the Study Area – existing ML was the subject of a search on the Aboriginal site register maintained by OEH. This identified 22 registered sites either on or in close vicinity of the Study Area – existing ML. The locations of these sites are included in Figure 6. The data included on this map is a direct copy of OEH data for these sites. All of these are shown as artefacts and as valid, meaning they have not been subject of s90 consent to destroy permit (now called an AHIP – Aboriginal Heritage Impact Permit). Of these 22 locations, one is a duplicate – site 35-6-0152 duplicates 35-6-0038 – this is recognised by OEH. This poses a general management problem but can be ignored here as neither location will be affected by the development footprint. We also note that there seems to be another duplicate with 35-6-0031 and 35-6-0032 both referring to Stone's site 3. This has not, however, been identified by OEH as a duplicate.

With the exception of four sites, none of the others are located in the development footprint and affected by the Project. The four AHIMS sites that might be affected are: 35-6-0039, 35-6-0153, 35-6-0159 and 35-6-0160. Site 35-6-0039 consists of an isolated stone artefact apparently found by Stone. Both appear to be situated within the Goonumbla land unit. Site 35-6-0153 was recorded by Paton as site A1. It consists of a highly disturbed artefact scatter containing 16 artefacts spread over an area of 275m^2 (55m East-West x 5m North-South) – section 5 for detailed description. Site 35-6-0159 consists of a single stone artefact recorded by Appleton. Site 35-6-0160 consists of a modified (scarred) tree recorded by Benson – see section 5 for detailed description.

There seem to be some significant issues with some of the site locations (see Figures 6 and 7). It appears that OEH has taken Paton's data, which was provided in AGD84 (as he notes in his report), and mapped it using GDA94. This results in a significant difference between the site location for 35-6-0153 (site A1) as mapped by Paton and that recorded on AHIMS. Paton's data places the site approximately 200m to the northwest of where AHIMS locates the site, and well outside the Development Footprint. We note that Paton's location, as we have mapped it, is highly consistent with his description of the site lying on an existing vehicle track. Paton's site A3 (35-6-0155), which AHIMS shows as outside the Development Footprint, also seems to be a projection error. However, Paton's data in the correct projection places this site, an isolated find, inside the Development Footprint. Again, the AHIMS location is consistent with an error arising from incorrect projection. We further note an apparent and significant transcription error between the location of Paton's site A2 (35-6-0154)

Figure 6: AHIMS Registered Cultural Heritage

AHIMS ID	SITE NAME	TYPE	STATUS	SITE_TYPE
35-6-0029	Site1;Alectow n;	Open site	Valid	Artefact
35-6-0030	Site2;Alectow n;	Open site	Valid	Artefact
35-6-0031	Site3;Alectow n;	Open site	Valid	Artefact
35-6-0032	Site3;Alectow n;	Open site	Valid	Artefact
35-6-0033	Site5;Alectow n;	Open site	Valid	Artefact
35-6-0036	Site8;Alectow n;	Open site	Valid	Artefact
35-6-0037	Site9;Alectow n;	Open site	Valid	Artefact
35-6-0038	Site10(Alectow n)	Open site	Valid	Artefact
35-6-0039	Site11;Alectow n;	Open site	Valid	Artefact
35-6-0040	Site12;Alectow n;	Open site	Valid	Artefact
35-6-0041	Site13;Alectow n;	Open site	Valid	Artefact
35-6-0042	Site14;Alectow n;	Open site	Valid	Artefact
35-6-0043	Site16;Alectow n;	Open site	Valid	Artefact
35-6-0152	NPM-Zone1-OS1 (duplicate c	Open site	Valid	Artefact : 13
35-6-0153	A1-Alectow n	Open site	Valid	Artefact : 16
35-6-0154	A2-Alectow n	Open site	Valid	Artefact : 1
35-6-0155	A3-Alectow n	Open site	Valid	Artefact : 1
35-6-0156	P1-Alectow n	Open site	Valid	Modified Tree
35-6-0157	P2-Alectow n	Open site	Valid	Artefact : 1
35-6-0158	P3-Alectow n	Open site	Valid	Artefact : 1
35-6-0159	P4-Alectow n	Open site	Valid	Artefact : 1
35-6-0160	NPM-ST1	Open site	Valid	Modified Tree

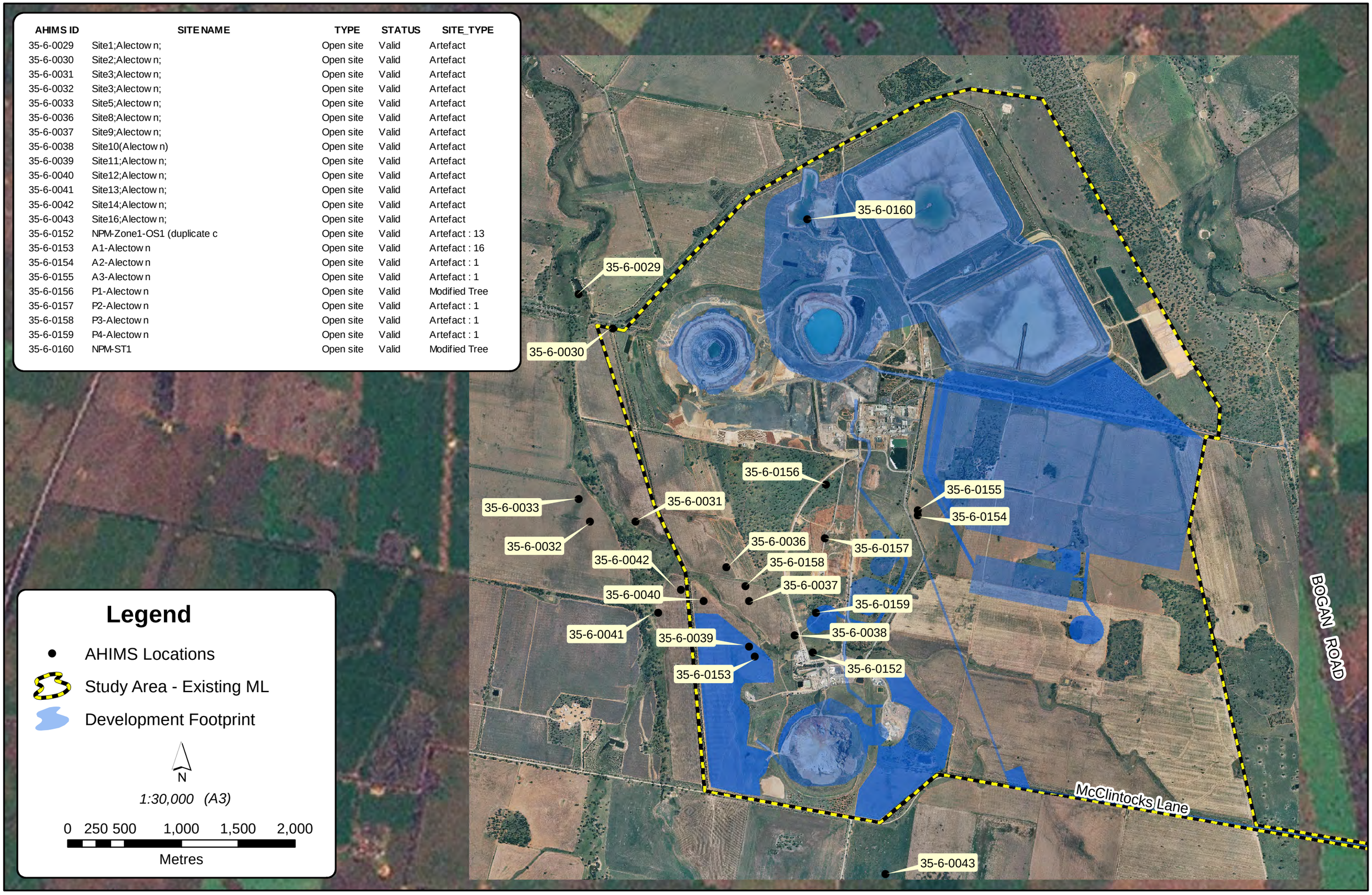
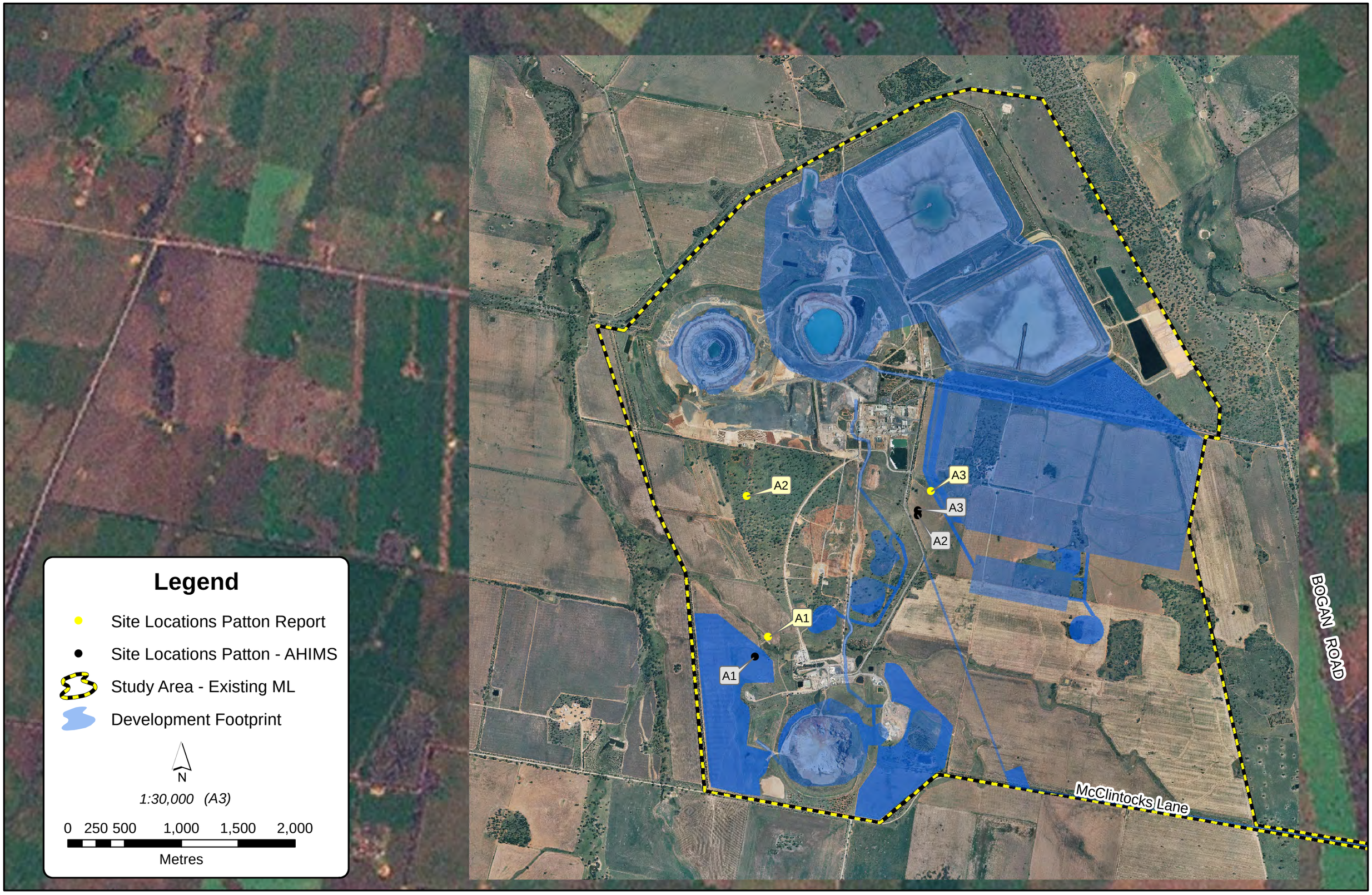


Figure 7: Comparison of Report Sites and AHIMS - Patton



mapped using the data from his report and that included in AHIMS – AHIMS has the site approximately 1.5km to the east of the location provided by Paton. The point at which this transcription error has occurred has not yet been determined.

Benson's modified (scarred) tree (35-6-0160) also appears problematic, but for other reasons. The tree is located within the Development Footprint (Figure 6). But, and as can be seen, it also seems to fall within the bounds of areas already disturbed as part of the Estcourt TSF expansion program at the mine, and thus likely destroyed, consistent with recommendations in the Ozark (2008) report. AHIMS, however, has this site as valid, meaning that no s90 Consent to Destroy or AHIP has been issued, and thus the site should still exist. It is noted that the Estcourt program proceeded under Part 3A of the *Environmental Protection and Assessment Act*. Accordingly, the site may have been destroyed consistent with the recommendations of the Ozark report but without a s90 Consent or AHIP issued and an administrative oversight has resulted in AHIMS having not been adjusted to remove the site from the valid category.

We must accept the results of the AHIMS search as the current legal record of sites within the Development Footprint. However, it is possible to amend AHIMS when errors of this sort are identified. This can be done by a program of administrative resolution followed by ground truthing where necessary. In this way we can determine exactly what is at risk of the Development Footprint in its present configuration and plan appropriate management measures. This will be undertaken as part of the commitment to undertake survey of areas of the development footprint prior to disturbance.

10. Impacts of the Proposed Development upon Aboriginal Cultural Heritage

NPM has committed to implement the Avoidance Principle. As previously noted the Avoidance Principle means, in relation to Aboriginal cultural heritage, the avoidance of Harm to Aboriginal cultural heritage and, to the extent where such Harm cannot be avoided, to minimise Harm to Aboriginal cultural heritage. The Avoidance Principle is consistent with best practice in cultural heritage management, with environmentally responsible development and with Rio Tinto's cultural heritage standards. Thus, NPM have sought to apply this principle in the design of the Project and location of the development footprint outside of identified sensitive areas and areas of identified cultural heritage, where possible.

