

Appendix R
***Aboriginal Archaeological
Due Diligence Assessment***



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Aboriginal Archaeological Due Diligence Assessment

Modification 8

Boggabri Coal Operations Pty Ltd.

Report to

Hansen Bailey

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1. Introduction & Proposed Works

Insite Heritage Pty Ltd were commissioned by Hansen Bailey Pty Ltd on behalf of Idemitsu Boggabri Coal Operations to provide an Aboriginal Archaeological Due Diligence Assessment to accompany an application for a Modification (Mod 8) to PA 09_0182 for the Boggabri Coal Mine (BCM). The MOD 8 would facilitate the following:

- Increasing the approved depth of mining to the Templemore Coal Seam to recover an additional 61.6 Million tonnes (Mt) of ROM coal within the current approved mine disturbance boundary.
- Construction of a specifically designed fauna movement crossing of the existing haul road between the mining area and the MIA. The fauna crossing will encourage the movement of fauna through the southern rehabilitation area (SRA).
- Additional workforce for peak operations.
- Continue mining operations for a further six years to 2039 and amend the Conceptual Final Landform design whilst maintaining the rehabilitation objectives of the Approval.
- The mining methods and equipment types used at BCM will remain the same.

Activities at BCM are subject to an approved Cultural Heritage Management Plan V7 November 2016 (CHMP) which details the management of cultural heritage within the approved Project Boundary and prescribes the management of activities on BCMs biodiversity offset properties. The CHMP (Section 4.1) states that a Due Diligence assessment is triggered where a previously unassessed activity is proposed under a Project Approval Modification.

Whilst mining operations will remain within the currently approved mine disturbance boundary, the fauna movement crossing (and associated infrastructure) will result in some minor additional ground disturbance on the western side of the existing haul road, but entirely within the approved Project Boundary to which the CHMP applies.

For assessment purposes, a Survey Area of 110 ha to the western side of the existing mining operations within the approved Project Boundary was identified. A smaller polygon of 3.3 ha (MOD 8 Disturbance Footprint) was identified as the most suitable location for the additional disturbance which is likely to be required for the construction of the fauna crossing. It is expected that only 1.2 ha of disturbance will be required within the MOD 8 Disturbance Footprint, the location of which will be determined during the detailed engineering design of the fauna crossing and with consideration of other identified environmental constraints. No Aboriginal cultural heritage sites have been identified within the MOD 8 Disturbance Footprint.

2. The assessment objectives

The assessment objectives were to review the known Aboriginal cultural sites within the 110 ha Survey Area and to identify any previously unrecorded sites exposed in the time interval since the area was previously inspected. The process also aimed to involve BCM Aboriginal stakeholders in the assessment process by means of consultation and participation in the field assessment (Section 3).

The MOD 8 Survey Area was divided into polygons for the purposes of the field assessment. Polygon 4 represents the MOD 8 Disturbance Footprint, which is the area within which the proposed disturbance (i.e. only 1.2 ha within this 3.3 ha area) for the fauna crossing will occur.



Figure 1 Mod 8 Conceptual layout courtesy of Hansen Bailey



Figure 2 MOD 8 Survey Area divided into assessment Polygons.

3. Consultation

Boggabri Coal regularly engages with a RAP group who participate in the management of cultural heritage at the BCM by means of the Aboriginal Stakeholders Community Forum (ASCF). An ASCF meeting is typically held twice a year. Key consultation engagement undertaken relevant to this assessment are:

- Consultation included the distribution of a draft assessment methodology to Registered Aboriginal Parties (RAPs) for comment, with a review period of more than 28 days. The draft assessment methodology was provided to RAPs for review and consideration between 18 August 2020 to 18 September 2020 (Appendix A).
- A special Aboriginal Stakeholders Committee Forum (ASCF) meeting was held with the RAPs on 10 September 2020 where specific information was presented regarding MOD 8 and the proposed assessment methodology which was supported by the participants in the ASCF (Appendix B). Participants comments are included in Appendix B.

A summary of comments received at the special ASCF are- the identification of employment opportunities for local Aboriginal people (Gomery) and a preference for an under and over access for the fauna crossing (Cacatua)

- The 110 ha Survey Area was subject to field inspection with stakeholders from the RAP group on the 28th and 29th September 2020. Two archaeologists (Elizabeth Wyatt and Angela Besant) RAPs (Cindy Foley, Kerry Morgan, Brian Draper and Greg Griffiths (for part of the day on 28th September 2020) and Keren Halliday and Gary Briggs (Boggabri Coal) participated in the fieldwork. Whilst previously unknown objects were located, none of these were located within the area of proposed ground disturbance to facilitate the construction of the fauna crossing.

The Boggabri Coal site survey confirmation forms were completed once the fieldwork was complete as per Boggabri Coals internal procedures.

The draft Due Diligence report was sent to RAPs for a 28 day review period throughout November and December 2020. Two comments by RAPS were received at the Aboriginal Stakeholder Consultative Forum (ASCF) on the 3rd December 2020 meeting. These comments have been reviewed by and considered as part of the finalization of this Due Diligence assessment. The comments are included in Appendix B1. No further comments were received.

4. Environmental Context

The BCM is located in the Leard State Forest on the southern slopes of the Willow Tree Range. Soils are solodic harsh texture contrast profiles or duplex in structure, with coarse sand to loam forming the A-horizon over columnar sandy clays to medium clays (Mitchell 2007). Annual rainfall is approximately 600mm.

Vegetation within the MOD 8 Survey Area includes silver-leaved ironbark, white cypress pine, western box, white box and yellow box. Additional species present in lesser numbers include narrow-leaved ironbark, broad-leaved ironbark, bull oak, pilliga box, grey box, bimble box and black cypress pine.

The Leard State Forest has been historically subject to harvesting by NSW State Forestry Commission.

5. Archaeological context

The approved BCM Project Boundary has been well surveyed, firstly by Archaeological Risk Assessments Services in 2005 prior to the commencement of mining. Insite Heritage resurveyed the approved Project Boundary for the Continuation of Mining Project in 2009. The approved CHMP has been developed and is used to guide the management of cultural heritage on the site.

The salvage process associated with the approved operations at BCM has shown a particular pattern in the distribution of cultural sites across the Project Boundary. Larger sites tend to be located down toward the plain where drainage lines confluences would have created wetlands in the area of the property 'Merriown', where multiple more complex sites are located.

Within the Leard State Forest, sites tend to be less complex and contain fewer artefacts. Isolated finds are common. The exception to the pattern is an extensive site (BC54) which is located on an east facing slope on a deeply incised drainage on an upper spur. The site is relatively discrete with excavations 600m down the slope finding a low density of archaeological material. This site is located within the approved mine disturbance boundary and will be subject to the salvage methodology described within the CHMP prior to mining advancing through this area.



Figure 3 The northern extent of MOD 8 Survey Area relative to BC 54

The location of cultural sites proximate to the BCM has been patterned in relation to the occurrence of water resources. Cultural sites tend to be larger and more complex on the higher order creeks in the lower sections of the catchment. The MOD 8 Survey Area contains two 1st order creeks in the northern portion (Polygon 2). Polygon 6 contains a 2nd order creek line (Figure 4) and number of sites have been recorded in this area and many artefacts previously salvaged in accordance with the CHMP (Figure 5).

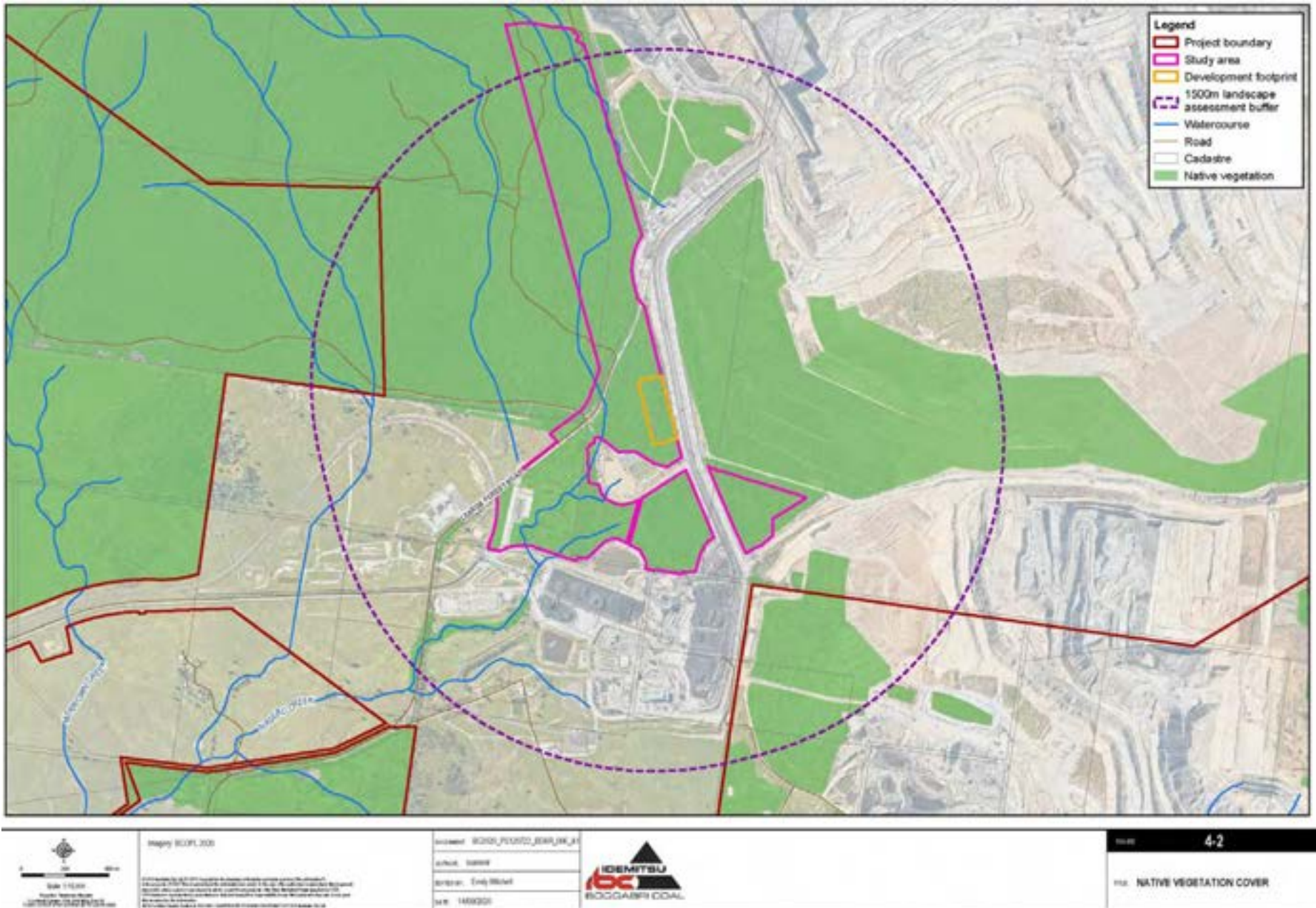


Figure 4 Drainage lines relative to MOD 8 Survey Area courtesy of WSP



Figure 5 MOD8 Survey Area previously recorded sites - salvaged in red, partial salvage in orange, white extant



Figure 6 Mod 8 Survey Area north known sites extant nil salvaged

6. Aboriginal Heritage Impact Assessment & Aboriginal Archaeological Due Diligence Assessment

The CHMP (Section 4.1) states that a Due Diligence assessment is triggered where a previously unassessed activity is proposed under a Project Approval Modification. The CHMP also allows for the salvage/collection of cultural heritage items within the Project Boundary prior to impact, for retention in the locked store at the BCM, pending the determination of a Keeping Place.

The following Aboriginal Archaeological Due Diligence Assessment is based on the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (NSW Office of Environment & Heritage 2010).

Aboriginal heritage is protected in NSW under the *National Parks & Wildlife Act 1974 (the Act)*. Section 90 of the Act states that it is an offence to destroy, deface, damage or desecrate, or cause or permit the destruction, damage or desecration of an Aboriginal object or Aboriginal Place without prior consent of the Secretary of Heritage NSW.

The purpose of the Due Diligence assessment is to identify if any Aboriginal Objects or Places may be harmed by the proposed activity and to identify the requirement for further investigation and/or salvage as per the CHMP. In areas outside the approved Project Boundary an Aboriginal Heritage Impact Permit would be required from the Biodiversity Conservation Division (BCD) prior to the salvage of identified cultural heritage site. As MOD 8 seeks to amend the Disturbance Boundary within the Project Boundary the CHMP is the appropriate management reference.

The Act provides that a person who exercises due diligence in determining that their actions will not harm Aboriginal objects, has a defence against prosecution for the strict liability offence if they later unknowingly harm an object without an Aboriginal Heritage Impact Permit.

Generic Due Diligence Assessment – Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (OEH 2010).

Step 1. Will the activity disturb the ground surface or any culturally modified trees?

