

Prepared for
Neoen Australia Pty Ltd
ABN: 57 160 905 706

AECOM

Great Western Battery

Aboriginal Cultural Heritage Assessment Report Addendum

19-Sep-2022

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ABN: 57 160 905 706

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Table of Contents

Executive Summary	1
1.0 Introduction & Background	1
1.1 Introduction	1
1.2 Background to this Addendum ACHAR	1
1.3 Description of Proposed Works	3
1.4 Scope of this Addendum ACHAR	4
1.5 Authorship	4
2.0 RAP Consultation	7
2.1 RAP Consultation for ACHAR and first Addendum ACHAR	7
2.2 RAP Consultation for this Addendum ACHAR	7
2.2.1 Archaeological Survey	7
2.2.2 RAP review of draft Addendum ACHAR	7
3.0 Desktop Review	9
3.1 AHIMS Database	9
3.1.1 Surface and subsurface artefact scatter 'SU1a-A5' (45-1-2716)	9
3.2 NSW State Heritage Inventory	10
3.3 Project ACHAR	10
3.4 Landscape Context	13
3.5 Historical Aerials	13
4.0 Archaeological Survey	16
4.1 Objectives and Survey Strategy	16
4.2 Results	16
4.2.1 GWB-IA1-22	23
5.0 Significance assessment	24
5.1 Principles of assessment	24
5.2 Scientific Values	25
5.2.1 Rarity and representativeness	25
5.2.2 Research potential	25
5.2.3 Significance Assessment for GWB-IA1-22	26
5.3 Cultural values	26
6.0 Key Findings and Recommendations	27
6.1 Key Findings	27
6.2 Recommendations	27
7.0 References	29
Appendix A	
Consultation Log	
Appendix B	
RAP Responses to Draft Addendum ACHAR	
Appendix C	
AHIMS Search Results	
Appendix D	
Addendum ACHAR Study Area - Historical Aerials	

Executive Summary

AECOM Australia Pty Ltd (AECOM) was commissioned by Neoen Australia Pty Ltd (Neoen) to prepare a second Addendum Aboriginal Cultural Heritage Assessment Report (Addendum ACHAR) for the Great Western Battery Project in Wallerawang, New South Wales (NSW). Neoen is seeking development consent to construct, operate and maintain a large-scale Battery Energy Storage System (BESS) of approximately 500 megawatts (MW) and approximately 1000 megawatt-hour (MWh) at 173 Brays Lane, Wallerawang, NSW (the Site), as well as a new transmission line that would connect the BESS to the existing TransGrid 330 kilovolt (kV) substation at Wallerawang (the Project).

In December 2021, AECOM finalised an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project, with a follow up Addendum ACHAR, addressing some additional site access works adjacent to Brays Lane, finalised in February 2022. Both documents formed part of the Environmental Impact Statement (EIS) prepared for the Project, which was placed on public display between Tuesday 8 March 2022 and Monday 4 April 2022.

Subsequent to the EIS exhibition period, Neoen, in consultation with the Project's potential Horizontal Directional Drilling (HDD) contractors identified the need for an additional HDD launch/receipt pit on the left bank floodplain of Pipers Flat Creek, outside of the Project's previously assessed ACHAR study area. This additional launch/receipt pit has necessitated a revision of the Project's transmission connection corridor.

This Addendum ACHAR has been prepared to address potential impacts to Aboriginal heritage values as a result of the revised HDD alignment and associated drilling features, with the latter including a c.20 x 15 m drill rig hardstand and laydown area, as well as c.270 m section of a pre-existing vehicle track. The study area for this supplementary assessment comprises a c.585 m long linear corridor that has a maximum width of about 40 m. Referred to herein as the 'Addendum ACHAR study area', it encompasses all proposed ground disturbance activities outside of the Project's previously assessed ACHAR study area.

Based on a desktop review of existing Aboriginal heritage data sources for the Addendum ACHAR study area, as well as the results of an archaeological survey of this area, undertaken on 11 August 2022, this assessment finds that:

- Two Aboriginal sites are present within the Addendum ACHAR study area: previously recorded surface and subsurface artefact scatter SU1a-A5 (AHIMS ID #45-1-2716) and newly recorded isolated artefact 'GWB-IA1-22' (AHIMS ID #45-1-2891). Both sites have been assessed as being of low scientific significance.
- The mapped boundary of previously recorded artefact scatter SU1a-A5 is located partially within the Addendum ACHAR study area. However, the results of archaeological surveys undertaken for the Project, including that carried out to support the preparation of this Addendum ACHAR, indicate that none of the surface-based Aboriginal objects identified in association with this site occur within or immediately adjacent to the Addendum ACHAR study area.
- In general, land within the Addendum ACHAR study area, which encompasses part of the left bank floodplain of Pipers Flat Creek and a small section of adjoining slope, is considered to be of low Aboriginal archaeological sensitivity, with existing archaeological data for the Project suggesting an occupational emphasis on elevated low gradient landform elements away from the floodplain proper.
- Any subsurface archaeological deposits present within those portions of the Addendum ACHAR study area that have not been significantly disturbed are likely to be of low conservation value, consisting of low to very low density deposits.
- Land within the Addendum ACHAR study area retains variable Ground Integrity (GI). While sections of the study area, including the proposed drill rig hardstand and laydown area, have been significantly disturbed as a result of historical land use activities, the majority of land within this area retains moderate GI.

In view of these findings, and taking into consideration the nature of the proposed works within the Addendum ACHAR study area, the following recommendations are made:

1. Additional archaeological investigations within the bounds of the Addendum ACHAR study area, including a supplementary program of test excavation, are unwarranted. While Aboriginal archaeological deposits of low conservation value are likely to present within parts of the Addendum ACHAR study area, physical impacts to these deposits as a result of the proposed works are considered unlikely due to: a) the nature of the works proposed within identified areas of subsurface archaeological potential (i.e., HDD at nominal depth of 1.5 m below ground level (b.g.l).) and b) significant ground disturbance within the bounds of the proposed drill rig hardstand and laydown area.
2. All light and heavy vehicle movements within the mapped boundary of previously recorded artefact scatter SU1a-A5 (45-1-2716) should be restricted to the existing vehicle track present within this portion of the study area. An access corridor centred on the existing track and taking into account the maximum width of the vehicles required for the HDD installation process should be demarcated using high visibility fencing. Fencing should be installed prior to works commencing and remain in place until works are completed. All fencing works should be undertaken by, or under the supervision of, a qualified Aboriginal heritage specialist. Sections of SU1a-A5 outside of the recommended access corridor should be clearly defined in the Project's Construction Environmental Management Plan (CEMP) as 'no-go zones'.
3. To ensure no inadvertent impacts during construction, newly recorded isolated artefact 'GWB-IA1-22' should be protected via high visibility fencing. Fencing should be installed prior to works commencing and remain in place until works are completed. All fencing works should be undertaken by, or under the supervision of, a qualified Aboriginal heritage specialist. The location of GWB-IA1-22 should be clearly defined in the Project's CEMP as a 'no-go zone'.
4. Proposed management measures for SU1a-A5 and GWB-IA1-22 should be included in the Project's Aboriginal Cultural Heritage Management Plan (ACHMP).
5. Should any confirmed or suspected Aboriginal objects be identified within the Addendum ACHAR study area during construction, the Unexpected Aboriginal Heritage Finds Procedure (UAHFP) detailed in the ACHMP would be followed.
6. All contractors engaged to complete the proposed works within the Addendum ACHAR study area should be made aware of the nature and location of SU1a-A5 and GWB-IA1-22, as well as their associated 'no-go zones'.

1.0 Introduction & Background

1.1 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Neoen Australia Pty Ltd (Neoen) to prepare an Addendum Aboriginal Cultural Heritage Assessment Report (Addendum ACHAR) for the Great Western Battery Project in Wallerawang, New South Wales (NSW). Neoen is seeking development consent to construct, operate and maintain a large-scale Battery Energy Storage System (BESS) of approximately 500 megawatts (MW) and approximately 1000 megawatt-hour (MWh) at 173 Brays Lane, Wallerawang, NSW (the Site), as well as a new transmission line that would connect the BESS to the existing Transgrid 330 kilovolt (kV) substation at Wallerawang (the Project).

The Project is considered State Significant Development (SSD) under the *Environmental Planning and Assessment Act 1979* (EP&A Act) as it satisfies the requirements of Section 2.6 of the *State Environmental Planning Policy (Planning Systems) 2021* (PS SEPP).

In December 2021, AECOM finalised an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project (AECOM, 2021), with a supplementary ACHAR, addressing some additional site access works adjacent to Brays Lane, finalised in February 2022 (AECOM, 2022). Both documents formed part of the Environmental Impact Statement (EIS) prepared for the Project, which was placed on public display between Tuesday 8 March 2022 and Monday 4 April 2022. Subsequent to the EIS exhibition period, Neoen, in consultation with the Project's potential Horizontal Directional Drilling (HDD) contractors identified the need for an additional HDD launch/receipt pit on the left bank floodplain of Pipers Flat Creek, outside of the Project's previously assessed ACHAR study area. This additional launch/receipt pit has necessitated a revision of the Project's transmission line corridor.

This Addendum ACHAR has been prepared to address potential impacts to Aboriginal heritage values as a result of the revised HDD alignment and associated features, with the latter including a c.20 x 15 m hardstand and laydown area, as well as a c.280 m section of a pre-existing light vehicle track. The study area for this supplementary Aboriginal cultural heritage assessment, shown on **Figure 1** and referred to herein as the 'Addendum ACHAR study area', comprises a c.585 m long linear corridor that has a maximum width of about 40 m. As shown, it encompasses all proposed HDD-related ground disturbance activities outside of the Project's previously assessed ACHAR study area. It is intended that this Addendum ACHAR be read in conjunction with the Project's ACHAR (AECOM, 2021) and first Addendum ACHAR (AECOM, 2022).

1.2 Background to this Addendum ACHAR

AECOM was commissioned by Neoen to prepare an ACHAR for the Project in accordance with the Secretary's Environmental Assessment Requirements (SEARs) and relevant Heritage NSW guidelines including the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011). Finalised in early December 2021, AECOM's ACHAR documented the results of an assessment of the Aboriginal heritage values of the ACHAR study area, shown in part on **Figure 1**.

As detailed in the ACHAR, information regarding the Aboriginal heritage values of the ACHAR study area was obtained through a combination of background research, archaeological fieldwork and Aboriginal community consultation. A total of nine Registered Aboriginal Parties (RAPs), listed in **Table 1** in **Section 2.1**, were consulted for the assessment, with key consultation activities including:

- RAP review of AECOM's draft assessment methodology
- RAP review of AECOM's draft test excavation methodology
- RAP participation in archaeological field investigations
- RAP review of a draft of the ACHAR.

Archaeological survey of the ACHAR study area was undertaken on 16 June 2021 by a combined field team of two AECOM archaeologists of three RAP field representatives. All landform elements,

excluding areas of severely disturbed terrain within the fenced Lidsdale Siding facility and existing Transgrid Wallerawang 330 kV substation, were subject to survey, with particular attention paid to areas of higher Ground Surface Visibility (GSV) therein.