Study Area – Existing ML

Ultimately, if the development proceeds it will be necessary to establish surface infrastructure (development footprint) within the Project area. This footprint is far smaller than the Project area but occupies approximately 11 square kilometres, of which 7 square kilometres is already disturbed.

The need for there to be practical means of shifting ore, concentrate and waste products around the mine imposes some constraints on design. The Avoidance Principle does not demand total avoidance of harm. Rather, it states that harm should be avoided to the greatest extent possible or otherwise actions taken to minimize harm. As we have noted before, all indications before us are that use of areas within the existing mine development area or in the flat, waterless landform unit will likely avoid harm or give the greatest chance to minimize harm. The use of the Goonumbla Creek and Limestone National Forest units, while not carrying great risks in that there are still relatively few sites of limited value (at least from a scientific purpose – discussed further below) does increase the risk of harm, and therefore does not minimize it in accordance with the Avoidance Principle. The least acceptable decision from this perspective would be to situate infrastructure in the Bogan River unit. This likely also carries unacceptable natural environmental impacts as well.

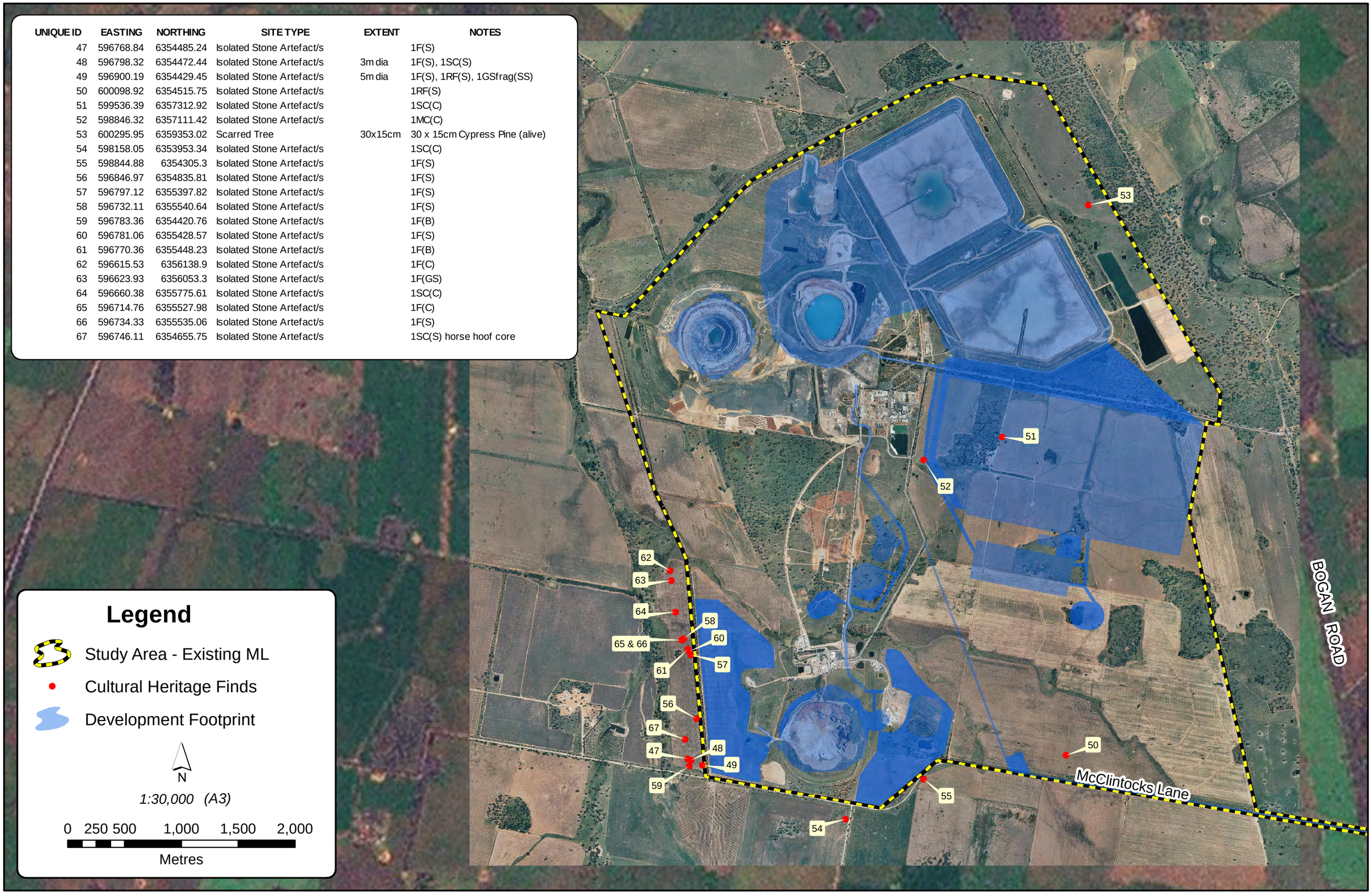
The proposed development footprint avoids in its entirety the Bogan River Unit. It also avoids Goonumbla Creek and Limestone State Forest Units. The preferred footprint focuses on the flat waterless terrain and developed mine area, and these areas have only very small amounts of Aboriginal cultural heritage within them. Noting that we have surveyed 64.2% across all areas where development infrastructure will be developed in this land unit and that otherwise development infrastructure will be situated within already heavily disturbed areas, the preferred footprint would affect:

1. Two sites identified in this survey – sites 51 and 52. These are situated in the Flat, Waterless Landform Unit. Both are isolated stone artefacts and because they were recorded with differential GPS we can be certain they lie within the Development Footprint (Figure 8).

2. The development footprint might also affect the following registered sites: 35-6-0039 (1 isolated artifact that is possibly within the Development Footprint), 35-6-0153 (stone artifact scatter of 16 artefacts), 35-6-0159 (1 isolated stone artifact that is possibly within the Development Footprint) and 35-6-0160 (modified/scarred tree). It

Figure 8: Identified Cultural Heritage and Development Footprint

UNIQUE ID	EASTING	NORTHING	SITE TYPE	EXTENT	NOTES
47	596768.84	6354485.24	Isolated Stone Artefact/s		1F(S)
48	596798.32	6354472.44	Isolated Stone Artefact/s	3m dia	1F(S), 1SC(S)
49	596900.19	6354429.45	Isolated Stone Artefact/s	5m dia	1F(S), 1RF(S), 1GSfrag(SS)
50	600098.92	6354515.75	Isolated Stone Artefact/s		1RF(S)
51	599536.39	6357312.92	Isolated Stone Artefact/s		1SC(C)
52	598846.32	6357111.42	Isolated Stone Artefact/s		1MC(C)
53	600295.95	6359353.02	Scarred Tree	30x15cm	30 x 15cm Cypress Pine (alive)
54	598158.05	6353953.34	Isolated Stone Artefact/s		1SC(C)
55	598844.88	6354305.3	Isolated Stone Artefact/s		1F(S)
56	596846.97	6354835.81	Isolated Stone Artefact/s		1F(S)
57	596797.12	6355397.82	Isolated Stone Artefact/s		1F(S)
58	596732.11	6355540.64	Isolated Stone Artefact/s		1F(S)
59	596783.36	6354420.76	Isolated Stone Artefact/s		1F(B)
60	596781.06	6355428.57	Isolated Stone Artefact/s		1F(S)
61	596770.36	6355448.23	Isolated Stone Artefact/s		1F(B)
62	596615.53	6356138.9	Isolated Stone Artefact/s		1F(C)
63	596623.93	6356053.3	Isolated Stone Artefact/s		1F(GS)
64	596660.38	6355775.61	Isolated Stone Artefact/s		1SC(C)
65	596714.76	6355527.98	Isolated Stone Artefact/s		1F(C)
66	596734.33	6355535.06	Isolated Stone Artefact/s		1F(S)
67	596746.11	6354655.75	Isolated Stone Artefact/s		1SC(S) horse hoof core



Legend

- Study Area - Existing ML
- Cultural Heritage Finds
- Development Footprint

N

1:30,000 (A3)

0 250 500 1,000 1,500 2,000

Metres

should be noted, however, that two of these sites (35-6-153 and 35-6-0160) are subject of either locational uncertainty or may already have been destroyed – as discussed in section 9. Sites 35-6-0039 and 35-6-0159 are cited as only possibly within the Development Footprint because the date of their recording means the original locational may be less than precise and other possible causes of error (e.g. OEH uses GDA94 as the default datum if now is specified with site coordinates) cannot be excluded.

3. It is further noted that one further isolated stone artifact (Paton's site A3: 35-6-0155) is probably located within the Development Footprint but this is again subject to locational uncertainty.

These data are summarized in appendix 7 of this report.

Our conservative estimate of the likely impact of the proposed development (i.e. worse case impact of the proposed development once locational and other issues surrounding AHIMS have been resolved) is that at most five isolated stone artefacts would be affected by the proposed development on the Development Footprint as now designed. This, however, requires verification and the report recommendations make express provision for the management of this issue.

11. Significance Assessment

The Burra Charter describes a set of criteria for defining significance. The Burra Charter was developed by Australia ICOMOS, and the principles enshrined withn it are generally accepted world-wide as a guide for cultural heritage practitioners, and is endorsed by UNESCO for this purpose. The criteria by which the significance of cultural heritage objects, places and values is assessed under the Burra Charter include:

Cultural and Social
Scientific
Historical
Educational and Economic
Aesthetic

Some of these significance criteria can be assigned a relative value from low to very high at the regional, State or national level. This process of significance assessment is employed nationally by heritage consultants and by Environment Australia.

We first address scientific significance. Before doing so, we also state summarily that, in our opinion, the two sites that will be directly impacted by the development on the preferred development footprint have limited historical, educational, economic or aesthetic significance. The significance of the Aboriginal cultural heritage has also been assessed against cultural and social criteria and is discussed further below.

Scientific Significance

This area of significance generally focuses on three separate issues:

- Opportunity to answer particular research questions using the site/s;
- Rarity of the site/s;
- Representativeness of the site/s.

The six sites, either by themselves or as a whole, offer limited opportunity to answer particular research questions. The limited amount of material found in the stone artifact sites means that opportunity to explore issues such as lithic technology, seriation studies and the like is significantly constrained. For instance, Witter (1988) has suggested that a sample of 30 artefacts is required at any one site to provide any reasonable sample of material for technological analysis. With none of the sites within the Study Area – existing ML consisting of more than 20 artefacts at most, this basic condition is not met. The absence of a stratigraphic dimension to the sites also hinders any opportunity to date the sites or explore chronological issues such as changes in, for instance, lithic technology, raw materials or the lack thereof through time. The high degree of disturbance that many exhibit further reduces opportunity as site integrity has been reduced and other components of the sites that may have once existed (e.g. hearths) will now have been lost – the archaeological signature may now have been heavily biased. There is, therefore, little additional information that would be extracted from these sites by any further research program.

The scarred tree, offers little opportunity. This is not an argument for loss but it is to note that it has limited scientific value at the present time particularly given its uncertain provenance. In any case at this stage it will remain unaffected by the proposed development activity.

These sites are not rare: rather all the evidence from throughout the region points squarely to the fact that they are, in fact, very common.

It could be suggested that the sites, on the basis that they are common, are representative of sites throughout the region. However, this is to miss the point of what this term really means. It not only requires that they constitute a representative sample but that they also be good examples of that form of site, and not necessarily just within a region. Given the high degree of disturbance they generally have suffered one would have to consider it highly likely that, while these locations hold cultural significance, there is a high likelihood that there are examples of these types to be found elsewhere in the region that would be seen as of greater value as representative examples of what such sites once offered. On the other hand it is true that the region as a whole has been heavily affected by development, notably agriculture, and it might be thought that most other examples in the region would likewise be so affected. They could be considered as regionally representative. In suggesting even this it should be noted that on a comparative basis all the artefact scatters and isolated finds described here represent very much the smaller examples of sites of this type found in the region.

In summary,the two sites recorded during this survey must be entered onto the relevant state register. However, it is difficult to conceive a situation in which any independent assessment would lead to them attracting any concerted research effort in the near to medium term. They do not warrant entry on any national register of sites of scientific significance. Thus we advise that site 51, consisting of a single stone artefact, is of low scientific significance and site 52, a single stone artefact, is of low scientific significance. Of the other sites identified in previous research (35-6-0039, 35-6-0153, 35-6-0155, 35-6-0159, and 35-6-0160), consistent with the estimates of significance made by the original recorders, we deem that all are of low scientific significance.

Cultural Significance

Here we focus exclusively on what these sites mean to Wiradjuri people. The opportunity to provide meaningful statements of the significance of cultural sites to Aboriginal groups is often curtailed by the mechanisms afforded them. To this point the various surveys competed on the mine site have noted that the sites are generally of limited scientific significance (an assessment with which we agree). Commentary on Aboriginal attitudes has been provided byindividuals who participated in the surveys or excavations and the RAPs. It is often the case that statements have been baldly made that such sites are of limited significance but may have some ill-defined

educational value. Here, taking account of commentary from survey team members and the RAPs, we offer a more nuanced perspective.