Construction of the proposed fauna crossing into Polygon 4 will require ground disturbance works, although the final location of any required disturbance within this area will be subject to final design. One option under consideration is a land bridge over the existing haul road which would entail the emplacement of earth materials into the MOD 8 Disturbance Footprint to provide a sufficient ramp enabling fauna to cross. The nominated area for the fauna crossing was inspected during the field survey. No culturally modified trees or other cultural heritage sites were recorded in this area (Polygon 4).

There is no ground disturbance works proposed for the remaining portions of the MOD 8 Survey Area. The new sites identified during the field survey will be recorded on the Boggabri Coal Aboriginal Site Status Database and registered with Aboriginal Heritage Information Management System (AHIMS).

Whilst a new modified tree was found during the field assessment and a known modified tree has been recorded previously within the MOD 8 Survey Area, these trees are located outside of the MOD 8 Disturbance Footprint and will not be impacted by ground disturbance associated with the proposal.

Step 2 a) Are there any relevant confirmed site records or other associated landscape features on AHIMS?

A search of the AHIMS database was undertaken in order to check the distribution of recorded sites within the locality of the MOD 8 Survey Area. The area searched was Eastings 225000-227500 and Northings 6608000 to 6611000. The number of sites found was 55, including sites that have been salvaged. Thirty-seven sites are recorded as valid. Two of these have indeed been salvaged by ARAS in 2007 and Insite Heritage are working with AHIMS to have their status corrected. It was also noted that a group of three sites were registered with the same co-ordinates back in 2005. Insite Heritage are working with AHIMS to have the site co-ordinates corrected.

A copy of the AHIMS database search is provided in Appendix C.

On the basis of the AHIMS search and the review of the Boggabri Coal Site Status Database (s4.5 CHMP), the following sites have been identified within the 110 ha MOD 8 Survey Area.

Extant sites.

- 20-4-0115 - isolated find
- 20-4-0117 – modified tree - note post fieldwork this site was marked on AHIMS as invalid.
- 20-4-0118 – isolated find
- 20-4-0119 - isolated find
- 20-4-0121 – isolated find
- 20-4-0139 - Artefact scatter - partially salvaged. Salvage not continued into the treed area on the creek.
- 20-4-0505 - portable grind stone – Jane Delany John – we have tried to relocate that site previously but could not locate it.
- 20-4-0526 – artefact scatter, 8 artefacts in 3 locations
- 20-4-0563 – Potential Archaeological Deposit (PAD)
- 20-4-0565 - isolated find
- 20-4-0566 – isolated find
- 20-4-0583 – modified tree

Salvaged sites

- 20-4-0140 – artefact scatter
- 20-4-0141 – artefact scatter
- 20-4-0142 – isolated find
- 20-4-0570 – isolated find collected during tree clearing in 2015

AHIMS site impact forms were submitted to AHIMS for 20-4-0140 and 2-4-0142 on the 05/07/2013. 20-4-0141 was salvaged by ARAS in 2005 /2007 and whilst listed on AHIMS as valid AHIMS will be updated. 20-4-0570 was registered on AHIMS as salvaged on the 03/06/2015. The Aboriginal Cultural Heritage Salvage Report for Boggabri Coal Expansion Project is listed on AHIMS as report number 103378.

Step 2 b) Are there any landscape features that are likely to indicate presence of Aboriginal objects?

Consequently, if your proposed activity is:

- ***within 200m of waters, or***
- ***located within a sand dune system, or***
- ***located on a ridge top, ridge line or headland, or***
- ***located within 200m below or above a cliff face, or***
- ***within 20m of or in a cave, rock shelter, or a cave mouth;***
- ***and is on land that is not disturbed land (see definitions) then you must go to step 3.***

Land is disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable.

Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.

The MOD 8 Disturbance Footprint – Polygon 4 – is not located within a sensitive landform as described above. This area has been disturbed by historic logging activities over a prolonged time period. The area has been dissected centrally by a contour bank (or bund wall) to contain water flows from entering the mining area – although the contour bank looks to have been constructed circa 2006 based on a Hansen Bailey review of aerial photography. Taller reedy grasses have established in the lower lying wet area created by the contour bank.

Where the ground was waterlogged, visibility was reduced to 10% by thick ground cover. The dry area – particularly the southern end of Polygon 4 had surface visibility of 20%. No creek or drainage lines are present in Polygon 4.

Polygon 3 is defined by Leard Forest Road and Polygon 4. The area comprised open forest with generally low visibility. A drainage line at the southern end of the area between the dam and the haul road was also inspected.

Polygon 6 is dissected by a 2nd order creek line and is therefore within 200m of waters. Polygon 2 whilst dissected by two 1st order creeks, these are generally dry with very few little ponding due to the steep slope of the creeks. These creeks are deeply incised.

A drainage line was noted in Polygon 5 running north eastward toward the eastern boundary of this polygon. Surface visibility was variable from 50% in erosion scalds and ants nests to 20-30% within the open forest.



Plate 1 Polygon 1 view east typical ground cover



Plate 2 Polygon 1 example of surface exposure



Plate 3 Polygon 2 example surface exposure



Plate 4 Polygon 2 view east



Plate 5 Northern end Polygon 3 view south



Plate 6 Polygon 4 view east to bund wall



Plate 7 Polygon 3 view south



Plate 8 View east into the wet area Polygon 4



Plate 9 Polygon 5 facing east



Plate 10 Polygon 5 view south-west



Plate 11 Polygon 6 view west



Plate 12 Surface exposure Polygon 6

Step 3. Can harm to an Aboriginal object listed on AHIMS or identified by other sources of information and /or can the carrying out of the activity at the relevant landscape features be avoided?

This step only applies if your activity is on land that is not disturbed land or contains known Aboriginal objects.

The construction of the fauna crossing and associated disturbance within the MOD 8 Disturbance Footprint (Polygon 4) will not impact on any Aboriginal object listed on AHIMS, or identified by field inspection. The proposed activity is located on land that is not archaeologically sensitive and has evidence of partial disturbance. The proposed works will not impact on any cultural objects.

Harm to the AHIMS sites and new sites identified during the field surveys will be avoided by containing the disturbance associated with the construction of the fauna crossing to the MOD 8 Disturbance Footprint (Polygon 4).

Step 4. Does a desktop assessment and visual inspection confirm that there are Aboriginal objects?



This step only applies if your activity is on land that is not disturbed land or contains known Aboriginal objects.

The desktop assessment and visual inspection confirmed that there are no Aboriginal objects or sensitive landform elements within the MOD 8 Disturbance Footprint (Polygon 4). The cultural sites identified by visual inspection and the AHIMS sites will not be impacted by the proposed fauna crossing assuming the disturbance associated with the fauna crossing remains in Polygon 4.

A total of 6 previously unknown sites were located within the MOD 8 Survey Area (outside of MOD 8 Disturbance Footprint (Polygon 4)) (Table 1). In addition, 28 artefacts were found in 15 loci including 1 loci of 4 artefacts and a loci of 12 artefacts. These artefacts are associated with the partially salvaged site 20-4-0139 in Polygon 6 (Figure 7). The site was salvaged by grader scrapes and whilst some five of the artefacts are located on the creek margins which was not salvaged, the remaining 24 artefacts have been exposed in the grader scrape windrows over the last 7 years. Note that Figure 7 shows the location of the artefacts located however the scale of the figure and the proximity of the artefacts does not clearly show the 15 loci.

Field inspection data is included in Appendix D.

Table 1 Previously unknown objects Co-ordinates GDA94 Zone 56

New Site Label	Easting	Northing	Type	Photograph
Mod8_1/20 Poly 2	226226	6610431	Core/scrapper	
Mod8_2/20 Poly 2	226270	6609238	Possible oven Clay nodules on the ground surface	
Mod8_3/20 Poly 5	226691	6608744	Flakes broken x 2	
Mod8_4/20 Poly 5	226521	6608441	Modified tree	

Mod8_5/20 Poly 6	226349	6608568	Broken flake	
Mod 8_6/20 Poly 2	226151	6610727	Flake broken	
MOD 8_6/20 Poly 2	226151	6610727	Flake	



Figure 7 Remnant artefacts from the 2013 salvage

7. Discussion

The field inspection recorded 28 artefacts in 15 loci, the location of 20-4-0139. 20-4-0139 was partially salvaged in 2013– the portion of the site that runs along an unnamed creek margin was left in-situ to mitigate any impact to the creek (Figure 5). The sites were salvaged by test pits followed by grader scrapes, and whilst some of the artefacts are located on the creek margin, others were found on the now eroded windrows from the grader scrapes. Included in the 15 loci was an extensive scatter(12 artefacts) on an eroded 20m x 5m section of windrow at 226183E 66208795N (point 166 Figure 7). A loci of four IMT flakes was found on an exposure of 10m x 2m at 226095 E 6608908N (point 169 Figure 7).

Three new sites were located in Polygon 2, two new sites in Polygon 5 and one new site in Polygon 6.

The distribution of new sites is consistent with the distribution of known sites. The two new sites found in the northern section of Polygon 2 close to 20-4-0563 is adjacent to the incised drainage line which has been identified as a PAD (Figure 8).

The details of the previously unknown sites are included in Appendix E. The AHIMS site cards for the new sites are in Appendix F.

