holocene and Recent Aeolian Reactivation of the Willandra Lakes Lunettes, Semi-Arid Southeastern Australia.” Holocene 29:606–21.

Fluvial Systems (Fluvial Systems Pty Ltd) (2023) *HVO Continuation Project: Geomorphological Assessment of Potential Extent of Late-Pleistocene Deposits Across the Project Area*, Fluvial Systems Pty Ltd, accessed XXX.

Ford, Geoffrey Eric. 2010. “Darkiñung Recognition An Analysis of the Historiography for the Aborigines from the Hawkesbury-Hunter Ranges to the Northwest of Sydney.” University of Sydney.

FCNSW (Forestry Corporation of NSW) (2024) 'Over a Centenary of Forestry in NSW', accessed 7 March 2024 (https://www.forestrycorporation.com.au/about/history).

Fullagar, R., Stephenson, B. Hayes, E. 2017. “Grinding Grounds: Function and Distribution of Grinding Stones from an Open Site in the Pilbara, Western Australia.” Quaternary International 427:175–83.

Fuller, R. .. 2020. “The Astronomy and Songline Connections of the Saltwater Aboriginal Peoples of the New South Wales Coast.” University of New South Wales.

Galloway RW (1963) 'Geomorphology of the Hunter Valley' pp. 90–102 in No.8 General Report on the Lands of the Hunter Valley, CSIRO Land Research Surveys 2010(1) 1-156, edited by Story R, Galloway RW, van de Graaff RHM and Tweedie AD. Melbourne, Victoria, Victoria: CSIRO.

Gliganic, L., Cohen, T.J., Slack, M., Feather, J.K. (2016) Sediment mixing in aeolian sandsheets identified and quantified using single-grain optically stimulated luminescence. *Quaternary Geochronology,* 32:56-66.

Gould, R. 1977. “Puntutjarpa Rockshelter and the Australian Desert Culture.” Anthropological Papers of the American Museum of Natural History.

Gourlay RC and Tunstall BR (1995) Environmental Impact Assessment of the Singleton Training Area, report to the Department of Defence.

Government Gazette of the State of New South Wales. 1914a. “Proclamation.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), May 27, 3080.

Government Gazette of the State of New South Wales. 1914b. “Proclamation.” Government Gazette of the State of New South Wales, July 15, 4065.

Government Gazette of the State of New South Wales. 1919a. “Proclamation—‘Forestry Act, 1916.’” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), August 8, 4416.

Government Gazette of the State of New South Wales. 1919b. “Proclamation—‘Forestry Act, 1916.’” Government Gazette of the State of New South Wales, August 29, 4744.

Government Gazette of the State of New South Wales. 1920a. “Proclamation—‘Forestry Act, 1916.’” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), March 12, 1556.

Government Gazette of the State of New South Wales. 1920b. “Proclamation—Forestry Act, 1916.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), June 25, 3589.

Government Gazette of the State of New South Wales. 1920c. “Proclamation—‘Forestry Act, 1916.’” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), February 6, 869–70.

Government Gazette of the State of New South Wales. 1921. “Proclamation—Forestry Act, 1916.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), October 7, 5767.

Government Gazette of the State of New South Wales. 1929. “Crown Lands Not Available For Settlement Until Further Notification.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), May 10, 2028.

Government Gazette of the State of New South Wales. 1942. “Forestry Act, 1916-1935.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), October 2, 2719.

Government Gazette of the State of New South Wales. 1966. “Forestry Act, 1916-1964.—Proclamation.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), November 11, 4669.

Government Gazette of the State of New South Wales. 1984. “Setting Apart Of Part Of A State Forest As A Flora Reserve.” Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001), June 29, 3439.

Grant, J. 1803. The Narrative of a Voyage of Discovery in the Years 1800, 1801, and 1802, to New South Wales. London.

Gray, Nancy. n.d. “Dangar, Henry (1796–1861).” Australian Dictionary of Biography. Retrieved January 26, 2022 (https://adb.anu.edu.au/biography/dangar-henry-1954/text2349).