Even a brief review of Wiradjuri involvement in cultural heritage investigations would lead to the following observations and conclusions. Firstly, on being presented with the opportunity to involve themselves in cultural heritage studies through legal and ethical shifts, the Wiradjuri immediately accepted the chance and have sought to maintain that involvement ever since. Secondly, they also sought to reinforce their rights in relation to the cultural places and information by entering into a direct contractual relationship to undertake the studies, engage any necessary technical advice, obtain the necessary permits, maintain control of the cultural information deriving from these studies, and to negotiate and control all subsequent management activities. Thirdly, they have never adopted a monolithic approach to management or simply sought to maximise any financial return from such studies. To the contrary, they have adopted a measured and graduated response guided by the results of the studies they have undertaken. It also should be noted that in this case, and where the opportunity has otherwise presented itself, the Wiradjuri ensured that suitably knowledgable and senior Wiradjuri people were involved in the studies, and that the group as a whole, guided by their elders, reviewed the results and determined the appropriate management strategy to be set in place for each project.

They have also taken the position that they have an exclusive custodial responsibility for, and right with respect to, the cultural places and values found in a particular area, and the information deriving from the studies. They have effectively and forthrightly protected that exclusivity as needed. They have also afforded contingent rights in their country to others (e.g. those with an historical association to Wiradjuri country as against a traditional affiliation) but with the clear understanding that they reserve the right to withdraw those rights as they see fit. These positions are consistent with their asserted claim through Native Title to own and manage the cultural places and values in their country.

We must now confront two other questions:

1. Are the manifestations of a determination to assert a managerial role in relation to cultural heritage described above merely a recent invention?
2. Is the interest in these cultural places and values, and the method of management, part of a body of law that is consistent with the maintenance of Native Title?

In our estimation the answer to both these questions is: no and yes, respectively. We suggest that the interest and involvement in the management of cultural heritage places and values is undoubtedly undertaken within current legal and technical parameters, it is a contemporary manifestation of tradition practices and conventions of cultural custodianship.

Despite their exclusion from legally-sanctioned processes until the relatively recent past, the Wiradjuri sought to exercise a role in cultural heritage management where they could. There also are numerous examples that could be cited indicating that Wiradjuri interest in cultural heritage matters is not a recent one. It is also generally understood within Aboriginal Australia that traditional owners of country have a right and responsibility to exercise a custodial role in relation to the management of cultural places and property. The next question, however, that must be confronted is whether their interest in the range of things that are now considered to be elements of that cultural heritage is consistent with traditional interests and roles.

To suggest that the management of material cultural places is only a recent interest that has no links to traditional practice is fraught. For instance, no one denies that certain types of material cultural places such as rock art sites, carved trees and burial sites, and others could be nominated, are deeply imbued with significance, being directly associated with ritual and ceremony. It is also true that other kinds of places, such as quarries from which lithic material used in the manufacture of various types of stone artefacts, required a deep knowledge and application of ritual to be used safely (i.e. without bringing down on oneself the wrath of spirits associated with such places). Further, there were particular types of stone artefacts that had a distinct role in ceremony. Beyond this, however, there also were places that were used as camping areas, where the imprint of the inhabitants were left in the form of material culture such as hearths and grinding equipment, but which were abandoned and avoided because of the death of a person at the site.

Moreover, the significance of places could often be multivalent: it might be a camping site that also was of significance because of the presence of an important creator being, such as the rainbow serpent but many others as well. There were also general locations that were associated with major ceremonial gatherings in the course of which large numbers of people regularly congregated, and where there were designated areas for camping (which resulted in the creation of large concentrations of material culture). It is our contention, therefore, that it is extremely difficult to

categorise concentrations of material culture as being simple discard that had little or no significance or as places that in various ways were the subject of, or important to, ritual and ceremonial behaviour.

It is also important to note that in traditional Aboriginal society there was no static list of places that were deemed to be culturally important. It should also be noted that in a sense the entire landscape was a cultural entity in which some places required a greater level of response but in which people had to be continually aware that the 'old people' or other spirit entities could manifest themselves. People regularly had experiences in the course of the daily round, or dreamed about places and things, that were then submitted to older, knowledgeable people for their consideration. Dependent on the outcome of that adjudication, places and events were then added to a corpus of places that were seen as important, demanding special attention and response from people: that is those places had to be managed.

We now want to consider matters in the context of the study area. As has been clearly demonstrated through the results of the survey, the area in contention possesses a range of cultural places and values. The Aboriginal cultural researchers involved in the inspection of this area have duly reported on this to their elders who have given the matter considerable thought. They have determined that the area is one that is of significance to them as Wiradjuri people. This process of identification of an area of cultural significance, and the subsequent determination made by the elders, is entirely consistent with traditional processes seen elsewhere in Aboriginal Australia and is consistent with the actions of the Wiradjuri in other cases. Central to their deliberations has been consideration of the duty of care they owe to the material culture, as a manifestation of the 'old people', and to the area as a whole, recognising they are being watched by the 'old people'. Thus, they imbue all items, whether of low scientific significance or not, as of cultural significance to themselves. With respect to site 35-6-0160 the parties involved in that fieldwork have expressly stated that this site was of high cultural significance (Ozark 2008: 35).

12. Recommendations

The recommendations outlined below are made on the basis of the impacts associated to sites within the development footprint and the issues surrounding this which have been discussed in detail above, and also in relation to general management and mitigation measures to be applied in the Project area.

12.1 NPM reaffirms its commitment to the application of the Avoidance Principle in the design of mine infrastructure;

12.2 In relation to 12.1 in the Study Area – Existing ML, this has seen a concerted effort put into designing infrastructure so that to the greatest extent possible it is situated within either the existing mine development area or the flat, waterless terrain, thereby likely avoiding the vast majority of sites in the general area and the land units wherein the higher concentrations of cultural material exist or are likely to exist;

12.3 NPM reaffirms its commitment to ensure a comprehensive survey of any area not previously surveyed that is part of the development footprint. Such survey is to be undertaken in a timely fashion prior to any development taking place and that agreed management measures will be implemented prior to any development taking place;

12.4 Consistent with requirements of OEH consultation requirements, transitional provisions of Part 3A, its previous commitments and Rio Tinto group policy on cultural heritage management, NPM will maintain the working group of RAPs that has been established for this project and warrant to settle any management measures by consensus wherever possible;

12.5 Consistent with 12.4, NPM will convene a meeting of the RAP working group to review this report, confirm statements of significance with regard to the cultural sites, and table a draft of the revised Aboriginal Heritage Management Plan (AHMP) with the RAPs that, among other things, gives effect to the above principles and commitments. NPM will then settle the revised AHMP with the RAPs based on their commentary of the report;

12.6 In addition to provisions of 12.5, the revised AHMP will make provision for a comprehensive review of specific management measures that are to be implemented for particular sites identified as a result of implementing the commitment made in 12.3;

12.7 Specific management measures contemplated in 12.6 will be included in the revised AHMP for those locations already identified as at risk from the proposed development. That is, the revised AHMP will, for instance, specify management of specific categories of sites in specific land units. In this regard it is recommended that:

a. The isolated stone artifacts (sites 51 and 52) identified in the flat waterless terrain unit that will be subject to direct impact from the development footprint on the basis of the currently preferred configuration be collected and relocated to a place nominated by the

RAPs;

b. Noting the issues surrounding the locations of sites 35-6-0153 and 35-6-0155 and the management implications of the same, measures will be taken to resolve the issues associated with AHIMS that have been identified. In the first instance this will involve detailed review of materials in AHIMS and informing AHIMS (site cards, reports and administrative data such as s90 Consents and similar) and settlement of agreement with OEH to amend AHIMS as appropriate. Where necessary, ground truthing may be required and will be undertaken. If site 35-6-0153 is found to be outside the Development Footprint no further action other than to protect this site location will be taken. If site 35-6-0155 is found to be inside the Development Footprint it is recommended that it be collected and relocated to a location nominated by the RAPs;

c. Noting issues surrounding site 35-6-0160, measures will be taken to resolve the issues associated with AHIMS that have been identified. In the first instance this will involve detailed review of materials in AHIMS and informing AHIMS (site cards, reports and administrative data such as s90 Consents and similar) and settlement of agreement with OEH to amend AHIMS as appropriate. Where necessary, ground truthing may be required and will be undertaken. If this site is found still to exist the management measures recommended from consultation in Ozark (2008) will be implemented prior to any development activity in this area subject to further endorsement by the RAPs;

d. Noting the possible weakness of locational data for sites 35-6-0039 and 35-6-0159 the same review measures and ground truthing proposed for sites 35-6-0153 and 35-6-0155 will be adopted. If these sites are confirmed as lying within the Development Footprint then it is recommended that they be collected and relocated to a location nominated by the RAPs.

12.8 The revised AHMP will also specify what measures are to be taken in circumstances where various contingencies arise. Thus, a procedure for handling the discovery of human remains in the unlikely event they are found within the land units now planned for use as part of this project will be specified. Similarly, a procedure for the management of sub-surface sites will also be specified;

12.9 The revised AHMP will also specify the administrative and logistical

arrangements that will apply both to normal activities anticipated under the AHMP and for contingencies so that there is clarity on this issue and they can be implemented in a timely fashion;

12.10 The revised AHMP will make provision for development and settlement of formal supplementary and subsidiary management procedures so that an auditable trail of agreed management measures is created and specific site management measures can be implemented as required subsequent to conduct of additional surveys or as otherwise required if the development footprint sits wholly within areas subject of this CHA;

12.11 NPM commits in the revised AHMP to meet all reasonable costs of implementing the revised AHMP and any supplementary or subsidiary management settled pursuant to provisions of the revised AHMP;

12.12 NPM commits that it will table the development footprint at the next meeting of the RAPs and in that context discuss necessary specific management measures arising from the results of the survey reported here and to make plans, if any are required to undertake any additional surveys so as to give effect to the commitment in recommendation 12.3;

12.13 Provision to vary relevant conditions of the revised AHMP such as parties to the AHMP and their roles in its implementation should be provided to allow variation of the AHMP to the extent that any revision of existing policies of OEH and provisions of any new cultural heritage legislation requires.

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Appendix 1

NPM Step Change Project Description

NPM are seeking approval for the Step Change Project (the Project) which encompasses the continuation of underground block cave mining in two existing ore bodies, the development of underground block cave mining in the E22 resource, additional campaign open cut mining located in existing mining leases and an extended mine life of 7 years until 2032.

The Project area is shown in **Figure 1.2** and consists of existing and proposed mining operations and associated infrastructure. **Figure 1.2** shows the major components of the Project which include:

- Continuation of approved underground block cave mining in the E48 and E26 ore bodies, and associated underground infrastructure;
- Development of underground block caving in the E22 resource beneath the E22 open cut void;
- Campaign open cut mining through development of five open cut resources including;
  - Development of four small open cut pits E31, E31N, E28, E28N; and
  - Proposed E26 open cut which is located in an area of previous underground block cave subsidence (existing vertical extent of subsidence void is approximately 200 metres);
- Amendments to the configuration of tailings storage facilities (TSFs) including
  - continuation of tailings disposal to the existing and approved TSFs (TSF 1 and 2, infill between TSF 1 and 2, and Estcourt) to an approved height of 28 metres;
  - provision for additional raises on Estcourt TSF to provide for an increased height from the approved 20 metres to up to approximately 28 metres above ground surface; and
  - development of a new TSF 3, which will extend to the south and from the southern embankment of TSF 2 to a height of approximately 28 metres above ground surface, which incorporates the approved Rosedale TSF;
- Development of new waste dumps for the management of E28/E28N and E26 open cut waste rock. Waste rock from E31 and E31N open cut mining areas will be utilised in the development of TSF 3.
- Continuation of approved ore processing infrastructure up to 8.5 Mtpa capacity, and road haulage of copper concentrate to the existing Goonumbla rail siding;
- Continued use of existing site infrastructure including administration buildings, workshop, internal access roads and service infrastructure;

- Continued use of surface mining infrastructure including ventilation shafts, hoisting shaft and ore conveyors;

- Continuation of existing approved water supply and management processes;

- Development of an amended access road to service all mine related traffic entering the site;

- Establishment of new visitor car parking facilities and access control to support the amended mine site access;

- Continuation of approved mining operations for an extended life of an additional 7 years until end of 2032; and

- Rehabilitation and closure of the mine site will be carried out after the end of the operational life of the Project in accordance with relevant approvals.

Table 1 – Key Features of the Project

Major Project Components/ Aspects	Existing and Approved Operations	Proposed Operations
Mining Areas	• Underground block cave mining of E26 and E48 ore bodies; and • Open cut mining of E22 (ceased in 2010).	• Continued block caving of the E26 and E48 ore bodies (as per current approval); • Development of block cave mining in the E22 resource (previously subject to open cut mining); and • Development of open cut mining area in existing mine subsidence zone for E26 • Development of four small open cuts to extract ore from E28, E28NE, E31 and E31N. • All proposed open cut mining areas are located within the existing PA 06_0026 Project Area and existing Mining leases.
Ore Processing	• Up to 8.5Mtpa of ore, sourced from underground and open cut mining areas	• Continuation of processing up to 8.5Mtpa of ore through the existing processing plant sourced from underground and open cut mining areas
Mine Life	• Until 2025	• Extension of mining by 7 years until end of 2032.
Operating Hours	• 24 hours a day, 7 days per week	• No Change.
Number of Employees	• Approximately 700 full time equivalents	
Mining Methods	• Multiple Underground Block Cave; and	• Multiple Underground Block Cave; and • Campaign Open cut mining of up to

Major Project Components/ Aspects	Existing and Approved Operations	Proposed Operations
	• Campaign open cut mining yielding up to 2Mtpa for stockpiling and processing as required	6Mtpa for stockpiling and processing as required .
Infrastructure	**Operation of:** • tailings storage facilities (TSF 1-4); • ore processing plant including surface crusher, crushed ore stockpiles, active grinding mills, froth flotation area and concentrate storage; • site offices, training rooms and workshop facilities; • road haulage of concentrate to the Goonumbla rail siding for transport to Port Kembla; and • an overland conveyor to transport ore from the hoisting shaft to the ore processing plant stockpiles.	**Construction and operation of:** • tailings storage facilities to be augmented to connect existing and approved tailings facilities, through the development of TSF 3 southward from the existing southern embankment of TSF 2. The proposed TSF 3 will substantially include the approved TSF 3 (known as Rosedale); • establishment of new waste rock dump and stockpiles to store waste material generated during open cut mining campaigns; • continued operation of existing processing plant, site offices, underground access, water supply infrastructure and logistics connections; • continued road haulage of concentrate to Goonumbla rail siding for transport to Port Kembla; • closure of the existing site access road through the development of TSF3; • provision of an upgraded site access road along a new alignment from McClintocks Lane; • development of a access control and visitors car parking at the intersection of the proposed site access and McClintocks Lane; • Upgrade/ sealing of McClintocks Lane between the NPM access road and Bogan Road; and • Upgrades as required to the intersection of McClintocks Lane and Bogan Road.
Block Cave Knowledge Centre	• Onsite Rio Tinto Block Cave Knowledge Centre operates for the domestic and international training of underground block cave mining methodology	• Continued operation of the Rio Tinto Block Cave Knowledge Centre.