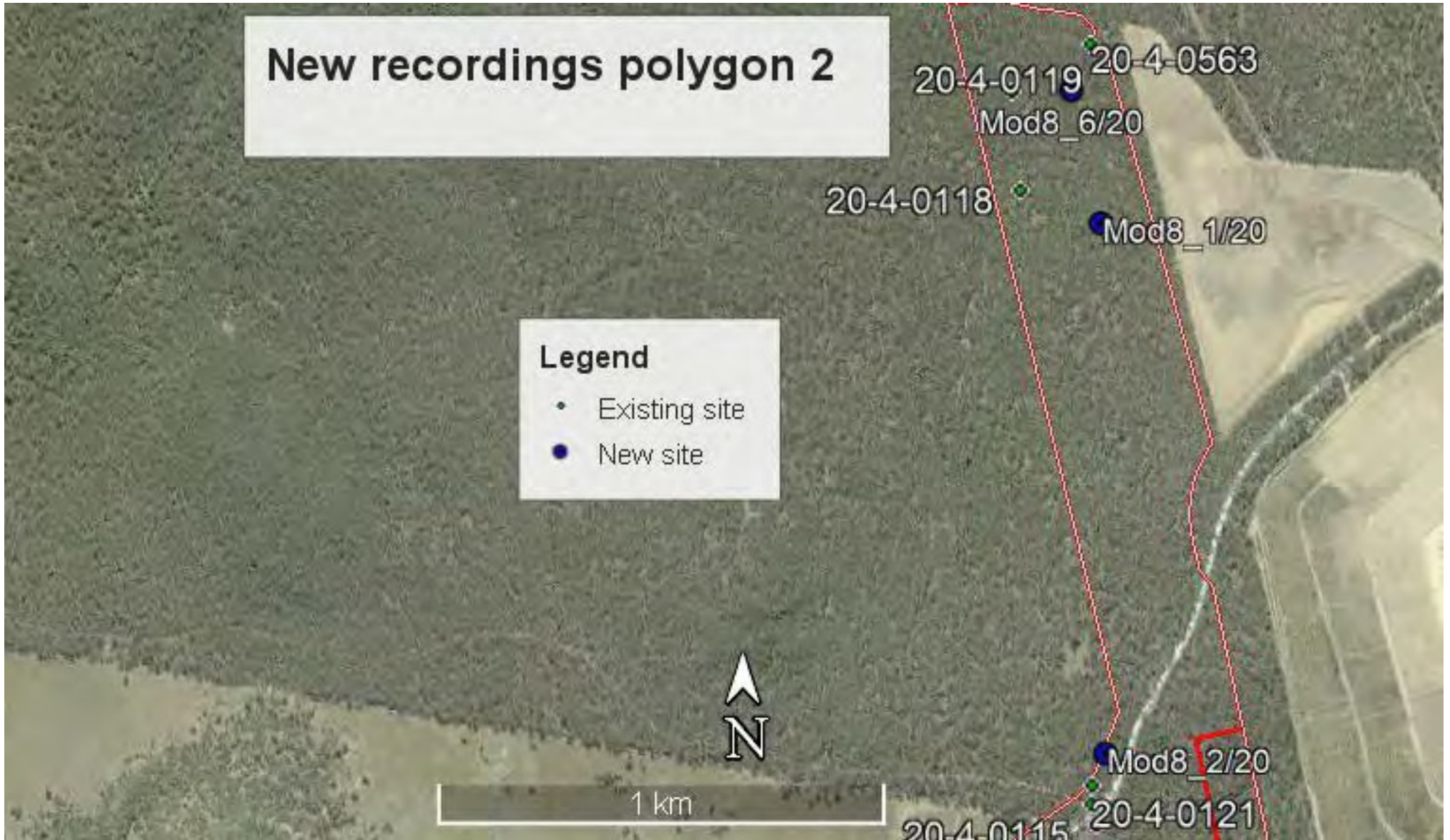


Figure 8 Location of three new sites relative to existing sites Polygon 2

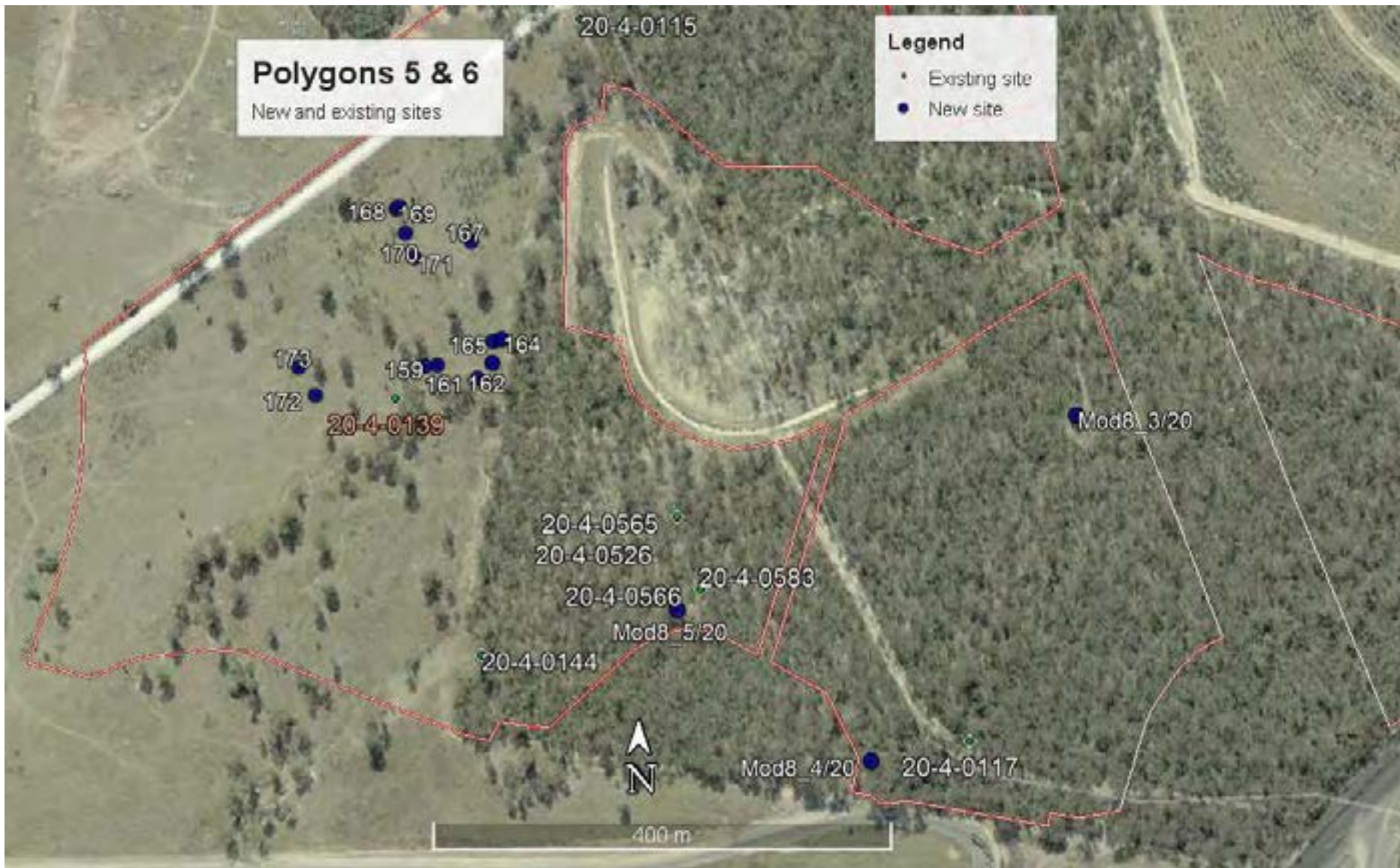


Figure 9 New and existing sites Polygons 5 & 6

8. Management Recommendations

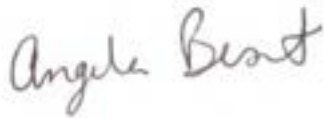
The desktop and field inspection due diligence assessment did not identify any Aboriginal objects or culturally significant landscape features that will be impacted by the ground disturbance element of MOD 8. The ground disturbance element, which is confined to the construction of a fauna crossing, is contained within the MOD 8 Disturbance Footprint (Polygon 4) in which no objects or areas of sensitivity were located.

There are no cultural heritage constraints associated with the MOD 8 Disturbance Footprint (Polygon 4) for the fauna crossing.

If any Aboriginal objects are identified during earthworks, work must immediately cease in the area and an archaeologist and RAPs notified to ascertain the significance of the object. The object can then be managed under the protocols outlined within the approved CHMP. Heritage NSW should be notified if the unexpected find is of unusual significance.

If suspected human remains are identified during the works, works must immediately cease. The area must be secured and the NSW Police and Heritage NSW notified immediately.

Insite Heritage Pty Ltd



Angela Besant
Snr Archaeologist
Insite Heritage.

References

ARAS, 2007 *Boggabri Coal Project Final Report: Section 87 and 90 Consent Conditions* Report to Idemitsu Boggabri Coal Pty Ltd

DECCW 2010 *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. NSW Heritage (formerly Dept. of Environment, Climate Change & Water).

Insite Heritage 2010 *Aboriginal Cultural Heritage Impact Assessment Report for the Continuation of Boggabri Coal Mine* Report to Hansen Bailey Pty Ltd

Insite Heritage 2015 *Stage One Aboriginal Cultural Heritage Salvage Report Boggabri Coal Expansion Project Boggabri, NSW* Report to Boggabri Coal Operations Pty Ltd

Insite Heritage 2016 *Boggabri Coal Part 3A Cultural Heritage Management Plan (CHMP) Revision 7*. Report to Boggabri Coal Operations Pty Ltd

Mitchell, P 2007 in ARAS 2007 *Boggabri Coal Project Final Report: Section 87 and 90 Consent Conditions* Report to Idemitsu Boggabri Coal Pty Ltd

Appendix A – Draft methodology provided to ASCF members

17th August 2020

RE: Consultation for the potential preparation of an Aboriginal Cultural Heritage Assessment for Boggabri Coal Modification 8

Thankyou for your interest in the Boggabri Coal Project and your ongoing participation in the RAP group. The purpose of this information package is to present information regarding the proposed Aboriginal cultural heritage assessment (ACHA) to be prepared to support an application to modify the existing Boggabri Coal Project Approval 09_0182. The modification application will be prepared for submission to the NSW Department of Planning, Industry and Environment (DPIE).

Boggabri Coal is in the preliminary stages of preparing a Statement of Environmental Effects (SEE) to support the modification application which seeks approval to increase the depth of mining and to construct a fauna movement crossing over the existing haul road at Boggabri Coal Mine. The Modification will be known as MOD 8.

Whilst mine planning activities are ongoing to establish the finer details of MOD 8, the following key modifications are proposed:

- Increasing the approved depth of mining to the Templemore Coal Seam to recover additional ROM coal within the currently approved mine disturbance boundary.
- Construction of a specifically designed fauna movement crossing of the existing haul road between the mining area and the MIA to encourage fauna movement from the Leard State Forest to established areas of the Southern Rehabilitation Area.
- Additional workforce for peak operations.
- Maintain the current production rate at 8.6 Mtpa for a further 6 years to 2039.
- Amendments to the Conceptual Final landform design, whilst maintaining the currently specified rehabilitation objectives for the mine.
- The mining methods and equipment types used at BCM will remain the same.

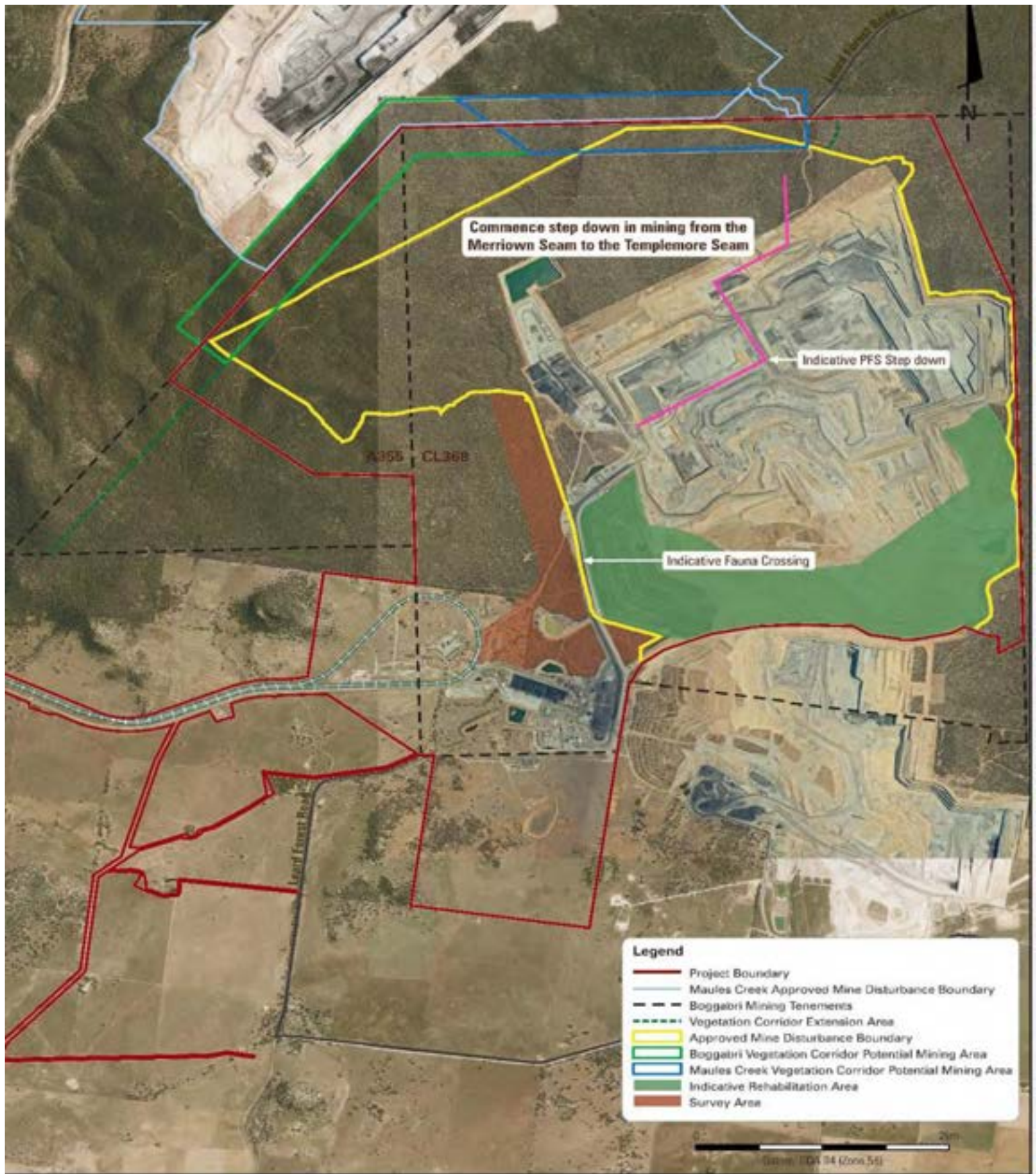
This letter provides information relevant to the modification (Stage 2 of the OEH consultation process) and commences OEH consultation step Stage 3 by providing a draft ACHA methodology for your review and comment.

Project Information & Background

Insite Heritage Pty Ltd have been commissioned by Hansen Bailey on behalf of Boggabri Coal to prepare an Aboriginal Cultural Heritage Assessment Report for MOD 8.

The subject area lies within the boundaries of Red Chief Local Aboriginal Land Council and the Narrabri Local Government Area, Parish of Leard and County of Nandewar.

The proposed Modification is located entirely within the existing project boundary for the Boggabri Coal Mine which was the subject area of the 2010 Aboriginal Cultural Heritage Assessment. The proposed survey area for Mod 8 encompasses an area of approximately 110 ha on the western side of the currently approved mining operations as shown in Figure 1.



BOGGABRI COAL MINE

Conceptual MOD 8 Project Layout



Figure 1 Boggabri Coal with MOD 8 in brown shading.

Summary

Note that:

Whilst mining operations will remain within the currently approved mine disturbance boundary, the proposed fauna movement crossing (and associated infrastructure) will result in some minor additional disturbance.

A survey area of approx. 110 ha has been identified for inspection. The additional disturbance required for MOD 8 infrastructure will be within the Survey Area and is to be confirmed following detailed infrastructure design. It is anticipated that the additional disturbance required for the fauna movement crossing and associated infrastructure will be located within the region bound by the haul road to the east, the former section of Leard Forest Road to the north west and the existing dam to the south.

Insite Heritage has been commissioned to prepare an Aboriginal and Historic Heritage Impact Assessment for inclusions within the Statement of Environmental Effects (SEE) being prepared for MOD 8.

The Survey Area includes land which has previously been surveyed.

A number of Aboriginal heritage sites are known to occur within the Survey Area (Figures 2, 3 & 4). Some sites have been salvaged in 2013. These are not included in the site list.