Greenwood P (2013) 'Land of the Wiradjuri: Traditional Wiradjuri Culture, Wagga Wagga, NSW', *Riverina Environmental Education Centre*

Gunson, Niel. 1966. “Biraban (?–C. 1842).” Australian Dictionary of Biography Online. Retrieved March 13, 2024 (https://adb.anu.edu.au/biography/biraban-1781).

Gunson, Niel. 1967. “Lancelot Edward Threlkeld (1788–1859).” Australian Dictionary of Biography Online. Retrieved March 13, 2024 (https://adb.anu.edu.au/biography/threlkeld-lancelot-edward-2734).

Haglund, L. 1993. Archaeological Investigation of Site 37-5-63, Hunter Valley No 1 Mine: October 1993 Test Excavations for Coal and Allied Pty Ltd. Unpublished report to E.Rich on behalf of Coal & Allied Pty Ltd.

Haglund, Laila. 1982. Archaeological Survey of Proposed Routes for Conveyor Belt and Haul Road Linking Hunter Valley No. 2 Mine Authorisation Area with Hunter Valley No. 1 Mine. Unpublished report to Croft & Associates Pty Ltd.

Hamm, G., P. Mitchell, G. J. Arnold, L.J. Prideaux, D. Questiaux, N. A. Spooner, V. A. Levchenko, Foley E.C., T. H. Worthy, B. Stephenson, V. Coulthard, C. Coulthard, S. Wilton, and D. Johnston. 2016. "Cultural Innovation and Megafauna Interaction in the Early Settlement of Arid Australia." Nature 539.

Harris, J. 1801. "Surgeon Harris to Governor King 25 June, 1801." 416–18.

Hawley, S. P., R. A. Glen, and C. J. Baker. 1995. "Newcastle Coalfield Regional Geology 1:100 000."

Heritage Now Pty Ltd. 2023. "Corrabare North Cultural Survey Report."

Hiscock, Peter, P. Hughes, W. Shawcross, and R. Paton. 2000. Report of a Salvage Excavation at Site 37-5-63 Hunter Valley, New South Wales. Unpublished report to ERM Mitchell McCotter Pty Ltd.

HLA Envirosciences Pty Ltd. 2006. Aboriginal Heritage Assessment: Area 2, Area 4, Railway Easement, LCHPP, and Archerfield, Hunter Valley Operations South, NSW. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

Hughes PJ (unpublished) 'An Overview of the Archaeology of the Hunter Valley, Its Environmental Setting and the Impact of Development: NSW National Parks and Wildlife Service Hunter Valley Region Archaeology Project Stage 1', NSW National Parks and Wildlife Service.

Hughes PJJ, Spooner N and Questiaux D (2014) 'The Central Lowlands of the Hunter Valley, NSW: Why so Few Early Sites Have Been Found in This Archaeologically-Rich Landscape', *Australian Archaeology* 79:34–44, doi:10.1080/03122417.2014.11682017.

Huntley, J., Wallis, Stephenson, B., Karlka Nyiyaparli Aboriginal Corporation, Davis, AA multi-technique approach to contextualising painted rock art in the Central Pilbara of Western Australia: Integrating in-field and laboratory methods*Quaternary International,*

Huonbrook Environment & Heritage Pty Ltd. 1999. A Geomorphological Assessment of the Proposed Carrington Mine Site, Hunter Valley, NSW. Unpublished report to ERM Mithcell McCotter Pty Ltd.

Huonbrook Environment & Heritage Pty Ltd. 2000. Archaelogical and Geomorphological Excavations at the Proposed Carrington Mine Site, Hunter Valley, NSW. Unpublished report for Environmental Resources Management Australia.

HV Operations Pty Ltd. 2017. Aboriginal Cultural Heritage Assessment Report for the Hunter Valley Operations North (DA 450-10-2003), West Pit Dam 17 – Aboriginal Heritage Permit Application. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

Jacobs Group (Australia) Pty Limited. 2019a. Bayswater Water and Other Associated Operational Works Project: ACHA. Unpublished report prepared for AGL Macquarie.

Jacobs Group (Australia) Pty Limited. 2019b. Testers Hollow Cultural Values Assessment. Unpublished report prepared for Roads and Maritime.