NORTHPARKES STEP CHANGE PROJECT

TERMS OF REFERENCE

INITIAL CULTURAL HERITAGE ASSESSMENT

1. Background

1.1 Northparkes Mines (NPM) Step Change Project (hereafter referred to as the Project) consists of extensions to the existing underground mining operations at the Northparkes Mine. The Project includes the development of additional surface processing infrastructure, including tailings storage facilities, and a water pipeline from properties purchased in the Lachlan Valley by NPM for the purposes of obtaining groundwater to the NPM mine site. At this stage, the definition of development area is being further refined and consists of approximately 9,500 hectares of land owned by NPM and private landholders and a water pipeline route with an approximate length of 120km as shown in **Figure 1** attached. The **development footprint**, which will be significantly smaller is currently being refined by NPM and will be confirmed at a later date.

1.2 The objective is to secure approvals for the management of Aboriginal cultural heritage so that the Project can obtain Part 3A Approval so that the development can proceed.

1.3 This Project is to be developed under provisions of Part 3A of the Environmental Planning and Assessment Act (EP&A) 1979 (using transitional provisions). Accordingly, it will not be necessary to secure an AHIP under s90 of the *National Parks and Wildlife Act (NSW)*. However, approval will be given by Department of Planning and Infrastructure (DP&I) informed by the Office of Environment and Heritage (OEH) with respect to Aboriginal cultural heritage. OEH requires that Part 3A major Project Assessments are completed to the equivalent standard as to that of securing an AHIP, and measures to this end are being set in place as part of our strategic approach.

1.4 The Project is to be developed in an environmentally responsible manner that is consistent with the Rio Tinto's cultural heritage standards.

1.5 The preferred approach to management will be application of the Avoidance Principle. The Avoidance Principle means, in relation to Aboriginal cultural heritage, the avoidance of Harm to Aboriginal cultural heritage and, to the extent where such Harm cannot be avoided, to minimise Harm to Aboriginal cultural heritage. The Avoidance Principle is consistent with best practice in cultural heritage management, environmentally responsible development and Rio Tinto's cultural heritage standards.

2. Definition of Aboriginal Cultural Heritage

2.1 A broad definition of Aboriginal Cultural Heritage has been adopted. All types of archaeological sites that constitute Aboriginal Cultural Heritage will be recorded and managed. In addition, all other sites that are of traditional, historical or contemporary significance also will be guided and managed. In the latter category places linked to creator beings and other traditionally significant heroes, dangerous

beings and places and the like, historical places such as massacre sites, old camps and reserves, places where important recent events took place and any places of contemporary importance such as good food places will all be included.

3. Strategy

3.1 The primary approach is to prepare a statement of Aboriginal cultural heritage values and develop a management strategy for these. This will be based on an initial cultural heritage assessment (**ICHA**). The ICHA will adopt a sampling strategy for the archaeological cultural heritage in the **Study Area** (which comprises the site based **development area** (subject to further refinement as a part of on-going prefeasibility assessment and the proposed water pipeline route). Additionally, all places of traditional, historical and contemporary significance will be recorded and included in the management strategy.

3.2 Using the results of the ICHA, an Aboriginal Cultural Heritage Management Plan (ACHMP) will be developed to manage Aboriginal cultural heritage in any areas of the **development footprint** when identified.

3.3 The ICHA will not be used to argue that no further investigation is required within the development footprint area. Rather, NPM makes a commitment that all areas that:

a. fall within the development footprint; and
b. were not surveyed as part of the ICHA

will be subject to a comprehensive and systematic survey irrespective of the results of the ICHA. That is, the sampling strategy will not be used as a predictive model. It will only be used to inform understandings as to what is likely and inform development of a management strategy to manage those types of sites. The ACHMP will make express provision for this commitment. Also, the ACHMP will be subject to variation in the event that subsequent survey identifies any site type that was not provided for the in the ACHMP.

4. Scale and Purpose of the Initial Cultural Heritage Assessment (ICHA)

4.1 The primary objectives in undertaking the ICHA are as follows:

(a) Identify, collate and document information about Aboriginal Cultural Heritage within the Study Area, including a statement of the significance of any Aboriginal cultural heritage to the registered Aboriginal parties.

(b) Identify the impacts of the Project on Aboriginal Cultural Heritage in the Study Area.

(c) Develop options to avoid, minimise or mitigate the identified impacts in a culturally appropriate fashion.

5. Methodology for implementation of the ICHA

5.1 A zoning scheme of the **Study Area** will be created using environmental data and the results of previous cultural heritage investigations. Using this scheme, a sample of all environmental and cultural zones identified will be selected.

5.2 Each sample area will then be subject of a systematic and comprehensive archaeological survey to identify Aboriginal cultural heritage objects and or areas. This survey will be undertaken using a system of transects designed to ensure comprehensive coverage, and will proceed at a rate of 8-10km of transects per day. To facilitate this process, these data will be incorporated in a GPS linked to a real time GIS. The design of the survey and the recording of all sites data will be undertaken in a manner that takes account of *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* as well as all other relevant Survey standards and guidance as outlined in the Projects Director General's Requirements (DGR's) for the EA.

5.3 Additionally, interviews will be undertaken with knowledgeable Aboriginal persons nominated by registered Aboriginal parties to identify any other cultural places that do not have a material signature.

5.4 This ToR will be used to guide all phases of the fieldwork as well the development of the Project outcomes (ICHA reporting and ACHMP).

5.5 All data collected will be incorporated within a cultural heritage GIS. All data deriving from previous cultural heritage investigations also will be added to this GIS. Using this, a management strategy for each category of site will be developed that will be used to populate the ACHMP. It will also be possible to make some general statements of the nature and density of the cultural heritage that is likely to be encountered.

5.6 This latter data may be used to inform the design of additional cultural heritage assessment if further fieldwork is deemed warranted before settlement of the ACHMP. We stress, however, there is no intention to use the sampling strategy as a predictive model to determine the need for additional survey. All areas that will be affected by the proposed development (i.e. that lie within the finalised development footprint) will be subject to comprehensive and systematic survey. The ACHMP will make an explicit commitment to this.

5.7 It will be necessary that the work is undertaken so that it:

- Identifies any objects, areas or places whether of archaeological or cultural significance;
- Describes the significance of these objects, areas or places;
- Determines the actual or likely harm upon identified objects, areas or places that would arise as a result of the Project should it proceed;
- Provides a management strategy that minimises or otherwise effectively manages the actual or likely harm, and this should be informed by principles relating to Ecologically Sustainable Development (ESD) and Inter-generational equity.

5.8 The ACHMP and subsequent analyses not covered under works completed as a part of the ICHA process will be used to refine the proposed development footprint to either avoid or minimise or otherwise manage impact on Aboriginal cultural heritage within that footprint.

5.9 The ACHMP will provide for a management and mitigation program. The management component will be consistent with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

6. Reporting

6.1 There will be three distinct outputs from the Project:

a. The GIS that will house all data generated as a part of the ICHA cultural heritage assessment. This will be developed in such a way as to facilitate use in the production of the Environmental Assessment (EA) and for future management purposes, and can be integrated with the overall EA GIS being prepared/managed by Umwelt (Australia) Pty Limited whom have been engaged by NPM as the lead Consultants responsible for the development of the Projects EA;

b. A formal report documenting the ICHA strategy, methods, fieldwork, results, consultation and recommended management measures;

c. A draft Aboriginal Cultural Heritage Management Plan (ACHMP) which will take the results of the fieldwork, agreed management recommendations (settled in consultation with the Aboriginal parties), commitments made for additional fieldwork to be completed prior to disturbance (see above) and formulate a formal plan for management of all Aboriginal cultural heritage identified for the Project.

6.2 The Technical Adviser (CQCHM) will provide a single formal written report detailing the results of the research and survey. The report will include a description of the Aboriginal cultural heritage identified in the Study Area, the likelihood of further Aboriginal cultural heritage existing in a sub-surface context in the Study Area and the location and extent of any such areas, an assessment of significance of the Aboriginal cultural heritage, an assessment of the potential impact of Project related activities on them, preferred options that will minimise those impacts and suggested cultural heritage management options.

6.3 Once completed the ICHA report and draft ACHMP will be circulated to all Registered Aboriginal Parties (RAPs) for review and comment. A meeting of the RAPs will then be convened to address any issues raised and to settle the ACHMP.

7. Dates and Timing of Survey

7.1 The survey will commence on a date agreed between the parties: 20 March 2012.

7.2 ICHA Fieldwork will continue for 10 days, with each CHST covering 8-10km of transects per day.

7.3 The Cultural Heritage Survey Teams (CHSTs) will mobilise on 19 March 2012 at locations to be advised.

7.4 Where contingencies arise in the course of fieldwork, consideration will be given to reasonable requests for additional time to complete the ICHA survey, and may

authorise additional time for this purpose. Any additional time must be requested by the CHSTs and agreed to in advance by NPM.

8. Mitigation

8.1 No cultural heritage management or mitigation is to be undertaken during the survey by the CHSTs.

8.2 Management and mitigation measures will only be implemented after Aboriginal cultural heritage has been reported with appropriate measures agreed and a Project approval (Part 3A) obtained. Agreed management and mitigation measures will be included in the ACHMP.

9. Data Management and Information

9.1 Field data about Aboriginal cultural heritage will be collected during the survey using a mobile mapping unit and other methods as appropriate. The data will then be entered on to a Project Cultural Heritage GIS.

10. Cultural Heritage Survey Team and Qualifications

10.1 In order to complete the ICHA Survey, it is intended to run two CHSTs in parallel, with each team undertaking 10 days fieldwork:

CHST 1 will examine selected areas that may be used for facilities required on existing mining leases or close to the existing mining lease.

CHST 2 will be responsible for the survey of the proposed pipeline routes.

10.2 Each CHST will comprise the following:

(a) 6 Aboriginal Field Officers (AFOs). Their duties will include assisting in the comprehensive assessment of the Study Area, identification of Significant Aboriginal Objects or Significant Aboriginal Areas and determination of their significance. Any one of these AFOs may be designated as senior AFO, with each CHST having an appointed senior AFO.

(b) 1 technical adviser (Central Queensland Cultural Heritage Management - CQCHM) whose duties include documenting the form, nature, extent and significance of any Aboriginal cultural heritage identified in the Study Area.

10.3 It is expected that any AFO appointed to participate in the fieldwork will be suitably qualified or experienced in identifying Aboriginal objects and/or places in the vicinity of the project in the Study Area, and any Registered Aboriginal Party nominating AFOs will certify that the nominated AFOs are so qualified or experienced.

11. Inductions and Occupational Health and Safety (OH&S)

11.1 NPM will specify, prior to the initiation of the survey any inductions (including in relation to occupational health and safety) required by the CHST members and will make such arrangements as are necessary to ensure CHST members are suitably inducted. A copy of this material will be provided to Aboriginal parties, and the relevant elements must be completed prior to the CHST entering the field. NPM will meet the costs of any medicals and other inductions if required.

11.2 A PowerPoint presentation including a questions and answers session may be provided to the CHST members by NPM immediately prior to the commencement of the proposed survey to inform survey participants of the relevant OH&S requirements and procedures.

11.3 It is essential that all CHST members have an adequate level of health and fitness to cope with field conditions and to undertake the survey. The Aboriginal parties are responsible for ensuring that those they nominate for the CHST meet this requirement. Absence of such fitness, as determined by a suitably qualified medical officer, will constitute a basis for a person being disqualified from the CHST. This condition applies to any and all members of the CHST.

11.4 A roster of persons to undertake survey work will be collated. This roster will, to the greatest extent possible, provide for the equitable allocation of work to persons entered on the roster. NPM will oversee the creation of this roster, and review its implementation for the purpose of ensuring equitable allocation of work.

12. Briefings for Survey

12.1 At the commencement of the survey and each day for the duration of the survey, the Technical Advisor will provide a briefing on the ToR and the objectives of the day's work to the AFOs. They will brief AFOs on the terms and conditions and scope and scale of the Project activities likely to be undertaken in the area so that all participating AFOs have a clear understanding of the nature of work program for the Project, potential impacts of the work program and their roles and responsibilities.

12.2 On completion of the survey a debriefing will be held on the field outcomes of the survey. Feedback will be sought from all members of the CHST on how the survey was undertaken. The Technical Adviser will make notes of any comments.

13. Administrative Arrangements

13.1 NPM will meet the costs of implementing this ToR. That will include payment of fees for the services of the AFOs, all costs associated with carriage of the survey, Technical Adviser's fees, costs associated preparation of the report.