Two Aboriginal archaeological sites, consisting of previously identified artefact scatter SU1a-A5 (45-1-2716) and a new stone quarry site designated as 'GWB-STQ1-21' (45-1-2853), were identified during survey. In addition to these surface sites, three areas of subsurface archaeological sensitivity were also identified, two within the transmission line corridor and one within the Site. Designated in the field as 'ASAS-1', 'ASAS-2' and 'ASAS-3', these areas were assessed by the survey team as retaining moderate to high potential for the presence of subsurface archaeological deposits, albeit of variable character, extent and integrity. ASAS1 incorporated the crest and upper flanks of the main low gradient ridgeline within the Site, while ASAS-2 and ASAS-3 encompassed sections of the left bank floodplain of Pipers Flat Creek. Those portions of GWB-STQ1-21 and SU1a-A5 located within the ACHAR study area fell within ASAS-1 and ASAS-2 respectively.

Archaeological test excavations within ASAS1, ASAS-2 and ASAS-3 were undertaken over a four day period in October 2021 (5-8 October 2021). As per Requirement 14 of the Code of Practice, the overarching aim of the test excavation program was to collect information about the nature and extent of any subsurface Aboriginal objects present within these areas. Subsidiary objectives included site delineation and an assessment of levels of historical land disturbance.

Test excavations in ASAS-1, ASAS-2 and ASAS-3 were completed in two phases under a systematic sampling design. For ASAS-1, Phase 1 testing involved the excavation of 50 x 50 cm test pits across all non-severely-disturbed sections of this area, with pits placed on an underlying 25 m grid. For ASAS-2 and ASAS-3, Phase 1 testing involved the completion of two linear transects of 50 x 50 cm test pits, with pits on each transect spaced at 25 m intervals. Phase 2 of the test excavation program involved small expansion excavations around four Phase 1 test pits, two located within ASAS-1 (TPs 12 and 21) and two within ASAS-2 (TPs 42 and 52). These pits were selected for expansion on the basis of artefact yields and/or the technological characteristics of their associated Phase 1 artefact assemblages. In all instances, expansions involved the excavation of an additional three 50 x 50 cm test pits around the original test pit, producing 1 m² pits.

A total of 71 subsurface Aboriginal objects, consisting exclusively of flaked stone artefacts, were recovered from ASAS-1 and ASAS-2, with the majority (n = 58, 81.7%) coming from ASAS-1. Subsurface densities in both areas were uniformly low, with a maximum Phase 1 density of 7 artefacts per 0.25 m² occurring in ASAS-1. Phase 2 expansion excavations in ASAS-2 failed to yield any additional Aboriginal objects while those in ASAS-2 yielded a further 16 objects. Subsurface testing results for ASAS-2 are deemed consistent with existing surface evidence for GWB-STQ1-21 in attesting, amongst other activities, to low intensity Aboriginal quarrying and on-site reduction of naturally occurring quartz pebbles and cobbles derived from the Early Permian Shoalhaven Group. East of Brays Lane, subsurface evidence from ASAS-2, associated with artefact scatter site SU1a-A5, suggest low intensity Aboriginal use of the left bank floodplain of Pipers Flat Creek.

Taking into account the results of the archaeological survey and test excavation works detailed in AECOM's ACHAR for the Project, a total of two Aboriginal archaeological sites were ultimately recognised within the ACHAR study area: surface and subsurface artefact scatter SU1a-A5 (45-1-2716) and surface and subsurface stone quarry site GWB-STQ1-21 (45-1-2853) (**Figure 2**). Both sites extend outside of the ACHAR study area. An assessment of the scientific significance of SU1a-A5 and GWB-STQ1-21 attributed low significance to SU1a-A5 and moderate significance to GWB-STQ1-21.

Proposed ground disturbance activities within the ACHAR study area are expected to result in a near-complete loss of value for stone quarry GWB-STQ1-21 and, subject to appropriate protective measures, no loss of value for artefact scatter SU1a-A5. Measures to both mitigate and manage the potential impacts of the Project on the identified Aboriginal cultural heritage values of the ACHAR study area are detailed in Section 11.0 of AECOM's (2021) ACHAR.

Subsequent to the finalisation of the AECOM's ACHAR in December 2021, Neoen identified the need for some additional site access works adjacent to Brays Lane, outside of the previously assessed ACHAR study area. Accordingly, an Addendum ACHAR addressing potential impacts to Aboriginal heritage values as a result of these works was prepared by AECOM and included in the EIS prepared for the Project (see AECOM, 2021). Based on a desktop review of existing Aboriginal heritage data

sources for the Addendum ACHAR study area, this assessment identified that land required for the proposed access works had been significantly disturbed as a result of historical land use activities, with the most severe impacts to natural landform elements and soil profiles within this area associated with the construction of Brays Lane and the main driveway into Lot 1 DP126659. No previously recorded Aboriginal sites were identified within the proposed works area. However, two sites, consisting of previously recorded open artefact site 'Brays Lane AS1' (AHIMS ID #45-1-2799) and stone quarry site 'GWB-STQ1-21' (AHIMS ID #45-1-2853) were noted as being located in close proximity. While impacts to Aboriginal objects as a result of the proposed site access works were assessed as highly unlikely, in recognition of the fact that the proposed works area was not physically inspected for such objects, it was recommended that the ACHMP proposed for the Project include a provision requiring this area to be subject to a visual inspection prior to the commencement of any ground disturbing works therein. Additionally, it was recommended that a previously demarcated 'no-go zone' for open artefact site 'Brays Lane AS1' be adhered to throughout the duration of the proposed access works.

Following public exhibition of the Project EIS, WaterNSW informed Neoen that the Project's proposed transmission line would cross an existing underground water pipeline (the Fish River Pipeline). Neoen consulted with WaterNSW to understand the separation distances and construction methods required to avoid impacting the Fish River Pipeline. The recommended separation distances mean that the transmission connection would need to make sharper turns underground. The separation distances were discussed with the Project's potential HDD contractors and it was agreed that whilst the HDD methodology could still be used to cross from the Site to the northern end of the rail corridor, an additional entry/exit pit along this part of the alignment is likely to be required to account for the required separation distances and the turns required to install the transmission connection. The additional HDD pit means that the cable pulls between the pit locations are possible to complete. Neoen has completed a review of the land between the Site and the northern end of the rail corridor and identified a suitable location for the additional pit that would avoid as far as practicable additional environmental impacts.

As indicated in Section 1.1, this Addendum ACHAR has been prepared to address potential impacts to Aboriginal heritage values as a result of the revised HDD alignment and associated features.

1.3 Description of Proposed Works

As shown on **Figure 1**, installation of that portion of the proposed transmission line located within the Addendum ACHAR study area is to occur using HDD. HDD is a trenchless construction method for installing conduits that is associated with less surface ground disturbance than trenching. A drill rig is used to bore an opening in the ground through which a pipe is passed through. The hole is opened by passing progressively larger pipes through the bore hole until a sufficient diameter is reached to allow the conduits to be passed through. Drilling fluid is used in the process of HDD, which comprises a mixture of water and biologically neutral drill additives (such as bentonite). This fluid is continuously pumped through the bore and serves multiple purposes, including cooling the drill cutting head, removing cuttings, stabilising the bore hole and lubricating the passage of the conduits. Slurry generated from the drilling fluid would primarily be captured and reused in the HDD process. When this is no longer feasible the waste slurry would be collected and appropriately disposed.

Proposed HDD-related ground disturbance activities within the Addendum ACHAR study (hereafter the 'proposed works') include:

1. Use of an existing unsealed vehicle track off Brays Lane to the proposed additional launch/receipt pit location (approximately 280 m in length)
2. Excavation down to approximately 1 m below natural ground to accommodate a prefabricated concrete cable joining pit
3. Installation of the joining pit (2.5m x 9m) and works required to join underground cables terminating within it
4. Establishment of a temporary equipment laydown area of 15 m x 12 m
5. Installation of a temporary drill rig of 15 m x 8 m
6. Rehabilitation of the hardstand and laydown area to allow it to return to its condition prior to the works once construction is completed.

1.4 Scope of this Addendum ACHAR

This Addendum ACHAR has been prepared to address potential impacts to Aboriginal heritage values as a result of the proposed works. Tasks undertaken have included:

- An updated search of the AHIMS database
- A review of AECOM's ACHAR and first Addendum ACHAR for the Project
- A review of the landscape context of the Addendum ACHAR study area
- A review of historical aerial photographs for the Addendum ACHAR study area, spanning the years 1954 to 2019
- Consultation with the Project's nine RAPs.

1.5 Authorship

This report was prepared by AECOM Principal Aboriginal Heritage Specialist Dr Andrew McLaren, with technical and QA review provided by Geordie Oakes (Principal Heritage Specialist) and William Miles (Technical Director - Environment, ANZ) respectively.

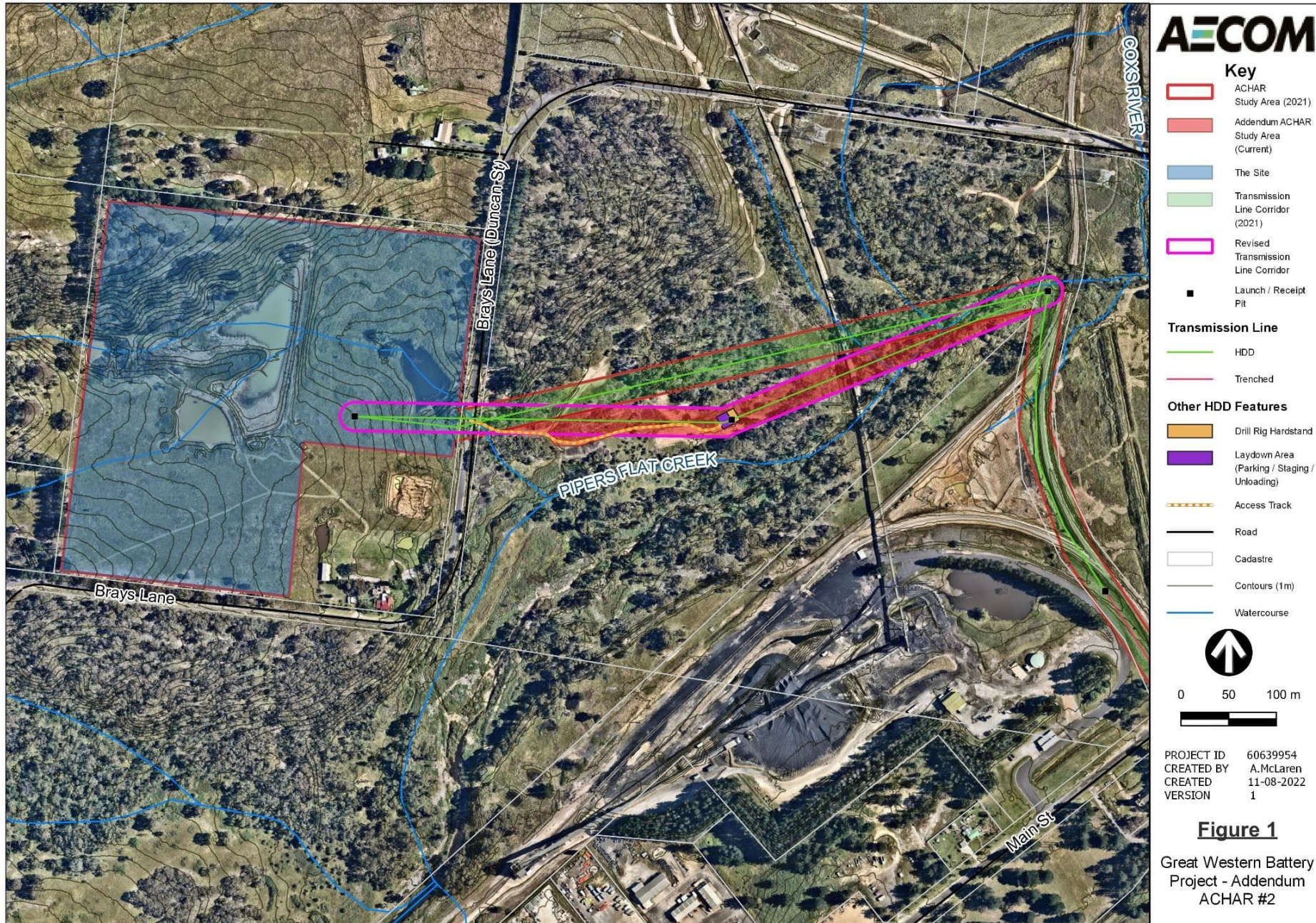


Figure 1 Map showing location of Addendum ACHAR study area relative to the Site, original transmission line corridor and ACHAR study area