Jacobs Group (Australia) Pty Limited. 2021. Eraring Battery Energy Storage System: Aboriginal Cultural Heritage Assessment Report. Unpublished report prepared for Origin Energy Eraring Pty Limited.

JACTO Australia Pty Ltd. 2008. Hunter Valley Operations Mitchell Pit Stage 1 – Indigenous Archaeology Assessment. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

Jones, Gerry. 2009. Yengo Country: A Source of Cultural & Spiritual Awakening.

Kayandel Archaeological Services. 2018. Stage 2 PACHCI Aboriginal Archaeological Survey Report. Unpublished report prepared for Roads and Maritime on behalf of Jacobs.

Keary, Anne. 2009. “Christianity, Colonialism, and Cross-Cultural Translation: Lancelot Threlkeld, Biraban, and the Awabakal.” Aboriginal History 33:117–55.

Kinhill Engineers Pty Ltd. 1995. Morisset Forestry District EIS: An Assessment of Aboriginal Archaeological Sites. Unpublished report prepared for State Forests NSW.

Koettig M 1986. Assessment of Archaeological Sites along the Proposed Singleton to Glennies Creek Water Pipeline Route and the Reservoir Site at Apex Lookout, Hunter Valley, NSW, *Public Works Department*.

Koettig, Margrit. 1991. Survey and Test Excavation: Authorisation 219. Unpublished report for Saxonvale Coal Pty Ltd.

Kovac M and Lawrie J (1991) Soil Landscapes of the Singleton 1:250,000 Sheet Map and Report, Soil Conservation Service of New South Wales.

Kuskie, P. 1997. An Aboriginal Archaeological Assessment of a Newcastle City Council Property at the Corner of Lenaghans Drive and John Renschaw Drive, Beresfield, Lower Hunter Valley, NSW.

Kuskie, P. 1999. An Aboriginal Archaeological Assessment of a Proposed Extension to the South Lemington Coal Mine Lease. Unpublished report prepared for Lemington Coal.

Lake Mac Familiy Life. 2019. “Lake Macquarie, from the Watagans State Forest Viewpoint.” Retrieved March 13, 2024 (https://lakemacfamilylife.com.au/watagans-state-forest-viewpoint/).

Lampert, R. 1971. Burrill Lake and Currarong: Coastal Sites in Southern New South Wales, Terra Australia I. Canberra, ACT: Department of Prehistory, Research School of Pacific Studies, ANU.

Lang, John Dunmore. 1834. An Historical and Statistical Account of New South Wales: Both as a Penal Settlement and as a British Colony. London: Cochrane and M’Crone.

Langley, M., Chris Clarkson, and Sean Ulm. 2011. “From Small Holes to Grand Narratives: The Impact of Taphonomy and Sample Size on the Modernity Debate in Australia and New Guinea.” Journal of Human Evolution2 61(2).

Mathews, Robert Hamilton. 1897. “The Burbung of the Darkinung Tribes.” Proceedings of the Royal Society of Victoria 10:1–12.

Maynard, J. 1999. “Fred Maynard and the Australian Aboriginal Progressive Association.” Journal of Aboriginal History 21:1–13.

Maynard, John. 2013. “Awabakal Voices: The Life and Work of Percy Haslam.” Aboriginal History Journal 37(2013):77–92. doi: 10.22459/ah.37.2013.04.

McCardle Cultural Heritage Pty Ltd. 2009a. Carrington West Extension Study Area–Indigenous Archaeology Assessment. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

McCardle Cultural Heritage Pty Ltd. 2009b. Hunter Valley Operations: South Riverview – AHIP S90 #1102084 Indigenous Archaeological Results. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

McCardle Cultural Heritage Pty Ltd. 2009c. Mitchell Pit Stage 1 – Indigenous Archaeology Assessment. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

McCardle Cultural Heritage Pty Ltd. 2010. HVO CHPP Energy Australia Substation Relocation–Indigenous Archaeology Assessment. Unpublished report prepared for Rio Tinto Coal Australia Pty Ltd.

McDonald, Jo. 1994. The Results of an Excavation Programme near Mount Yengo in the Hunter Range, NSW. Department of Prehistory and Anthropology Faculties, ANU, Canberra.