Types of sites within MOD 8 – not salvaged

Isolated finds are the most common site type previously identified within the MOD 8 Survey Area. However, previous surveys have identified a portable grind stone recorded by Jane Delaney-John, a modified tree, an area of Potential Archaeological Deposit (PAD) and a modified tree (Figures 2, 3 & 4).

In-situ sites

- 20-4-0115 - isolated find
- 20-4-0117 – isolated find
- 20-4-0118 – isolated find
- 20-4-0119 - isolated find
- 20-4-0121 – isolated find
- 20-4-0139 - Artefact scatter - partially salvaged. Salvage not continued into the treed area on the creek.
- 20-4-0505 - portable grind stone – Jane Delany John – we have tried to relocate that site previously but could not locate it.
- 20-4-0526 – artefact scatter 8 artefacts in 3 locations
- 20-4-0563 - PAD
- 20-4-0565 - isolated find
- 20-4-0566 – isolated find
- 20-4-0583 – modified tree

Salvaged sites

- 20-4-0140 – artefact scatter
- 20-4-0141 – artefact scatter
- 20-4-0142 – isolated find
- 20-4-0570 – isolated find collected during tree clearing in 2015

MOD 8

Known sites - red salvaged, orange partial salvage, white valid



Figure 2 MOD 8 Survey Area, recorded sites – white valid, red salvaged orange partial salvage.



Figure 3 MOD 8 northern section with recorded sites .



Figure 4 MOD 8 south with sites - red salvaged, orange partial salvage, white valid. Note the lines on the ground in the cleared area are the 2013 grader scrapes that salvaged sites.

Proposed assessment methodology

Three days have been allowed to conduct the survey of the 110 ha Survey Area. The survey will aim to cover the area in its entirety, with particular focus on revisiting known sites and coverage of drainage and creek lines and sensitive landscape area (ie terraces above drainage lines). Any newly recorded sites, in addition to known sites, will then be considered in the final fauna crossing design.

A roster of available RAPs will be prepared in order to share the work amongst the group. 2-3 RAPs per day are likely to be required.

Justification for the methodology

Whilst the area has been previously surveyed, Boggabri Coal have undertaken to update field surveys prior to tree clearing and project modifications.

The field survey allows ground truthing of known sites and the identification of any sites exposed by natural process since the previous assessment. All of these sites can be then included in the impact assessment and allow for avoidance in the detailed final fauna crossing design where possible.

Once prepared, the draft assessment report will be provided to all RAPs for a 28 day review period. During this period, a RAP meeting may be held for discussion of MOD 8 and to provide an opportunity for further feedback, if required.

Input Point: We would appreciate your input regarding the proposed assessment methodology.

DRAFT

Regulation 80C requirements

Objectives

The objective of this consultation process is to consult with the Registered Aboriginal Community representatives regarding the cultural heritage values of the study area and to identify appropriate mitigation measures.

The first step in this process is to carry out consultation with the Aboriginal community representatives in accordance with 80 (C) of the *National Parks and Wildlife Act*.

The resulting information / consultation outcomes will result in the identification of cultural values that will be incorporated into the ACHAR and assist the Biodiversity Conservation Division (BCD) (formerly OEH) in their consideration of the modification application.

Consultation Step 4.2.2 d) Definition of agreed roles, functions and responsibilities by the registered Aboriginal parties and the proponent

The proponent acknowledges that the registered Aboriginal parties are the primary determinants of cultural significance in the project area. Where appropriate, the registered Aboriginal parties are encouraged to provide information to Insite Heritage on behalf of Boggabri Coal regarding the cultural significance of objects and / or places within the project area and provide input into the proposed management recommendations for these objects.

Insite Heritage on behalf of Boggabri Coal would be responsible for providing information regarding the proposed project, conducting the consultation process and incorporating any submissions received from the registered parties into the cultural heritage assessment process. Insite Heritage would also be responsible for the development and implementation, in consultation with the registered Aboriginal parties, of protocols regarding the sourcing and holding of cultural knowledge which is sensitive or has restricted access. The information obtained by the proponent during the consultation process would only be used to inform the decision making process for the potential Aboriginal Place nomination, unless otherwise agreed to by the registered Aboriginal parties.

Any additional input into the above statements would be greatly appreciated.

Consultation Step 4.2.2 e) An opportunity to registered Aboriginal parties to raise and discuss their cultural concerns, perspectives and assessment requirements

We would like to invite all registered Aboriginal parties to identify, raise and discuss any cultural concerns, perspectives and outline any cultural values that should be considered by the BCD in their assessment of the ACHAR. This can be done by contacting Angela Besant at Insite Heritage by mail, email or phone (contact details below). If you would prefer to discuss direct with the proponent or BCD, please let us know so that we can make arrangements for you.

Stage 3 –Gathering information about cultural significance

Consultation Step 4.3.1 & 4.3.2 Presentation of proposed methodology for the cultural heritage assessment and opportunity to review and provide feed back

Our proposed methodology for the cultural heritage assessment is outlined below:

- Initiate the Stage 2 & Stage 3 consultation process by; providing information about the proposal to all registered parties.
- Seek submissions and information regarding the cultural significance of objects/and or places within the project area.
- Seek submissions regarding the development of management options of the identified objects and / or places within the project area.
- Collate information received in the Stage 3 consultation process, documenting all feedback and response to submissions and incorporate into the draft cultural heritage assessment report.
- Circulate the draft cultural heritage assessment report to the registered Aboriginal parties for review and comment.
- Hold a site visit opportunity to assist with input into the draft ACHAR if required.
- Collate and incorporate all responses to the draft report into the final cultural heritage assessment report.
- Submit final ACHA report to the client.

We would like to invite all registered Aboriginal parties to identify any protocols you wish to be adopted in the information gathering process and assessment methodology and any matters such as issues/areas of cultural significance that might affect, inform or refine the assessment methodology.

Consultation Steps 4.3.3 & 4.3.6

As part of this consultation we would like to seek cultural information from registered Aboriginal parties to identify:

- a) Whether there are any Aboriginal objects of cultural value to Aboriginal people in the area of the proposed project (other than known sites).
- b) Whether there are any places of cultural value to Aboriginal people in the area of the proposed project, including places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.

Management of Culturally Sensitive Information

The proponent and Insite Heritage understand that some of the information received may be sensitive or have restricted public access and we are committed to protecting cultural knowledge. We understand that Aboriginal people must control the way in which cultural knowledge and other information relating specifically to their heritage is used, as this may be an integral aspect of its heritage value (OEH 2010).

We would endeavour to only collect cultural knowledge from Aboriginal people to the extent that it is required to understand and demonstrate:

- a) The cultural values in the area of the proposed activity, and
- b) The significance of any Aboriginal object(s) and/or place(s) that may be present.

Information collected from the cultural assessment process would only be used to inform the assessment report. Information would be received by Insite Heritage for incorporation into the assessment report which would also be forwarded to the proponent and BCD. Note that cultural information may be provided to other RAPs unless specified otherwise.

We would like to seek your input regarding the development and implementation of appropriate protocols for sourcing and handling cultural information in the following areas;

1. Cultural restrictions on access to the material.
2. Cultural restrictions on communication of the material.
3. Cultural restrictions on the location of the material.
4. Cultural recommendations on handling the material.
5. Any other contextual information.
6. The names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and the degree of authorisation.
7. Details of any consent given in accordance with customary law
8. Level of confidentiality to be accorded to the material.
9. Access and use, by the registered Aboriginal parties, of the cultural information in the material
10. And any other areas identified by the registered parties

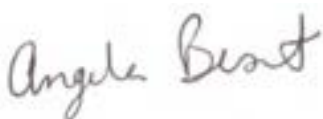
It is also acknowledged that it may be necessary for registered Aboriginal parties to liaise directly with OEH regarding sensitive information.

We would appreciate if you could provide your comments in writing regarding the proposed mitigation methodology, via email, mail or phone, by the 14th September 2020:

**Insite Heritage Pty Ltd PO Box 198 Morisset NSW 2264 Ph 0412836031
Email angela@insiteheritage.com.au**

Please do not hesitate to contact me with any queries; we look forward to your response.

Kind regards
Insite heritage Pty Ltd



**Angela Besant
Archaeologist**

Appendix B –ASCF member feedback on draft methodology



Project Approval Modification No 8 Comments/Feedback Form

Name (s)	Organisation	Date
DAVID	gomer / e/c	10/9/20

If you would like to provide any comments/feedback please provide details below.....

work force number with contractors should engage
Arrival local people. How many total people would get
jobs for Mod 8.
Cultural values of the MOD Area
walk over of study area
Collection of artifacts & Materials



Project Approval Modification No 8 Comments/Feedback Form

Name (s)	Organisation	Date
Aaron Talbott	AT GOMILARDI CULTURAL CONSERVATION	10th September

If you would like to provide any comments/feedback please provide details below.....

Satisfied with the Methodology for Modification 8. In saying the impact area is less than 50% of the proposed walk over, AT GOMILARDI is giving the ^{support for} Modification 8 to proceed.

Does Boggabri engage Ecologist from time to time to monitor the rehabilitation areas to get an indication of the activity and settlement of fauna in these rehabilitation areas. My question was answered ~~(for)~~ ABRalest.

Keren Halliday

From: Keren Halliday
Sent: Thursday, 10 September 2020 3:42 PM
To: angela@insiteheritage.com.au
Cc: Hamish Russell
Subject: FW: Meeting

Hi Ang
Donna had to leave part way through the call. She has forwarded these comments.
Regards
Keren

From: cacatua4service@tpg.com.au <cacatua4service@tpg.com.au>
Sent: Thursday, 10 September 2020 1:17 PM
To: Keren Halliday <keren.halliday@boggabriccoal.com.au>
Subject: Meeting

[WARNING: This email originated outside of Our Company. DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.]

Keren,

Cacatua would like to see both under and over access for the fauna crossing.

As per Heritage letter with regards to Modification 8, we agree with the methodology that was put forward.

Thank you
Donna

Appendix B 1 - Comments ASCF 3/12/2020



Project Approval Modification No 8

Comments/Feedback Form

Name (s)	Organisation	Date
Cindy Foley	Cindy Foley	3-12-20.

If you would like to provide comments or feedback please outline below.....

Modification 8.
would like Rep list?
and consultation list. ?

46 mil ton overburden.

5.9 mil ton coal.

Details good.

Maybe take over Daycare ?

Ⓢ Could "tree troffs. Just want to say this is a great project.

Over pass project? Cant wait to see.

? CHMP - Raps should be on site to manage ground disturbance while fence's are digging, as they are not experianced to identify artifacts.

~~cut~~
2039 etended life of mine

I agree with ange's assesment on modification 8
I also worked on Modification 8. and Im happy with the assesment that was done.

Responses may be posted to PO Box 12, Boggabri NSW 2382 or send by email to : keren.halliday@boggabrichoal.com.au

PLEASE SEND YOUR COMMENTS BY 18 DECEMBER 2020



Project Approval Modification No 8

Comments/Feedback Form

Name (s)	Organisation	Date
GREG GRIFFITHS	TRADITIONAL OWNER DIRECT DESCENDANT WONNARUA C&H	7/12/2020

If you would like to provide comments or feedback please outline below.....

MODIFICATION 8 PROJECT

✓ CREATING A WILDLIFE PASSAGE FOR OUR NATIVE FAUNA IS A VERY WORTHWHILE PROJECT PROVIDING SAFETY FOR OUR TOTEMIC SPECIES TO MOVE FROM BUSHLAND TO REHABILITATION AND BACK.

✓ ARTIFACT OBJECTS INSIDE OUT OF DISTURBANCE BOUNDARY SHOULD BE LEFT ALONE, ANY WITHIN SHOULD BE COLLECTED AND RELOCATED

✓ MANAGEMENT PLAN REVIEW

THE MANAGEMENT PLAN SUBSTANCE SHOULD INCLUDE MORE ON CULTURAL LANDSCAPE AND MORE ON IDENTIFYING MY ANCESTORS OCCUPATION OF THIS AREA.

✓ KEEPING PLACE

????????

Responses may be posted to PO Box 12, Boggabri NSW 2382 or send by email to : keren.halliday@boggabrichoal.com.au

PLEASE SEND YOUR COMMENTS BY 18 DECEMBER 2020



Project Approval Modification No 8

Comments/Feedback Form

FINAL COMMENTS & RECOMMENDATIONS

1/ I SUPPORT MODIFICATION 8 AS A DIRECT DESCENDANT AND TRADITIONAL OWNER OF THIS AREA, WHICH BOGGABRI COAL OPERATIONS IS ON.

2/ THAT THE DRAFT SOCIAL IMPACT MANAGEMENT PLAN REVIEW BE MORE DIRECT ON THE SOCIAL IMPACTS IT HAS ON ABORIGINAL COMMUNITY. EG - WE HAVE ORGANISATIONS THAT HAVE RESPONSIBILITY IN WORKING TO IMPROVE AND BETTER OUR ABORIGINAL AND THAT BOGGABRI COAL DEAL WITH THEM MORE DIRECTLY.