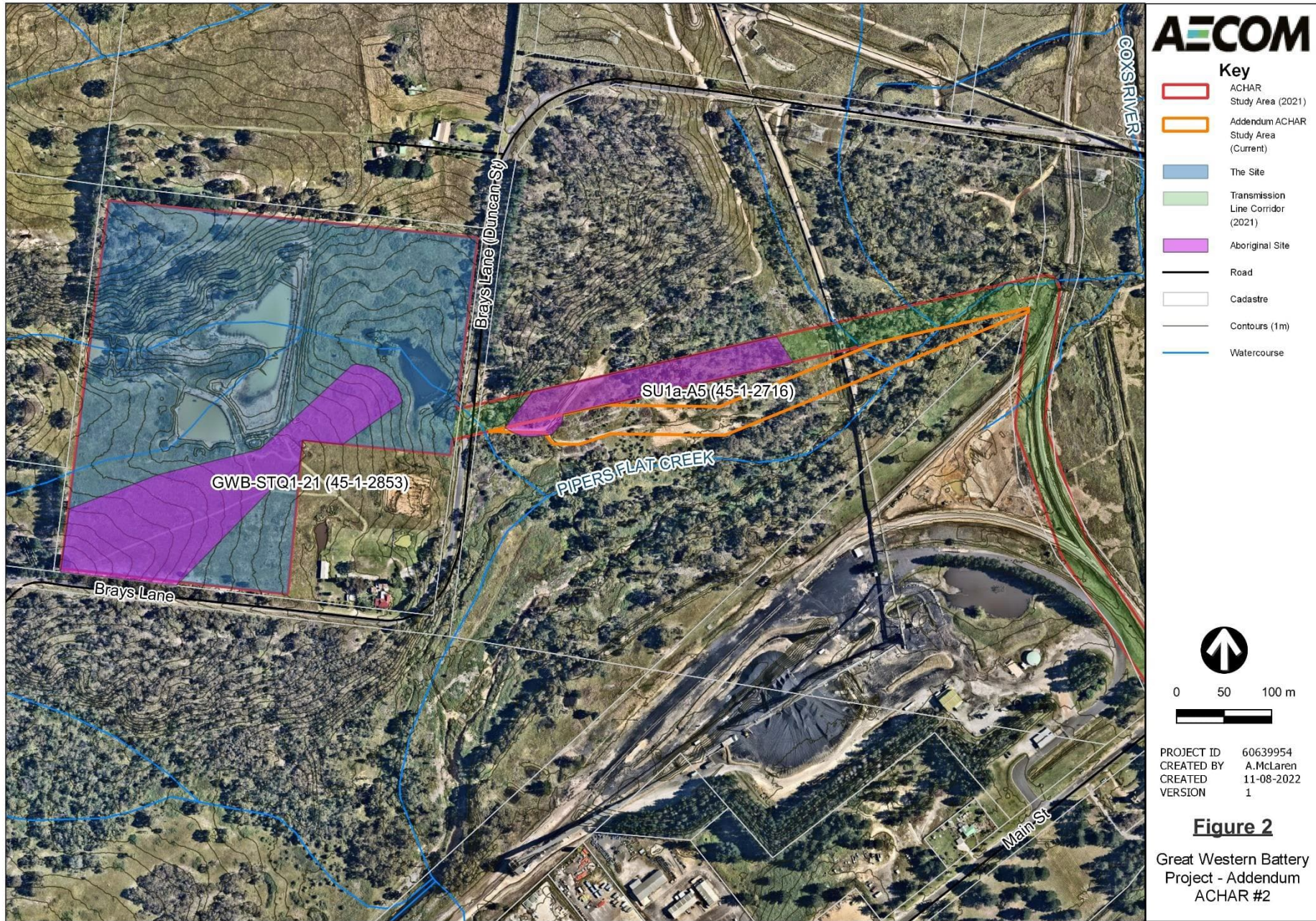


Figure 2 Aboriginal sites identified as part of AECOM's (2021) Aboriginal cultural heritage assessment

2.0 RAP Consultation

2.1 RAP Consultation for ACHAR and first Addendum ACHAR

RAP consultation for the Project has been undertaken in accordance with Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010) (the Consultation Requirements). As indicated in **Section 1.2**, a total of nine RAPs have been consulted for the assessment, with key ACHAR consultation activities including:

- RAP review of AECOM's draft assessment methodology
- RAP review of AECOM's draft test excavation methodology
- RAP participation in archaeological field investigations
- RAP review of a draft of the Project ACHAR
- RAP review of a draft of the Project's first Addendum ACHAR.

RAPs for the Project, including associated registration dates, are listed in **Table 1** below.

Table 1 Registered Aboriginal Parties (RAPs) for the Project

Organisation	Date of registration
Warrabinga-Wiradjuri #7 Native Title Claimant Group	02.02.2021 (automatically registered)
Bathurst LALC	17.02.2021 (automatically registered)
North East Wiradjuri Company	04.02.2021
Didge Ngunawal Clan	04.02.2021
Murra Bidgee Mullangari Aboriginal Corporation	08.02.2021
Merrigarn	08.02.2021
Muragadi	08.02.2021
Corroboree Aboriginal Corporation	10.02.2021
Gunjeewong Cultural Heritage Aboriginal Corporation	10.02.2021

2.2 RAP Consultation for this Addendum ACHAR

2.2.1 Archaeological Survey

All RAPs were invited to participate in the archaeological survey detailed in **Section 4.0** of this report, with invitations to participate forwarded via e-mail on 26 July 2022. Ultimately, five RAPs provided site officers for the survey, with attending officers listed by organisation in **Section 4.0**.

2.2.2 RAP review of draft Addendum ACHAR

Consistent with Section 4 of the Consultation Requirements, on 17 August 2022, a draft of this Addendum ACHAR was issued to all RAPs for their review. The closing date for comments was 15 September 2022, which provided the necessary 28 days for comment. However, comments were actively sought up to 19 September 2022.

Ultimately, a total of four RAPs provided responses to the draft Addendum ACHAR, all in writing. RAP responses are presented in **Table 2** and attached in **Appendix B**.

Table 2 RAP responses to draft Addendum ACHAR

RAP Organisation	Representative(s)	Date of response	Type	Response	AECOM Response
Didge Ngunawal Clan	Paul Boyd	15-09-22	E-mail	"We are happy with the 2nd ACHAR, as we have reviewed it"	-
Warrabinga-Wiradjuri #7 Native Title Claimant Group	Jack Pennell	15-09-22	E-mail	"I would like to thank the site officers for their time and apologise that Warrabinga NTCAC could not supply an officer for the site surveys. I have strong feelings for our cultural history and I feel that any sites being small or large are the same. If we find one or one thousand artifacts it proves that our ancestors were present in this area hunting, gathering or living I just have a problem with Low Moderate and High to make this determination"	AECOM respectfully acknowledges that all Aboriginal archaeological sites, regardless of assessed levels of scientific significance, are culturally significant to Aboriginal people.
Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	16-09-22	E-mail	"I have read the project information and ACHAR for the above project, I endorse the recommendations made"	-
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	16-09-22	E-mail	"We see no issues with the second addendum"	-

3.0 Desktop Review

3.1 AHIMS Database

The AHIMS database, administered by Heritage NSW, contains records of all Aboriginal objects reported to the Secretary of the Department of Premier and Cabinet in accordance with Section 89A of the NPW Act. It also contains information about Aboriginal places, which have been declared by the Minister to have special significance with respect to Aboriginal culture. Previously recorded Aboriginal objects and declared Aboriginal places are known as 'Aboriginal sites'.

An updated search of the AHIMS database on 12 August 2022 for a 5 x 5 km area centred on the Addendum ACHAR study area, returned 38 site entries (**Table 3**). As is typical for the local area, open artefact sites are the most common site type within the AHIMS search area, accounting for 68.4% of recorded sites. Other less common site types include five rockshelter sites, two burial sites, two grinding groove sites, a single area of PAD and one stone quarry (i.e., 'GWB-STQ1-21' (45-1-2853)).

Registered centroid coordinates for previously recorded Aboriginal sites within the AHIMS search area place three sites - artefact scatters 'SU1a-A5' (45-1-2716) and 'S2' (45-1-0211), and stone quarry 'GWB-STQ1-21' (45-1-2853) - within 200 m of the Addendum ACHAR study area (**Figure 3**). However, a review of associated site cards and reports, including AECOM's ACHAR (2021) for the Project, confirms that only one of these sites - surface and subsurface artefact scatter 'SU1a-A5 - extends into this area. Further information on this site is provided in **Section 3.1.1** below.

Table 3 AHIMS search results

Site type	AHIMS feature(s)	Number	%
Open artefact site	AFT; PAD	26	68.4
Rockshelter	AFT; GRD; ART	5	13.2
Burial	BUR; TRE	2	5.3
Grinding groove(s)	GRD	2	5.3
Potential Archaeological Deposit (PAD)	PAD	1	5.3
Stone quarry	STQ; AFT; PAD	1	2.6
Total	-	38	100

3.1.1 Surface and subsurface artefact scatter 'SU1a-A5' (45-1-2716)

Artefact scatter SU1a-A5 was first identified by RPS (2012) as part of archaeological survey undertaken for the Lidsdale Siding Project. At that time, a total of 19 stone artefacts were identified on a north-easterly trending vehicle track to the east of Brays Lane. Artefacts were identified across an area measuring approximately 120 m (east-west) by 20 m (north-south) and consisted primarily of flake debitage items (n = 15, 78.9%), with quartz (n = 12, 63.2%) the dominant raw material. Formed objects were limited to two multidirectional cores, one manufactured out of 'mudstone' (likely silicified tuff) and the other chalcedony.

AECOM's (2021) archaeological survey of the ACHAR study area, undertaken on 16 June 2021, included a physical reassessment of SU1a-A5, with a total of ten stone artefacts identified on and immediately adjacent to the vehicle track surveyed by RPS. Artefacts identified during AECOM's (2021) survey were clustered towards the northern end of the site (see **Figure 3**), as mapped by RPS (2012). Consistent with RPS's (2012) observations, recorded artefacts were primarily manufactured out of quartz (n = 7, 70%), with one quartzite and two silicified tuff artefacts also represented. No silcrete or chalcedony artefacts were observed (cf. RPS, 2012: 85- 86). Recorded artefact types included four flake shatter fragments, one complete flake, two proximal flakes, one split flake, a multidirectional quartz core and a unidirectional silicified tuff core made on a flake.

Land within and surrounding the bounds of SU1a-A5, as defined by RPS (2012), was subsequently subject to test excavation as part of AECOM's test excavation program for the Project, with that portion

of the SU1a-A5 extending into the original ACHAR study area falling within of a broader area of subsurface archaeological sensitivity designated as 'ASAS-2'. Testing within ASAS-2, which encompassed part of the left bank floodplain of Pipers Flat Creek and a small section of adjoining slope, was completed in two phases under a systematic sampling design. Phase 1 testing involved the completion of a single linear transect of 50 x 50 cm test pits (n = 14) (**Figure 14**), with pits spaced at 25 m intervals, while Phase 2 comprised two small expansion excavations around Phase 1 test pits TPs 42 and 52, with both pits expanded to 1 m².

A total of 14 Aboriginal objects, consisting exclusively of flaked stone artefacts, were recovered as a result of subsurface testing across ASAS-2. Artefact-yielding pits (n = 7) were spread widely across the area tested (**Figure 4**). However, the majority (n = 5) occurred in the eastern half of the PAD area. Densities for Phase 1 test pits within ASAS-2 ranged from one to four artefacts per 0.25 m² (mean = 2±1.4 artefacts/0.25m²). All pits contained fewer than five artefacts, with TPs 42 and 52 containing the equal highest count (n = 4). Phase 2 expansion excavations at TPs 42 and 52 produced no additional artefacts. Collectively, artefacts recovered as a result of Phase 1 and 2 testing across ASAS-2 and ASAS-3 (n = 14) provided a mean artefact density of 2.3 artefacts per m².

Based on AECOM's (2021) survey and test excavation results, RPS's (2012) boundary for SU1a-A5 was revised to that shown on **Figure 4**.

3.2 NSW State Heritage Inventory

The NSW State Heritage Inventory, administered by Heritage NSW, is an online database containing more than 30,000 heritage items and places on statutory lists in NSW. The inventory, which can now be searched using an interactive map, includes:

- Declared Aboriginal Places
- Items listed on the State Heritage Register (SHR)
- Listed Interim Heritage Orders
- Items of local heritage significance listed in the heritage schedules of Local Environmental Plans.

Of relevance to the current assessment are declared Aboriginal places. As per the AHIMS search results above, reference to the State Heritage Inventory interactive map (accessed 12 August 2021) confirms that there are no declared Aboriginal places located within or immediately adjacent to the Addendum ACHAR study area, with the closest example being the Blackfellows Hand rockshelter (also known as Maiyingu Marragu), located around 7.5 km north-northeast of this area.

3.3 Project ACHAR

As detailed in **Section 1.2**, archaeological field investigations undertaken to inform AECOM's (2021) ACHAR for the Project included a full coverage pedestrian survey of ACHAR study area and targeted test excavation program, with AECOM ultimately identifying a total of two Aboriginal sites within and immediately surrounding the ACHAR study area. These consisted of previously recorded surface and subsurface artefact scatter SU1a-A5 (AHIMS ID #45-1-2716) and newly identified surface and subsurface stone quarry site GWB-STQ1-21 (AHIMS ID #45-1-2853).

As shown on **Figure 2**, SU1a-A5 extends into the Addendum ACHAR study area, while GWB-STQ1-21 is located wholly outside of this area. Reference to **Figure 4**, meanwhile, indicates that none of surface artefacts identified by AECOM (2021) within the bounds of SU1a-A5 are located within or immediately adjacent to the Addendum ACHAR study area.

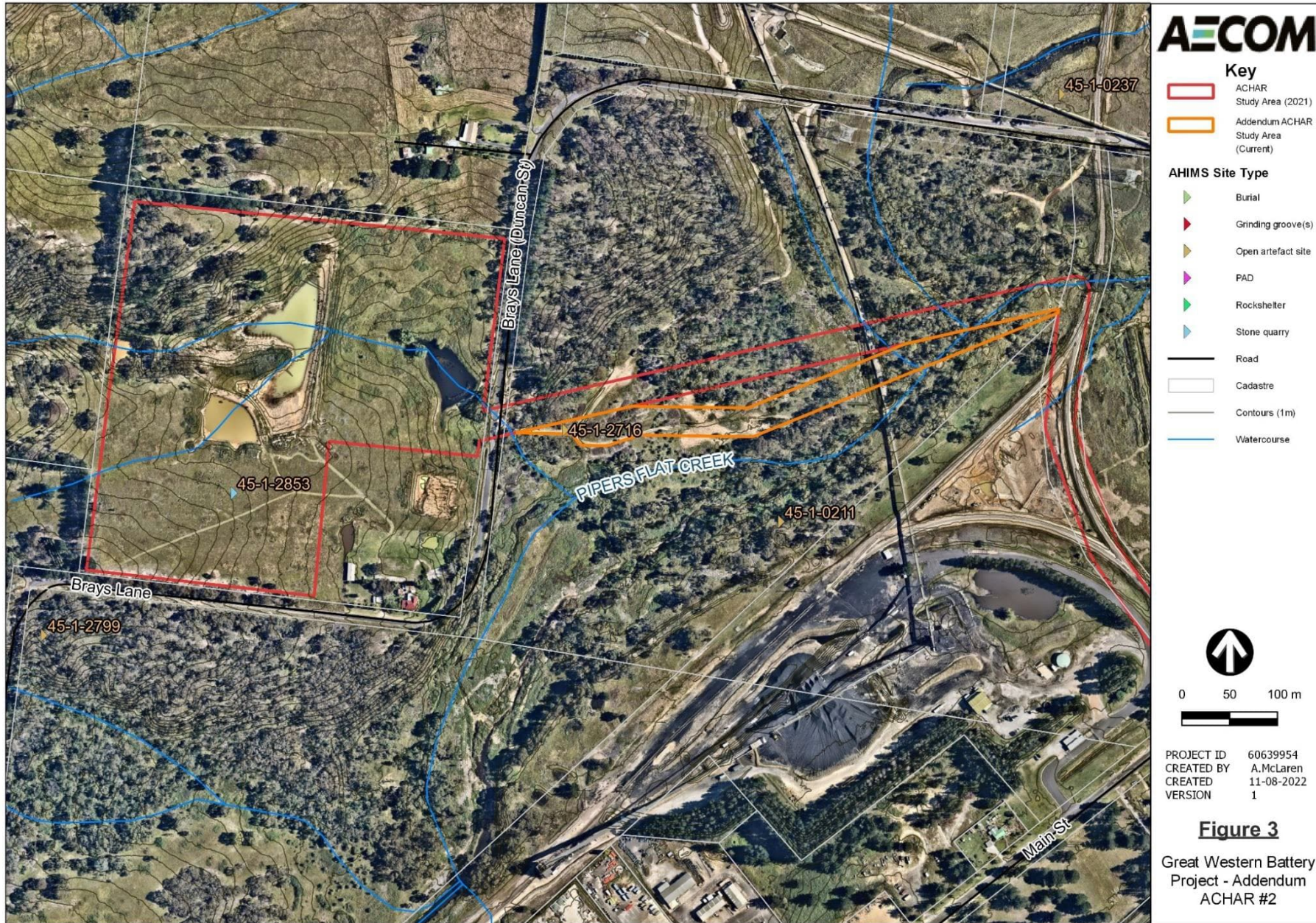


Figure 3 AHIMS search results



Figure 4 Surface and subsurface artefact scatter SU1a-A5 (37-6-2716)

3.4 Landscape Context

Key observations to be drawn from a review of the landscape context of the Addendum ACHAR study area are as follows:

- The Addendum ACHAR study area encompasses part of the level to very gently inclined left bank floodplain of Pipers Flat Creek, a locally significant >4th order watercourse, with a small section of adjoining slope also represented. While the former landform unit could be described as being amenable to Aboriginal occupation in the past, it is noted that existing archaeological data for this component of ACHAR study area, detailed in AECOM (2021) and summarised above, indicated low intensity use by Aboriginal people in the past.
- At its closest point, the current channel of Pipers Flat Creek is located approximately 25 m to south of the Addendum ACHAR study area.
- While sections of Pipers Flat Creek, both within and outside of Addendum ACHAR study area, are known to have been modified historically, the original alignment of the creek adjacent to this area appears to have been largely preserved.
- Stones suitable for stone artefact manufacture are known to occur within and immediately surrounding the Addendum ACHAR study area in the form of surface and subsurface deposits of fluvial gravels.
- Existing archaeological data for the greater Wallerawang-Lidsdale area indicate that Aboriginal people occupying this area utilised a diverse range of rock types for flaked and edge-ground stone tool manufacture. Nonetheless, quartz and silicified tuff are particularly well represented in recorded assemblages (e.g., White, 2004: 5, Table 1), including those from the ACHAR study area.
- Native vegetation within the Addendum ACHAR study area has been extensively modified as a result of historical land use activities, with the majority now comprising 'non-native vegetation' (after Biosis, 2022). Historical disturbance activities notwithstanding, the results of Biosis '(2022) biodiversity assessment for the Project suggests that this area would once have supported Black Gum grassy woodland.
- Given the scale of past vegetation clearance activities within the Addendum ACHAR study area, culturally modified trees are unlikely to be present within this area.
- Land within the Addendum ACHAR study area retains variable Ground Integrity (GI). While the majority of land within this area is assessed as retains a moderate degree of integrity, having been cleared historically for grazing but not subject to severe disturbance in the form of earthworks or the like, other parts have been significantly disturbed and retain low GI. Areas of severely disturbed terrain therein are assessed as retaining low Aboriginal archaeological potential.

3.5 Historical Aerials

Alongside field observations, historical aerial photographs provide an avenue for assessing the nature and extent of past ground disturbance within the Addendum ACHAR study area. Aerials from 1954 to 2019, provided in **Appendix D**, indicate a range of ground-disturbing land use activities including:

- Extensive native vegetation clearance
- Light vehicle track construction and use (including the creation of multiple turning circles)
- Modifications to Pipers Flat Creek
- Coal transport and handling (i.e., Lidsdale Siding and its associated overland conveyor)

To varying degrees, all of the above cited activities are relevant to the survival, integrity and identification of Aboriginal archaeological deposits within the Addendum ACHAR study area. Key implications for the current assessment include:

- The probable destruction of a proportion of the Aboriginal archaeological record of this area (i.e., due to severe ground disturbance)

- The disturbance of pre-existing archaeological deposits through both direct (e.g., earthworks) and indirect (e.g., erosion) means, resulting in a loss of archaeological integrity
- A substantially reduced likelihood for the presence of culturally scarred trees
- An increase of archaeological site visibility in areas affected by erosion.

Figure 5 comprises a land disturbance map for the Addendum ACHAR study area. For the current assessment, two basic levels of disturbance are recognised: 'low' and 'high'. Any Aboriginal archaeological deposits located within areas of high disturbance are likely to have been either destroyed or significantly disturbed. Areas of low disturbance, in contrast, retain potential for the presence of intact archaeological deposits, albeit of variable character.



Figure 5 Land disturbance

4.0 Archaeological Survey

4.1 Objectives and Survey Strategy

Archaeological survey of the Addendum ACHAR study area was undertaken on 10 August 2022, with the survey team comprising personnel from AECOM, five RAPs and Complete Assessment Management (CAM). Consistent with the draft ACHAR methodology issued to RAPs in February 2021, a full coverage survey strategy was adopted for the current survey, with all sections of the Addendum ACHAR study area subject to survey. Specific survey objectives were as follows:

- To identify and record any existing surface evidence of past Aboriginal activity within the Addendum ACHAR study area
- To identify areas of subsurface archaeological sensitivity (if present)
- To ground truth levels of past ground disturbance
- To physically reassess that portion of 'SU1a-A5' (45-1-2716) extending into the Addendum ACHAR study area.