McDonald, Josephine. 2008. Dreamtime Superhighway : An Analysis of Sydney Basin Rock Art and Prehistoric Information Exchange. ANU E Press.

McNiven, I., Dunn, J.E., Crouch, J., Gunditj Mirring Traditional Owners Aboriginal Corporation. 2017. “Kurtonitj Stone House: Excavation of a Mid-Nineteenth Century Aboriginal Frontier Site from Gunditjmara Country, South-West Victoria.” Archaeology in Oceania 52(3):171–97.

Newcastle Morning Herald and Miners’ Advocate (1 June 1946) 'Hitch-hike back to camp'.Newcastle Morning Herald and Miners’ Advocate, accessed XX.

Newcastle Morning Herald and Miners’ Advocate (1947). “Forests Go Down Into Mines.” Newcastle Morning Herald and Miners’ Advocate (NSW : 1876 - 1954), October 4, 5.

Miller, J. 1985. “About the Wonnarua.” Retrieved March 11, 2022 (https://wonnarua.org.au/wp-content/uploads/2021/06/about-the-wonnarua-2.pdf).

Miller, R. 1887. “The Hunter River: The Wonnarua Tribe and Language.” Pp. 352–55 in The Australian race: its origins, languages, customs, place of landing in Australia, and the routes by which it spread itself over that continent. Vol. 3. Melbourne, Victoria: Government Printer.

Milliss, R. 1992. Waterloo Creek. Sydney: University of New South Wales Press.

Miromaa Aboriginal Language and Technology Centre. 2020. Awabakal Dictionary: Community Edition. Hamilton, NSW: Miromaa Aboriginal Language & Technology Centre.

Moore, D. .. 1981. “Results of an Archaeological Survey of the Hunter River Valley, New South Wales, Australia. Part II. Problems of the Lower Hunter and Contacts with the Hawkesbury Valley.” Records of the Australian Museum 33(9):388–442.

Moore, D. R. 1970. “Results of an Archaeological Survey of the Hunter River Valley, New South Wales, Australia. Part I. The Bondaian Industry of the Upper Hunter and Goulbourn River Valleys.” Records of the Australian Museum 28(2):25–64.

Nolan, Rosa. 2012. “‘We Want to Do What They Did’: History at St Clair.” University of Sydney.

NSW National Parks and Wildlife Service. 2010. Watagans National Park and Jilliby State Conservation Area: Plan of Management.

NSW National Parks and Wildlife Service. 2023. Corrabare Flora Reserves (Corrabare North No. 203 And Corrabare South No. 204) Site Specific Working Plan.

OEH (Office of Environment and Heritage) (2011) Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW, OEH, New South Wales Government.

O’Connell, James F., Jim Allen, Martin A. J. Williams, Alan N. Williams, Chris S. M. Turney, Nigel A. Spooner, Johan Kamminga, Graham Brown, and Alan Cooper. 2018. “When Did Homo Sapiens First Reach Southeast Asia and Sahul?” Proceedings of the National Academy of Sciences 115(34):8482–90. doi: 10.1073/pnas.1808385115.

O’Neill, C, and C Danis (2013) The Geology of NSW, report to the New South Wales Chief Scientist’s Office.

Office of Environment and Heritage NSW Government. 2014. Soil and Land Resources of the Merriwa Plateau. NSW Office of Environment and Heritage, Sydney.

OzArk Environmental & Heritage Pty Ltd. 2013. Aboriginal Archaeological Values Assessment Bulga Optimisation Project. Vol. 7.

OzArk Environmental & Heritage Pty Ltd. 2015. “Archaeological Due Diligence Assessment Proposed Erosion Control Works Hillcrest Offset Area, Upper Hunter Valley NSW Muswellbrook Local Government Area.”

OzArk Environmental & Heritage Pty Ltd. 2016. Aboriginal Archaeological Values Assessment: United Wambo Project. Unpublished report prepared for Glencore/Peabody Energy.

OzArk Environmental & Heritage Pty Ltd. 2019. Glendell Continued Operations Project. Vol. 27.

Pardoe, Colin. 1995. “Riverine, Biological and Cultural Evolution in Southeastern Australia.” Antiquity 69(265):696–713. doi: 10.1017/S0003598X00082284.