13.2 The AFOs will be the employees of entities other than NPM. Those entities will be responsible for meeting all administration, payments to AFOs, tax requirements, insurance requirements and all additional on-costs including meals, accommodation and travel for the AFOs.

13.3 NPM may only give directions to the AFOs about induction requirements, occupational health and safety requirements and complying with any additional requirements for property access.

13.4 NPM has appointed GWS Personnel (GWS) as the entity to manage all administrative arrangements for AFOs.

13.5 NPM will only accept a tax invoice for services tendered by GWS.

14. Work Day for Survey

14.1 The CHST can make such arrangements for the start and finish times for each day of the survey as they consider appropriate on the basis of seasonal conditions subject to the survey being completed within the timeframes provided for in the ToR. Extreme or unsafe weather conditions may influence those times. Any arrangements made will be designed to ensure the safety of the CHST and will accordingly conform to NPMs Fatigue management standards and polices. A normal work day will include travel time, morning tea break, lunch break and afternoon tea break.

14.2 The length of the normal day for fieldwork will be determined by the CHST with reference to compliance with the average rate of progress specified in this ToR. For the sake of clarity, there will be no requirement for the CHST to remain in the field on any given day where they have, on that day, achieved the average daily rate of coverage, or contingencies have arisen that reasonably prevent this, and where the overall expected rate of progress of the ICHA survey is, within reason, being, or is reasonably close to being, achieved.

14.3 In the event of inclement weather the following procedures apply:

(a) Where safe to do so, the CHST will travel to the work area and the Project Manager, Technical Advisor and senior AFO will assess field conditions for safety and/or operational suitability.

(b) If conditions are unsafe or unsuitable, the CHST will temporarily delay survey work. They will only undertake survey work once conditions have improved so that it is safe to do so.

(c) While the CHST remains in the field (although unable to undertake survey activities), NPM will meet the fees and costs agreed. (For the sake of clarity, if the survey is postponed up to 48 hours before the CHST has mobilised, then the AFOs will be entitled to payment for the full day).

(d) Where an extension of the survey period due to inclement weather is required, NPM will meet all fees and costs associated with that extension.

15. Travel, Meals and Accommodation

15.1 Where AFOs are not locally based, the entities employing the AFOs will arrange accommodation and meals for the AFOs and the Technical Adviser. NPM approval is needed for any AFO seeking accommodation and meals. In these

instances NPM will make an allowance in accordance with the agreed budget for the costs associated with that. (Locally based means a person whose normal place of residence is less than 50kms from the point of mobilisation of the CHST).

15.2 Where an AFO is required to travel to the point of mobilisation in a private vehicle, they will use the most direct and economic form of transport available for that purpose at rates as specified in the agreed schedule of rates and cost items for the Project. This may include vehicle sharing.

15.3 NPM will make all necessary arrangements for any travel, accommodation and meals associated with the survey in accordance with the agreed schedule of rates.

16. Vehicles and Transport

16.1 NPM will make arrangements for the hire of appropriate vehicles for the transportation of the CHST from the agreed point of mobilisation to the field each day. NPM will meet costs of hiring and fuelling the vehicles.

17. Equipment and Assistance

17.1 The Technical Adviser will provide all equipment necessary for the performance of their duties.

17.2 NPM will ensure necessary communication equipment is available to handle emergencies or for resolution of contingencies that might arise during the survey. It will not be available for personal communication except in case of an emergency.

17.3 During the survey AFOs will supply and wear appropriate Personal Protective Equipment (PPE) including long-sleeved shirts, long pants, sturdy boots and broad brim hats.

18. Access

18.1 Any and all necessary property access arrangements for the survey will be arranged by NPM. Any additional requirements will be negotiated by NPM with property owners and NPM will advise the CHST of any special requirements prior to the commencement of the survey. NPM will specify any properties where it has not secured a right of access and the survey will be arranged to accommodate that situation.

18.2 Where NPM is unable to arrange access to a property during the time the CHST is in the field, arrangements will be made for the CHST to examine that section of the development area at another time.

19. Permits

19.1 NPM will ensure that any permits or authorities required to undertake the survey are acquired prior to the commencement of the survey.

20. Contact Details

Northparkes Mines Project Manager*:*
Brad Welsh- Principal Advisor – Community and Environment
Ph: (02) 6861 3067
Email: brad.welsh@riotinto.com

Aboriginal parties – Primary Contact/s:
Peak Hill Local Aboriginal Land Council
Ph: (02) 6869 1726

Technical Adviser:
CQCHM (Luke Godwin and Scott L'Oste-Brown)
Ph: 0448 119 883
Ph: 0407 266 060
Email: lmgodwin@bigpond.com
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13 March 2012

Att: Paul Houston
Aboriginal Heritage Planning Officer
EPA – North West Branch
Office of Environment and Heritage
PO Box 2111
Dubbo, NSW 2830

Dear Paul

ABORIGINAL CULTURAL HERITAGE ASSESSMENT – NORTHPARKES STEP CHANGE PROJECT

In relation to your letter dated 29 November 2011 I am pleased to advise that Northparkes has written to the known Aboriginal parties identified and also advertised in the following local newspapers (advertisements attached):

- Parkes Champion Post – 7 December 2011 (page 5)
- The Forbes Advocate – 8 December 2011 (page 2)
- The Daily Liberal – 8 December 2011 (page 4)
- The Cowra Guardian – 16 December 2011 (page 7)

As requested in 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* please see below list of registrants as at 15 February 2012 (being the last date that Northparkes received a registration).

Francis Robinson	13 Whitton Park Road Peak Hill, NSW 2869
Trevor Robinson	41 Euchie Street Peak Hill, NSW 2869
Peter Peckham	27 Jenning St, Guerie, NSW 2831
Joy Russell	106 Ferry St Forbes, NSW 2871
Donna Bliss	36 River Rd Forbes, NSW 2871
Jeffery Brown	PO Box 350

	Forbes NSW 2871
Dorothy Stewart	260 Myall St Dubbo NSW 2830
Rob Clegg	3 Loretta place Glendenning, NSW 2761
Ralph Smith	PO Box 957 FORBES NSW 2871
Valda Keed	6 Ween Street PEAK HILL NSW 2869
Rebecca Shepherd Condobolin LALC	PO Box 114 Condobolin, NSW 2877
Cherie Keed Peak Hill LALC	PO Box 63 Peak Hill, NSW 2869

If you wish to discuss this letter please don't hesitate to contact me.

Yours sincerely

Brad Welsh
Principal Advisor – Community and Environment
Northparkes Mines

SPECIAL CEREMONY: Tony Fisher is pictured at last year's The Compassionate Friends annual candle lighting. This year's event will take place at Lions Park this Sunday evening. sub

Candle lighting Sunday

The Parkes Chapter of The Compassionate Friends (TCF) will hold their annual candle lighting at 6pm this Sunday, December 11.

The special evening will again be held at Lions Park.

It will be a time for people to remember their children, grandchildren, brother, sister or even a friend who has died and will be missing from the family Christmas celebrations.

Fran Scurfield (one of the coordinators) said candles will be supplied or people are more than welcome to take along their own.

"We will once again have a photo board to place a photo of your deceased loved one," Fran said.

"This event is held worldwide every year on the second Sunday of December in every time zone.

"As candles are lit after 6.30pm, a virtual wave of light is created as hundreds of people commemorate and honour the memories of children in a way that transcends all boundaries."

Fran said the time is a little earlier this year to allow people to also attend Carols by Candlelight in Cooke Park if they so wish.

The Parkes Chapter of TCF was started eight years ago by Mary McPhee and continues to offer support to parents and siblings of children who have died in our local area.

The Compassionate Friends this year hosted the New South Wales Residential Weekend on September 10 and 11 where 75 bereaved members gathered to share, support and seek healing.

In August this year, about 100 people supported the TCF car rally which raised funds to carry out the residential weekend.

The Parkes chapter of TCF would like to invite any parent, grandparent, brother or sister, who has a special poem, or story of their child or any poem they might like to read on the night to please contact Judy or Tony Fisher on 6862 3458.

The evening will begin at 6pm.

Everyone is welcome to bring a rug or chairs, drinks and nibbles and stay on following the candle lighting.

If the weather is inclement, the evening will take place in the Middleton School Hall.

Have you got lights?

By Taylah Smede (PHS)
Year 10 work experience student

It's that time of year again!

As we all embrace the Christmas festive season setting up the Christmas tree and prepare for family invasion, many Parkes residents are embracing the tradition of setting up the much loved Christmas light displays.

Around town we are beginning to see beautiful light displays illuminating houses and streets.

Don't let your magnificent display go unnoticed this year! If you have a Christmas light display let the town know!

Contact the Parkes Champion Post on 6862 2322 so your address can be published and your decorative Christmas lights can be appreciated and awed!

Christmas is a costly time and rising electricity prices are blamed for the decrease in Christmas light displays, however, many families are in the dark when it comes to knowing the truth about Christmas light energy consumption.

This year, power company, Ausgrid has outlined the exact prices of how much Christmas Lights could set you back.

If left on for 10 hours a day over a monthly period, a string of standard fairy lights (400 lights) will cost you only $2.50 and a string of LED fairy lights left on for the same amount of time will only cost $1 for that month.

In the same situation LED indoor/outdoor rope lights (6m in length) will set you back 95c a month even cheaper with LED Christmas star garden lights (20 lights) with those lights costing only 11c!

So don't be dispirited this year!

Make this Christmas a memorable one with a marvellous Christmas light display on your home this season!

Holy Family School funding windfall

The Holy Family Catholic School in Parkes has received an early Christmas gift in the form of a $798,051 Capital Grant from the Federal Government.

Denise Gersbach, Holy Family School Principal, said the grant application process had been in progress throughout the year.

"I was delighted to make the announcement of our successful application to the school community late last week," Mrs Gersbach said.

"We are fortunate to receive the grant due to the combined efforts of Holy Family School, parish priest – Father John Keeble, the Catholic Education Office in Forbes, in particular Mr Malcolm Goodwin and the Catholic Education Commission."

Mrs Gersbach said the grant will allow for the refurbishment and extension of 10 classrooms, withdrawal spaces and outdoor learning spaces

Mrs Gersbach said the building works will commence early in the new year.

Police in speed chase

A 22 year-old Parkes motorist was arrested and charged under Skye's Law after he was detected traveling at more than 200km/h on the Newell Highway early Sunday morning.

Skye's Law targets criminals who lead police on high-speed chases and was brought in by the Keneally State Government following the death of 19-month-old Skye Sassine during a police chase on the Hume Highway several years ago.

Sunday's incident started near Daroobalgie on the outskirts of Forbes at 1am.

Highway Patrol officers detected a vehicle travelling north along the Newell Highway at a speed of 200km/h.

Police attempted to catch up to the vehicle before deciding to stop the chase after the offender turned into Parkesborough Road outside of Tichborne.

Police said they decided to terminate the chase as the unsealed Parkesborough Road was determined to be too dangerous.

Throughout the pursuit, the offending motorist was clocked at speeds of between 170-200km/h.

At 2.10am Sunday, police located the vehicle on the Back Yamma Road where they arrested the driver and conveyed him to the Forbes Police Station.

Police believe alcohol was a contributing factor.

The 22 year-old was charged with drive in manner dangerous to the public, exceed speed by more than 45 km/h and fail to stop during a police pursuit (Skye's Law). He was granted bail to appear in Forbes Local Court next Wednesday, December 14.

Have a think about choices

A neurosurgeon who deals with some of the most serious head injuries caused from crashes on NSW roads is hoping his only contact with motorists this holiday season is through his television and radio messages - not his operating table.

Associate Professor Brian Owler features in the NSW Government's successful "Don't Rush" road safety campaign which will run again in December and January to help reduce road deaths and injuries in NSW.

"People have a choice when it comes to speeding every time they drive," Associate Professor Owler said.

"Don't end up in the operating theatre for something you can prevent by just slowing down.

"Remember your friends, family and everyone who witnesses a crash can be affected."

During the advertisement Associate Professor Owler takes people through a series of multiple choice questions from his operating theatre and asks them what outcome they would choose if they were in a rush.

Centre for Road Safety Director Dr Soames Job said speeding is the main killer on NSW roads with about 40 per cent of fatal crashes involving speeding last year.

"Crash statistics show last year between 24 December 2010 and 7 January 2011 there were 10 fatalities on NSW roads and 850 injuries," Dr Job said.

"Avoid the devastation and don't become one of these tragic statistics this Christmas or into the new year – slow down."

Police Reports

MOVED ON: At 1.30am on Saturday, December 3 police were called to Farnell Street following a report of a group of people loitering.

The group were given a move on direction.

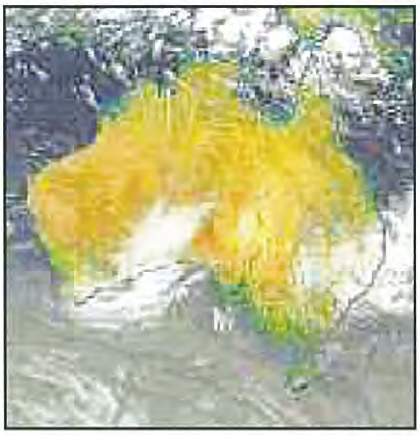
Police ask residents to keep ringing the station if they are having problems in their street so police can take action.

PURSUIT: In the early hours of Sunday, December 4, Highway Patrol were involved in a pursuit with a driver travelling in the Forbes area.

As a result of the pursuit the male driver will face Forbes Local Court at a later date.

BAIL BREACHED: On Monday, December 5 a Forbes man was charged with breaching his bail conditions after breaching bail conditions which were only set the day before.

The man is now being held and will appear at Forbes Local Court at a later date.



Yesterday's satellite image from the Bureau.

Your local Weather

Today will be mostly sunny ahead of an overcast week.