All survey was conducted on foot under the supervision of a rail protection officer (Mr David Horder, CAM), with associated survey data recorded in accordance with the relevant provisions of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. Survey units, shown on **Figure 6**, were demarcated on the basis of landform.

Table 4 Survey results

Organisation	Representative	Position
AECOM	Andrew McLaren	Principal Aboriginal Heritage Specialist
Didge Ngunawal Clan	Paul Boyd	Site officer
Murra Bidgee Mullangari Aboriginal Corporation	Ethan Trewlynn	Site officer
Merrigarn	Peter Carroll	Site officer
Muragadi	Lee Carroll	Site officer
Corroboree Aboriginal Corporation	Marilyn Carroll Johnson	Site officer
Complete Asset Management	David Horder	Rail Protection Officer

4.2 Results

The results of the survey undertaken, including coverage data, are presented in **Table 5**. As indicated, a single Aboriginal site, consisting of an isolated flaked stone artefact ('GWB-IA1-22'), was identified during the survey (see **Plate 4** and **Plate 5**). Consistent with AECOM's (2021) initial survey results, no Aboriginal objects were identified within the relevant section of previously recorded artefact scatter 'SU1a-A5' (45-1-2716).

Ground Exposure (GE) across Survey Unit 1, encompassing part of a pre-existing vehicle track, averaged 90%, with GSV averaging 70%. Observed ground disturbance phenomena within this unit included native vehicle clearance, vehicle track construction/use and erosion (sheet and gully).

GE across Survey Unit 2, encompassing part of the left bank floodplain of Pipers Flat Creek, averaged 30%. GSV in exposed areas was generally very high, averaging 90% (**Plate 1**). Ground Integrity (GI), meanwhile, varied from low to moderate, with observed areas of low GI associated with vehicle track construction/use (including former turning circle areas), erosion, the overland coal conveyor and historical modifications to Pipers Flat Creek (represented by multiple revegetated earth mounds adjacent to the creek's current channel) (**Plates 2 to 5**). Notably, extensive surface deposits of fluvial

gravels were noted in the vicinity of newly recorded isolated artefact 'GWB-IA1-22', ostensibly exposed by repeated light/heavy vehicle movements.

With regards to areas of subsurface archaeological sensitivity, drawing on AECOM's (2021) testing results for nearby 'ASAS-2' and 'ASAS-3' (see **Figure 4**), sections of floodplain outside of areas of disturbed terrain west of the overland coal conveyor were assessed in the field as retaining subsurface archaeological potential, albeit for low to very low density deposit.

Located towards the southern edge of a vehicle track exposure in the central portion of the Addendum ACHAR study area, newly identified isolated artefact 'GWB-IA1-22' has been registered on the AHIMS database and assigned the AHIMS ID #45-1-2891. The site is described in **Section 4.2.1** and its location shown on **Figure 6**.

Table 5 Survey results

Survey unit	Landform unit(s)	Area (m ²)	Ground Surface Visibility (%)	Ground Exposure (%)	Effective Coverage (m ²)	Effective coverage (%)	Disturbance rating	Observed ground disturbance phenomena	Aboriginal site(s)?	Areas of subsurface archaeological sensitivity?	Plates
1	Slope	35.7	70	90	22.5	63	High	Native vegetation clearance; light vehicle track construction/use; erosion	None	None	Plate 1
2	Floodplain	14,267	90	30	3852	27	Moderate to High	Native vegetation clearance; Light vehicle track construction/use; erosion; coal conveyor; tree planting; modifications to Pipers Flat Creek (straightening)	Yes Newly identified isolated artefact 'GWB-IA1-22' (see Section 4.2.1) No Aboriginal objects identified within relevant portion of previously identified artefact scatter 'SU1a-A5' (45-1-2716)	Yes Sections of floodplain outside of disturbed areas west of coal conveyor assessed in the field as retaining potential for low to very low density deposits.	Plates 2 to 5



Figure 6 Survey results



Plate 1: View east from central portion of Survey Unit 1. Note enhanced GSV and erosion on vehicle track (Source: AECOM, 2021)



Plate 2: View east from western portion of Survey Unit 2. Note poor GSV on existing vehicle track (Source: AECOM, 2021)



Plate 3: View across western 'turning circle' area within Survey Unit 2. Note enhanced GSV and exposure of fluvial river gravels (Source: AECOM, 2021)



Plate 4: View across eastern 'turning circle' area within Survey Unit 2. Proposed drill rig hardstand and laydown area at rear. Green pin marker, centre foreground, demarcates newly identified isolated artefact 'GWB-IA1-22'. Note enhanced GSV in exposed areas (Source: AECOM, 2021)



Plate 5: New identified isolated artefact 'GWB-IA1-22': an IMT flake (Source: AECOM, 2021)



Plate 6: View across easternmost portion of Survey Unit 2. Note mounds on right, likely associated with the realignment of Pipers Flat Creek in the 1950s, and very poor GSV (Source: AECOM, 2021)

4.2.1 GWB-IA1-22**Site type:** Isolated artefact**GPS coordinates:** GDA Zone 56 227778E 6300834N**Date recorded:** 10 August 2022**1:25,000 topographic map:** Lithgow 8931-3S**Site area:** 1 m²**Landform unit(s):** Floodplain (Pipers Flat Creek)**Vegetation:** Cleared (formerly Black Gum grassy woodland)**Slope:** Level to very gently inclined**GSV (%):** 90**Ground integrity:** Low**Disturbance factors:** Native vegetation clearance, vehicle track construction/use, erosion**Distance to nearest mapped watercourse (name, order):** c.28 metres (Pipers Flat Creek, 4th order)**Site description:**

GWN-IA1-22 consists of an isolated indurated mudstone/silicified tuff (IMT) flake with a single facet striking platform and no dorsal cortex. The flake, which measures 33 x 27 x 7.5 mm and is missing part of its distal termination, is located towards the southern edge of a former turning circle area on the left bank floodplain of Pipers Flat Creek, approximately 265 m east of Brays Lane. GSV at and immediately surrounding GWB-IA1-22 is excellent (90%). Large quantities of fluvial gravels are present in the vicinity of the site and appear to have been exposed via repeated light and/or heavy vehicle movements.

5.0 Significance assessment

5.1 Principles of assessment

Heritage sites hold value for different communities in a variety of different ways. All sites are not equally significant and thus not equally worthy of conservation and management (Pearson & Sullivan, 1995: 17). One of the primary responsibilities of cultural heritage practitioners, therefore, is to determine which sites are worthy of preservation and management (and why) and, conversely, which are not (and why) (Smith & Burke, 2007: 227). This process is known as the assessment of cultural significance and, as highlighted by Pearson and Sullivan (1995: 127), incorporates two interrelated and interdependent components. The first involves identifying, through documentary, physical or oral evidence, the elements that make a heritage site significant, as well as the type(s) of significance it manifests. The second involves determining the degree of value that the site holds for society (i.e., its cultural significance) (Pearson & Sullivan, 1995: 126).

In Australia, the primary guide to the assessment of cultural significance is the Australian ICOMOS Charter for Places of Cultural Significance (2013), informally known as The Burra Charter, which defines cultural significance as the “*aesthetic, historic, scientific, social or spiritual value for past, present or future generations*” of a site or place (ICOMOS Australia, 2013: 2). Under the Burra Charter model, the cultural significance of a heritage site or place is assessed in terms of its aesthetic, historic, scientific, social and spiritual values, none of which are mutually exclusive (**Table 6**). Establishing cultural significance under the Burra Charter model involves assessing all information relevant to an understanding of the site and its fabric (i.e., its physical make-up). The assessment of cultural significance and the preparation of a statement of cultural significance are critical prerequisites to making decisions about the management of any heritage site or place.

Table 6 Values relevant to determining cultural significance, as defined by The Burra Charter

Value	Definition
Aesthetic	“Aesthetic value refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals” (Australia ICOMOS, 2013: 3)
Historic	“Historic value is intended to encompass all aspects of history. A place may have historic value because it has influenced, or has been influenced by, an historic event, phase, movement or activity, person or group of people. It may be the site of an important event. For any place the significance will be greater where the evidence of the association or event survives at the place, or where the setting is substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of such change or absence of evidence” (Australia ICOMOS, 2013: 3)
Scientific	“Scientific value refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions” (Australia ICOMOS, 2013: 4)
Social	“Social value refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them” (Australia ICOMOS, 2013: 4)
Spiritual	“Spiritual value refers to the intangible values and meanings embodied in or evoked by a place which give it importance in the spiritual identity, or the traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations, and be expressed through cultural practices and related places” (Australia ICOMOS, 2013: 4)

5.2 Scientific Values

Scientific value or significance refers to the importance of a place in terms of its rarity, representativeness and the extent to which it may contribute further information (i.e. its research potential) (OEH, 2011: 9).

5.2.1 Rarity and representativeness

Rarity and representativeness are related concepts. Rarity refers to the relative uniqueness of a site within its local and regional context. The scientific significance of a site is assessed as higher if it is unique or rare within either context. Conversely, it is considered to be of lower significance if it is common in one or both. The concept of representativeness, meanwhile, refers to the question of whether or not a site is “*a good example of its type, illustrating clearly the attributes of its significance*” (Burke & Smith 2004: 247). Representativeness is an important criterion as one of the primary goals of cultural heritage management is to preserve for future generations a representative sample of all archaeological site types in their full range of environmental contexts.

5.2.2 Research potential

Research potential can be defined as the potential of an archaeological site to address what Bowdler (1981: 129) has referred to as “*timely and specific research questions*”. These questions may relate to any number of issues concerning past human lifeways and environments and, as suggested by Bowdler’s quote, will inevitably reflect current trends or problems in academic research (Burke & Smith, 2004: 249). For their part, Bowdler and Bickford (1984: 23-4) suggest that the research potential of an archaeological site can be determined by answering the following series of questions:

1. Can the site contribute knowledge which no other resource can?
2. Can the site contribute knowledge which no other such site can?
3. Is this knowledge relevant to general questions about human history or other substantive subjects?

Several criteria can be used to assess the research potential of an archaeological site. Particularly important in the context of Aboriginal archaeology are the intactness or integrity of the site in question, its complexity and its potential for archaeological deposit (NPWS, 1997: 7). The connectedness of the site to other sites or natural landscape features may also be relevant, as may its educational potential and aesthetic qualities.

Integrity refers to the extent to which a site has been disturbed by natural and/or anthropogenic phenomena and includes both the state of preservation of particular remains (e.g. animal bones, plant remains) and, where applicable, stratigraphic integrity. Assessments of archaeological integrity are predicated on the notion that undisturbed or minimally disturbed sites are likely to yield higher quality archaeological and/or environmental data than those whose integrity has been significantly compromised by natural and/or anthropogenic phenomena. Establishing levels of preservation or integrity in the context of a surface survey is difficult. Nonetheless, useful rating schemes are available for open artefact sites (Coutts & Witter, 1977: 34) and scarred trees (Long, 2003).

The *complexity* of a site refers primarily to the nature or character of the artefactual materials or features that constitute it but also includes site structure (e.g. the physical size of the site, spatial patterning in observed cultural materials). In the case of open artefact sites, the principal criteria used to assess complexity are the site’s size (i.e. number of artefacts and/or spatial extent), the presence, range and frequency of artefact and raw material types, and the presence of features such as hearths.

Potential for archaeological deposit refers to the potential of a site to contain subsurface archaeological evidence which may, through controlled excavation and analysis, assist in answering questions that are of contemporary archaeological interest. Assessing subsurface potential in the absence of subsurface investigation is difficult. Nonetheless, consideration of a range of factors, including the integrity of the site, the complexity of extant surface evidence, local geomorphic conditions (as established through surface observations and documentary research) and the results of previous archaeological excavations in the area, help inform assessment of this criterion.

Connectedness concerns the relationship between archaeological sites within a given area and may be expressed through a combination of factors such as site location, type and contents. It may, for

example, be possible to establish a connection between a stone quarry and discarded edge-ground hatchet head found nearby. Demonstrating connectedness archaeologically, however, is far from straightforward, especially when dealing with surface evidence alone. Ultimately, this difficulty rests with the need to demonstrate contemporaneity between sites that may have been created hundreds, if not thousands, of years apart. As Shiner (2008: 13) has observed with respect to surface sites, “*much of the surface archaeological record documents the accumulation of materials from multiple behavioural episodes occurring over long periods of discontinuous time*”. Contemporaneity, then, needs to be demonstrated not assumed.

5.2.3 Significance Assessment for GWB-IA1-22

An assessment of the scientific significance of newly identified isolated artefact GWB-IA1-22 is presented in **Table 7**. Surface and subsurface artefact scatter SU1a-A5 (45-1-2716) is not included here as the scientific significance of this site was assessed as part of the preparation of the Project ACHAR and remains unchanged.

Following Australian Museum Business Services (AMBS) (2009b, 2009c), a scored ranking system has been employed for the current assessment, with overall significance ratings based on a cumulative ‘score’ derived from a ranked assessment of the research potential, rarity and representativeness of the site on a local and regional scale. Rankings for each of the criteria discussed above are associated with one of three potentials scores: low (score = 1), moderate (score = 2) and high (score = 3). Overall significance ratings are defined as follows:

- Low significance: score 10-15
- Moderate significance: score 16-25
- High significance: score 26-30.

As indicated, GWB-IA1-22 has been assessed as being of low scientific significance.

Table 7 Scientific significance assessment

Site	Site type	Rarity		Representativeness		Integrity		Complexity		PAD		Overall score	Overall significance
		L	R	L	R	L	R	L	R	L	R		
GWB-IA1-22	IA	1	1	1	1	1	1	1	1	1	1	10	Low

5.3 Cultural values

Social or cultural value refers to the spiritual, traditional, historic and contemporary associations and attachments a place or area has for Aboriginal people and can only be identified through consultation with Aboriginal people (OEH, 2011: 8).

No specific cultural values pertaining to the Addendum ACHAR study area were identified by RAPs during the archaeological survey detailed in **Section 4.0**. Regardless, it is acknowledged that all material remains of past Aboriginal activity within and surrounding this area, including new identified isolated artefact GWB-IA1-22, hold significant cultural value to RAPs and that this value was expressed broadly by multiple RAPs during the preparation of the Project ACHAR.

6.0 Key Findings and Recommendations

6.1 Key Findings

The key findings of this assessment are as follows:

- Two Aboriginal sites are present within the Addendum ACHAR study area: previously recorded surface and subsurface artefact scatter SU1a-A5 (45-1-2716) and newly recorded isolated artefact 'GWB-IA1-22'. Both sites have been assessed as being of low scientific significance.
- The mapped boundary of previously recorded artefact scatter SU1a-A5 is located partially within the Addendum ACHAR study area. However, the results of archaeological surveys undertaken for the Project, including that carried out to support the preparation of this Addendum ACHAR, indicate that none of the surface-based Aboriginal objects identified in association with this site occur within or immediately adjacent to the Addendum ACHAR study area.
- In general, land within the Addendum ACHAR study area, which encompasses part of the left bank floodplain of Pipers Flat Creek and a small section of adjoining slope, is considered to be of low Aboriginal archaeological sensitivity, with existing archaeological data for the Project suggesting an occupational emphasis on elevated low gradient landform elements away from the floodplain proper.
- Any subsurface archaeological deposits present within those portions of the Addendum ACHAR study area that have not been significantly disturbed are likely to be of low conservation value, consisting of low to very low density deposits.
- Land within the Addendum ACHAR study area retains variable GI. While sections of the study area, including the proposed drill rig hardstand and laydown area, have been significantly disturbed as a result of historical land use activities, the majority of land within this area retains moderate GI, having been cleared historically but not subject to severe disturbance.

6.2 Recommendations

In view of the key findings above, the following recommendations are made regarding the proposed works:

1. Additional archaeological investigations within the bounds of the Addendum ACHAR study area, including a supplementary program of test excavation, are unwarranted. While Aboriginal archaeological deposits of low conservation value are likely to present within parts of the Addendum ACHAR study area, physical impacts to these deposits as a result of the proposed works are considered unlikely due to: a) the nature of the works proposed within identified areas of subsurface archaeological potential (i.e., HDD at nominal depth of 1.5 m below ground level (b.g.l.)) and b) significant ground disturbance within the bounds of the proposed drill rig hardstand and laydown area.
2. All light and heavy vehicle movements within the bounds of previously recorded artefact scatter SU1a-A5 (45-1-2716) should be restricted to the existing vehicle track that is present within this portion of the study area. An access corridor centred on the existing track and taking into account the maximum width of the vehicles required for the HDD installation process should be demarcated using high visibility fencing. Fencing should be installed prior to works commencing and remain in place until works are completed. All fencing works should be undertaken by, or under the supervision of, a qualified Aboriginal heritage specialist and minimum of one RAP representative. Sections of SU1a-A5 outside of the recommended access corridor should be clearly defined in the Project's Construction Environmental Management Plan (CEMP) as 'no-go zones'.
3. To ensure no inadvertent impacts during construction, newly recorded isolated artefact 'GWB-IA1-22' should be protected via high visibility fencing. Fencing should be installed prior to works commencing and remain in place until works are completed. All fencing works should be undertaken by, or under the supervision of, a qualified Aboriginal heritage specialist and minimum of one RAP representative. The location of GWB-IA1-22 should be clearly defined in the Project's CEMP as a 'no-go zone'.

4. Proposed management measures for SU1a-A5 and GWB-IA1-22 should be included in the Project's Aboriginal Cultural Heritage Management Plan (ACHMP).
5. Should any confirmed or suspected Aboriginal objects be identified within the Addendum ACHAR study area during construction, the Unexpected Aboriginal Heritage Finds Procedure (UAHFP) detailed in the ACHMP should be followed.
6. All contractors engaged to complete the proposed works within the Addendum ACHAR study area should be made aware of the nature and location of SU1a-A5 and GWB-IA1-22, as well as their associated 'no-go zones'.

7.0 References

- AECOM Australia Pty Ltd. (2021). *Great Western Battery: Aboriginal Cultural Heritage Assessment Report*. Unpublished report prepared for Neoen Australia Pty Ltd.
- AECOM Australia Pty Ltd. (2022). *Great Western Battery - Aboriginal Cultural Heritage Addendum*. Unpublished report prepared for Neoen Australia Pty Ltd.
- Australia ICOMOS. (2013). *Understanding and Assessing Cultural Significance*. Australia ICOMOS Incorporated.
- Australian Museum Business Services. (2009a). *Kurri-Redbank Feeder 953/95R (132kV) Upgrade: Aboriginal Heritage Assessment, Hunter Valley, NSW*. Unpublished report for Energy Australia.
- Australian Museum Business Services. (2009b). *Kurri Kurri Aboriginal Heritage Assessment for the 33kV Kurri-Rutherford Feeder Split: Stage 1 and Stage 2 Works*. Unpublished report for Energy Australia.
- Bickford, A., & Sullivan, S. (1984). Assessing the research significance of historic sites. In S. Sullivan & S. Bowdler (Eds.), *Site survey and significance assessment in Australian Archaeology* (1st ed., pp. 19–26). Australian Institute of Aboriginal Affairs.
- Biosis Pty Ltd. (2022). *Battery Energy Storage System, Wallerawang - Biodiversity Development Assessment Report*. Unpublished report prepared for AECOM Australia Pty Ltd.
- Bowdler, S. (1981). Unconsidered Trifles? Cultural Resource Management, Environmental Impact Statements and Archaeological Research in New South Wales. *Australian Archaeology*, 12.
- Burke, H, & Smith, C. (2004). *The Archaeologist's Field Handbook*. Allen & Unwin.
- Burke, Heather, & Smith, C. (2004). *The Archaeologist's Field Handbook*. Allen & Unwin.
- Coutts, P. J. F., & Witter, D. C. (1977). Summer Field Programme of the Victoria Archaeological Survey. *Australian Archaeology*, 6.
- ICOMOS (Australia). (2013). *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*. Australia ICOMOS. <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>
- Long, A. (2003). *Scarred Trees: An Identification and Recording Manual*. Prepared for Aboriginal Affairs Victoria.
- NSW Department of Environment Climate Change & Water. (2010a). *Aboriginal Cultural Heritage Consultation Requirements for Proponents*. Department of Environment, Climate Change and Water.
- NSW Department of Environment Climate Change & Water. (2010b). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water.
- NSW Office of Environment & Heritage. (2011). *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*. Office of Environment and Heritage.
- Pearson, M., & Sullivan, S. (1995). *Looking After Heritage Places: The Basics of Heritage Planning for*

Managers, Landowners and Administrators. Melbourne University Press.

Shiner, J. (2008). *Place as Occupational Histories: An Investigation of the Deflated Surface Archaeological Record of Pine Point and Langwell Stations, Western New South Wales, Australia* (BAR Intern). Archaeopress.

Smith, C., & Burke, H. (2007). *Digging It Up Down Under: A Practical Guide to Doing Archaeology in Australia*. Springer.

White, B. (2004). *Salvage of Site #45-1-2574, Lidsdale, NSW: Artefact Analysis*. Unpublished report prepared for Ozark Cultural Heritage Management.

Appendix A

Consultation Log

Date	To/From AECOM	Organisation	Contact person(s)	Method of contact	AECOM representative	Summary
26.07.22	From AECOM	All RAPs (n = 9)	Various	E-mail	A.McLaren	Fieldwork notification
26.07.22	To AECOM	Didge Ngunawal Clan	Lily Carroll & Paul Boyd	E-mail	A.McLaren	Confirming survey attendance
26.07.22	To AECOM	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	E-mail	A.McLaren	Confirming survey attendance
26.07.22	To AECOM	Merrigarn	Shaun Carroll	E-mail	A.McLaren	Confirming survey attendance
26.07.22	To AECOM	Muragadi	Jesse Johnson	E-mail	A.McLaren	Confirming survey attendance
02.08.22	To AECOM	Muragadi	Jesse Johnson	E-mail	A.McLaren	Notifying that site officer will be Lee Carroll
04.08.22	To AECOM	Muragadi	Jesse Johnson	E-mail	A.McLaren	Providing Lee's JHR certificates
08.08.22	From AECOM	Bathurst LALC	Tonilee Scott	E-mail	A.McLaren	Follow-up to fieldwork notification
	To AECOM	Bathurst LALC	Tonilee Scott	E-mail	A.McLaren	Won't be able to make the survey as no site officers available
08.08.22	To AECOM	Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	E-mail	A.McLaren	Providing JHR certificates for Ethan
08.08.22	To AECOM	Merrigarn	Shaun Carroll	E-mail	A.McLaren	Providing JHR certificates for Peter Carroll
09.08.22	To AECOM	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	E-mail	A.McLaren	Confirming if survey is still on
09.08.22	From AECOM	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	E-mail	A.McLaren	Confirmation that survey is proceeding
17.08.22	From AECOM	All RAPs (n = 9)	Various	E-mail	A.McLaren	Draft Addendum ACHAR
15.09.22	To AECOM	Didge Ngunawal Clan	Paul Boyd	E-mail	A.McLaren	Response to draft addendum. Refer to Table 2 in Section 2.2 .
15.09.22	To AECOM	Warrabinga-Wiradjuri #7 Native Title Claimant Group	Jack Pennell	E-mail	A.McLaren	Response to draft addendum. Refer to Table 2 in Section 2.2 .
16.09.22	To AECOM	Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	E-mail	A.McLaren	Response to draft addendum. Refer to Table 2 in Section 2.2 .
16.09.22	To AECOM	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	E-mail	A.McLaren	Response to draft addendum. Refer to Table 2 in Section 2.2 .