3/ THAT THE CULTURE AND HERITAGE MANAGEMENT PLAN REVIEW PROCEED AS PLANNED BUT WITH A MORE AGGRESSIVE APPROACH IN REGARDS TO ITS SUBSTANCE. AND THAT FUTURE WORKS PROCEED. BUT ALSO MAYBE FINDING A PLACE FOR ELDER'S TO PARTICIPATE IN THE BOTH ABOVE ACTIONS

4/ KEEPING PLACE

? ? ? ? ? ? ? ?

AS A DIRECT DESCENDANT OF THIS AREA WHICH THE MINE OPERATE'S ON I HAVE CONCERNS ABOUT CULTURAL OBJECTS AND WOULD LIKE TO DISCUSS THIS FURTHER
"CONFIDENTIALLY"
YSA

Yours in Unity
GREG GRIFFITHS

Appendix C - AHIMS extensive search

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0123	BC-29	GDA	56	226090	6609164	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm						Permits		
20-4-0139	BC 46	GDA	56	226098	6608743	Open site	Partially Destroyed	Artefact : 28		103378
	Contact Searle	Recorders Mrs.Angela Besant,Mr.Giles Hamm						Permits		
20-4-0147	BC 54	GDA	56	226105	6608889	Opensite	Valid	Artefact : 60		103378
	Contact Searle	Recorders Mr.Giles Hamm						Permits		
20-4-0141	BC 48	GDA	56	226105	6608889	Opensite	Valid	Artefact : 3		
	Contact Searle	Recorders Mr.Giles Hamm						Permits		
20-4-0144	BC 51	GDA	56	226105	6608889	Opensite	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Searle	Recorders Mr.Giles Hamm						Permits		
20-4-0146	BC 53	GDA	56	226105	6608889	Opensite	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm						Permits		
20-4-0388	BCS 5	GDA	56	226147	6608004	Opensite	Destroyed	Artefact : 1		103378
	Contact	Recorders Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits		
20-4-0136	BC 43	GDA	56	226155	6608455	Opensite	Destroyed	Artefact : 15		103378
	Contact Searle	Recorders Mrs.Angela Besant,Mr.Giles Hamm						Permits		
20-4-0140	BC 47	GDA	56	226157	6608862	Opensite	Destroyed	Artefact : 3		103378
	Contact Searle	Recorders Mrs.Angela Besant,Mr.Giles Hamm						Permits		
20-4-0122	BC-28	GDA	56	226159	6609147	Opensite	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm						Permits		
20-4-0510	Leard Forest	GDA	56	226169	6609233	Closed site	Valid	Artefact : -		103378
	Contact	Recorders Ms.Jane Delaney-John						Permits		
20-4-0511	Leard Forest Old Camp 3	GDA	56	226178	6609239	Closed site	Valid	Artefact : -		103378
	Contact	Recorders Ms.Jane Delaney-John						Permits		
20-4-0137	BC 44	GDA	56	226186	6608185	Opensite	Destroyed	Artefact : 4		
	Contact Searle	Recorders Mrs.Angela Besant,Mr.Giles Hamm						Permits		
20-4-0563	NV 83	GDA	56	226189	6610827	Opensite	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders Ms.Taryn Gooley						Permits		
20-4-0512	Leard Forest- Old Camp	GDA	56	226200	6609177	Closed site	Valid	Artefact : -		103378
	Contact	Recorders Ms.Jane Delaney-John						Permits		
20-4-0507	Isolated Find Flake	GDA	56	226201	6609171	Closed site	Valid	Artefact : -		103378

Report generated by AHIMS Web Service on 08/07/2020 for Angela Besant for the following area at Datum :GDA, Zone : 56, Eastings : 225000 - 227500, Northings : 6608000 - 6611000 with a Buffer of 50 meters. Additional Info : to inform an arch assessment for Mod 8 for boggabri coal. Number of Aboriginal sites and Aboriginal objects found is 56

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0121	BC-27	GDA	56	226238	6609120	Opensite	Valid	Artefact : 1		
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0505	Leard Stare Forest Grinding Stone Portable	GDA	56	226239	6609162	Closed site	Valid	Aboriginal Resource and Gathering : -, Aboriginal Ceremony and Dreaming : -, Artefact : -		103378
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0570	TC5/15	GDA	56	226251	6608783	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0115	BC-21	GDA	56	226251	6609073	Open site	Valid	Artefact : 1		
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0138	BC 45	GDA	56	226282	6608124	Open site	Destroyed	Artefact : 4		
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0526	LFNV80	GDA	56	226282	6608635	Open site	Valid	Artefact : -		103378
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0145	BC 52	GDA	56	226306	6608432	Open site	Destroyed	Modified Tree (Carved or Scarred) : 1		103378
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0134	BC 42	GDA	56	226309	6608430	Open site	Destroyed	Artefact : 6		103378
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0135	BC 41	GDA	56	226333	6608273	Open site	Valid	Artefact : 3		
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0565	NV 84	GDA	56	226346	6608647	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0574	TC9/15	GDA	56	226360	6608543	Opensite	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0566	NV 85	GDA	56	226368	6608585	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0132	BC39	GDA	56	226422	6608122	Opensite	Valid	Artefact : 1		
	<u>Contact</u> Searle	<u>Recorders</u>						<u>Permits</u>		
20-4-0583	BC30 (ST)	GDA	56	226425	6608589	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		

Report generated by AHIMS Web Service on 08/07/2020 for Angela Besant for the following area at Datum :GDA, Zone : 56, Eastings : 225000 - 227500, Northings : 6608000 - 6611000 with a Buffer of 50 meters. Additional Info : to inform an arch assessment for Mod 8 for boggabri coal. Number of Aboriginal sites and Aboriginal objects found is 56

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0133	BC 40	GDA	56	226468	6608332	Opensite	Valid	Artefact : 10		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0131	BC38	GDA	56	226524	6608158	Opensite	Valid	Artefact : 144		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0117	BC-23	GDA	56	226605	6608460	Opensite	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0584	TC2/14	GDA	56	226722	6608998	Opensite	Destroyed	Artefact : -		
	Contact	Recorders	Mrs.Angela Besant,Ms.Taryn Gooley					Permits		
20-4-0571	TC6/15	GDA	56	226722	6608998	Opensite	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Taryn Gooley					Permits		
20-4-0130	BC37	GDA	56	226785	6608396	Opensite	Not a Site	Modified Tree (Carved or Scarred) : 1		103378
	Contact Searle	Recorders	Mr.Giles Hamm,Ms.Taryn Gooley					Permits		
20-4-0100	BC-6	GDA	56	226988	6610617	Opensite	Valid	Artefact : 1		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0099	BC-5	GDA	56	226989	6610613	Opensite	Valid	Artefact : 1		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0564	TC1/15	GDA	56	227174	6610814	Opensite	Destroyed	Artefact : -		
	Contact	Recorders	Ms.Taryn Gooley					Permits		
20-4-0114	BC-20	GDA	56	227531	6608729	Opensite	Valid	Artefact : 1		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0017	Nagero Creek;	AGD	56	225704	6608190	Opensite	Destroyed	Artefact : -	Open Camp Site	103378
	Contact	Recorders	Mrs.Angela Besant,Karen Flick					Permits		

Report generated by AHIMS Web Service on 08/07/2020 for Angela Besant for the following area at Datum :GDA, Zone : 56, Eastings : 225000 - 227500, Northings : 6608000 - 6611000 with a Buffer of 50 meters. Additional Info : to inform an arch assessment for Mod 8 for boggabri coal. Number of Aboriginal sites and Aboriginal objects found is 56

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Appendix D – Field assessment data

Mod 8 Survey Notes

General – survey transects meandering pedestrian transects due to terrain and vegetation constraints. Field participants approximately 5-10m apart.

Survey Polygon	Notes
Polygon 1	From southern boundary of Poly 1 northward to northern boundary Surface wash notes, surface visibility in eroded patches, casuarina regrowth SV60%
Polygon 1	Northern boundary eastward to eastern boundary then meandering transect to southern boundary Lower visibility than T1 due to grass and ground covers. Some visibility in erosion scours, ants nest, animal tracks and old access track. SV60-40%
Polygon 2	Transect in a northerly direction along western boundary of polygon, north from Leards Forest Road to access track northern end, approx. 2km in length. Post associated with former cattle yard? noted southern end of transect. SV approx60%, Exposures in erosions scours and around ants nest and track ways. Relocated Site 20-4-0118, isolated find could not be relocated. Surface wash. Fencing down, required repair and maintenance
Polygon 2	Southwards from northern track to Leards Forest Road Northern end of transect in proximity to site site 20-4-0563. Extend PAD for site, down the creek line that runs southwards / mark as a sensitive area along creekline for future test investigations to see if PAD extends due to low visibility. Very low visibility (10-20%) due to ground cover.
Polygon 2	Cleared paddock area adjacent to Leards Forest Road 80% SV, gravel lag, background gravels, no artefacts identified
Polygon 3	Southern side of Leard Forest Road, south to northern boundary of Polygon 4. Low visibility open forest
Polygon 3	South of southern boundary of Polygon 4. Drainage line at southern end between haul road and dam. Low visibility
Polygon 4	Transect adjacent to eastern boundary of Poly4. Swampy waterlogged area, 10-20% SV. Bund wall and fence bisect polygon, on southern side open forest, not swampy. Surface wash
Polygon 5	Cleared former pipeline corridor and adjacent area. Vis 90%, adjacent areas 30%
Polygon 5	20-4-0117 could not be relocated. Drainage line adjacent 226598,6608462 which runs north eastwards to eastern boundary of polygon RAP request mark sensitive area 30m either side due to low visibility.
Polygon 5	North side of drainage line. Some small areas of visibility in erosion scours, ants nest and bank face SV 50%, decreasing to 20-30% back from drainage line. Northern bank of drainage line eastern end near polygon boundary two broken flakes of white chalcedony @ E226691, 6608744. 21x16x4mm mid section, 23x16x7 broken flake mid section, retouch left margin

Polygon 5	<p>Small area between former pipeline corridor and dam. Eroded gravel lag, surface was, drainage line of T3 crossed at 2265,6608435. Southern end of transect disturbed.</p> <p>Possible scar tree at 226521, 6608441. Tree species (smooth barked apple????) Scar on northern face of tree 130cm long x 45cm wide. 7cm regrowth at base of scar, only 2cm regrowth top of scar. No signs of limb tear or fungus. Base of tree to base of scar 70cm. Tree diameter at base greater than 2m.</p>
Polygon 6	<p>20-4-0566 Fencing around scared tree damaged needs repair. Open woodland, visibility in eroded patches adjacent to creek line. 226349, 6608568 Broken flake, rhyolite/volc. Dark grey, weathered, hinge termination, platform break. 25x35x10mm. Located in 5x5m animal track exposure 15m from southern side of drainage line. Transect westwards to cleared paddock.</p>
Polygon 6	<p>Edge of cleared paddock east to road adjacent to dam. Open forest vis30-60%</p>

Appendix E – Previously unknown sites details

Table 1 Artefacts located in the area of grader scrapes 20-4-0140 & 20-4-0139 – Polygon 6

ID	Easting	Northing	Near site	Type	Material	LxWxTh	Comments
159	226135	6608774	20-4-0139	Blade	IMT		Located on creek margin
160	226135	6608774		Flake	IMT		Crushed platform
161	226170	6608763		Broken flake	IMT		Distal
162	226183	6608776		Flake	Chalcedony		
163	226182	6608776		Flake	Chalcedony	12x10x3	
164	226190	6608797		Flake	Chalcedony	22x24x9	
165	226190	6608796		Broken flake	IMT		mid
166	226183	6608795		12 artefacts	various		On exposure 20m x 5m eroded windrow
167	226161	6608881		Flake	IMT	45x35x15	
168	226098	6608910		Flake	IMT		
169	226095	6608908		Flake x 4	IMT		On exposure 10 m x 2m
170	226104	6608887		Core flake	IMT		
171	226112	6608866		Flake	IMT		
172	226028	6608745		Flake	IMT		
173	226013	6608769		Flake	IMP		Longitudinal break

Table 2 Previously unknown object located by field survey

New Site Label	Easting	Northing	Colour	Type	Raw Material	LxWxTh	Comment	Polygon
Mod8_1/20	226226	6610431	Grey	Core/scrapper	IMT	50x53x30	Rotated core reduced to scrapper	2
Mod8_2/20	226270	6609238		Possible oven	Baked Clay Balls on surface	1m x 1m	Possible oven located adjacent to loggers? camp near 20-4-0505	2
Mod8_3/20	226691	6608744	White	Flakes broken x 2	Chalcedony	21x16x4 23x16x7	Mid section	5

							Mid section retouch left margin	
Mod8_4/20	226521	6608441		Modified tree	Smooth barked apple	130cmx45cm w	On north face, 7cm regrowth at base of scar, 2cm regrowth top of scar. 70cm ground level to base of scar. Tree diameter at base >2m.	5
Mod8_5/20	226349	6608568	Grey	Broken flake	Rhyolite/volcanic	25x35x10	Dark grey weathered, hinge termination and platform break.	6
Mod 8_6/20	226151	6610727	Grey / white	Flake broken	Greywacke	12x8x3	Mid & distal feather termination	2
			Grey	Flake	IMT	21x12x5	Feather termination, focal platform	2



Figure 1 Artefacts located in area of previous salvage

Appendix F – AHIMS Cards for new sites.