Showers are expected to fall on every day until early next week, although there will be no more than five millimetres of rain on any given day.

Winds will blow in an easterly direction today and will remain light and variable this week.

Maximum temperatures will sit around the mid 20s while minimum temperatures will be between 10 to 15 degrees.

On the morning of Wednesday, December 7 the minimum temperature was 10 degrees.

Tuesday, December 6 had a high temperature of 25 after a low of 11 degrees was recorded.

Monday, December 5 weathered a high temperature of 25 degrees and no rain fell on any of these days.

Across the state, unsettled conditions are expected for Friday and the weekend with humid, warm winds ahead of a trough crossing the state.

Today there will be scattered showers in the north-east, increasing on the northern coast while there will be isolated showers in the southeast and fine in the southwest.

Tomorrow there will be scattered showers and isolated thunderstorms through the central districts while isolated showers develop in the far west.

DISTRICT NEWS IN BRIEF

QUARRY CONCERN

Portland families say they fear for the safety of their children because of hazards posed by an abandoned Boral quarry site.

Portland resident Sonnya McDougall raised concerns after her children strayed onto the site after following an echidna through a hole in the perimeter fence.

A Boral spokesperson said the company was working on rehabilitating the site and addressing safety issues.

HELP FOR FAREWELL

The Dubbo community has opened its hearts and wallets to a cash strapped couple unable to pay for their daughter's funeral.

Pledges totalling more than $3000 are pouring in for Allan and Christine Blunt, who have been traumatised by the loss of their only child, Ashley.

The two-year-old died at Dubbo Base Hospital on October 26, the day after she was sent home by staff.

BYPASS ACTION

Cowra Shire Council has decided it would be fruitless to seek funding for a heavy vehicle bypass around the town until plans for the project have been completed.

Councillor Jack Mallon said the council had four or five plans for a bypass over the years and it should not have any trouble picking one.

"Council has to make positive moves to get funding," he told the council.

ROOM TO GROW

Gulgong has enough land zoned for residential development for at least 350 new houses, a public meeting in the town was told this week.

The meeting was called by the Gulgong Chamber of Commerce in response to residents' concerns about the town's ability to cope with expected growth.

Mayor Des Kennedy said up to 400 blocks were zoned for housing, but owners were reluctant to develop them at current prices.

Merit for cold and flu

A WOMAN charged with being involved in the manufacture of methamphetamine has been assessed as suitable for the Magistrate's Early Referral Into Treatment (MERIT) drug and alcohol rehabilitation program.

Racheal Louise Nott, 28, reconfirmed a guilty plea when she made a brief appearance in Dubbo Local Court yesterday.

Magistrate Andrew Eckhold ordered her to reappear in court on January 18 for a MERIT progress report.

Co-accused Christopher Curtis Nott, 28, has also pleaded guilty to being involved in the manufacture of methamphetamine. He has been assessed as suitable for MERIT intervention and will reappear in court on January 11 for a rehabilitation progress report.

Racheal and Christopher Nott were arrested at an address in Dubbo's Avian Estate at 11am on August 25, the day after police swarmed on a clandestine drug laboratory at Gilgandra.

The raid followed the arrest of 39-year-old Michael John Forrest who faces charges of manufacturing, supplying and possessing methamphetamine.

Forrest remains in custody in Bathurst Correctional Centre. He will reappear in court on December 14.

Police allege Christopher Nott supplied Forrest with packets of Codral cold and flu medication in the knowledge pseudoephedrine in the tablets would be used in the illegal manufacture of methamphetamine.

Police allege Nott supplied Forrest with cold and flu tablets every third week.

Nott was allegedly paid for the tablets and received one or two "points of speed".

The arrest of Forrest and Christopher and Racheal Nott followed a lengthy police investigation into drug supply in the Dubbo region.

Success if we work together

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WORKING together is the crucial ingredient for Dubbo's growth, two experts told a business lunch yesterday.

NSW Business Chamber public affairs adviser Chris Taylor and Scaffidi Hugh-Jones (SHJ) consultant Nathan Burman said they came to town to discuss the progress of two campaigns - Evocities and 10 Big Ideas to Grow.

Evocities is a campaign to encourage people to move from the city to regional NSW.

Mr Burman discussed how the Evocities managed to cut through the multitude of messages in the Sydney market in a bid to encourage the move to a regional city.

Dubbo created its own 10 Big Ideas To Grow campaign and Mr Taylor explained how the statewide campaign gained momentum across NSW.

He said the Evocities and 10 Big Ideas To Grow Dubbo campaign was "more effective and reached the target when people worked together."

Regional communities should form partnerships if they are to succeed in convincing Sydneysiders to move to regional cities, Mr Taylor said.

"Regional communities should look at working together instead of working alone. It's important to share resources and ideas.

"If it was Dubbo alone saying 'come here' they would find it very difficult.

"It is the cooperation that makes it stronger," he said.

The secret behind success, he said, lies in the community.

"To me this is what makes [the campaigns] successful: grassroots activity which feed in the statewide campaign."

The meeting was deemed a success and talked about effective ways to "bring people here".

"We talked about key learning opportunities.

"For regional cities to work cooperatively on common issues rather than competitively," he said.

There is a need for competitiveness, he said, but working together produces better results.

The Public Relations Institute of Australia's Regional Communicators Network and Dubbo Chamber of Commerce hosted the lunch.

Let's work together: Public Relations Institute of Australia's Regional Communicators Network representative, Donna Ambler, Scaffidi Hugh-Jones consultant Nathan Burman and NSW Business Chamber public affairs consultant Chris Taylor. *Photo: AMY MCINTYRE*

Westbury given strict bail sentence

A WOMAN facing charges over a major drug supply operation had the appearance and demeanour of a business executive when she appeared in Dubbo Local Court yesterday.

Carla Westbury was dressed in a smart black and white skirt suit and carried a document holder.

The 30-year-old's poise was in stark contrast to an earlier court appearance when she sat handcuffed in the dock sobbing and wiping her face with the edge of a long flowing skirt.

Westbury entered no plea to a charge of supplying a commercial quantity of the prohibited drug cannabis.

She sat quietly before Magistrate Andrew Eckhold as her solicitor asked for a variation in bail to reduce police reporting conditions to three days a week. The application was not opposed by the Department of Public Prosecutions.

Westbury and co-accused Darren Legett, 37, were stopped by police on November 17.

A large quantity of cannabis was allegedly found in their vehicle and the couple allegedly made admissions about purchasing drugs earlier in the day.

Their arrest coincided with a police raid on the couple's home in Clive Street, Wellington where another co-accused alleged drug offender Colin Peacock, 45, was arrested. All three were charged with supplying a commercial quantity of a prohibited drug.

The arrests followed a lengthy police investigation and came a week after cannabis worth $592,000 was found on a property at Mendooran.

Police allege Leggett is the head of a crime syndicate supplying cannabis in Wellington and surrounding towns for between four and five years.

Westbury is alleged to have played an active role in the drug enterprise. Police started an in-depth investigation into the supply of cannabis in the Wellington area on September 23.

Telephone calls and the movement of people were electronically monitored.

Police said cannabis was sourced from Sydney, with orders for 454.4 grams at a time placed via mobile phone.

Leggett is alleged to have ordered cannabis from Sydney on 17 occasions between September 23 and November 17.

According to court documents, 27.9kg of cannabis was supplied in the 56-day period.

Police intelligence estimates the value of the drug to be $246,000 when purchased in bulk. Prosecutors allege Leggett and Westbury funded their lifestyle and assets through the supply of cannabis.

Westbury has been allowed bail with strict conditions. Leggett and Peacock have been refused bail. They will remain in jail until their next court appearance on January 11.

Rehab for break and enter

A MAN facing a charge of break and enter has appeared in Dubbo Local Court for a drug and alcohol rehabilitation progress report.

Jason Lee Nixon, 36, was represented by Legal Aid when he appeared before Magistrate Andrew Eckhold.

Police allege Nixon broke into a house on October 3. The court heard Nixon is taking part in the Magistrate's Early Referral Into Treatment (MERIT) program.

He will reappear in court on January 18.

Defence says dog bite regrettable

AN incident in which an Australian army dog bit an Afghan child has been deemed regrettable and unfortunate.

However, the operation in which the incident occurred was judged to have been conducted in accordance with proper procedures, defence said.

The child was treated promptly and is expected to make a full recovery.

IN THE COURTS

14 month suspended jail for drink drive

A Cowra man convicted of high range drink driving and breaching a bond for special range drink driving received a 14 month suspended jail sentence when he appeared in the local court on December 7.

Noel Kenneth Collett, 39, of Lyall Street had his bond, which was imposed last year, revoked and was placed on a bond for a further 12 months when he appeared before Magistrate Michael Antrum.

Mr Antrum told Collett he could have killed a young person and himself as a result of his drinking and driving.

"You were already on a bond for special category drink driving, you abused that bond.

"What I should do today is send you to jail, but it seems to be that not withstanding what must be a serious alcohol problem there was a period where you had mended your ways.

"The suspended sentence I impose is the last stop, you breach it and you go to jail," Mr Antrum said.

Collett was on a bond after he was stopped at 11 15am on August 21 last year and charged with special range drink driving.

His blood alcohol reading at the time was 0.030.

He told police on that occasion that he started drinking at 5pm and had his last drink at 1am consuming 20 small glass of approximately 200ml of Moselle.

Collett's high range drink driving offence, for which he also receive a five year driving ban, occured on June 22 after his vehicle was involved in a head on collision with a truck.

According to police facts tendered to the court witnesses said they saw Collett's vehicle leave the driveway of the BP service station on the Grenfell Road, spinning its wheels, before Collett lost control crossed to the incorrect side of the road where it drove into the path of a truck travelling in the opposite direction.

A 14 year old boy was seated in the front passenger seat of Collett's vehicle at the time.

At the scene Collett told police "I'm not going to hospital, I know I'm over the limit. Let's just go to the station and get it over with. I'm not wasting all my day."

Police said Collett appeared well affected by alcohol.

A roadside breath test proved positive and a breath analysis taken at the Cowra police station returned a reading of 0.214

Cowra/Grenfell Meals on Wheels board members Beth Richardson, Michele Johnson, Dawn McKay, Jasmine Pike, Judy Delaney, and Bruce Oliver.

$200,000 injection from meals on wheels

Meals on Wheels injected over $200,000 into the Cowra and Grenfell communities during the past year.

Staff and board members of the organisation came together last week to celebrate another successful year for the service at the annual general meeting at the Cowra Bowling Club.

During the 2010-2011 year, volunteers worked an estimated 7,800 hours to provide 29,102 meals to the service's 299 clients, 1316 more meals than the previous year.

Service manager Denise Makin said the organisation hopes to build the profile of the service even further next year, continuing to live up to the motto of providing 'more than a meal' with social interaction also a big part of the service.

"We want everyone to realise that Meals on Wheels is a great service in Cowra and want as many people to be involved as possible," she said.

The service hopes to attract more volunteers next year and will consider hosting two weekly lunches so residents no longer have to eat alone.

This year, the organisation improved the frozen meal service and expanded hot meal delivery to provide the service seven days a week.

The clients were also given more food choices from the service's seven different suppliers.

Ms Makin said the service "met a lot of diverse clients" this year, including younger people who needed help with their nutrition.

"We can make it more personal," she said.

"Instead of going to a supermarket people can buy fresh and nutritious frozen meals from Meals on Wheels."

To find out more about Meals on Wheels or register as a volunteer visit www.nswmealsonwheels.org.au.

Cowra/Grenfell Meals on Wheels staff members Maree Allen, Sandy Farrell, Denise Makin and Kath Holz at the AGM.

More choice for TAFE students in Cowra

Enrolments are now open for 2012 and TAFE Western is offering more choices in training for individuals and businesses in Cowra.

Kate Baxter TAFE Western's Institute Director said "If you are considering undertaking a qualification at TAFE Western in 2012, you will be able to choose from a wider range of courses available to you in your community, allowing you to stay where you are, but really go places."

TAFE Western is also is focusing on providing a more flexible enrolment service to its prospective students with a new approach to enrolments for courses offered at the Cowra College.

Students are able to enrol now and up until classes commence from Monday, February 6, 2012. This is a move away from the traditional enrolment day at the beginning of semester.

Kate Baxter, TAFE Western's Institute Director believes a longer enrolment period offers greater convenience to students.

"In the past students have had to enrol for their course on a particular day" she said.

"We've responded to feedback and have opened up the enrolment period so that prospective students are now able to enrol at a time that suits them between now and when classes commence from Monday, 6 February 2012 or up until the class is full".

Appendix 4 – Methodology and Results of Survey of Water Pipeline Options

For the pipeline route options, a team of six Aboriginal Field Officers (AFOs) and one technical adviser (from CQCHM) simply walked to proposed alignments. They did this using a differential GPS into which the proposed alignments had been loaded. Using these data they were able to accurately walk the alignment with the technical adviser walking the centreline and three AFOs spread either side of him to a width of approximately 30m, giving a combined width for the transect of 60m. Commencing in the south, the team proceeded in a northerly direction, completing their survey by following the pipeline option across the southern bounds of the mining lease itself. The route options were broken into a series of short transects to assist with logistical planning and for OH&S reasons. A total of 72 transects totalling 147km were designed. The team was in the field for 9 days, representing 63 person days, and progressed at a rate of approximately 10km per day. Thus, at the conclusion of the fieldwork 93km of the proposed pipeline alignments had been inspected, representing better than 63% of the total length of the pipeline options, constituting a very good sample.