Appendix B

RAP Responses to Draft
Addendum ACHAR

McLaren, Andrew

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Thursday, 15 September 2022 3:30 PM
To: McLaren, Andrew
Subject: [EXTERNAL] Re: Second Addendum ACHAR - Great Western Battery Project, Wallerawang

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[Report Suspicious](#)

Hi Andrew

We are happy with the 2nd ACHAR, as we have reviewed it.

Kind regards Paul

[Sent from Yahoo Mail for iPhone](#)

On Thursday, September 15, 2022, 2:20 pm, McLaren, Andrew <Andrew.McLaren@aecom.com> wrote:

Afternoon Lilly/ Paul,

Just following up on the below re our second Addendum ACHAR for the Great Western Battery project in Wallerawang.

Today is the official closing date for comment. Wanted to check in and see if you had any feedback on the document.

Cheers,

Andy

From: McLaren, Andrew
Sent: Wednesday, 17 August 2022 11:59 AM
To: McLaren, Andrew <Andrew.McLaren@aecom.com>
Subject: Second Addendum ACHAR - Great Western Battery Project, Wallerawang

McLaren, Andrew

From: jack pennell <jackpennell@hotmail.com>
Sent: Thursday, 15 September 2022 4:52 PM
To: McLaren, Andrew
Subject: [EXTERNAL] Re: Second Addendum ACHAR - Great Western Battery Project, Wallerawang

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Hi Andrew,

I would like to thank the site officers for their time and apologise that Warrabinga NTCAC could not supply an officer for the site surveys. I have strong feelings for our cultural history and I feel that any sites being small or large are the same. If we find one or one thousand artifacts it proves that our ancestors were present in this area hunting, gathering or living I just have a problem with Low Moderate and High to make this determination

Regards

Jack Pennell
Chairperson for Warrabinga Native Title Claimants Aboriginal Corporation
Phone: 0407006097

From: McLaren, Andrew <Andrew.McLaren@aecom.com>
Sent: Thursday, 15 September 2022 2:30 PM
To: dfabar@optusnet.com.au <dfabar@optusnet.com.au>; jack pennell <jackpennell@hotmail.com>; Peter Swain <peterswain20@gmail.com>; Rick Slaven <rickyslaven69@gmail.com>; david.masters@warrabinga.com.au <david.masters@warrabinga.com.au>
Subject: FW: Second Addendum ACHAR - Great Western Battery Project, Wallerawang

Afternoon all,

Just following up on the below re our second Addendum ACHAR for the Great Western Battery project in Wallerawang. Attached again for your records.

Today is the official closing date for comment. Wanted to check in and see if you had any feedback on the document.

Cheers,

Andy

From: McLaren, Andrew
Sent: Wednesday, 17 August 2022 11:59 AM
To: McLaren, Andrew <Andrew.McLaren@aecom.com>
Subject: Second Addendum ACHAR - Great Western Battery Project, Wallerawang

Dear Registered Aboriginal Party (RAP),

McLaren, Andrew

From: Corroboree Aboriginal Corporation <corroboreecorp@bigpond.com>
Sent: Friday, 16 September 2022 2:03 PM
To: McLaren, Andrew
Subject: [EXTERNAL] Re: Second Addendum ACHAR - Great Western Battery Project, Wallerawang
Attachments: 60639954_ACHAR_Addendum_2022_08_16_Drft_REV.pdf

This Message Is From an Untrusted Sender

You have not previously corresponded with this sender.

Report Suspicious

Hi Andrew
Sorry day late. We see no issues with second addendum.

Kind regards
Marilyn Carroll-Johnson
Director
Corroboree Aboriginal Corporation
Mob: [0415911159](tel:0415911159)
Ph: [0288244324](tel:0288244324)
E: corroboreecorp@bigpond.com
Address: PO Box 3340
ROUSE HILL NSW 2155

CAC acknowledges the Traditional Owners of Country throughout Australia and their continuing connection to land, sea & community. We pay our respects to them and their cultures, to the Elders past and present, and emerging.

On 15 Sep 2022, at 2:28 pm, McLaren, Andrew <Andrew.McLaren@aecom.com> wrote:

Afternoon Marilyn,

Just following up on the below re our second Addendum ACHAR for the Great Western Battery project in Wallerawang.

Today is the official closing date for comment. Wanted to check in and see if you had any feedback on the document.

Cheers,

Andy

From: McLaren, Andrew
Sent: Wednesday, 17 August 2022 11:59 AM

McLaren, Andrew

From: Darleen Johnson <murrabidgeemullangari@yahoo.com.au>
Sent: Friday, 16 September 2022 2:43 AM
To: McLaren, Andrew
Subject: [EXTERNAL] Re: Second Addendum ACHAR - Great Western Battery Project, Wallerawang
Attachments: 60639954_ACHAR_Addendum_2022_08_16_Drft_REV.pdf

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Report Suspicious

Hi Andrew,
I have read the project information and ACHAR for the above project, I endorse the recommendations made.
Kind regards
Darleen Johnson
0490051102

On Thursday, 15 September 2022 at 02:21:50 pm AEST, McLaren, Andrew <andrew.mclaren@aecom.com> wrote:

Afternoon Darleen,

Just following up on the below re our second Addendum ACHAR for the Great Western Battery project in Wallerawang.

Today is the official closing date for comment. Wanted to check in and see if you had any feedback on the document.

Cheers,

Andy

From: McLaren, Andrew
Sent: Wednesday, 17 August 2022 11:59 AM
To: McLaren, Andrew <Andrew.McLaren@aecom.com>
Subject: Second Addendum ACHAR - Great Western Battery Project, Wallerawang

Dear Registered Aboriginal Party (RAP),

Appendix C

AHIMS Search Results

AECOM Australia Pty Ltd - Sydney

Date: 12 August 2022

Level 21 420 George Street
SYDNEY New South Wales 2000

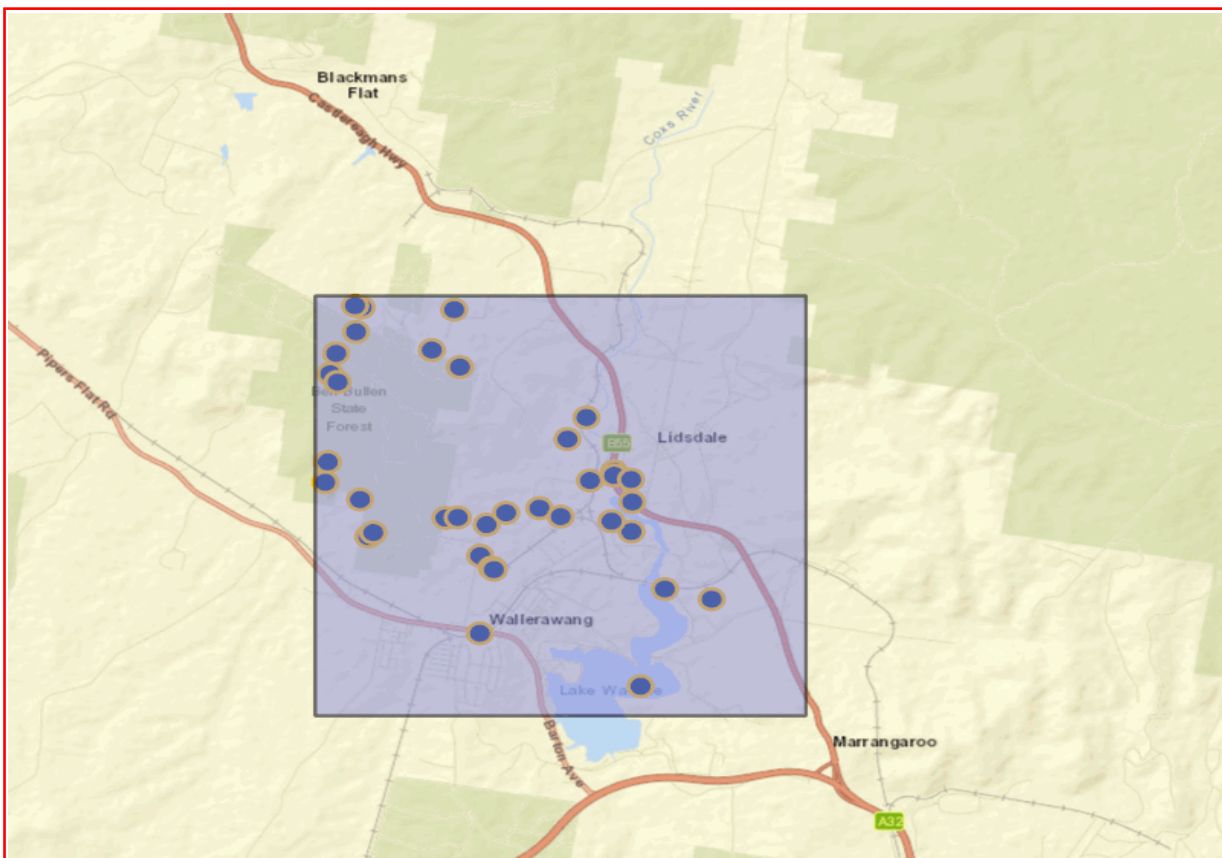
Attention: Andrew Peter McLaren

Email: andrew.mclaren@aecom.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 225306.0 - 230306.0, Northings : 6298373.0 - 6303373.0 with a Buffer of 0 meters, conducted by Andrew Peter McLaren on 12 August 2022.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

38	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-2355	Lamberts Creek 6;	AGD	56	225480	6303070	Open site	Destroyed	Artefact : -	Open Camp Site	
	Contact	Recorders	Ms.Laila Haglund,Ms.Jillian Comber					Permits	405	
45-1-0071	Mt Piper;Lamberts Creek 1;	AGD	56	225325	6302130	Closed site	Valid	Artefact : -	Shelter with Deposit	2294
	Contact	Recorders	Helen Brayshaw,Ms.Laila Haglund					Permits		
45-1-0072	Lamberts Creek2	AGD	56	225245	6302229	Open site	Valid	Artefact : -	Open Camp Site	2294
	Contact	Recorders	Helen Brayshaw,Ms.Laila Haglund					Permits		
45-1-0206	S9;Lidsdale;	AGD	56	227750	6301500	Open site	Valid	Artefact : -	Open Camp Site	2300
	Contact	Recorders	Elizabeth Rich,Alice Gorman					Permits		
45-1-0207	S8;Blackmans Flat;	AGD	56	226520	6303050	Open site	Valid	Artefact : -	Open Camp Site	2300
	Contact	Recorders	Elizabeth Rich,Alice Gorman					Permits		
45-1-0208	S5;Blackmans Flat;	AGD	56	225550	6303050	Open site	Valid	Artefact : -	Open Camp Site	2300
	Contact	Recorders	Elizabeth Rich					Permits	361	
45-1-0209	S4;Wallerawang;	AGD	56	226300	6302550	Open site	Valid	Artefact : -	Open Camp Site	2300
	Contact	Recorders	Elizabeth Rich					Permits		
45-1-0210	S3;Wallerawang;	AGD	56	226600	6302350	Open site	Valid	Artefact : -	Open Camp Site	2300
	Contact	Recorders	Elizabeth Rich					Permits	472	
45-1-0211	S2;Wallerawang;	GDA	56	227811	6300741	Open site	Valid	Artefact : -	Open Camp Site	2300
	Contact	Recorders	Mr.Neville Baker,Elizabeth Rich,Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats					Permits	467	
45-1-0215	Lamberts Ck 5;Mt Piper;	AGD	56	225300	6302480	Open site	Valid	Artefact : -	Open Camp Site	2294
	Contact	Recorders	Helen Brayshaw,Ms.Laila Haglund					Permits		
45-1-0237	Springvale Colliery;	AGD	56	228000	6301000	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Doctor.Susan (left ahms) Mcintyre-Tamwoy					Permits	496	
45-1-0247	Wallerawang Schoolhouse;	AGD	56	228240	6300510	Open site	Valid	Artefact : -	Open Camp Site	3818
	Contact	Recorders	Ms.Elizabeth White					Permits		
45-1-0010	Pipers Flat Creek;	AGD	56	225600	6300700	Closed site	Valid	Artefact : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Deposit	1515
	Contact	Recorders	D Miller					Permits		
45-1-0012	Pipers Flat Creek;	AGD	56	225250	6301150	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Deposit	
	Contact	Recorders	D Miller					Permits		
45-1-0013	Pipers Flat Creek;	AGD	56	225230	6300900	Closed site	Valid	Artefact : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Deposit	
	Contact	Recorders	ASRSYS					Permits		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-1-0019	Irondale;	AGD	56	225500	6302750	Closed site	Valid	Artefact : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Deposit	
	Contact		Recorders	R Miller				Permits		
45-1-0020	Pipers Flat Creek;	AGD	56	225750	6300300	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Art,Shelter with Deposit	
	Contact		Recorders	R Miller				Permits		
45-1-0021	Pipers Flat Creek;	AGD	56	225700	6300250	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact		Recorders	R Miller				Permits		
45-1-0022	Pipers Flat Creek;Bald Rock;	AGD	56	226630	6300510	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact		Recorders	R Miller				Permits		
45-1-0023	Pipers Flat Creek;Bald Rock;	AGD	56	226500	6300500	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact		Recorders	R Miller				Permits		
45-1-0048	Wallerawang; Lithgow;	AGD	56	226900	6299100	Open site	Valid	Burial : -, Modified Tree (Carved or Scarred) : -	Burial/s,Carved Tree	
	Contact		Recorders	David Bell,NPWS - Blackheath Office,Betty Meehan				Permits	473	
45-1-2572	Site 1, Catlereagh Highway Realignment, Lidsdale	AGD	56	228430	6301025	Open site	Valid	Artefact : -		4549
	Contact		Recorders	Ms.Louise Gay				Permits		
45-1-2573	PAD 1, Castlereagh Highway Realignment, Lidsdale	AGD	56	228250	6301070	Open site	Destroyed	Potential Archaeological Deposit (PAD) : -		98700,102443
	Contact		Recorders	Ms.Louise Gay				Permits	1436,1666	
45-1-2574	PAD 2, Castlereagh Highway Realignment, Lidsdale	AGD	56	228250	6301120	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		98700,102443
	Contact		Recorders	Ms.Louise Gay				Permits	1436,1707	
45-1-2545	Wallerowong Station Massacre	AGD	56	228600	6298500	Open site	Valid	Burial : -	Burial/s	
	Contact		Recorders	Ms.Adrienne Howe-Piening				Permits		
45-1-2583	Duncan/Main Street PAD	AGD	56	228450	6300750	Open site	Valid	Artefact : -		
	Contact		Recorders	Doctor,Jodie Benton				Permits	1793	
41-1-0238	Duncan Street PAD(refer to site 45-1-2583)	AGD	56	228450	6300750	Open site	Deleted	Potential Archaeological Deposit (PAD) : -		
	Contact		Recorders	Doctor,Jodie Benton				Permits		
45-1-2715	SU1a - A4	GDA	56	228046	6301960	Open site	Valid	Artefact : 1		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports	
	Contact	Recorders	Ms.Cheng-Yen Loo,RPS East Australia Pty Ltd - Echuca Victoria						Permits		
45-1-2716	SU1a - A5	GDA	56	227585	6300837	Open site	Valid	Artefact : 19			
	Contact	Recorders	Ms.Cheng-Yen Loo,RPS East Australia Pty Ltd - Echuca Victoria						Permits		
45-2-2539	SU1a - A7	GDA	56	227122	6300093	Open site	Valid	Artefact : 4			
	Contact	Recorders	Ms.Cheng-Yen Loo,RPS East Australia Pty Ltd - Echuca Victoria						Permits		
45-1-2717	SU1a - A8	GDA	56	227130	6300072	Open site	Valid	Artefact : 1			
	Contact	Recorders	Ms.Cheng-Yen Loo,RPS East Australia Pty Ltd - Echuca Victoria						Permits		
45-1-2718	SU1a - A9	GDA	56	226981	6300239	Open site	Valid	Artefact : 1			
	Contact	Recorders	Ms.Cheng-Yen Loo,RPS East Australia Pty Ltd - Echuca Victoria						Permits		
45-1-2719	SU1a - A6	GDA	56	227105	6300095	Open site	Valid	Artefact : 1			
	Contact	Recorders	Ms.Cheng-Yen Loo,RPS East Australia Pty Ltd - Echuca Victoria						Permits		
45-1-2799	Brays Lane AS1	GDA	56	227039	6300622	Open site	Valid	Artefact : -			
	Contact	Recorders	Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats						Permits		
45-1-2800	WPS-IF1	GDA	56	228556	6300579	Open site	Valid	Artefact : -		104157,104158	
	Contact	Recorders	Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats						Permits		
45-1-2853	GWB-STQ1-21	GDA	56	227238	6300771	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -, Stone Quarry : -			
	Contact	Recorders	AECOM Australia Pty Ltd - Sydney,Doctor.Andrew Peter McLaren						Permits		
45-1-2843	Wallerawang BESS IF + PAD 02	GDA	56	229419	6299775	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -			
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick						Permits		
45-1-2844	Wallerawang BESS AFT + PAD 01	GDA	56	228926	6299886	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -			
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick						Permits		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

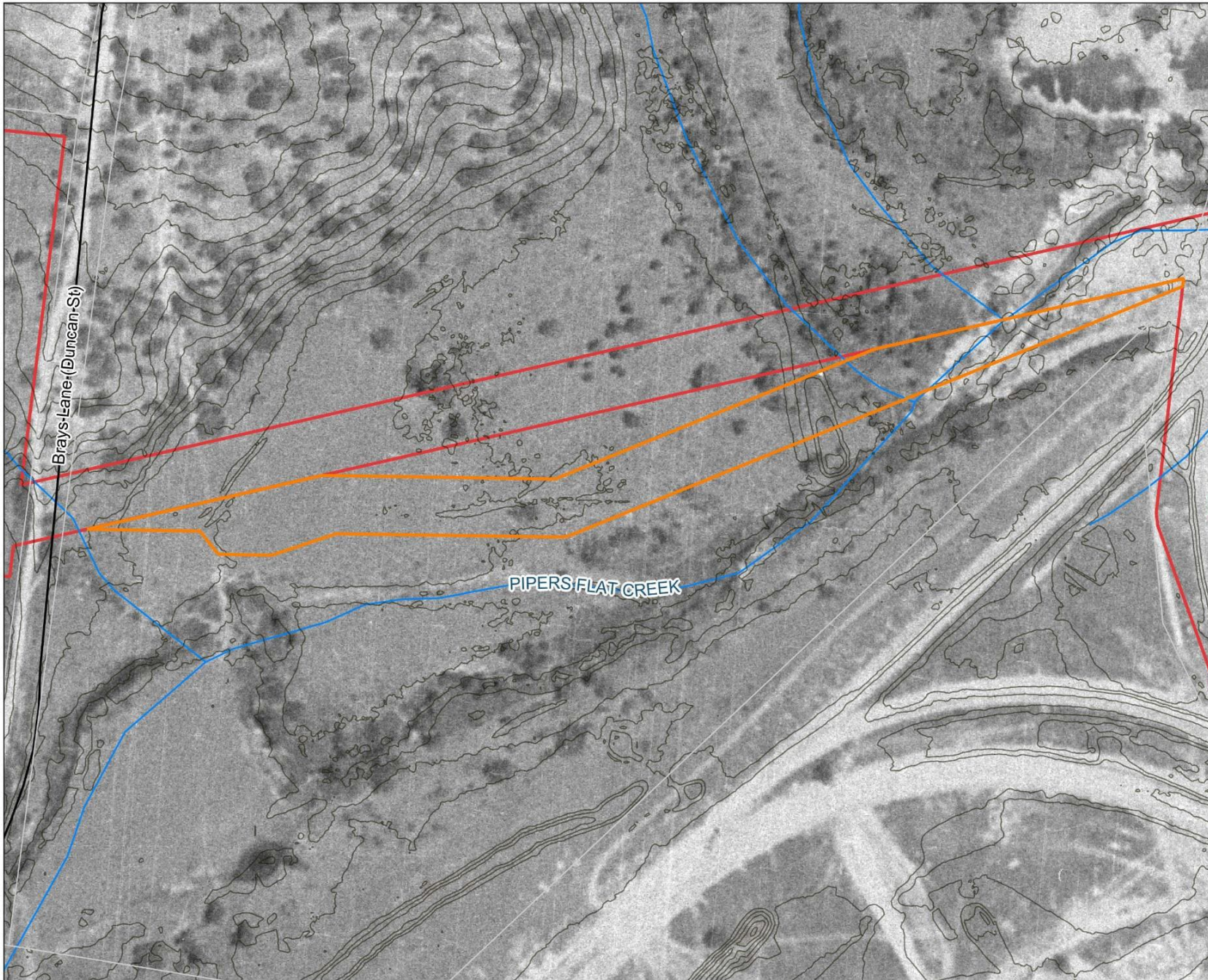
Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground







Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

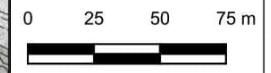
Appendix D

Addendum ACHAR
Study Area - Historical
Aerials



Key

-  ACHAR Study Area (2021)
-  Addendum ACHAR Study Area (Current)
-  Road
-  Watercourse (2022)
-  Contours (1m)
-  Cadastre



PROJECT ID 60639954
CREATED BY A.McLaren
CREATED 11-08-2022
VERSION 1

**Figure D1 -
1954**
Great Western Battery
Project - Addendum
ACHAR #2