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Ms."/>	<input type="text" value="Besant"/>	<input type="text" value="Angela"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

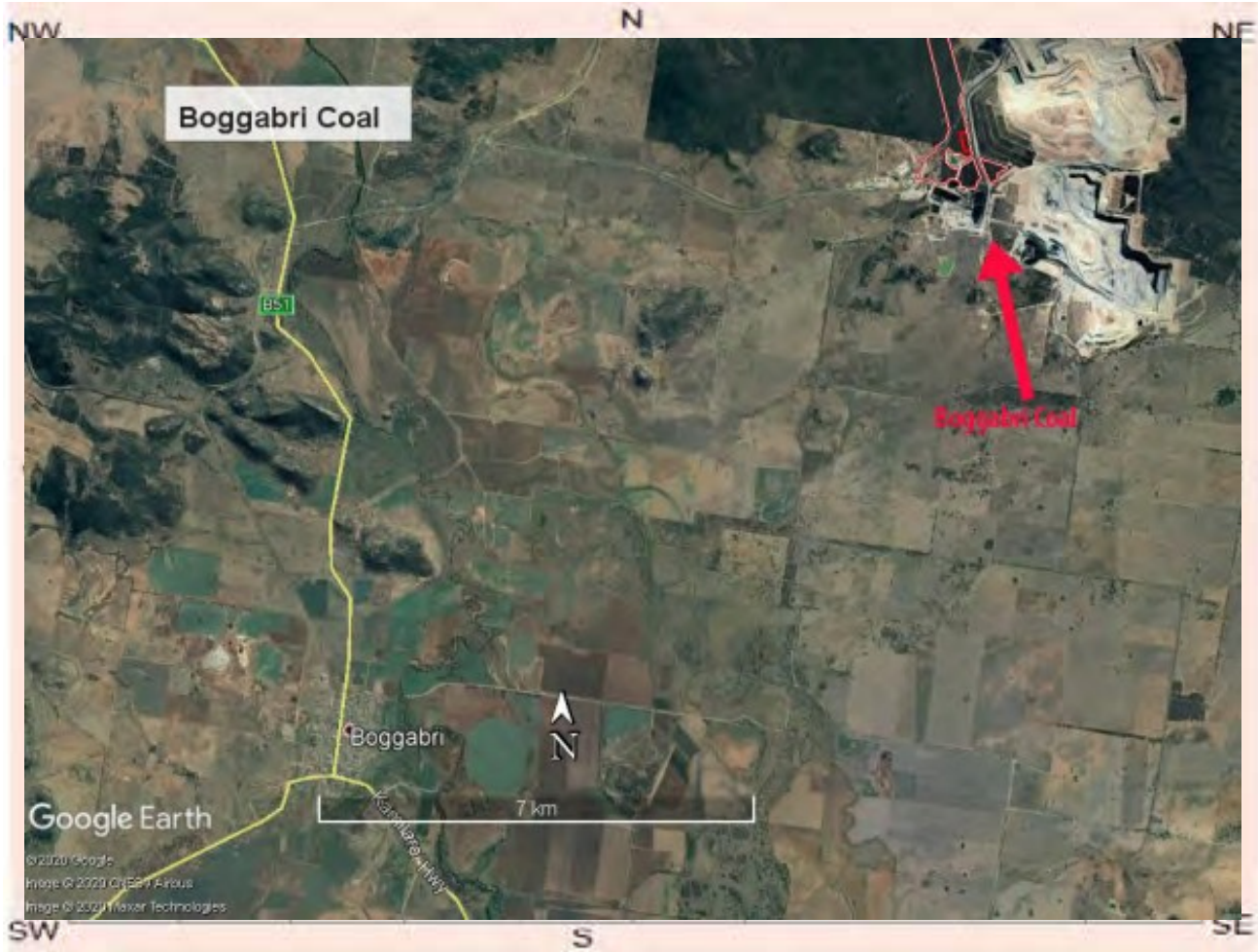
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Open

Site condition:

Good

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. Artefact	1	2	1				

Description:

core scraper IMT grey 5% cortex 16 neg scars

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.							

Description:

Features:

3.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

4.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

5.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

isolated artefact in the Leard Forest

Site plan



Site photographs



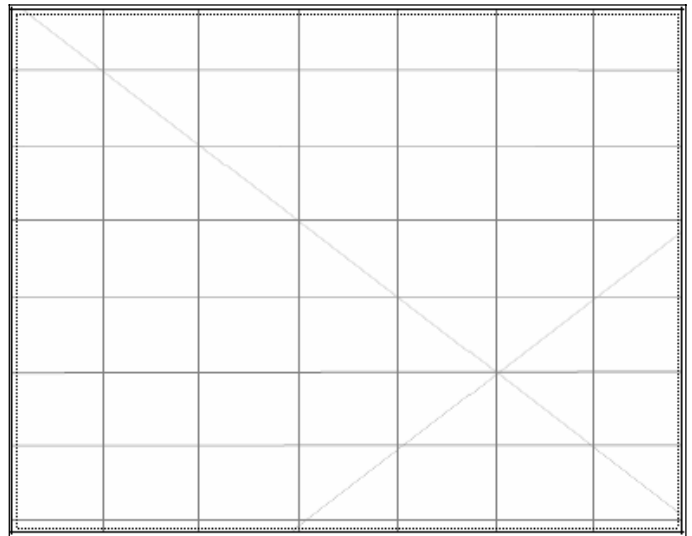
Description:



Description: core scraper base



Description: core scraper proximal



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Ms."/>	<input type="text" value="Besant"/>	<input type="text" value="Angela"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

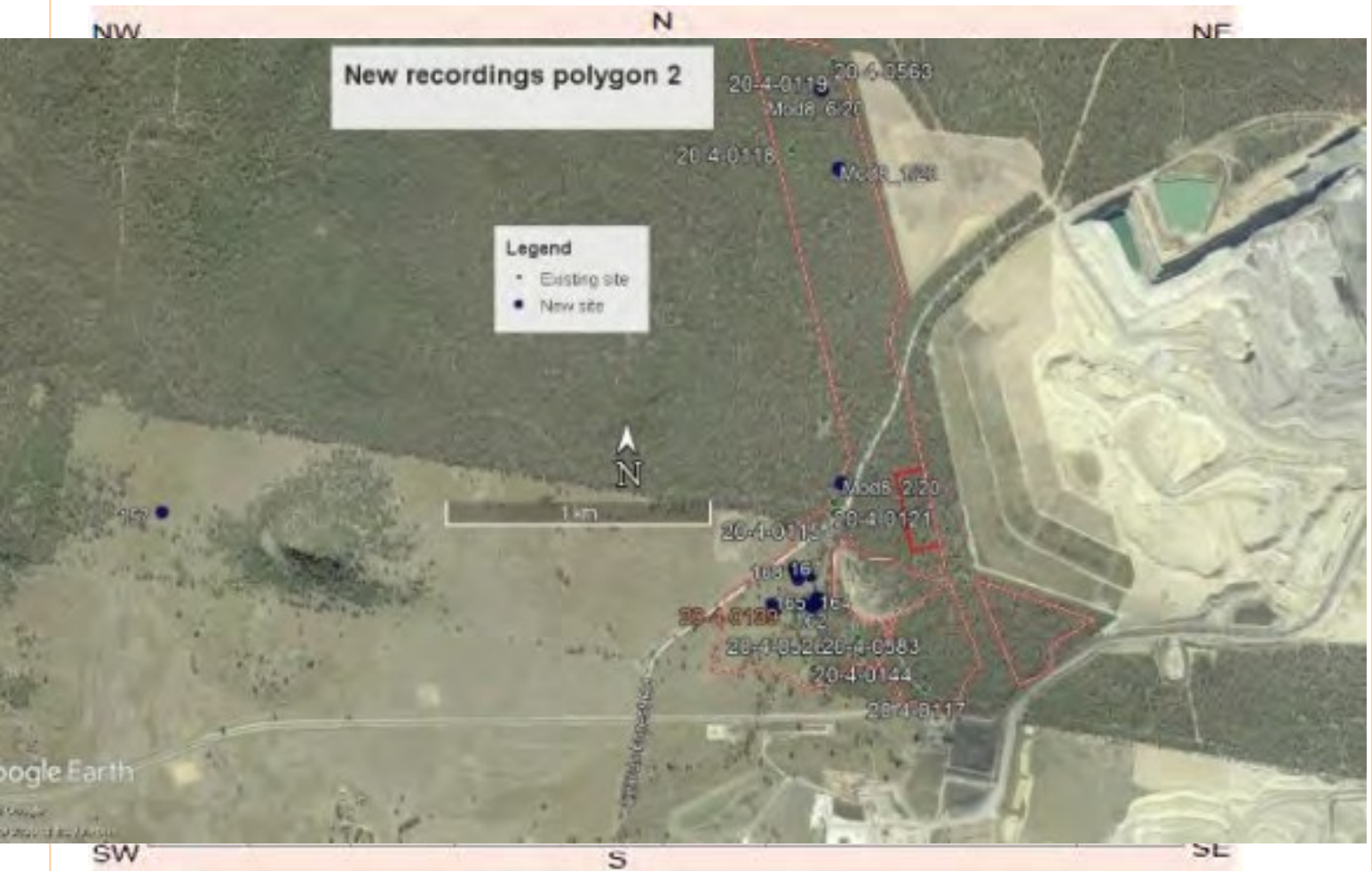
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
1.	<input type="text" value="1"/>	<input type="text" value="1"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

potential oven site - back clay nodules on surface. located about 5m from an old loggers camp so maybe of non aboriginal origin - will be treated as indigenous until shown otherwise

Features:

Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
2.	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

4.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

5.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

oven site in the Leard Forest approx 30m from leard forest road.

Site plan



Site photographs



Description:

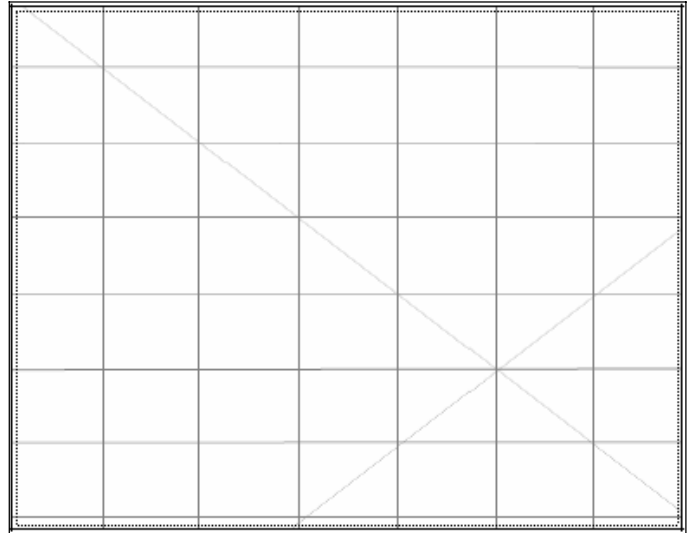


Description: clay nodules



Description:

landscape context



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Ms."/>	<input type="text" value="Besant"/>	<input type="text" value="Angela"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