Parish of Pokolbin. 2024. “History: About the Parish of Pokolbin.” Retrieved March 13, 2024 (https://www.parishofpokolbin.com.au/history/).

Pate, D. F. 1998. “Stable Carbon and Nitrogen Isotope Evidence for Prehistoric Hunter-Gatherer Diet in the Lower Murray River Basin, South Australia.” Archaeology in Oceania 33(2):92–99.

Paterson, William. 1801a. “Lieut. Colonel Paterson’s Journal and Discoveries at Hunter River, 1801.” 447–48.

Paterson, William. 1801b. “Paterson to King, 25 June 1801.” 414–16.

Paul Budde History, Philosophy, Culture. n.d. “The Darkinjung.” Retrieved March 7, 2024 (https://paulbuddehistory.com/bucketty/the-darkinjung/).

Rich, Elizabeth. 1990. Proposed New Road: Bulahdelah to Coolongolook - Archaeological Survey for Aboriginal Sites. Unpublished report for Roads and Traffic Authority.

Rich, Elizabeth. 1993. Archaeological Investigations of Sites 37-5-63 and 37-5-126 Hunter Valley No.1 Mine. Unpublished report for Coal and Allied Operations Pty Ltd.

Ryan, Lyndall, Jennifer Debenham, Bill Pascoe, Robyn Smith, Chris Owen, Jonathan Richards, Stephanie Gilbert, Robert. J. Anders, Kaine Usher, Daniel Price, Jack Newley, Mark Brown, Le. Hoang. Le, and Hedy Fairbairn. 2022. “Colonial Frontier Massacres in Australia 1788-1930.” Retrieved March 16, 2022 (https://c21ch.newcastle.edu.au/colonialmassacres/detail.php?r=566).

Scarp Archaeology. 2009. Warkworth Archaeological Project.

Scarp Archaeology. 2011. Cultural Heritage Investigations: Hunter Valley Operations Over Land Conveyor Firebreak, Hunter Valley. Unpublished report for Rio Tinto Coal Australia.

Singleton Argus. 1888. “A ‘Grand’ Corroboree.” Singleton Argus (NSW : 1880 - 1954), February 29, 2.

Smith, M.A., Hayes, E., Stephenson, B. 2015. “Mapping a Millstone: The Dynamics of Use-Wear and Resides on a Central Australian Seed-Grinding Implement.” Australian Archaeology 80:70–79.

State Library of NSW. 2021. “Australian Agricultural Company.” State Library of NSW. Retrieved February 19, 2021 (https://www.sl.nsw.gov.au/stories/australian-agricultural-and-rural-life/australian-agricultural-company).

Stewart J and Adler J (1995). “New South Wales Petroleum Potential – Sydney Basin.”

Stockton, E. 1973. “Shaw’s Creek Rockshelter Human Displacement of Artefacts and Its Significance.” Mankind 9:112–17.

Stockton, E., and W. Holland. 1974. “Cultural Sites and Their Environment in the Blue Mountains.” Archaeology and Physical Anthropology in Oceania 9(1):36–65.

Suters Architects. 2007. Newcastle City Wide Heritage Study: Thematic History. Unpublished report for Newcastle City Council.

The Cessnock Eagle and South Maitland Recorder. 1919. “Forestry Reserve.” The Cessnock Eagle and South Maitland Recorder (NSW : 1913 – 1954), July 25, 3.

The Cessnock Eagle and South Maitland Recorder. 1925. “The Timber Industry.” The Cessnock Eagle and South Maitland Recorder (NSW : 1913 – 1954), February 24, 7.

The Council of the City of Maitland. 1983. A New History of Maitland. Maitland, NSW: The Council of the City of Maitland.

The Gosford Times and Wyong District Advocate. 1920. “Supplies for the Public.” The Gosford Times and Wyong District Advocate (NSW : 1906 - 1954), July 29, 5.

The Maitland Daily Mercury. 1921. “Olney State Forest.” The Maitland Daily Mercury (NSW : 1894 - 1939), January 11, 4.

The Sydney Morning Herald. 2004. “Pokolbin.” The Sydney Morning Herald Online, February 8.

Threlkeld, Lancelot Edward. 1974. Australian Reminiscences & Papers of L.E. Threlkeld, Missionary to the Aborigines, 1824-1859. edited by W. N. Gunson. Canberra, ACT: Australian Institute of Aboriginal Studies.

Tindale, Norman B. 1974. Aboriginal Tribes of Australia: Their Terrain, Environmental Controls, Distribution, Limits and Proper Names. Canberra, A.C.T.: Australian National University Press.

Tobler, R., A. Rohrlach, J. Soubrier, P. Bover, B. Llamas, J. Tuke, N. Bean, A. Abdullah-Highford, S. Agius, A. O’Donoghue, I. O’Loughlin, P. Sutton, F. Zilio, K. Walshe, Alan N. Williams, C. Turney, SM. Richards, R. Mitchell, E. Kowal, J. Stephen, L. Williams, W. Haak, and A. Cooper. 2017. “Aboriginal Mitogenomes Reveal 50,000 Years of Regionalism in Australia.” Nature 544(7469):180–84.

Tocomwall Pty Ltd. 2015. Glencore United Collieries Aboriginal Cultural Heritage Assessment. Unpublished report prepared for Glencore Coal Assets Australia.

Tuck, D. 2003. An Introduction to the Aboriginal History of Newcastle & of the Lower Hunter NSW.

Turner, J. 1997. A Pictorial History of Newcastle. Crows Nest, NSW: Kingsclear Books.

Turner JW (1985) 'Historical Themes of the Shire of Muswellbrook'.

Turner, J. W. 1996. Muswellbrook Shire Wide Heritage Study: Volume Three : Historical Themes of the Shire of Muswellbrook.

Turney, Chris S. M., Michael I. Bird, L. Keith Fifield, Richard G. Roberts, M. Smith, C. Dortch, R. Grun, E. Lawson, L. Ayliffe, G. Miller, J. Dortch, and R. Cresswell. 2001. “Early Human Occupation at Devil’s Lair, Southwestern Australia 50,000 Years Ago.” Quarternary Research 55(1).

Umwelt (Australia) Pty Limited. 1998. Environment Impact Statement: Newstan Colliery Life Extension Project. Unpublished report prepared for Powercoal.

Umwelt (Australia) Pty Limited. 2003. “Minmi Corridors Assessment - Maintaining and Enhancing Natural and Cultural Heritage Values.”

Umwelt (Umwelt Australia Pty Limited) (2023a) Appendix F - Historic Heritage Assessment, [unpublished report] prepared for the Department of Defence, Umwelt.

Umwelt (Umwelt Australia Pty Limited) (2023b) Hunter Trasmission Project Heritage Risk Assessment, [unpublished report] prepared for EnergyCo, Umwelt.

Umwelt (Umwelt Australia Pty Limited) (2023c) Singleton Military Area Heritage Management Plan: Appendix D - Indigenous Heritage Assessment [unpublished report] prepared for the Department of Defence.

Umwelt (Australia) Pty Ltd. 2004. Response to Department of Environment and Conservation Request for Further Information in Relation to the Aboriginal Archaeological Assessment - Glendell Open Cut Mine. Unpublished to Glendell Joint Venture.

Umwelt (Australia) Pty Ltd. 2010. Ravensworth Operation Project Environmental Assessment Volume 5 Appendix 11A Aboriginal Archaeological Assessment.

Veritas Archaeology & History Service. 2017. Report Covering Cultural Collection, Salvage and Sub-Surface Investigations at HVO West Pit Dam 17 Area. Unpublished report prepared for HVO Pty Ltd.

Veth, P. 1993. Islands in the Interior: The Dynamics of Prehistoric Adaptations within the Arid Zone of Australia. Michigan: Ann Arbor.

Wafer, Jim. 2014. “Placenames as a Guide to Language Distribution in the Upper Hunter, and the Landnám Problem in Australian Toponomastics.” Pp. 57–82 in Indigenous and Minority Placenames: Australian and International Perspectives, edited by I. D. Clark, L. Hercus, and L. Kostanski. Canberra, ACT: ANU Press.

Wafer, Jim, and Tracey Howie. 2023. “A Southeastern Dog Country.” in Australian National Placenames Survey.

Waters M (2000) 'Alluvial Stratigraphy and Geoarchaeology in the American Southwest'. *Geoarchaeology* 15(6):537–57.

Wiessner, P. 1990. “Is There a Unity to Style?” Pp. 105–12 in New Directions in Archaeology, edited by M. Conkey and C. Hastorf. Cambridge: Cambridge University Press.

Williams, Alan N. 2013. “A New Population Curve for Prehistoric Australia.” Proceedings of the Royal Society B: Biological Sciences 280(1761):20130486. doi: 10.1098/rspb.2013.0486.

Williams, Alan N., Fenella Atkinson, Michelle Lau, and Phillip S. Toms. 2014. “A Glacial Cryptic Refuge in South-East Australia : Human Occupation and Mobility from 36 000 Years Ago in The.” Journal of Quaternary Science 29(8):735–48. doi: 10.1002/jqs.2742.

Williams, Alan N., Adrian Burrow, Phil S. Toms, Oliver Brown, Michelle Richards, and Tessa Bryant. 2017. “The Cranebrook Terrace Revisited: Recent Excavations of an Early Holocene Alluvial Deposit on the Banks of the Nepean River, NSW, and Their Implications for Future Work in the Region.” Australian Archaeology 83(3):100–109. doi: 10.1080/03122417.2017.1392834.

Williams, Alan N., Peter Mitchell, Richard. S. Wright, and Phillip. S. Toms. 2012. “A Terminal Pleistocene Open Site On The Hawkesbury River, Pitt Town, New South Wales.” Australian Archaeology 74(1):85–97. doi: 10.1080/03122417.2012.11681937.

Williams, Alan N., Sean Ulm, Andrew R. Cook, Michelle C. Langley, and Mark Collard. 2013. “Human Refugia in Australia during the Last Glacial Maximum and Terminal Pleistocene: A Geospatial Analysis of the 25-12ka Australian Archaeological Record.” Journal of Archaeological Science 40(12):4612–25. doi: 10.1016/j.jas.2013.06.015.

Williams, Alan N., Sean Ulm, Ian Goodwin, and Mike Smith. 2010. “Hunter-Gatherer Response to Late Holocene Climatic Variability in Northern and Central Australia.” Journal of Quaternary Science 25(6):831–38.

Williams, Alan N., Sean Ulm, Chris S. M. Turney, D. Rohde, and G. White. 2015. “Holocene Demographic Changes and the Emergence of Complex Societies in Prehistoric Australia.” PLoS ONE 10(6):e0128661.

Williams, Alan N., Peter Veth, W. Steffen, Sean Ulm, Chris S. M. Turney, J. M. Reeves, S. J. Phipps, and M. Smith. 2015. “A Continental Narrative: Human Settlement Patterns and Australian Climate Change over the Last 35,000 Years.” Quaternary Science Reviews 123(2015):91–112. doi: 10.1016/j.quascirev.2015.06.018.

Williams, Alan N., Sean Ulm, Tom Sapienza, Stephen Lewis, and Chris S. M. Turney. 2018. “Sea-Level Change and Demography during the Last Glacial Termination and Early Holocene across the Australian Continent.” Quaternary Science Reviews 182:144–54. doi: 10.1016/j.quascirev.2017.11.030.

Williams, A.N., McDonald, J., Atkinson, F., Toms, P.S., Hobbs, A., Barry, L., Sapienza, T., Wood, J.C., Doelman, T. (2021) Was Aboriginal population recovery delayed after the Last Glacial Maximum? A synthesis of a terminal Pleistocene deposit from the Sydney Basin, New South Wales, Australia. *Journal of Archaeological Science: Reports* (40B): 103225.

Wollombi Valley Progress Association. 1981. Wollombi Valley: Description and History. Wollombi Valley Progress Association.

Wonnarua Nation Aboriginal Corporation. 2014. “Our History.” Retrieved March 11, 2022 (https://wonnarua.org.au/about-us-page-2/).

Yorston RM, Gaffney VL and Reynolds PJ (1990) 'Simulation of Artefact Movement Due to Cultivation', *Journal of Archaeological Science*, Volume 17, Issue 1, pp67–83.