Initially, it had been intended to apply a predictive model to ensure that some portion of all environment zones found along the two options had been covered. Two factors militated against this. Firstly, on some sections NPM had been unable to secure access in advance of the field team commencing work. In the absence of landholder permission no access was possible. Secondly, there were also sections where very poor ground surface visibility meant that inspection would have been pointless and so the team quickly passed on to sections where better surface visibility presented. In our estimation that has not reduced the effectiveness of the survey because to have included sections where there was poor ground surface visibility such that nil results were recorded would have biased the results in any case. It is our view that within excess 50% of the route options having been inspected (90km of 147 of options), some portion of every environmental zone has been inspected in any case. Finally, NPM is not proposing to use a predictive model to guide it in any decisions about further survey. It is intended to undertake a 100% inspection of the preferred route option. Thus, all sections will be inspected irrespective of the results from this survey.

We can now turn to results of surveys on the water pipeline options. One of the major constraints here was quite low ground surface visibility (all areas where this was less than 30% are depicted on the maps). Land access was also an issue – the team was expressly instructed to stay in reserve easements and not go onto private property so this greatly constrained the areas which could be accessed (again these are depicted and annotated on the maps). Recent floods saw large bodies of water still lying around (particularly throughout

the immediately floodplain around the Lachlan) and again this restricted the team's survey effectiveness (and are shown and annotated on the maps).

Further details regarding the extent of the areas surveyed during the fieldwork, the constraints that were experienced and the cultural heritage places identified and recorded are included in the tables included at the end of this report (Report Appendices 3 and 4).

One of the major points of interest is the large number of scarred trees found during this survey and so some further discussion is warranted of this point. At least part of the reason for this is that much of pipeline alignment running within road easements and particularly the Lachlan Valley Way runs parallel and immediately adjacent to the Lachlan River for a considerable distance. These represent the floral corridors within which mature native vegetation most often survives and so these are just the places where we might best expect to find scarred trees. This was particularly the case within the areas where the pipeline alignments run close to the Lachlan River (which it parallels for a considerable length alongside the Lachlan Valley Way) and other creeks such as Bundaburah (alongside Back Marsden Road). Further to the north, several other scarred trees were also found in the area north of Bogan Gate.

It is also noted that the riparian corridors of the rivers would also have been preferred camping locations, particularly during the dry season and thus also where a concentration of cultural sites might be expected.

Other than single example of unidentified gum tree (Place 7), the remaining scarred trees were all box. Having thick and dense bark which is relatively easy to remove as a single piece this would be among the most common species upon which scars of Aboriginal origin are found. Although a number of these trees were clearly of considerable age, only three of these trees (Places 6, 17 and 22) were dead. But dead or alive, in all cases the trees were standing.

Although the vast majority of trees had only single scars, three had multiple scars resulting from the removal of bark. This included places 10 and 42 which had two scars taken from each tree. Place 6 had three scars of which two were in excess of 2.5m in length.

A great variety of scar sizes were identified and recorded. The maximum observed length ranged widely from 30cm to as long as 650cm. A total of 10 scars (around one quarter) were noted as being 300cm or longer in length. While widths varied considerable even within

single scars as a result of differential regrowth of the surrounding bark, these too were highly varied ranging from as narrow as 5cm up to 140cm. In general, however, and as may be expected, scar widths can be said to increase with length.

This team also applied the Precautionary Principle. Thus, of the 38 scarred trees which were identified during the fieldwork a number of these had scars which were considered to be only possibly of Aboriginal origin (i.e. they may have another source of origin: possible causes include bruising by machinery, fire, lightning strike, branch tears and bruising from being struck by other falling trees). There were sixteen trees in this category: Place numbers 3, 5, 9, 12-13, 15-16, 23, 27, 31-32, 35, 41-43 and 45. Further details of these are provided in Appendix 5.

Appendix 5 – Details of Cultural Heritage Places Identified during the Completed Fieldwork

Place No	Date Recorded	Grid Reference #		Place Type	Extent	Maximum Density	Notes *	Photos	Project Element
		Easting	Northing						
1	27/03/2012	574449.79	6335069.01	Resource Place	-	-	Old mature gum-topped box, leaves used for smoking ceremonies	-	Pipelines
2	28/03/2012	572188.06	6323222.53	Resource Place	-	-	Quinine tree, has medicinal properties	-	Pipelines
3	28/03/2012	573166.02	6320616.33	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 60x15cm	Yes, 3	Pipelines
4	28/03/2012	572312.98	6315560.50	Scarred Tree	-	-	Live standing box, single (canoe) scar 260x50cm	Yes, 2	Pipelines
5	29/03/2012	571592.66	6307201.86	Scarred Tree ***(possible only)***	-	-	Live standing box, single large scar, 500x80cm	Yes, 1	Pipelines
6	29/03/2012	572300.13	6303566.76	Scarred Tree	-	-	Big old standing dead hollow box, top missing, series of new live trunks, 3 scars 260x110cm, 330x140cm & 50x30cm. Noted as possibly being a woman's site. Was previously recorded during a powerline survey.	Yes, 4	Pipelines
7	29/03/2012	588299.40	6301399.07	Scarred Tree	-	-	Old live standing gum, single scar 310x120cm. Lower limb inside scar removed by a chainsaw	Yes, 2	Pipelines
8	29/03/2012	588347.72	6300947.98	Isolated Stone Artefact/s	-	1	1F(S)	-	Pipelines
9	30/03/2012	589703.81	6297930.90	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar, 120x35cm	Yes, 1	Pipelines
10	30/03/2012	589688.52	6297893.45	Scarred Tree	-	-	Live standing box, 2 scars, 110x20 & 210x35cm, larger scar has steel axe & chainsaw marks	Yes, 2	Pipelines
11	30/03/2012	589658.80	6297919.80	Scarred Tree	-	-	Live standing box, single scar 190x20cm	Yes, 1	Pipelines
12	30/03/2012	589706.97	6297664.16	Scarred Tree ***(possible only)***	-	-	Live standing hollow box, single scar 310x15cm	Yes, 1	Pipelines
13	30/03/2012	589614.45	6297510.50	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 190x35cm	Yes, 1	Pipelines
14	30/03/2012	589503.75	6296515.93	Scarred Tree	-	-	Old live standing box, single scar 240x60cm	Yes, 1	Pipelines
15	30/03/2012	587809.24	6292731.32	Scarred Tree ***(possible only)***	-	-	Old live standing box, single scar 260x65cm	Yes, 2	Pipelines

Place No	Date Recorded	Grid Reference #		Place Type	Extent	Maximum Density	Notes *	Photos	Project Element
		Easting	Northing						
16	30/03/2012	589677.68	6298386.76	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 240x35cm	Yes, 1	Pipelines
17	31/03/2012	583865.47	6303483.62	Scarred Tree	-	-	Dead standing box, old trunk with 2 new either side, single scar 380x35cm	Yes, 1	Pipelines
18	31/03/2012	580705.42	6303012.66	Scarred Tree	-	-	Live old standing box, single scar 110x15cm	Yes, 1	Pipelines
19	31/03/2012	580006.82	6303263.06	Scarred Tree	-	-	Live standing box, single scar 320x70m	Yes, 2	Pipelines
20	31/03/2012	579916.52	6303269.06	Scarred Tree	-	-	Live standing box, single scar 380x45cm	Yes, 2	Pipelines
21	1/04/2012	579497.13	6303391.30	Scarred Tree	-	-	Live standing box, single scar 130x45cm	Yes, 2	Pipelines
22	1/04/2012	579321.96	6303465.53	Scarred Tree	-	-	Dead standing box, single scar, lots regrowth, hollow, white ants, single (canoe) scar 650x35cm	Yes, 2	Pipelines
23	1/04/2012	579247.58	6303458.62	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 50x10cm	Yes, 1	Pipelines
24	1/04/2012	578999.26	6303516.72	Isolated Stone Artefact/s	-	1	1GS(M) - likely not artefactual as natural stone same as road base	Yes, 1	Pipelines
25	1/04/2012	578356.36	6303478.00	Scarred Tree	-	-	Live standing box, single scar 130x25cm	Yes, 2	Pipelines
26	1/04/2012	577867.15	6303258.08	Scarred Tree	-	-	Live standing box, single (canoe) scar 580x80cm	Yes, 2	Pipelines
27	1/04/2012	576245.80	6303616.05	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 60x5cm	Yes, 1	Pipelines
28	1/04/2012	575865.31	6303674.37	Scarred Tree	-	-	Live old standing box, single scar 410x110cm	Yes, 1	Pipelines
29	1/04/2012	575883.46	6303714.01	Scarred Tree	-	-	Live standing box, single scar 160x25cm	Yes, 1	Pipelines
30	1/04/2012	575554.37	6303764.88	Scarred Tree	-	-	Live standing box, single scar 90x30cm	Yes, 1	Pipelines
31	1/04/2012	575374.15	6303729.06	Scarred Tree ***(possible only)***	-	-	Live standing grey gum-topped box, single scar 75x15cm	Yes, 1	Pipelines
32	1/04/2012	573061.36	6320070.38	Scarred Tree ***(possible only)***	-	-	Live young standing box, single scar 75x25cm	Yes, 1	Pipelines
33	1/04/2012	573063.55	6320129.99	Isolated Stone Artefact/s	-	1	1GSfrag(SS)	Yes, 1	Pipelines
34	2/04/2012	575352.41	6338730.41	Scarred Tree	-	-	Live standing box, single scar 90x30cm	Yes, 1	Pipelines
35	2/04/2012	575516.73	6338834.47	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 120x5cm	Yes, 1	Pipelines

Place No	Date Recorded	Grid Reference #		Place Type	Extent	Maximum Density	Notes *	Photos	Project Element
		Easting	Northing						
36	2/04/2012	575533.91	6338825.54	Isolated Stone Artefact/s	-	1	1GSfrag(SS)	Yes, 2	Pipelines
37	2/04/2012	576483.75	6339669.27	Isolated Stone Artefact/s	-	1	1SC(S), poor quality raw material, possibly also ground	Yes, 1	Pipelines
38	2/04/2012	576703.12	6339870.08	Scarred Tree	-	-	Likely, live standing grey box, single scar 300x60cm. Precautionary recording, scar hidden by thick bush so hard to ascertain size and base of scar	Yes, 1	Pipelines
39	2/04/2012	576798.95	6340071.49	Isolated Stone Artefact/s	-	1	1RD(S), very high quality raw material	Yes, 2	Pipelines
40	2/04/2012	577580.05	6341042.77	Scarred Tree	-	-	Live standing box, single scar 135x30cm	Yes, 1	Pipelines
41	2/04/2012	577627.61	6341078.78	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 135x15cm	Yes, 1	Pipelines
42	2/04/2012	579022.66	6341972.71	Scarred Tree ***(possible only)***	-	-	Live standing box, 2 scars 150x30cm & 75x10cm	Yes, 3	Pipelines
43	2/04/2012	579017.80	6341971.40	Scarred Tree ***(possible only)***	-	-	Live standing box, single scar 75x20	Yes, 1	Pipelines
44	3/04/2012	587073.71	6348706.68	Scarred Tree	-	-	Live standing box, single scar 75x25cm	Yes, 1	Pipelines
45	3/04/2012	588430.77	6350530.49	Scarred Tree ***(possible only)***	-	-	Old live standing box, single scar 90x75cm	Yes, 1	Pipelines
46	4/04/2012	596117.08	6354605.33	Isolated Stone Artefact/s	-	1	1GSfrag(SS)	-	Study Area – Existing ML
47	4/04/2012	596768.84	6354485.24	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
48	4/04/2012	596798.32	6354472.44	Isolated Stone Artefact/s	3m dia	1	1F(S), 1SC(S)	-	Study Area – Existing ML
49	4/04/2012	596900.19	6354429.45	Isolated Stone Artefact/s	5m dia	1	1F(S), 1RF(S), 1GSfrag(SS), top-stone pebble	Yes, 1	Study Area – Existing ML
50	4/04/2012	600098.92	6354515.75	Isolated Stone Artefact/s	-	1	1RF(S)	-	Study Area – Existing ML

Place No	Date Recorded	Grid Reference #		Place Type	Extent	Maximum Density	Notes *	Photos	Project Element
		Easting	Northing						
51	27/03/2012	599536.39	6357312.92	Isolated Stone Artefact/s	-	1	1SC(C)	-	Study Area – Existing ML
52	28/03/2012	598846.32	6357111.42	Isolated Stone Artefact/s	-	1	1MC(C)	Yes, 2	Study Area – Existing ML
53	29/03/2012	600295.95	6359353.02	Scarred Tree	-	-	Live standing Cypress Pine, single scar 30x15cm. Steel axe marks on scar	Yes, 1	Study Area – Existing ML
54	30/03/2012	598158.05	6353953.34	Isolated Stone Artefact/s	-	1	1SC(C)	-	Study Area – Existing ML
55	3/04/2012	598844.88	6354305.30	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
56	3/04/2012	596846.97	6354835.81	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
57	3/04/2012	596797.12	6355397.82	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
58	3/04/2012	596732.11	6355540.64	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
59	3/04/2012	596783.36	6354420.76	Isolated Stone Artefact/s	-	1	1F(B)	-	Study Area – Existing ML
60	3/04/2012	596781.06	6355428.57	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
61	3/04/2012	596770.36	6355448.23	Isolated Stone Artefact/s	-	1	1F(B)	-	Study Area – Existing ML

Place No	Date Recorded	Grid Reference		Place Type	Extent	Maximum Density	Notes *	Photos	Project Element
		Easting	Northing						
62	3/04/2012	596615.53	6356138.90	Isolated Stone Artefact/s	-	1	1F(C)	-	Study Area – Existing ML
63	3/04/2012	596623.93	6356053.30	Isolated Stone Artefact/s	-	1	1F(GS)	-	Study Area – Existing ML
64	3/04/2012	596660.38	6355775.61	Isolated Stone Artefact/s	-	1	1SC(C)	-	Study Area – Existing ML
65	3/04/2012	596714.76	6355527.98	Isolated Stone Artefact/s	-	1	1F(C)	-	Study Area – Existing ML
66	3/04/2012	596734.33	6355535.06	Isolated Stone Artefact/s	-	1	1F(S)	-	Study Area – Existing ML
67	4/04/2012	596746.11	6354655.75	Isolated Stone Artefact/s	-	1	1SC(S), horse hoof core	-	Study Area – Existing ML

Notes: # With respect all grid references & mapping provided the Transverse Mercator Projection used was the Map Grid of Australian (MGA), while the horizontal datum used was the Geodetic Datum of Australian 1994 (GDA94). Note that the grid references provided represent the centroids of each place.

* notes associated with stone artefacts provided in this field are in the following format: number of artefacts, type of artefact, (raw material of manufacture). Thus 1F(S) represents one flake manufactured from silcrete. Codes for artefact and raw material types are as follows:

Code	Artefact Type	Code	Artefact Type
F	Flake		
RF	Retouched Flake	MC	Multi-Platformed Core
RD	Retouched Blade	DC	Blade Core
GS	Grindstone	GSfrag	Grindstone Fragment

Code	Raw Material Type	Code	Raw Material Type
S	Silcrete	C	Chert
GS	Grey Silcrete	B	Basalt
M	Mudstone	SS	Sandstone

Appendix 6 – Details of Survey Transects Completed during the Fieldwork

Transect No	Length (m)	Project Element	Date Surveyed	Average Visibility	Cultural Heritage Places	Transect Notes
3	559	Pipeline Alignments	30/03/2012	30	-	Section to private done, forest lands as previous
5	2640	Pipeline Alignments	30/03/2012	30	15	Generally open cleared, heavily grassed, myall, gums & box, patchy visibility
7	2022	Pipeline Alignments	30/03/2012	30	9, 10, 11, 12, 13 & 14	Open pine, gum and box flats, grassed, red sandy soils becoming heavier to the south
8	1980	Pipeline Alignments	30/03/2012	30	16	Open box forest on red sandy soils, parallel to creekline, no stone, away from creek in west
9	2172	Pipeline Alignments	29/03/2012	40	-	Red sands, open box flats, heavy grasses, regular exposures, southern end grassed easement
10	2027	Pipeline Alignments	29/03/2012	30	7 & 8	Through forested Lands Department parcel off road, grasses thick but regular tracks and exposures
12	2689	Pipeline Alignments	31/03/2012	20	17	Wooded highway easement, gums & box, dense grass & weeds, occasional exposures & tracks
14	2447	Pipeline Alignments	31/03/2012	30	18, 19 & 20	Wooded highway easement, gums & box, dense grass & weeds, occasional exposures & tracks
15	2244	Pipeline Alignments	1/04/2012	40	21, 22, 23, 24, 25 & 26	Nice open box & sheoak flats, low grasses, silcrete stone around
16	2235	Pipeline Alignments	1/04/2012	40	27, 28, 29, 30 & 31	Nice open box & sheoak flats, low grasses, silcrete stone around
17	2124	Pipeline Alignments	29/03/2012	30	-	Big old box and blue gum, runs around end of ridge, rather than across as on plan
19	1226	Pipeline Alignments	30/03/2012	10	-	Cleared grassland
20	1836	Pipeline Alignments	30/03/2012	30	-	Cleared, grassed, narrow easement, slashed
21	2394	Pipeline Alignments	31/03/2012	30	-	Starts mostly cleared, open box forest on red soils, turns to grassed road easement
23	2984	Pipeline Alignments	31/03/2012	30	-	Heavily grassed road easement, firebreaks provide good regular exposure
26	1140	Pipeline Alignments	31/03/2012	60	-	Open cleared cropping lands into slashed easement

Transect No	Length (m)	Project Element	Date Surveyed	Average Visibility	Cultural Heritage Places	Transect Notes
27	1005	Pipeline Alignments	31/03/2012	40	-	Cleared low grassed road easement, no trees, into heavily grassed, wet south of highway
32	1646	Pipeline Alignments	29/03/2012	40	6	Track present for west end which provided good visibility, same ridge issue as for Transect 17
33	594	Pipeline Alignments	29/03/2012	10	-	Part done to end of adjacent transect
35	3205	Pipeline Alignments	29/03/2012	20	5	Floodplain, still damp with pools in places, old blue gums
37	2601	Pipeline Alignments	28/03/2012	30	-	Grassed easement, little stone, floodplain, grasses thicker south
38	2265	Pipeline Alignments	28/03/2012	30	4	Dirt road, surrounding forest, floodplain/swampy, blue gum
40	2463	Pipeline Alignments	1/04/2012	20	-	More of the same treed straight alongside road, cyprus, box
41	2596	Pipeline Alignments	28/03/2012	30	32 & 33	Long straight heavily treed, mature box, pine, sheoak
42	2449	Pipeline Alignments	28/03/2012	20	2	Generally heavy grasses
44	2455	Pipeline Alignments	27/03/2012	20	-	Narrow easement fully cleared, dense grass
45	3037	Pipeline Alignments	27/03/2012	40	-	Same trees as Transect 45 with currajong, box, lots of firewood cut out
46	2703	Pipeline Alignments	27/03/2012	30	-	A lot of tree clearing along this section, wilga, wattle, sheoak, gums
47	2586	Pipeline Alignments	27/03/2012	20	1	Red soils, disturbed narrow easement
49	1429	Pipeline Alignments	2/04/2012	30	34	Open cyprus, box, myall forest, red soils, low visibility south of turn
50	2367	Pipeline Alignments	2/04/2012	40	35, 36, 37, 38 & 39	Young pine, box & wilga lined easement, grasses, drainage channel starts at far end
51	2230	Pipeline Alignments	2/04/2012	40	40 & 41	Same as Transect 50, sandy red soils, wilga, route crosses road
52	2275	Pipeline Alignments	2/04/2012	40	42 & 43	Red sandy soils, box & cyprus, very little stone present
55	1730	Pipeline Alignments	2/04/2012	30	-	Grassed road easement grading to open forest of box, gum, wilga, cyprus
56	2331	Pipeline Alignments	3/04/2012	30	-	Open cyprus, gum, box, sheoak, wilga on reddy brown sandy loams, variable visibility, some stone
57	2980	Pipeline Alignments	3/04/2012	30	44	Open gum, box, irobark, sheok, wilga on reddy brown sandy loams, variable visibility
58	2145	Pipeline Alignments	3/04/2012	40	45	Red stone & sandy soils gums, cyprus, box, shoak, plate stone present
59	1742	Pipeline Alignments	3/04/2012	40	-	Same as Transect 58 with big old wilga, ironstone

Transect No	Length (m)	Project Element	Date Surveyed	Average Visibility	Cultural Heritage Places	Transect Notes
60	1794	Pipeline Alignments	3/04/2012	30	-	Open grasslands, forest generally cleared, patchy to good visibility
73	1872	Study Area – Existing ML	30/03/2012	60	-	Worked paddock
74	1872	Study Area – Existing ML	30/03/2012	60	-	Worked paddock
75	1872	Study Area – Existing ML	30/03/2012	60	-	Worked paddock
76	1872	Study Area – Existing ML	30/03/2012	20	-	Worked paddock
77	1872	Study Area – Existing ML	30/03/2012	20	-	Worked paddock
78	1872	Study Area – Existing ML	30/03/2012	20	54	Worked paddock
143	1731	Study Area – Existing ML	27/03/2012	50	-	Ploughed paddock with stubble
144	1731	Study Area – Existing ML	31/03/2012	40	-	Ploughed paddock with stubble
145	1713	Study Area – Existing ML	31/03/2012	40	-	Ploughed paddock with stubble
146	1707	Study Area – Existing ML	31/03/2012	40	-	Ploughed paddock with stubble
148	1692	Study Area – Existing ML	31/03/2012	60	-	Ploughed paddock with stubble
149	1702	Study Area – Existing ML	31/03/2012	60	-	Ploughed paddock with stubble
150	1714	Study Area – Existing ML	31/03/2012	60	-	Ploughed paddock with stubble
151	1714	Study Area – Existing ML	1/04/2012	60	-	Ploughed paddock with stubble
152	1712	Study Area – Existing ML	1/04/2012	60	-	Ploughed paddock with stubble
156	1798	Study Area – Existing ML	28/03/2012	50	52	Ploughed paddock with stubble
157	1798	Study Area – Existing ML	28/03/2012	50	-	Ploughed paddock with stubble

Transect No	Length (m)	Project Element	Date Surveyed	Average Visibility	Cultural Heritage Places	Transect Notes
158	1798	Study Area – Existing ML	28/03/2012	50	-	Ploughed paddock with stubble
159	1798	Study Area – Existing ML	27/03/2012	10	51	Heavily grassed
160	1798	Study Area – Existing ML	27/03/2012	50	-	Ploughed paddock with stubble
161	1798	Study Area – Existing ML	27/03/2012	50	-	Ploughed paddock with stubble
162	1798	Study Area – Existing ML	27/03/2012	50	-	Ploughed paddock with stubble
163	1798	Study Area – Existing ML	27/03/2012	50	-	Ploughed paddock with stubble
164	1806	Study Area – Existing ML	28/03/2012	50	-	Ploughed paddock with stubble
165	1811	Study Area – Existing ML	28/03/2012	50	-	Ploughed paddock with stubble
166	1786	Study Area – Existing ML	28/03/2012	50	-	Ploughed paddock with stubble
167	1185	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
169	1753	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
170	1753	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
171	1732	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
172	1731	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
173	1731	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
174	1726	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble

Transect No	Length (m)	Project Element	Date Surveyed	Average Visibility	Cultural Heritage Places	Transect Notes
177	1717	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
178	1740	Study Area – Existing ML	1/04/2012	40	-	Ploughed paddock with stubble
213	2342	Study Area – Existing ML	3/04/2012	80	47, 48, 49, 56, 57, 59, 60, 61 & 67	Ploughed paddock with stubble
215	1617	Study Area – Existing ML	3/04/2012	80	58, 62, 63, 64, 65 & 66	Ploughed paddock with stubble
219	2749	Study Area – Existing ML	3/04/2012	80	-	Ploughed paddock with stubble
301	2436	Study Area – Existing ML	4/04/2012	40	-	Ploughed paddock with stubble
302	2436	Study Area – Existing ML	4/04/2012	40	-	Ploughed paddock with stubble
303	2448	Study Area – Existing ML	4/04/2012	40	-	Ploughed paddock with stubble
315	2387	Study Area – Existing ML	29/03/2012	50	-	Worked paddock
316	2872	Study Area – Existing ML	29/03/2012	50	-	Worked paddock
323	2819	Study Area – Existing ML	29/03/2012	40	-	Worked paddock
324	2819	Study Area – Existing ML	29/03/2012	40	53	Worked paddock
353	2366	Study Area – Existing ML	3/04/2012	80	55	Ploughed paddock with stubble
354	980	Study Area – Existing ML	3/04/2012	80	-	Ploughed paddock with stubble

Transect No	Length (m)	Project Element	Date Surveyed	Average Visibility	Cultural Heritage Places	Transect Notes
355	2938	Pipeline in Study Area – Existing ML	4/04/2012	70	-	Open cultivated paddock, buff red sandy loams, mudstones & ironstones
356	2618	Pipeline in Study Area – Existing ML	4/04/2012	50	-	Same as Transect 355, grassed cyprus paddock
357	1065	Pipeline in Study Area – Existing ML	4/04/2012	40	46, ***47, 48 & 49***	Open regrowth, plantation, back into cultivation, swampy area
358	1820	Pipeline in Study Area – Existing ML	4/04/2012	60	50	Open cultivated paddocks
359	1636	Pipeline in Study Area – Existing ML	4/04/2012	50	-	Same as Transect 358, heads uphill to heavy grassed paddock, last 100m had no visibility
Total	***183207***					

Site ID	Source	Recorder	AHIMS - MGA94 Easting	AHIMS - MGA94 Northing	Site Type	Site Description	AHIMS condition	Commentary
NP-51	CQCHM Survey	Luke Godwin	599536.39	6357312.92	Isolated Stone Artefact/s	1 x Chert Single Platform Core	To be lodged	Within Development Footprint
NP-52	CQCHM Survey	Luke Godwin	598846.32	6357111.42	Isolated Stone Artefact/s	1 x Chert Multi-Platform Core	To be lodged	Within Development Footprint
35-6-0039 (Site11 - Alectown)	AHIMS	Tim Stone	597200.00	6355400.00	Open site - isolated stone artefact	Artefact: 1	Valid	Possibly within Development Footprint
35-6-0153 (A1-Alectown)	AHIMS	Robert Paton	597365.00	6355499.00	Open site	Artefact : 16	Valid	Locational issues with this site - AHIMS appears to have this incorrectly located - it is likely outside the Development Footprint
35-6-0155 (Site A3)	AHIMS does not have this site within Development Footprint	Robert Paton	Not included as transcription error identified	Not included as transcription error identified	Open site - isolated stone artefact	Artefact: 1	Valid	Locational issues with this site - AHIMS appears to have this incorrectly located - it is likely inside the Development Footprint but AHIMS does not show this
35-6-0159 (P4-Alectown)	AHIMS	John Appleton	597902.00	6355882.00	Open site - isolated stone artefact	Artefact : 1	Valid	Possibly within Development Footprint
35-6-0160 (NPM-ST1)	AHIMS	Jodie Benton	597826.00	6359342.00	Open site	Modified Tree	Valid	AHIMS has this site as valid but locational data in AHIMS places this in middle of existing mine infrastructure so probably destroyed - administrative issues explain it remaining valid