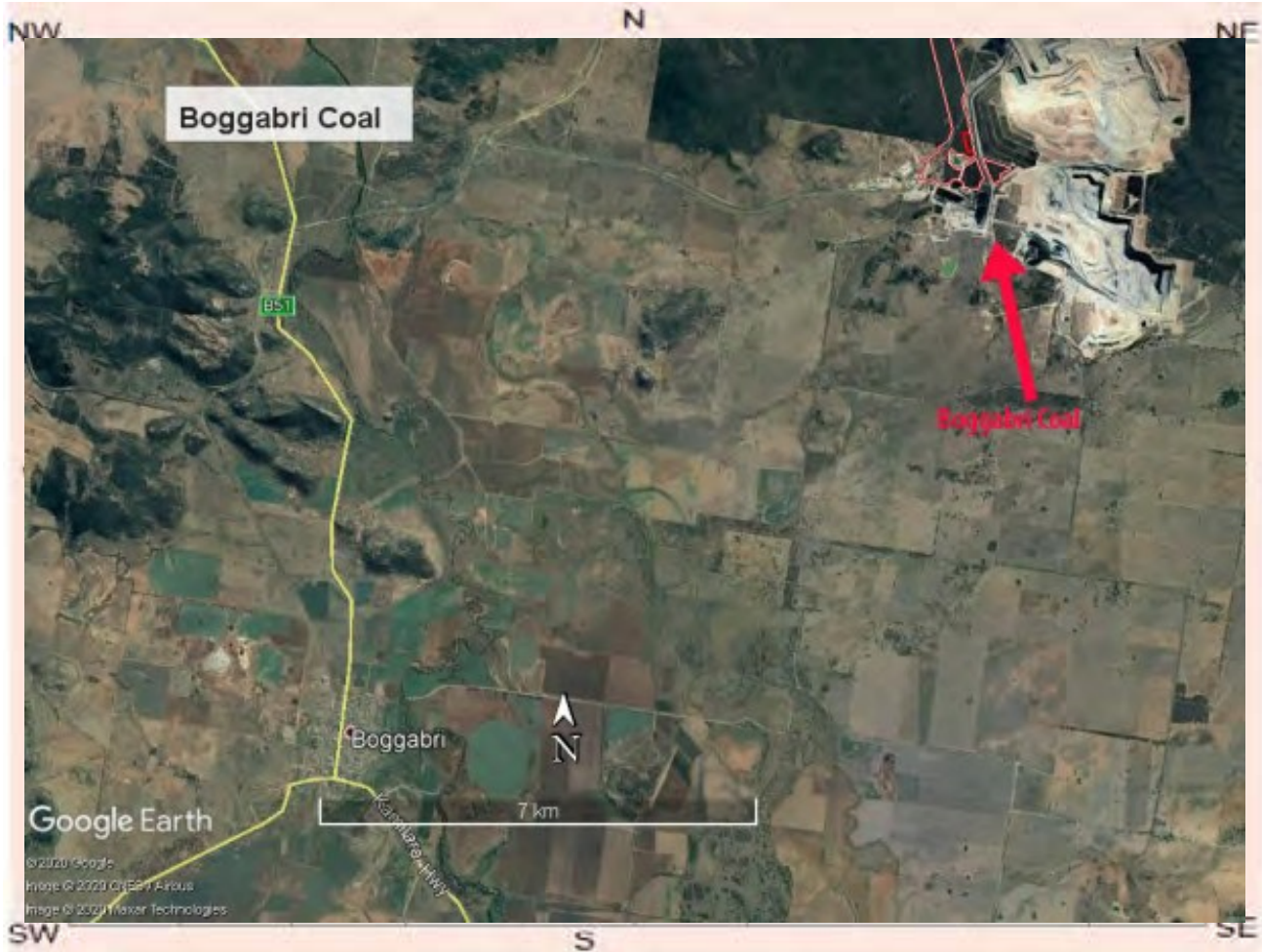
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. <input type="text" value="Artefact"/>	<input type="text" value="2"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

4.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

5.

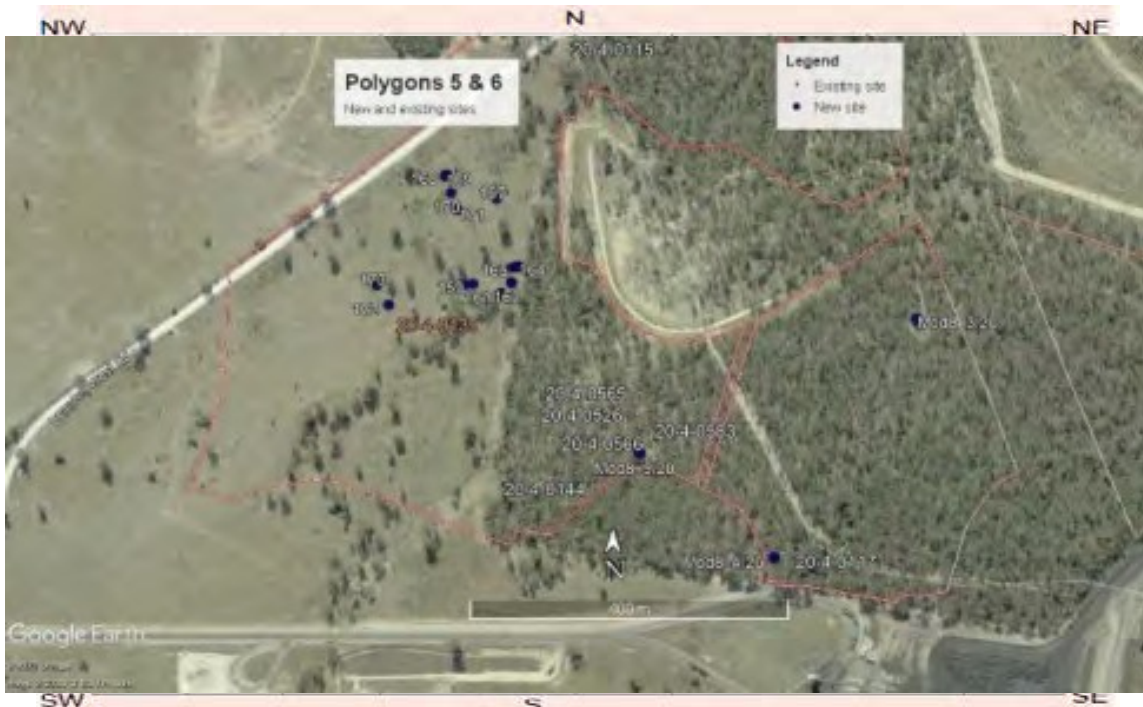
Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

Northern bank of drainage line

Site plan



Site photographs



Description:

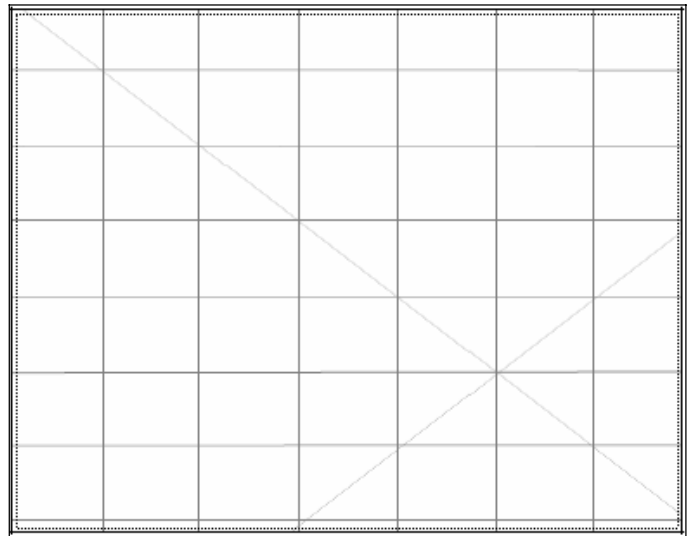


Description: site context



Description:

Site context view east



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Ms."/>	<input type="text" value="Besant"/>	<input type="text" value="Angela"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

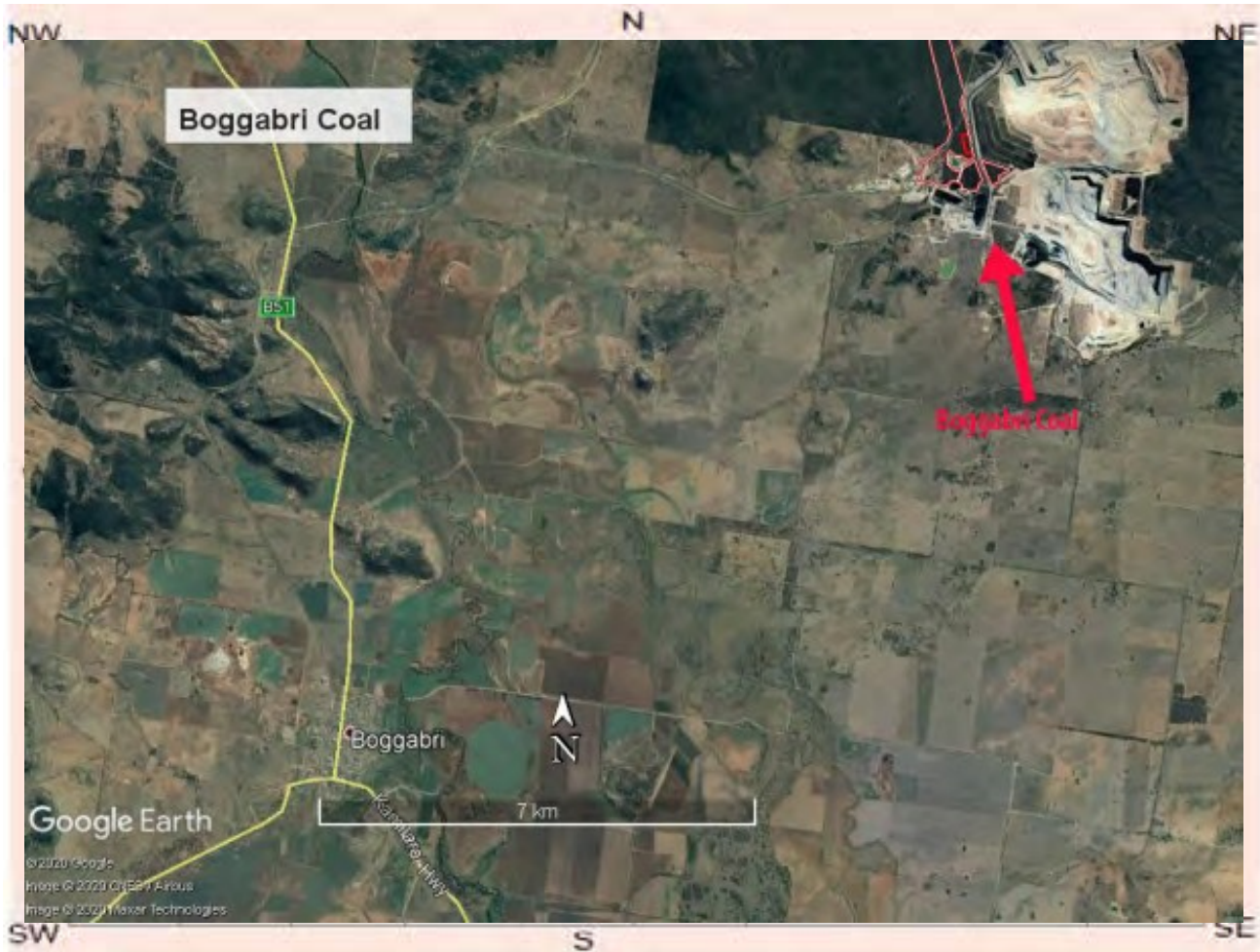
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. <input type="text" value="Modified Tree"/>	<input type="text" value="1"/>	<input type="text" value="130"/>	<input type="text" value="45"/>	<input type="text" value="2"/>	<input type="text" value="5"/>	<input type="text" value="Oval"/>	<input type="text" value="Angophora"/>

Description:

possible scar on a smooth barked apple ? circumference greater than 2m 2cm regrowth at top of scar 7cm regrowth at base of scar. base of scar 70 cm from ground level. Scar on north side of tree

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar shape

Tree Species

Description:

Features:

4.

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar shape

Tree Species

Description:

Features:

5.

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

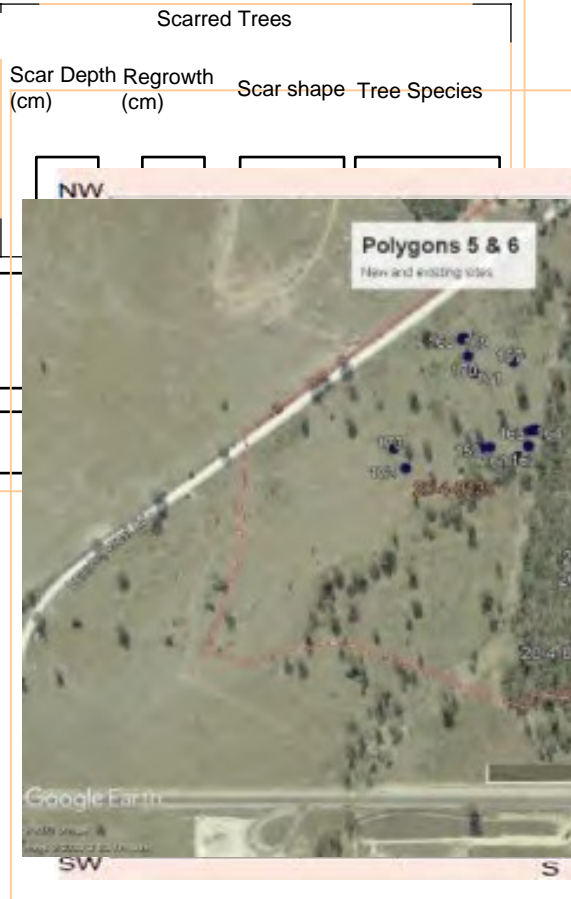
Scar shape

Tree Species

Description:

Other Site Info:

Site plan



Site photographs



Description:

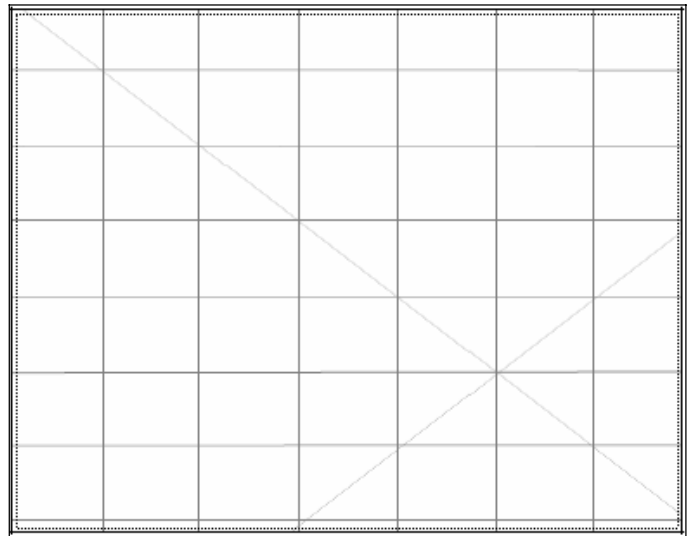


Description: View south east



Description:

view south east



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Ms."/>	<input type="text" value="Besant"/>	<input type="text" value="Angela"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

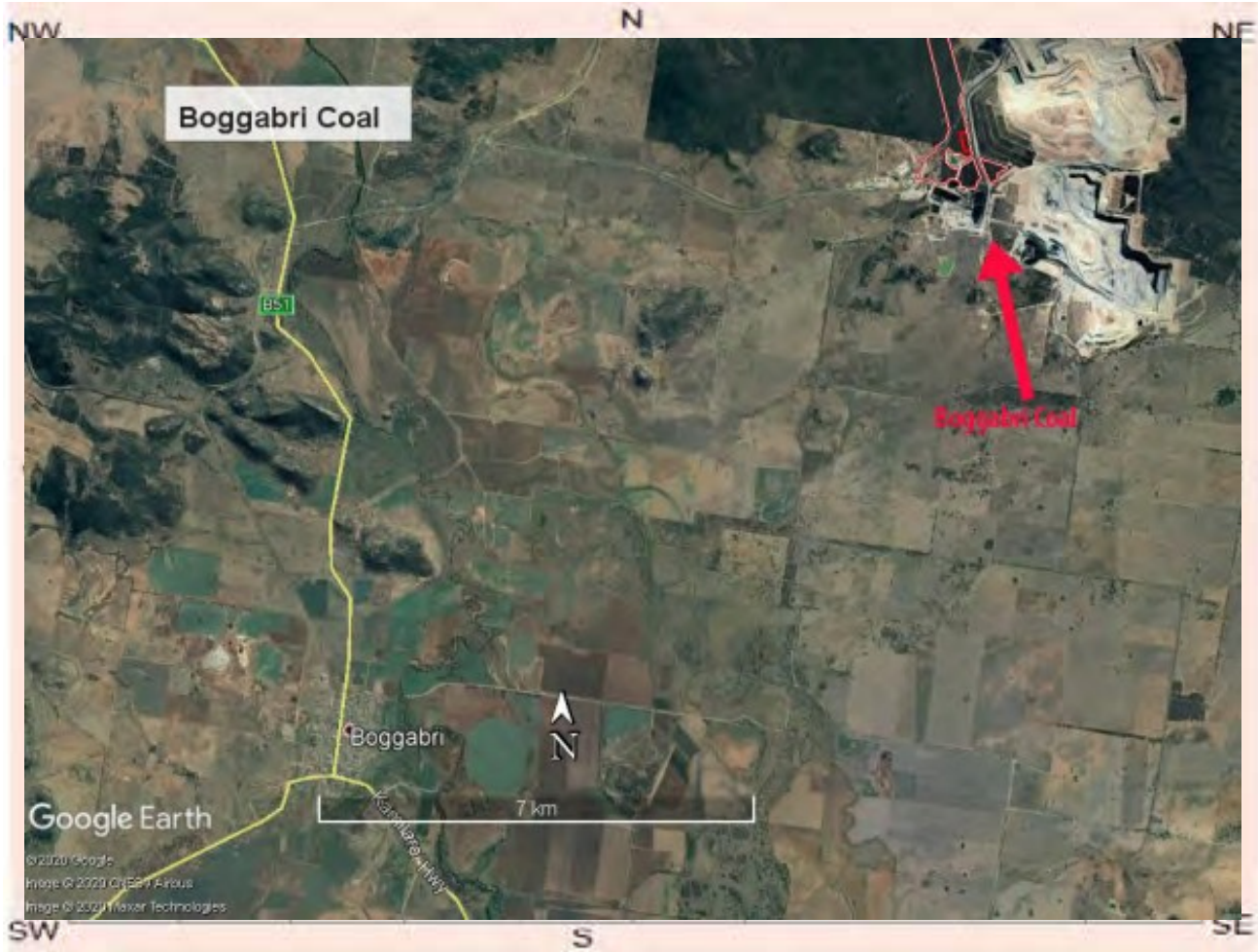
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. <input type="text" value="Artefact"/>	<input type="text" value="1"/>	<input type="text" value="15"/>	<input type="text" value="2"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

4.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

5.

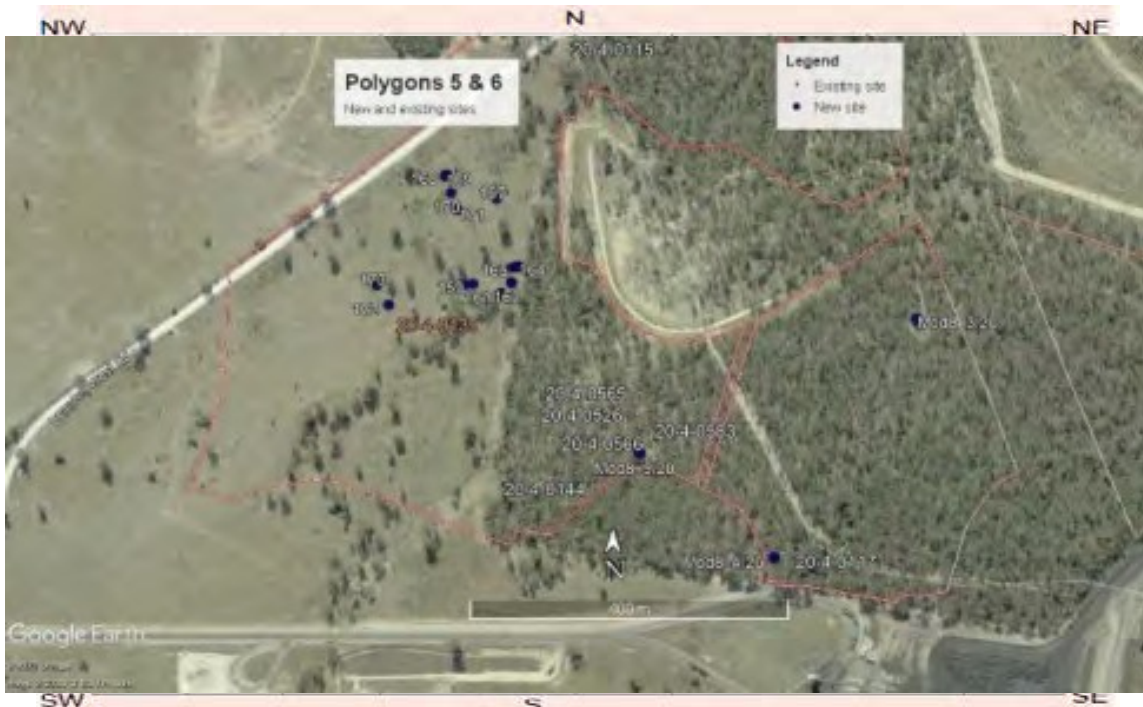
Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

located on informal track in the Leard Forest

Site plan



Site photographs



Description:

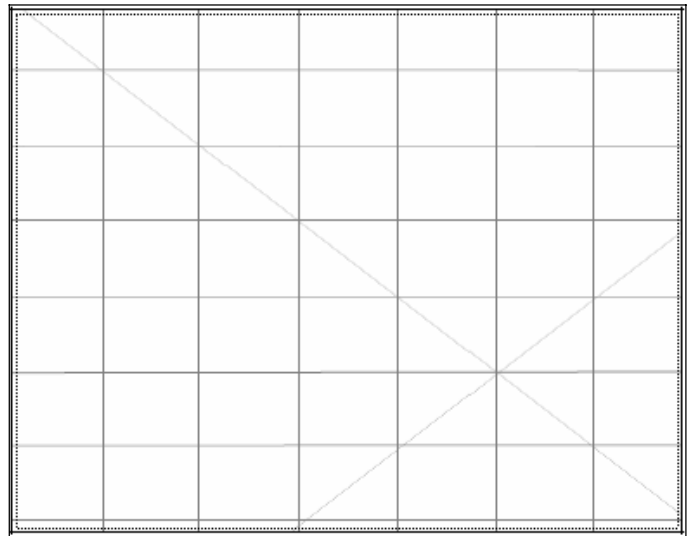


Description: artefact in-situ



Description:

site located on informal track



Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Ms."/>	<input type="text" value="Besant"/>	<input type="text" value="Angela"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

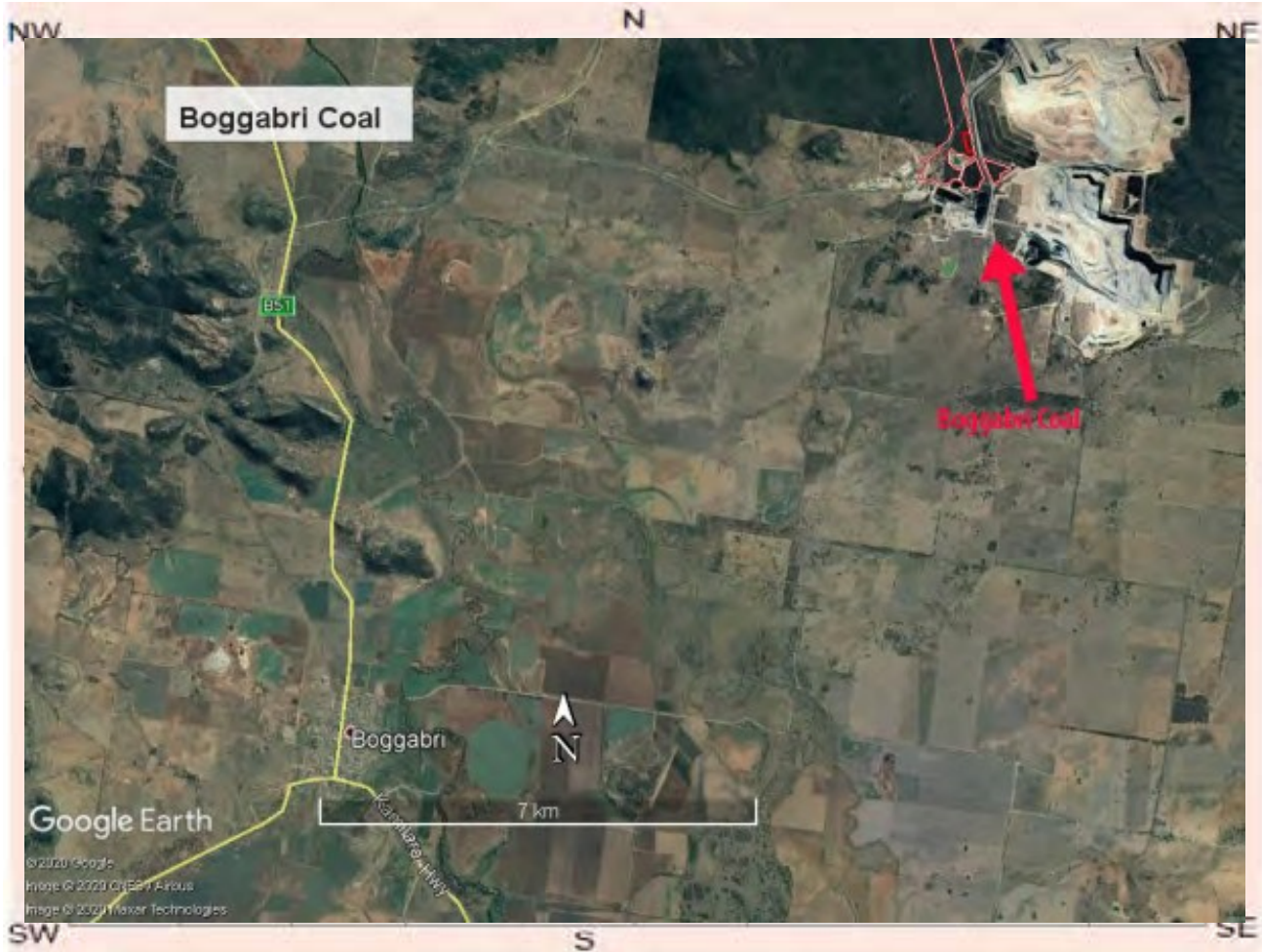
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Open

Site condition:

Good

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. Artefact	2	5	1				

Description:

greywacke broken flake mid and distal 12x8x3 feather termination flake IMT 21x12x5 step termination focal platform

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.							

Description:

Features:

3.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

4.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

5.

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

located on informal track in the Leard Forest

Site plan



Site photographs



Description:



Description: broken flake



Description: complete flake



Description: general site context

Site restrictions

Do you want to Restrict this site?:

Restriction type:

Gender

General

Location

Why is this site restricted?:

Further information contact

Title

Surname

First name

Organisation:

Address:

Phone:

E-mail: