



**LYNWOOD QUARRY
ABORIGINAL HERITAGE
MANAGEMENT PLAN**

Caring for Country

FINAL

July 2018



LYNWOOD QUARRY ABORIGINAL HERITAGE MANAGEMENT PLAN

Caring for Country

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Holcim (Australia) Pty Limited

Project Director: John Merrell
Project Manager: Brendan Rice
Technical Director: Jan Wilson
Report No. 3330M/R34/Final
Date: July 2018



Newcastle

75 York Street
Teralba NSW 2284

Ph. 02 4950 5322

www.umwelt.com.au



Quality
ISO 9001

This report was prepared using
Umwelt's ISO 9001 certified
Quality Management System.

Disclaimer

This document has been prepared for the sole use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Umwelt (Australia) Pty Ltd (Umwelt). No other party should rely on this document without the prior written consent of Umwelt.

Umwelt undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. Umwelt assumes no liability to a third party for any inaccuracies in or omissions to that information. Where this document indicates that information has been provided by third parties, Umwelt has made no independent verification of this information except as expressly stated.

©Umwelt (Australia) Pty Ltd

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V1	John Merrell and Brendan Rice	09 November 2016		
V2	John Merrell and Brendan Rice	24 November 2016		
V3	Janice Wilson	04 January 2017		
V4 Final Draft	Brendan Rice and Janice Wilson	05 January 2017	Guy Sibenaler – Holcim Quarry Manager	24 February 2017
V5 Final	Alana White Holcim Environment and Community Officer	20 July 2018	Alana White Holcim Environment and Community Officer	20 July 2018

Acknowledgement

Holcim and Umwelt would like to acknowledge the Traditional Custodians of the land encompassed by Lynwood Quarry – the Gundungurra People – and pay respect to their cultural heritage, beliefs and continuing relationship with the land. We recognise the custodial rights and obligations that the Gundungurra People have to Care for their Country.

We would also like to acknowledge the post-contact experiences of Aboriginal peoples who have attachment to this land. We pay our respects to the Elders – past, present and future – for they hold the memories, traditions, culture and hopes of Aboriginal people in the area.

Holcim and Umwelt thank the Registered Aboriginal Parties for their participation in the Aboriginal cultural heritage investigations undertaken within the Lynwood Quarry project area and in the development and preparation of this Aboriginal Heritage Management Plan. Their valuable contribution is acknowledged and all documentation for the project has been enriched by their willingness to share valuable aspects of their cultural knowledge.

Abbreviations

ACHAA	Aboriginal Cultural Heritage and Archaeological Assessment
AHIP	Aboriginal Heritage Impact Permit
AHMP	Aboriginal Heritage Management Plan
ATU	Archaeological Terrain Unit
CHMZ	Cultural Heritage Management Zone
DEC	Department of Environment and Conservation (previously the NSW EPA and the NPWS) and now OEH
DECC	Department of Environment and Climate Change (previously DEC) and now OEH
DECCW	Department of Environment Climate Change and Water (previously DECC) and now OEH
DP&E	Department of Planning and Environment
EMS	Environmental Management System
EP&A Act	Environmental Planning and Assessment Act 1979
GAHAI	Gundungurra Aboriginal Heritage Association Inc.
Granite Pit Area	The approved modified extraction area (as shown on Figure 1.2).
GTCAC	Gundungurra Tribal Council Aboriginal Corporation
Holcim	Holcim (Australia) Pty Limited
Ignimbrite Pit Area	The pre-Modification 4 extraction area (as shown on Figure 1.2).
NPW Act	National Parks and Wildlife Act (1974)
NPWS	National Parks and Wildlife Service
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
PFC	Peter Falk Consultancy
PLALC	Pejar Local Aboriginal Land Council
Umwelt	Umwelt (Australia) Pty Limited

Table of Contents

Abbreviations		vi
1.0 Introduction		1
1.1	DP&E Management Plan Requirements	4
1.2	OEH Consent Conditions	6
1.3	Registered Aboriginal Party Consultation	7
1.4	Agency Consultation for the Aboriginal Heritage Management Plan	7
	1.4.1 Department of Planning and Environment	7
	1.4.2 Office of Environment and Heritage	8
1.5	Relevant Legislation	8
2.0 Cultural Heritage Management Strategy		9
2.1	Management Protocols	9
	2.1.1 Aboriginal Heritage Management Committee	9
	2.1.2 Aboriginal Cultural Heritage Awareness Training	10
	2.1.3 Care of Aboriginal Objects (Artefacts)	11
	2.1.4 Fencing and Signage	11
	2.1.5 Removal of Stock	11
	2.1.6 Bushfire Hazard Reduction	11
	2.1.7 Erosion Control	12
	2.1.8 Feral Animal and Noxious and Pest Weed Control	12
	2.1.9 Access for Teaching Purposes and Research	12
	2.1.10 Site and Potential Archaeological Deposit Monitoring	12
	2.1.11 Previously Unknown Sites/Human Skeletal Material	13
	2.1.12 Annual Review	13
	2.1.13 AHMP Review	13
	2.1.14 Incidents which may breach the NPW Act or AHIP #1100264	13
2.2	Cultural Heritage Management Zone Conservation Plan	14
3.0 Management of Aboriginal Sites and Potential Archaeological Deposits		15
3.1	Aboriginal Sites and Potential Archaeological Deposits within the Lynwood Quarry Disturbance Footprint	18
3.2	Aboriginal Sites and Potential Archaeological Deposits to be Conserved <i>in-situ</i>	19
3.3	Aboriginal Sites and Potential Archaeological Deposits to be Conserved within the Cultural Heritage Management Zone	22

4.0	Lynwood Quarry Aboriginal Cultural Heritage Management Performance Measures	27
4.1	Performance Criteria and Performance Measures	27
4.2	Complaints Management and Dispute Resolution	27
4.2.1	Complaints Management	27
4.2.2	Dispute Resolution	27
5.0	References	28

Figures

Figure 1.1	Lynwood Quarry	2
Figure 1.2	Extant Aboriginal Sites and Potential Archaeological Deposits within the Ignimbrite Pit Area, the Granite Pit Area and the Extended and Existing Cultural Heritage Management Zone	3
Figure 3.1	Status of Aboriginal Sites and Potential Archaeological Deposits within the area pre Modification 4 and the Cultural Heritage Management Zones	16
Figure 3.2	Status of Aboriginal Sites and Potential Archaeological Deposits within the Area covered by Modification 4	17

Tables

Table 1.1	Details of Condition 35 of Modification 4 Relevant to the AHMP	4
Table 3.1	Aboriginal Sites within the Disturbance Footprint with further Requirements Prior to Impact	18
Table 3.2	Aboriginal Sites to be Conserved <i>In-Situ</i>	19
Table 3.3	Aboriginal Sites to be Conserved In-Perpetuity within the Cultural Heritage Management Zone	22

Appendices

Appendix 1	Notice of Modification
Appendix 2	Aboriginal Heritage Impact Permits and History of Prior Investigations
Appendix 3	Sites and Potential Archaeological Deposits for which AHIP Management Requirements are Complete
Appendix 4	Registered Aboriginal Party Consultation
Appendix 5	Relevant Research Design and Methodology

1.0 Introduction

Holcim (Australia) Pty Lid (Holcim) was granted Development Consent in December 2005 (DA 128-5-2005) for Lynwood Quarry located west of Marulan in the Southern Tablelands region of NSW (refer to Figure 1.1). The most recent Modification (4) was approved by the Department of Planning and Environment (DP&E) on 18 May 2016 (refer to Appendix 1).

The location and extent of the 30 year quarry pit is shown on Figure 1.1, including the locations of overburden and excess product emplacement areas and project infrastructure. The quarry has existing Development Consent approval to produce up to five million tonnes per annum (Mtpa) of saleable quarry product until 2038.

This Aboriginal Heritage Management Plan (AHMP) provides a framework for the management of Aboriginal sites and potential archaeological deposits (PADs) being conserved in-situ for the life of Lynwood Quarry. The AHMP also sets out the requirements for long-term management of Aboriginal sites and PADs located within a Cultural Heritage Management Zone (CHMZ) set up within Lynwood Quarry.

As Holcim had an existing Aboriginal Heritage Impact Permit (AHIP #1100264) for the life of the quarry it was assessed as appropriate to continue to manage Aboriginal cultural heritage under the conditions of this AHIP following Modification 4. This allowed for one overarching AHIP and AHMP for the entire Lynwood Quarry area (refer to Appendix 2 for copies all AHIPs and AHIP variations related to Lynwood Quarry).

Figure 1.2 indicates the location of all currently known extant Aboriginal sites and PADs covered by the existing AHMP. Figure 1.2 indicates the CHMZ offset for loss of Aboriginal cultural heritage values within the Ignimbrite and Granite Pit Areas.

This AHMP has been developed in accordance with Condition 25 of the Terms of Approval and Conditions 2, 3 and 5 of Schedule 5 of the development Consent. It also covers the conditions of AHIP #1100264 including two variations (refer to Appendix 2 for AHIPs and a brief summary of the subsurface testing and salvage programs completed).

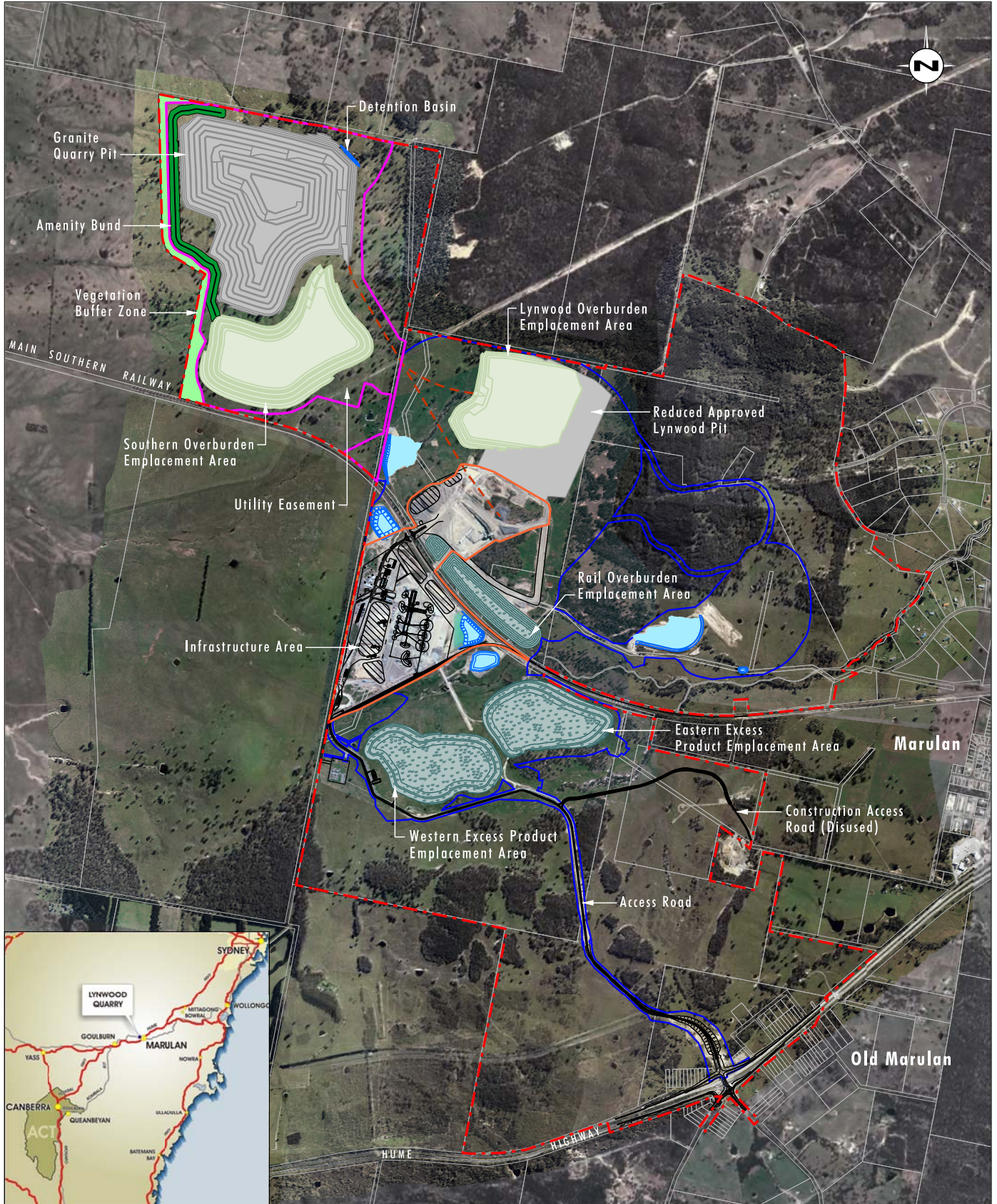


Image Source: Google Earth (2012), Holcim (2012, 2014)
 Data Source: LPI (2014), Holcim Australia (2015)

0 0.5 1.0 1.5 km
 1:30 000

Legend

- - - Approved Project Area
- - - Lynwood Infrastructure Area
- - - Approved Disturbance Footprint
- - - Granite Pit Disturbance Footprint
- - - Lynwood Infrastructure Layout
- - - Haul Road
- Quarry Pit
- Emplacement Area
- Dam
- Overburden Emplacement Area
- Vegetation Buffer Zone
- Amenity Bund

FIGURE 1.1
Lynwood Quarry

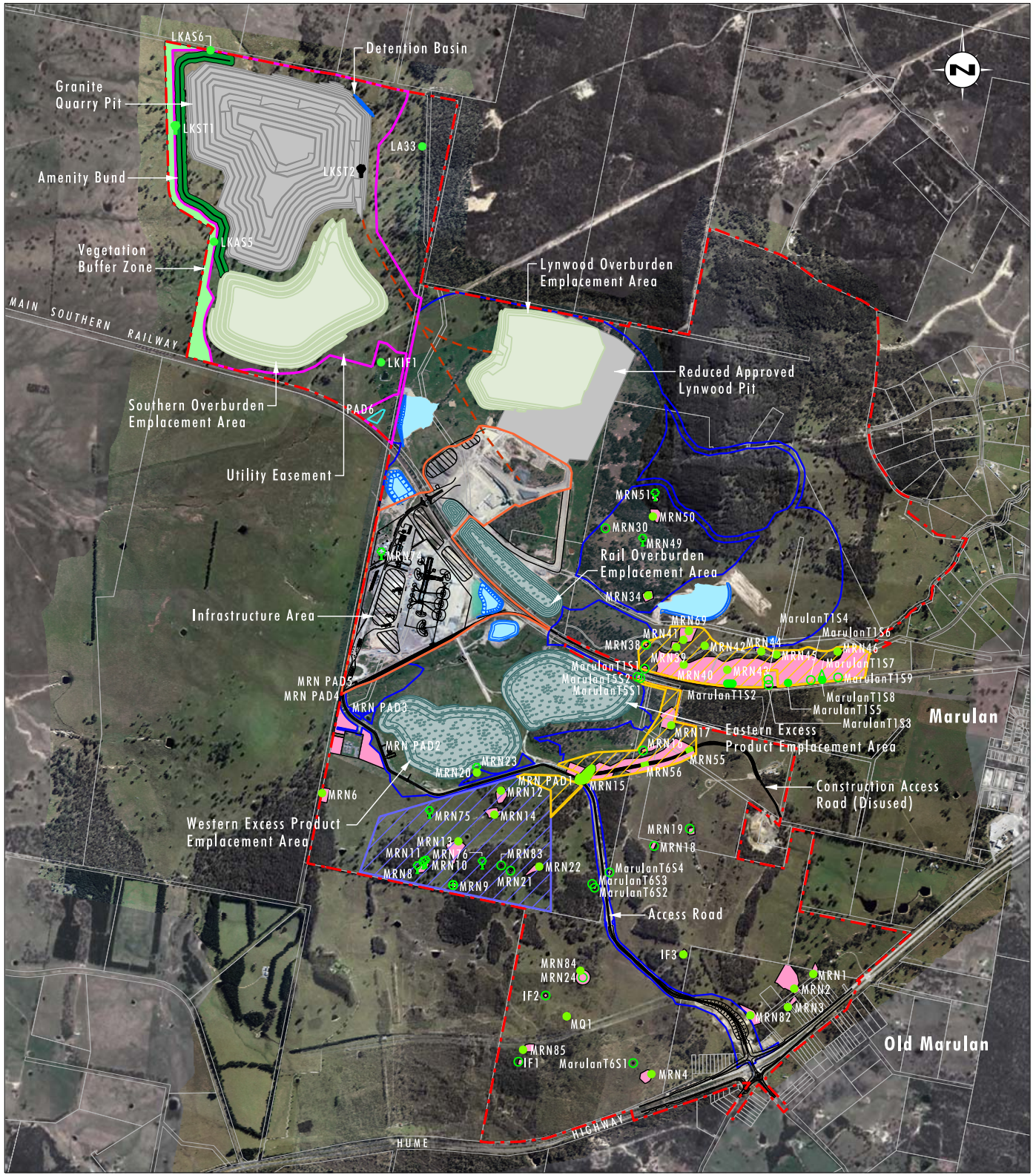


Image Source: Google Earth (2012), Holcim (2012, 2014)
 Data Source: LPI (2014), Holcim Australia (2015)

0 0.5 1.0 1.5 km
 1:30 000

Legend

- - - Approved Project Area
- Lynwood Infrastructure Area
- Approved Disturbance Footprint
- Granite Pit Disturbance Footprint
- Lynwood Infrastructure Layout
- Haul Road
- Quarry Pit
- Emplacement Area
- Overburden Emplacement Area
- Vegetation Buffer Zone
- Amenity Bund
- Cultural Heritage Management Zone
- Cultural Heritage Management Zone Extension
- Conserved Potential Archaeological Deposits
- Further Salvage Required
- ▲ Subsurface Testing Require if Impact Necessary
- Sites Conserved in-situ**
- ▲ Grinding Stone (CE) Conservation
- ⊕ Stone Arrangement Conservation
- ⊗ Scarred Tree Conservation
- Isolated Find Conservation
- Artefact Scatter Conservation

FIGURE 1.2

Extant Aboriginal Sites and Potential Archaeological Deposits within the Ignimbrite Pit Area, the Granite Pit Area and the Extended and Existing Cultural Heritage Management Zone

1.1 DP&E Management Plan Requirements

Table 1.1 provides details of Condition 35 of Modification 4 to the Consent and lists requirements of the AHMP and where they are addressed in this document.

Table 1.1 Details of Condition 35 of Modification 4 Relevant to the AHMP

Condition	Relevant Section of AHMP
Aboriginal Cultural Heritage Management Plan 35. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:	
(a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary	Section 1.4.1
(b) be prepared in consultation with OEH and local Aboriginal stakeholders	Section 1.3
(c) be submitted to the Secretary for approval by 30 November 2016, unless the Secretary agrees otherwise; (it is noted that an extension to this date was sought by Holcim and this was endorsed by DP&E on 9 November 2016 and approval for an extension until 15 January 2017 by DP&E on 29 November 2016. This was subsequently revised to 28 February 2017)	Section 1.4.1 and Appendix 1
(d)	

Condition	Relevant Section of AHMP
<p>(e) include the following:</p> <ul style="list-style-type: none"> • a Conservation Management Plan that details how the Cultural Heritage Management Zones (shown conceptually on the plan in Appendix 6) are managed • a detailed archaeological salvage program for Aboriginal sites/objects within the approved disturbance area, including details of how the salvaged Aboriginal objects will be managed and protected; and • a description of the measures that would be implemented for <ul style="list-style-type: none"> ○ protecting, monitoring and managing Aboriginal sites outside the approved disturbance area ○ maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site ○ managing the discovery of any human remains or previously unidentified Aboriginal objects on site, including (in the case of human remains) stop work provisions and notification protocols ○ ongoing consultation with local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage and ○ ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions. 	<p>Section 2.2</p> <p>Section 3.1 and Appendix 5</p> <p>Section 2.1.1 to 2.1.14 and Sections 3.1 to 3.3</p>
<p>Management Plan Requirements</p> <p>2. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p>	
<p>(a) detailed baseline data</p>	<p>Section 1.0 and Appendices 1 to 5</p>
<p>(b) a description of:</p> <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions) • any relevant limits or performance measures/criteria and • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures 	<p>Section 1.2, Section 1.5 and Appendices 1 and 2</p> <p>Section 4.1</p> <p>Section 4.2</p>

Condition	Relevant Section of AHMP
(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Section 4.3
(d) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the development and • effectiveness of any management measures (see (c) above) 	Section 4.3
(f) a contingency plan to manage any unpredicted impacts and their consequences	Section 2.1 and 2.1.11
(g) a program to investigate and implement ways to improve the environmental performance of the development over time	Section 2.1.10, Section 2.1.12, Section 2.1.14 and throughout Section 4
(h) a protocol for managing and reporting any: <ul style="list-style-type: none"> • incidents • complaints • non-compliances with statutory requirements and • exceedances of the impact assessment criteria and/or performance criteria and 	Section 2.1.10, Section 2.1.12 and 2.1.14
(i) a protocol for periodic review of the plan.	Section 2.1.13

1.2 OEH Consent Conditions

AHIP #1100264 (including two variations) is the only active AHIP held by Holcim for the Lynwood Quarry (refer to Appendix 2). The General Conditions of this AHIP approved 20 May 2009 remain active and are also applicable to the Granite Pit Area under a variation approved on 29 July 2016. The Specific Conditions of AHIP #1100264 relate to individual sites and PADs. These have also been detailed in the original AHIP and subsequent variations. Within this document the General Conditions of AHIP #1100264 are addressed throughout Sections 2.0 and 3.0. The Specific Conditions related to extant sites and PADs are addressed throughout Section 3.0. Appendix 3 provides details of all surface collection, subsurface testing and subsurface salvage completed under AHIP #1100264 and prior AHIPs held by Holcim that have now lapsed.

1.3 Registered Aboriginal Party Consultation

Registered Aboriginal Parties for the Lynwood Quarry project are:

- Gundungurra Aboriginal Heritage Association Inc (GAHAI)
- Gundungurra Tribal Council Aboriginal Corporation (GTCAC)
- Pejar Local Aboriginal Land Council (PLALC) and
- Peter Falk Consultancy (PFC).

On 3 April 2017 Peter Falk advised Holcim and Umwelt that Peter Falk Consultancy no longer wish to be consulted with regards to the Lynwood Quarry project as he has retired and Duncan Falk will no longer be available for work. Thus consultation beyond this date has not included Peter Falk Consultancy.

This revised AHMP was developed in consultation with the Registered Aboriginal Parties with a draft provided on 6 January 2017. Closing date for comments was 6 February 2017. On 13 February 2017, Sharyn Halls (GAHAI) requested a meeting of the Aboriginal Heritage Management Committee (AHMC) (refer to Section 2.1.1 for details related to the AHMC) to discuss the revised AHMP, especially in relation to Aboriginal site monitoring procedures. At a pre start meeting held on 13 February 2017 (during the salvage of site LKAS7) Sharyn Halls (GAHAI) and Sharon Brown (GTCAC) requested a meeting to discuss the management of PAD 4/LKAS7 and LKST2. Sharyn Halls reiterated the meeting request regarding the AHMP. Alana White (Senior Environment and Community Liaison, Holcim) organised a meeting which was scheduled for the 13 March 2017. However, as it was not possible to organise all committee members to attend the meeting until after the AHMP was to be provided to DP&E it was agreed by GAHAI, GTCAC, PFC and PLALC the AHMP could be provided to DP&E for approval and if any changes were requested by the Management Committee during the meeting Holcim would revise the AHMP accordingly.

Meetings were held on 13 March 2017, 10 April 2017, 28 April 2017 and 16 May 2017 with the AHMC to discuss the management of LKST2 and PAD4/LKAS7. At these meetings the parties discussed and agreed to changes to the management of PAD4/LKAS7 and LKST2 as well as LKST1. These changes are reflected within the review of this management plan and the amendment to the AHIP (See Section 1.4.2).

A revised draft of the AHMP was provided to the Registered Aboriginal Parties on 24 April 2018. At this time the registered Aboriginal party were requested to provide their review by 31 May 2018. Reminder emails were sent to the Registered Aboriginal Parties on the 13 June and 14 June 2018. No responses had been received by 24 July 2018 and subsequently the AHMP was finalised (see Appendix 4).

1.4 Agency Consultation for the Aboriginal Heritage Management Plan

1.4.1 Department of Planning and Environment

Holcim discussed the conversations and agreed outcomes with the DP&E (through phone correspondence and emails with Colin Phillips) on multiple occasions. The subsequent agreed amendments to the AHIP and commitments made by Holcim to the AHMC members were detailed within these discussions. These details are reflected within this management plan.

1.4.2 Office of Environment and Heritage

Initial consultation with OEH (Jackie Taylor, Team Leader Aboriginal Heritage – South-East, Queanbeyan) in relation to the AHMP was undertaken on 11 June 2015 early in the Aboriginal Cultural Heritage and Archaeological Assessment (ACHAA) process. At this time OEH supported the management of Aboriginal cultural heritage sites, PADs, CHMZ and values across Lynwood Quarry (Granite Pit and Ignimbrite Pit Areas) under the conditions of a variation to AHIP #1100264 and in compliance with a revised AHMP.

Holcim and Umwelt discussed the changes to the AHIP with OEH through Jackie Taylor on numerous occasions (through phone conversations and emails with Jackie Taylor). The subsequent agreed amendments to the AHIP and commitments made by Holcim to the AHMC members were detailed within these discussions. These details are reflected within this management plan.

Request for a Variation to Section 87/90 Aboriginal Heritage Impact Permit #1100264 to allow for the change of management for sites LKAS7/formerly PAD4, LKST1 and LKST2 was submitted to OEH on the 23 May 2017. The variation was approved 2 June 2017.

A copy of this AHMP will be provided to OEH in August 2018 for their records.

1.5 Relevant Legislation

OEH is primarily responsible for regulating the management of Aboriginal cultural heritage in New South Wales under the *National Parks and Wildlife Act 1974* (the NPW Act). The NPW Act is accompanied by the *National Parks and Wildlife Regulation 2009* (the Regulation), the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a) and other industry-specific codes and guides.

The NPW Act defines an Aboriginal object as:

..any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales.

Under Section 84 of the NPW Act, an Aboriginal Place must be declared by the Minister as a place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture.

In accordance with Section 86(1) of the NPW Act, it is an offence to harm or desecrate a known Aboriginal object, whilst it is also an offence to harm an Aboriginal object under Section 86(2). Similarly, Section 86(4) states that a person must not harm or desecrate an Aboriginal place. Harm to an object or place is defined as any act or omission that:

- a) destroys, defaces or damages an object or place, or
- b) in relation to an object – moves the object from the land on which it had been situated, or
- c) is specified by the regulations, or
- d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c),

but does not include any act or omission that:

- e) desecrates the object or place, or
- f) is trivial or negligible, or
- g) is excluded from this definition by the regulations

Section 87(1) of the NPW Act specifies it is a defence to prosecution under Section 86(1) and Section 86(2) if the harm or desecration of an Aboriginal object was authorised by an Aboriginal Heritage Impact Permit (AHIP) and the activities were carried out in accordance with that AHIP. Furthermore, Section 87(2, 4) establishes it is a defence to prosecution under Section 86(2) if due diligence was exercised to reasonably determine the activity or omission would not result in harm to an Aboriginal object or if the activity or omission constituting the offence is a low impact act or omission (as defined in Section 80B of the Regulation). The Regulation identifies compliance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) is excluded from the definition of harm.

2.0 Cultural Heritage Management Strategy

This section of the AHMP provides details of the management strategy for the Aboriginal sites and PADs to be impacted or conserved in situ within the project area. These management strategies are designed to comply with Development Consent Condition 35 (d), the Conditions of OEH AHIP #1100264 and the requirements of GAHAI, GTCAC, PFC, PLALC, OEH and DP&E. The majority of this management strategy has been implemented since 2007.

2.1 Management Protocols

The following management protocols combine to form the overall strategy for the management and conservation of Aboriginal sites and PADs within the Lynwood Quarry project area. The initial protocol involves the continuation of the Management Committee set up by Holcim to ensure the management strategy is implemented and adhered to in a culturally appropriate manner.

2.1.1 Aboriginal Heritage Management Committee

The AHMC's ongoing role is to provide guidance and contribute to indigenous related activities and initiatives on site as well as review the implementation of the AHMP. The objective is to review:

- the management of the extant sites and PADs within the development impact area until such time as they are salvaged in accordance with AHIP #1100264 and subsequently impacted by quarry development
- the conservation of sites and PADs outside the development impact area but within the broader project area *in situ* and
- the long term conservation of sites within the extended CHMZ (refer to Section 2.2 and Figure 1.2).

The AHMC is made up of the Lynwood Quarry, Quarry Manager and Senior Environment and Community Liaison, one representative of GAHAI, GTCAC and PLALC and a suitably qualified archaeologist (as required). The positions on AHMC for the Aboriginal parties were previously advertised and three representatives were selected. The representatives will be reviewed every three years or otherwise as required.

Holcim will ensure at least six monthly contact is maintained with the AHMC. If the committee is required to meet they may discuss and/or provide input into:

- the inclusion of Aboriginal cultural heritage awareness training within the Lynwood Quarry employee and contractor induction process (refer to Section 2.1.2)

- the appropriate 'Care' of artefacts retrieved during surface collections, subsurface testing and subsurface salvage (refer to Section 2.1.3 and Appendix 3)
- reviewing the management initiatives undertaken on site to ensure the protection of sites in situ
- supervised access to areas outside the development impact area for teaching purposes and non-invasive research (where approved by the Registered Aboriginal Parties and OEH) (refer to Section 2.1.9 and Section 2.2)
- monitoring of sites and PADs within the project disturbance boundary until they are impacted by construction or quarry development as required by the development consent and AHIP
- the appropriate recording/management of any previously unrecorded sites or skeletal material in the event they are located within the project area during construction or operations (refer to Section 2.1.11 and Section 2.2)
- the reporting of activities required by the AHMP within the Annual Environmental Management Report (AEMR) (refer to Section 2.1.12 and Section 2.2)
- the review of the AHMP (refer to Section 2.1.13) and
- any breaches that may occur.

2.1.2 Aboriginal Cultural Heritage Awareness Training

In compliance with Consent Condition 35 (d) and AHIP #1100264 it is a requirement that all employees, contractors, sub-contractors, agents and invitees undertaking work in areas relevant to Aboriginal sites and PADs undertake Aboriginal cultural heritage awareness training.

Holcim AHMC representatives (in consultation with the Registered Aboriginal Party AHMC representatives) have prepared an Aboriginal cultural heritage awareness training package for quarry personnel and contractors. This training is currently under review by the AHMC and is expected to be completed in 2019.

The training package includes (but is not limited to):

- information related to the types of Aboriginal sites and artefacts likely within the project area
- the Aboriginal cultural heritage value and archaeological significance of the sites/PADs/artefacts
- the supply of maps to employees and contractors indicating site/PAD locations and areas where ground disturbance is not allowed
- procedures for contacting the Senior Environment and Community Liaison at Holcim should work be required within proximity of a known site/PAD
- procedures for contacting the Senior Environment and Community Liaison at Holcim in the event a previously unknown site is located during ground disturbance activities and
- information related to the relevant legislation for the protection of Aboriginal sites (Section 86 NPW Act 1974) and that prosecution heavy fines may arise if sites are disturbed.

As part of the general induction, all employees or contractors, regardless of whether they are working near or within a significant area, undertake an online induction that highlights the significance of indigenous sites as well as the compliance requirements.

2.1.3 Care of Aboriginal Objects (Artefacts)

The care and control of all 'Aboriginal objects' (stone artefacts) recovered from the Lynwood Quarry development footprint is detailed within 'Care' Permits #2761 and #2762 approved by DECC (now OEH) on 27 August 2007. Holcim, GAHAI, GTCAC, PLALC and PFC are all signatories to the Care Permit.

The artefacts recovered from the subsurface testing and salvage program of the Ignimbrite Pit Area are kept in a secure storage facility at the Lynwood Quarry. Until such time as the final artefact analysis and reporting are completed for the Granite Pit Area the artefacts recovered as part of the subsurface investigations and salvage are temporarily stored at the Umwelt Office at 69 York Street Teralba, NSW as per Schedule D of AHIP #1100264. On completion of the artefact attribute recording and reporting process for the Granite Pit Area the artefacts will be handed over to Lynwood Quarry to be placed in the appropriate storage facility or on display at Lynwood Quarry.

At least six months prior the closure of Lynwood Quarry Holcim will commence consultation with GAHAI, GTCAC, PFC and PLALC in relation to the ongoing 'Care' of the artefacts. Based on the outcomes of the consultation process a new 'Care' application will be forwarded to OEH for approval. Once this is approved the artefacts kept at the Lynwood Quarry Office will be managed according to the new 'Care' Permit.

2.1.4 Fencing and Signage

In line with the requirements of Consent Condition 35(d), Holcim will ensure the development impact areas are clearly defined and key sites/PADs are fenced to avoid accidental damage. Gates leading from the development impact area into the area to be managed for the conservation of sites/PADs *in situ* will be locked.

If ground disturbance work or any other work is required in the CHMZ or sites/PADs, the committee will be informed and the actions discussed to ensure culturally appropriate controls are in place.

Signage for areas to be managed *in situ* has been created and implemented across the project area. The signs clearly indicate entry to the area/site/PAD is not permitted without consent.

2.1.5 Removal of Stock

In line with the requirements of Consent Condition 35(d), Holcim has removed stock from all areas. . This has and will continue to reduce the effects of erosion and the impact of trampling on sites/PADs and artefacts. However, if required to decrease groundcover and limit issues with bushfire, low numbers of stock may be re-introduced outside fenced site areas (refer to Section 2.1.6).

2.1.6 Bushfire Hazard Reduction

In line with the requirements of Consent Condition 35(d), Holcim in consultation with the AHMC will continue to ensure bushfire hazard reduction activities do not impact adversely on known sites within the project area.

As grazing is restricted outside the development impact area, there is potential for fuel loads to increase above limits generally recommended. Routine activities to clear potential fire hazards within proximity of a known site/PAD outside of the CHMZ (if outside the site/PAD area) will be undertaken when required. The use of machinery to control fire hazards will only be permitted within the development impact area unless it is to establish and maintain an approved fire break. Control measures that do not cause ground disturbance (e.g. manual brush cutting, cool burns [as would be used in an Aboriginal fire regime]) will be allowed in the vicinity of sites/PADs. Care will be taken to ensure no damage is caused to the scarred trees.

Very light cattle grazing is recommended outside the CHMZ to reduce the build up of dry grasses decreasing the bushfire hazard. If firebreaks are to be constructed for the CHMZ they should be located outside the boundary fence.

Should bushfire hazard reduction activities be required in proximity to areas identified as known Aboriginal sites/PADs, then a detailed assessment will be undertaken and consultation will be undertaken with the AHMC.

2.1.7 Erosion Control

Erosion control is a key aspect of the monitoring undertaken annually for the sites managed *in situ*. Mechanical erosion control works will not be undertaken within sites or 10 metres of the site boundary. If erosion control works are required to prevent further degradation of a known site/PAD, these may be undertaken manually following OEH consultation and agreement with the AHMC.

2.1.8 Feral Animal and Noxious and Pest Weed Control

Feral animal and noxious weed impacts for the *in situ* sites will be included in the monitoring program. Limited mechanical feral animal and noxious/pest weed controls may be undertaken in this area but not within known sites/PADs or within 10 metres of the site/PAD. Manual feral animal and noxious weed controls in a known site/PAD, may be undertaken manually following OEH consultation and agreement with the AHMC. In general, feral animal and noxious weed control can be undertaken in sites/PADs if they do not include ground disturbance works.

2.1.9 Access for Teaching Purposes and Research

Supervised access will be provided to Registered Aboriginal Parties to visit all sites/PADs outside the development impact area and outside the CHMZ. Persons wishing to access these areas will require site permission and inductions.

Access for non-invasive archaeological research purposes will be considered upon application by the AHMC. All requests to undertake archaeological research that would require ground disturbance will be considered by all Registered Aboriginal Parties, the AHMC and OEH.

2.1.10 Site and Potential Archaeological Deposit Monitoring

Holcim has committed to undertaking monitoring of all extant sites/PADs for the 30 year life of the quarry. Monitoring of sites/PADs in proximity to the development impact area will be undertaken on an annual basis or otherwise as agreed by the AHMC. Sites/PADs located at a distance from any proposed or established impact areas will be monitored on a triennial basis (refer to Sections 3.1 to 3.3 for detailed monitoring requirements) or otherwise as agreed by the AHMC.

The monitoring process will include photographing the sites/PADs and any other cultural values in the immediate area. Photographic and written records will be kept in relation to erosion, revegetation, fencing and signage, feral animals, noxious and/or pest weed species, bushfire hazards as well as visitor and/or indirect quarry impact. These records will be reviewed by the AHMC and forwarded to OEH.

After reviewing the monitoring report Holcim in consultation with AHMC will take appropriate steps to address any matters (if any) arising.

Copies of the monitoring report pertaining to the requirements of the AHMP will be provided to all Registered Aboriginal Parties and to OEH.

2.1.11 Previously Unknown Sites/Human Skeletal Material

Should a previously unknown site be located within any part of the project area, Holcim will inform the Registered Aboriginal representatives and engaged an archaeologist. All works in the vicinity of the site will cease until such time as appropriate management has been discussed and endorsed by all the Registered Aboriginal Parties and OEH. If the site is within the area for *in situ* conservation of sites, Holcim will ensure OEH is supplied with a site card and the site is managed in accordance with the AHMP.

Should human/possible human skeletal material be uncovered during works or by natural erosion processes within any part of the project area, Holcim will inform the Registered Aboriginal representatives and will engage an archaeologist, the NSW Police Department and OEH. A suitably qualified forensic archaeologist or anthropologist as approved by OEH will be employed to undertake any study of the skeletal material. All works in the vicinity of the find site will cease until such time as appropriate management has been discussed and endorsed by the GAHAI, GTCAC, PFC, PLALC and OEH. If the skeletal material is within the area for *in situ* conservation of sites, the AHMC will ensure OEH is supplied with a site card and that the site is managed in accordance with the wishes of the GAHAI, GTCAC, PFC, PLALC and OEH and under a revised AHMP.

2.1.12 Annual Review

The Lynwood Quarry Senior Environment and Community Liaison, as representatives of the Management Committee, will report on activities required by this AHMP within the Annual Review submitted to DP&E.

2.1.13 AHMP Review

This AHMP will be reviewed as per the requirements of the development consent and revised when necessary. Revisions to the AHMP will be provided to OEH and DP&E for approval. The reviews of the AHMP will reflect changes in cultural heritage requirements, technology and legislation.

2.1.14 Incidents which may breach the NPW Act or AHIP #1100264

If Holcim becomes aware of any contravention of the NPW ACT (1974) or in regard to AHIP #1100264 it must notify OEH immediately and in writing as soon as practicable. Holcim should specify within the documentation the following:

- the nature of the incident
- the nature and location of relevant Aboriginal objects (sites) and/or PADs, referring to and providing maps and photos where applicable

- the impact of the incident on the Aboriginal objects (sites) and/or PADs and any conditions of an AHIP that may have been breached and
- the measures which have or will be taken to prevent recurrence of the incident.

The report must be provided to the OEH office by the due date specified by the authorised officer.

2.2 Cultural Heritage Management Zone Conservation Plan

CHMZ areas will be subject to the following additional management procedures not already mentioned (it is noted the AHMC will be allowed 28 days to provide feedback to management activities that require consultation. If no response is provided Holcim will assume there is no objection):

- Access by Holcim employees/contractors to the CHMZ will be restricted to persons approved by the Holcim Senior Environment and Community Liaison or Quarry Manager as members of the Management Committee.
- The areas will be surveyed and fenced with the installation of appropriate signage on fences and gates within 12 months of substantial construction commencing in for each development approval. Gates will be provided for access and will be locked with keys under the control of Holcim Senior Environment and Community Liaison or the Quarry Manager.
- Grazing by livestock will not be permitted.
- There will be a restriction on vehicle access to light vehicles only except in the case of emergency – such as a bushfire. It is noted an Essential Energy easement is within one of the CHMZ's and that access by heavy vehicles may be required for power pole maintenance within this easement. In this case the access for a heavy vehicle will be restricted to within the Essential Energy easement and will be undertaken using rubber tyred vehicles. In the case of non-emergencies Holcim will request Essential Energy undertake this work when the ground is dry to avoid bogging.
- The CHMZ will have restricted access for teaching and research practices. Visitors undertaking teaching or research will be supervised by a representative of the AHMC (or inducted person appointed by the Management Committee). Access for non-invasive archaeological research purposes will be considered upon application.

3.0 Management of Aboriginal Sites and Potential Archaeological Deposits

This section identifies sites and PADs within the disturbance footprint which will require ongoing management until they are impacted by quarry development (refer to Appendix 5 for the Research Design and Methodology for these sites/PADs). It also addresses the conservation requirements of the sites/PADs outside the disturbance footprint

Figures 3.1 and 3.2 indicate the location of all known Aboriginal sites and PADs and CHMZ's. The figure indicates whether the site is being conserved (green symbols), has been salvaged as per the AHIP (red symbols – refer to Appendix 3 for details), has further requirements prior to any impact (black symbols) or for which there is approval for investigation/salvage but which may not require impact (blue symbol).



Image Source: Google Earth (2012), Holcim (2012, 2014)
 Data Source: LPI (2014), Holcim Australia (2015)

0 0.5 1.0 1.5 km
 1:30 000

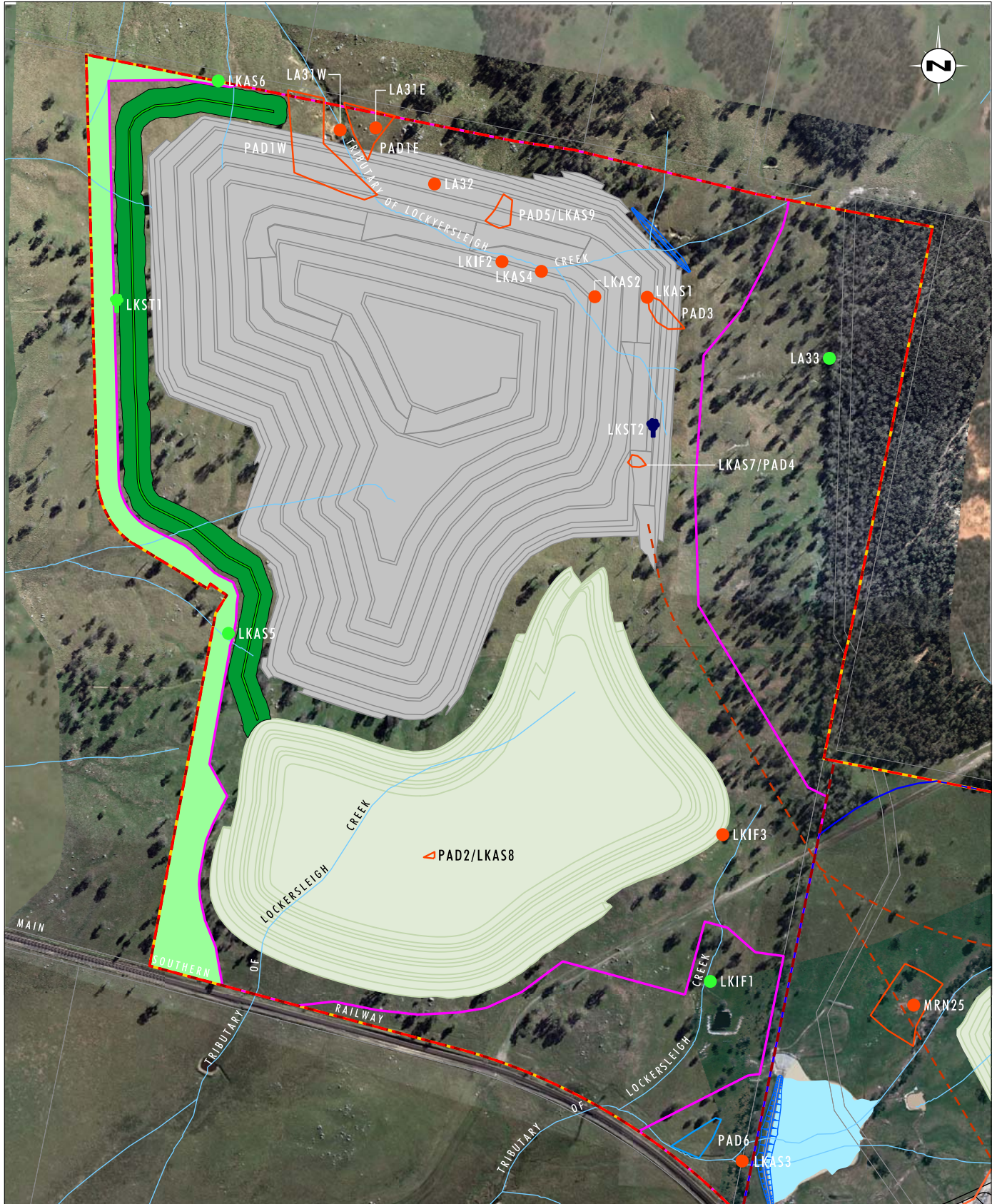
Legend

- Approved Project Area
- Lynwood Infrastructure Area
- Approved Disturbance Footprint
- Lynwood Infrastructure Layout
- Quarry Pit
- Emplacement Area
- Dam
- Cultural Heritage Management Zone
- Cultural Heritage Management Zone Extension
- Conserved Potential Archaeological Deposits

- Sites Conserved**
- Grinding Stone (CE) Conservation
 - Stone Arrangement Conservation
 - Scarred Tree Conservation
 - Isolated Find Conservation
 - Artefact Scatter Conservation
- Sites Salvages under AHIP #1100264**
- Artefact Scatter - no further management required prior to impact
 - Isolated Find - no further management required prior to impact

FIGURE 3.1

Status of Aboriginal Sites and Potential Archaeological Deposits within the Area Pre Modification 4 and the Cultural Heritage Management Zones



Data Source: LPI (2010), Holcim Australia (2015)

0 100 250 500m
1:10 000

Legend

- - - Approved Project Area
- Modification Project Area
- Approved Disturbance Footprint
- Approved Granite Pit Disturbance Footprint
- - - Approved Granite Pit Area
- - - Approved Haul Road
- Drainage Line
- Quarry Pit
- Dam
- Approved Overburden Emplacement Area
- Approved Vegetation Buffer Zone
- Approved Amenity Bund
- Conservation in-situ
- Further Salvage Required
- Salvaged Site
- Subsurface Testing Required if Impact Necessary

FIGURE 3.2

Status of Aboriginal Sites and Potential Archaeological Deposits within the Area covered by Modification 4

3.1 Aboriginal Sites and Potential Archaeological Deposits within the Lynwood Quarry Disturbance Footprint

Table 3.1 presents details of the sites/PADs that require further investigation and/or salvage prior to impact and the individual approved management procedures. These are all within the Granite Pit Area as shown on Figure 3.2.

Table 3.1 Aboriginal Sites within the Disturbance Footprint with further Requirements Prior to Impact

Site Name	AHIMS #	Site Type	Further Requirements
LKST2	51-6-0773	Scarred Tree	<p>Prior to impact the scarred section of the tree was removed under the supervision of an expert arborist using the methodology endorsed by OEH and developed in consultation with the Registered Aboriginal Parties and Holcim. The scarred section of the tree is to be temporarily placed to the east and outside the quarry impact footprint.</p> <p>The scarred section of the tree is to be moved upslope to a permanent position chosen in consultation with the Registered Aboriginal Parties. The scarred section of the tree will be placed in a roofed enclosure, fenced and signed where it will be subject to ongoing management for its conservation. An ASIR card will be provided to OEH following the placement of the scarred section of the tree in its permanent location.</p> <p>The scarred section of LKST2 will be monitored annually thereafter unless otherwise agreed by the Management Committee.</p>
PAD6	51-6-0777	Potential Archaeological Deposit	<p>To be subsurface tested under AHIP #1100264 if impact is proposed for water maintenance activities. If warranted by the results of the subsurface testing undertake further subsurface salvage under AHIP #1100264.</p> <p>Fence, implement signage and monitor until all requirements are fulfilled and the PAD has been impacted or for the life of the quarry. Initial monitoring to be undertaken in within 12 months of substantial construction and three yearly thereafter</p>

3.2 Aboriginal Sites and Potential Archaeological Deposits to be Conserved *in-situ*

Table 3.2 lists the sites and PADs to be conserved in-situ and indicates their specific conservation management requirements. Currently annual monitoring is required for sites and PADs in proximity to quarry infrastructure and triennial monitoring for all sites and PADs. If conservation measures are established to be well implemented, sites in proximity to quarry infrastructure may also be transitioned to triennial monitoring. Triennial monitoring commenced in 2013 and is currently proposed to be undertaken every three years thereafter until 2036 and again in 2038 should quarry operations cease at this time. Any site or PAD observed to have any substantial conservation issue(s) will require annual monitoring until such time as any issues have been addressed. Changes to this monitoring schedule may be implemented following consultation and endorsement by the Management Committee.

Table 3.2 Aboriginal Sites to be Conserved *In-Situ*

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
LKST1	51-6-0772	Scarred Tree	<p>Prior to the commencement of substantial construction in proximity to the site it is to be fenced and appropriate signage implemented (Protected Area, No Unauthorised Access) and a sign indicating the name of the site is to be installed.</p> <p>Monitor annually or as otherwise agreed by the AHMC to assess site condition and to identify if there are any management procedures that require implementation.</p>
LA33	51-6-0388	Isolated Find	As above
LKIF1	51-6-0769	Isolated Find	As above
LKAS5	51-6-0780	Artefact Scatter	As above
LKAS6	51-6-0781	Artefact Scatter	As above
MRN1	51-6-0242	Artefact Scatter	<p>The site is fenced and there is appropriate signage (Protected Area, No Unauthorised Access) on the fence. There is a sign indicating the name of the site.</p> <p>Monitor triennially to assess site condition and to identify if there are any management procedures that require implementation.</p>
MRN2	51-6-0243	Artefact Scatter	As above
MRN3	51-6-0244	Artefact Scatter	As above
MRN4	51-6-0245	Artefact Scatter	As above

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
MRN6	51-6-0246	Artefact Scatter	As above
MRN18	51-6-0259	Isolated Find	As above
MRN19	51-6-0260	Isolated Find	As above
MRN20	51-6-0261	Artefact Scatter	As above
MRN23	51-6-0264	Scarred Tree	As above
MRN24	51-6-0265	Isolated Find	As above
MRN30	51-6-0271	Isolated Find	As above
MRN34	51-6-0274	Artefact Scatter	<p>The site is fenced and there is appropriate signage (Protected Area, No Unauthorised Access) on the fence. There is sign indicating the site name.</p> <p>Monitor annually to assess site condition and to identify management procedures.</p>
MRN49	51-6-0290	Scarred Tree	<p>The site is fenced and there is appropriate signage (Protected Area, No Unauthorised Access) on the fence. There is a sign indicating the site name.</p> <p>Monitor triennially to assess site condition and to identify any management procedures.</p>
MRN50	51-6-0281	Artefact Scatter	As above
MRN51	51-6-0292	Scarred Tree	As above
MRN74	51-6-0634	Scarred Tree	<p>Tree is fenced and capped. Appropriate signage will be erected.</p> <p>Monitor annually to assess tree condition and to identify any management procedures.</p>
MRN82	51-6-0705	Artefact Scatter	<p>The site is fenced and there is appropriate signage (Protected Area, No Unauthorised Access). There is a sign in the site area indicating its name. The project disturbance footprint is demarcated and signed 'limit of works' in compliance with the AHMP.</p> <p>Monitor annually to assess site condition and to identify any management procedures.</p>
MRN84	51-6-0707	Artefact Scatter	As above

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
MRN85	51-6-0704	Artefact Scatter	As above
MRN PAD2	51-6-0688	Potential Archaeological Deposit	The area outside the approved access road footprint has high visibility demarcation along its boundary. Appropriate signage is in place along limit of works boundary. Monitor annually to assess PAD condition and to identify any management procedures.
MRN PAD3 (MRN81 salvaged from within PAD3 – PAD still extant)	51-6-0689	Potential Archaeological Deposit	As above
MRN PAD4	51-6-0689	Potential Archaeological Deposit	As above
IF1	51-6-0103	Isolated Find	The site is fenced and there is appropriate signage (Protected Area, No Unauthorised Access) on the fence. There is a sign indicating the site name. The project disturbance footprint is demarcated and signed 'limit of works' in compliance with the AHMP. Monitor triennially to assess site condition and to identify any management procedures.
IF2	51-6-0101	Isolated Find	As above
IF3	51-6-0102	Isolated Find	As above
MQ1	51-6-0059	Artefact Scatter	As above
Marulan T6 S1	51-6-0467	Isolated Find	As above.
Marulan T6 S2	51-6-0468	Isolated Find	As above
Marulan T6 S3	51-6-0470	Isolated Find	As above
Marulan T6 S4	51-6-0469	Isolated Find	As above

3.3 Aboriginal Sites and Potential Archaeological Deposits to be Conserved within the Cultural Heritage Management Zone

Table 3.3 lists the sites (including associated PADs) to be conserved in-perpetuity within the CHMZ. Currently triennial monitoring is required for sites within the CHMZ. If conservation measures are established to be well implemented changes to this monitoring schedule may be undertaken following consultation and endorsement by the AHMC.

Table 3.3 Aboriginal Sites to be Conserved In-Perpetuity within the Cultural Heritage Management Zone

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
MRN9	51-6-0250	Stone Arrangement	The site is individually fenced within the broader CHMZ and has a sign identifying its name. The gate into the CHMZ is locked. There is appropriate signage (Protected Area, No Unauthorised Access) on the CHMZ fence. Monitor triennially to assess site condition and to identify any management procedures
MRN8	51-6-0249	Scarred Tree	The site is fenced within the broader CHMZ and has a sign identifying its site name. The gate into the CHMZ is locked. There is appropriate signage (Protected Area, No Unauthorised Access) on the CHMZ fence. Monitor triennially to assess site condition and to identify any management procedures
MRN10	51-6-0251	Scarred Tree	As above
MRN11	51-6-0252	Scarred Tree	As above
MRN12	51-6-0253	Artefact Scatter	As above
MRN13	51-6-0254	Artefact Scatter	As above
MRN14	51-6-0255	Artefact Scatter	As above
MRN21	51-6-0262	Isolated Find	As above
MRN22	51-6-0263	Artefact Scatter	As above
MRN75	51-6-0635	Scarred Tree	As above
MRN76	51-6-0636	Scarred Tree	As above

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
MRN83	51-6-0706	Isolated Find	As above
MRN15 incorporating MRN PAD1	51-6-0256 51-6-0687	Artefact Scatter	<p>Within the extended CHMZ which is to be fenced and appropriate signage implemented.</p> <p>The site and encompassing PAD is fenced with appropriate signage (Protected Area, No Unauthorised Access). There are posts beside the Holcim access track indicating the 'limit of works' within the MRN PAD1 area. Batters and culverts restrict access as do barriers on the side of the access road.</p> <p>Monitor annually to assess Site/PAD condition and identify any management procedures.</p>
MRN16	51-6-0257	Isolated Find	<p>Within the extended CHMZ which is to be fenced and appropriate signage implemented.</p> <p>The site area is fenced and has appropriate signage (Protected Area, No Unauthorised Access) on the fence. There is a sign indicating the site name.</p> <p>Monitor triennially to assess site condition and identify any management procedures.</p>
MRN17	51-6-0258	Artefact Scatter	As above
Marulan T5 S1	51-6-0465	Isolated Find	As above
Marulan T5 S2	51-6-0466	Isolated Find	As above
MRN38	51-6-0279	Isolated Find	<p>Within the extended CHMZ which is to be fenced and appropriate signage implemented.</p> <p>The site has a sign indicating its name.</p> <p>Monitor triennially to assess site condition and to identify if there are any management procedures that require implementation.</p>
MRN39	51-6-0280	Artefact Scatter	As above

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
MRN40	51-6-0281	Artefact Scatter – forms part of larger Joarimin Creek South Site	As above.
MRN41	51-6-0282	Artefact Scatter – forms part of larger Joarimin Creek South Site	As above
MRN42	51-6-0283	Artefact Scatter – forms part of larger Joarimin Creek South Site	As above
MRN43	51-6-0284	Artefact Scatter – forms part of larger Joarimin Creek South Site	As above
MRN44	51-6-0285	Artefact Scatter	As above
MRN45	51-6-0286	Artefact Scatter	As above
MRN46	51-6-0287	Artefact Scatter	As above
MRN55	51-6-0529	Artefact Scatter	As above
MRN56	51-6-0530	Artefact Scatter	As above
MRN69	51-6-0630	Artefact Scatter	As above
Marulan T1 S1	51-6-0456	Isolated Find	As above

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
Marulan T1 S2	51-6-0457	Isolated Find – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S3	51-6-0458	Isolated Find – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S4	51-6-0459	Isolated Find – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S5	51-6-0460	Artefact Scatter – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S6	51-6-0461	Isolated Find – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S7	51-6-0462	Grinding bowl – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S8	51-6-0463	Artefact Scatter – forms part of larger Joarimin Creek South Site	As above
Marulan T1 S9	51-6-0464	Isolated Find – forms part of larger Joarimin Creek South Site	As above

Site Name	AHIMS #	Site Type	Current and Ongoing Management Requirements
Joarimin Creek South	51-6-0526	Artefact Scatters and intervening PAD (incorporates sites MRN40 (#51-6-0281), MRN43 (51-6-0284), Marulan T1S2 to T1S9 (#51-6-0457 to 0464) on southern side of Joarimin Creek	As above

4.0 Lynwood Quarry Aboriginal Cultural Heritage Management Performance Measures

4.1 Performance Criteria and Performance Measures

The management performance criteria are detailed in Section 2.0. Holcim's management performance in relation to the extant sites and PADs within its project area will be assessed through a detailed monitoring program as discussed in Sections 2.1.10, 2.2 and throughout Section 3.0.

4.2 Complaints Management and Dispute Resolution

4.2.1 Complaints Management

Holcim prides itself on fostering a positive relationship with its Registered Aboriginal Parties. Wherever possible, a proactive approach will be taken to engage the Registered Aboriginal Parties in discussing proposed activities that may affect cultural values. Any formal/written complaints received from the Registered Aboriginal Parties relating to Lynwood Quarry's operations will be recorded in a standard format and responded to in a timely manner by the Senior Environment and Community Liaison or their delegate.

Records of complaints will be kept for a minimum of four years in a register to be maintained by the Senior Environment and Community Liaison and will be reported on an annual basis in the Annual Review.

4.2.2 Dispute Resolution

Holcim strives to maintain good relations with its Registered Aboriginal Parties through effective communication. It is Holcim's desire to avoid disputes arising through ongoing and regular consultation. Should any disputes arise that cannot be resolved through direct consultation, the dispute resolution processes discussed below will be implemented.

If an independent review is requested in writing by the Registered Aboriginal Parties, and the Secretary of DP&E is satisfied it is warranted, then within two months of the Secretary's decision Lynwood Quarry must:

- Commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - Consult with the Registered Aboriginal Parties to determine their concerns;
 - Ensure the claims are substantiated; and
 - Provide recommendations agreed to by both parties to address the concerns
 - A copy of the independent review is then to be provided to the RAPS and the Secretary OEH and DP&E.

5.0 References

Umwelt (Australia) Pty Limited. 2007a. *Review of Environmental Factors for Proposed Electrical Transmission Lines, Marulan, NSW*. A report prepared for Country Energy. February 2007.

Umwelt (Australia) Pty Limited. 2007b. *Aboriginal Archaeological Assessment of Transmission Line Easements and a Proposed Substation Location near, Marulan, NSW. Appendix F. Review of Environmental Factors for Proposed Electrical Transmission Lines, Marulan, NSW*. A report prepared for Country Energy. February 2007.

Umwelt (Australia) Pty Limited 2007c. *Research Design and Methodology for Section 87 Subsurface Testing and Section 90 Collection for the Development Impact Area, Lynwood Quarry, Marulan*. Report to the Department of Environment and Climate Change on behalf of Rinker Australia Pty Limited. July 2007.

Umwelt (Australia) Pty Limited 2007d. *Lynwood Quarry, Marulan Aboriginal Heritage Management Plan*. Report to the Department of Environment and Climate Change on behalf of Rinker Australia Pty Limited. July 2007.

Umwelt (Australia) Pty Limited. 2008a. *Stage 1 Report - Lynwood Quarry Project Area Marulan, NSW Section 87 Subsurface Testing and Section 90 Salvage under Aboriginal Heritage Impact Permits #1077225 and #1077294*. January 2008.

Umwelt (Australia) Pty Limited. 2008b. *Review of Environmental Factors for Project Amendments, to Electrical Transmission Line Project, Marulan, NSW*. A report prepared for Country Energy. March 2008.

Umwelt (Australia) Pty Limited. 2008c. *Aboriginal Archaeological Assessment for a Review of Environmental Factors for Project Amendments to Electrical Transmission Line Project, Marulan, NSW*. A report prepared for Country Energy. March 2008.

Umwelt (Australia) Pty Limited. 2008d. *Documentation to Accompany a s87/90 Aboriginal Heritage Impact Permit for Works within the Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for Country Energy. March 2008.

Umwelt (Australia) Pty Limited. 2008e. *Stage 2 Report. Lynwood Quarry Project Area, Marulan, NSW Section 87 Subsurface Testing and Section 87/90 Salvage under Aboriginal Heritage Impact Permits #1077225 and #1077294*. A report prepared for CEMEX Australia. July 2008.

Umwelt (Australia) Pty Limited. 2008f. *Documentation to Accompany a s87/90 Aboriginal Heritage Impact Permit for Works within the Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for CEMEX Australia. September 2008.

Umwelt (Australia) Pty Limited. 2009a. *Documentation to Accompany an s87 Aboriginal Heritage Impact Permit for Further Subsurface Testing of Archaeological Terrain Units Works he Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for CEMEX Australia. February 2009.

Umwelt (Australia) Pty Limited. 2009b. *Stage 2 Report - Lynwood Quarry Project Area Marulan, NSW: Results of Subsurface Testing of Archaeological Terrain Units under s.87/90 AHIP #1100264*. A report prepared for CEMEX Australia. August 2009.

Umwelt (Australia) Pty Limited. 2010. Aboriginal Cultural and Archaeological Assessment – Proposed Minor Modifications to Lynwood Quarry, Marulan. A report prepared for Holcim Australia (Australia) Pty Limited. October 2010.

Umwelt (Australia) Pty Limited. 2011a. Caring for Country Lynwood Quarry, Marulan. Aboriginal Heritage Management Plan. Revision 2. A report prepared for Holcim Australia (Australia) Pty Limited. June 2011.

Umwelt (Australia) Pty Limited. 2011b. Preliminary Results of Subsurface testing of PAD5 and Monitoring of Works in PADs 2, 3 and 4 in Compliance with AHIP #1100264. A report prepared for Holcim Australia (Australia) Pty Limited. August 2011.

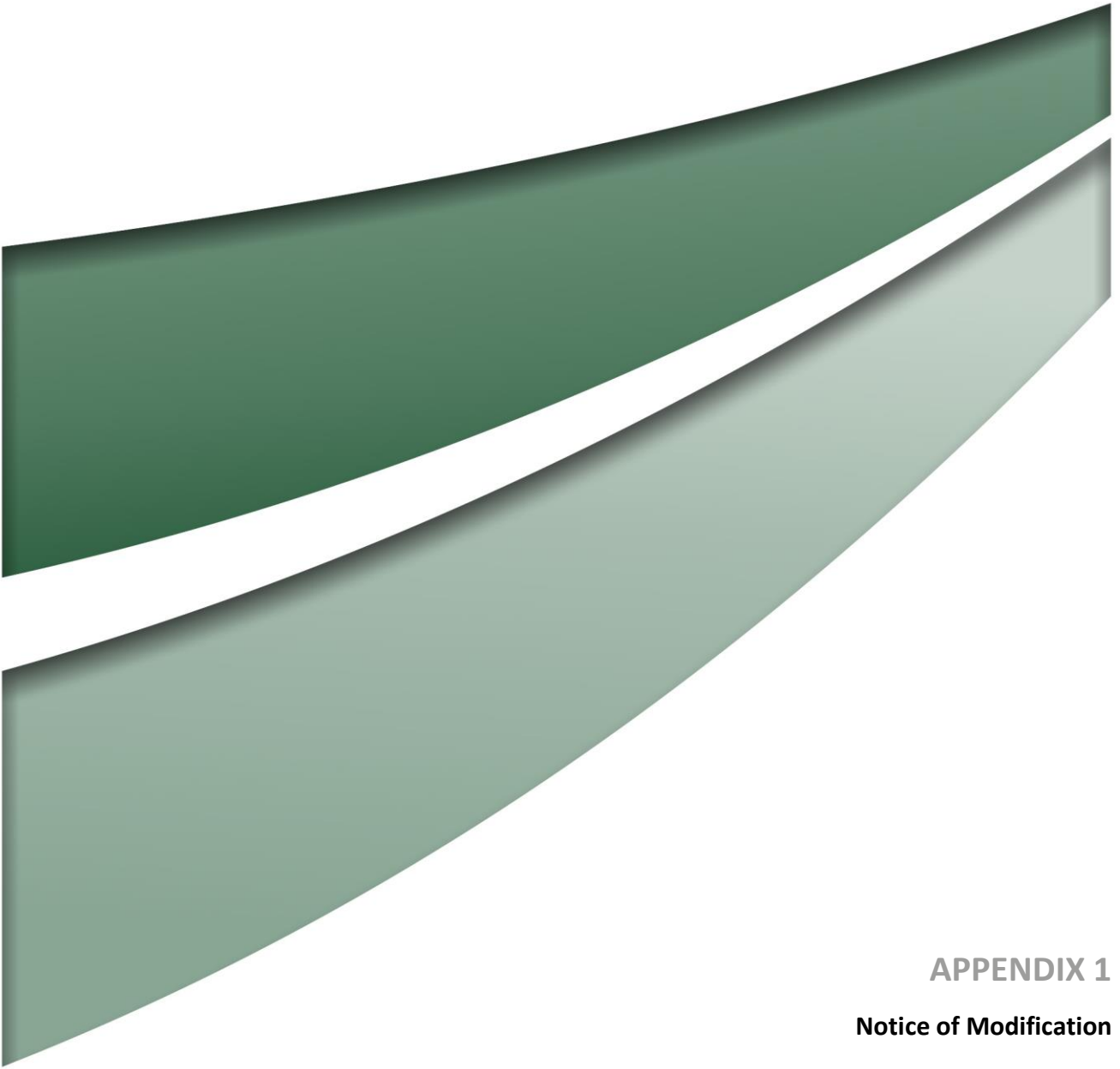
Umwelt (Australia) Pty Limited. 2012. Lynwood Quarry Project, Marulan, NSW. Aboriginal Heritage Site Monitoring 2007 and 2011. A report prepared for Holcim Australia (Australia) Pty Limited. August 2012.

Umwelt (Australia) Pty Limited. 2013a. Lynwood Quarry Project, Marulan, NSW. Aboriginal Heritage Site Monitoring 2012. A report prepared for Holcim Australia (Australia) Pty Limited. March 2013.

Umwelt (Australia) Pty Limited. 2013b. Stage 3 Report. Lynwood Quarry Project Area, Marulan, NSW. Integrated Results of Section 87 Subsurface Testing and Section 87/90 Salvage under Aboriginal Heritage Impact Permits #1077225, #1077294, #1089392 and #1100264. A report in preparation for Holcim Australia (Australia) Pty Limited. August 2013.

Umwelt (Australia) Pty Limited. 2014. Lynwood Quarry Project, Marulan, NSW. Aboriginal Heritage Site Monitoring 2013. A report prepared for Holcim Australia (Australia) Pty Limited. September 2014.

Umwelt (Australia) Pty Limited 2015. *Lynwood Quarry Extraction Area Modification Aboriginal Cultural Heritage and Archaeological Assessment*. A report prepared for Holcim Australia (Australia) Pty Limited. November 2015.



APPENDIX 1
Notice of Modification

Notice of Modification

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I modify the development consent referred to in Schedule 1, as set out in Schedule 2.



Oliver Holm
Executive Director
Resource Assessments & Compliance

Sydney

18/5/

2016

SCHEDULE 1

The development consent (DA 128-5-2005) for the Lynwood hard rock quarry and associated infrastructure, granted by the Minister for Planning on 21 December 2005.

SCHEDULE 2

1. Delete the Table of Contents and replace with the following:

DEFINITIONS	3
GENERAL ADMINISTRATIVE CONDITIONS	5
Obligation to Minimise Harm to the Environment	5
Terms of Approval	5
Limits on Approval	5
Structural Adequacy	5
Demolition	5
Protection of Public Infrastructure	5
Operation of Plant and Equipment	6
Production Data	6
SPECIFIC ENVIRONMENTAL CONDITIONS	7
General Extraction and Processing Provisions	7
Noise	7
Blasting and Vibration	9
Air Quality	10
Surface and Ground Water	11
Traffic and Transport	13
Aboriginal Heritage	14
Heritage	15
Rehabilitation and Landscaping	16
Visual Amenity	17
Waste Management	18
Emergency and Hazards Management	18
Quarry Exit Strategy	18
ADDITIONAL PROCEDURES	19
Notification of Landowners	19
Independent Review	19
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	20
Environmental Management	20
Reporting	21
Independent Environmental Audit	22
Access to Information	22

APPENDIX 1: SCHEDULE OF LAND	24
APPENDIX 2: DEVELOPMENT LAYOUT	26
APPENDIX 3: NOISE RECEIVER LOCATIONS	27
APPENDIX 4: LOCATION OF SEDIMENT DAMS	28
APPENDIX 5: CONSTRUCTION TRAFFIC ROUTES	30
APPENDIX 6: CULTURAL HERITAGE MANAGEMENT ZONE	31
APPENDIX 7: DETAILED HERITAGE CONDITIONS	32
APPENDIX 8: CONCEPTUAL REHABILITATION PLAN	35
APPENDIX 9: HABITAT MANAGEMENT AREAS	36
APPENDIX 10: NOISE COMPLIANCE ASSESSMENT	37
APPENDIX 11: STATEMENT OF COMMITMENTS	38

2. Delete the following definitions: “AEMR”, “Applicant”, “Department”, “Director-General”, “DRE”, “EIS”, “Land”, “NOW”, “RTA” and “SEE” and insert the following definitions in alphabetical order:

Annual Review	The review required by condition 10 of Schedule 5
Applicant	Holcim (Australia) Pty Limited or any other person or persons who rely on this consent to carry out the development that is subject to this consent
Conditions of Consent	Conditions contained in Schedules 2 to 5 inclusive
Department	Department of Planning and Environment
Development	The development described in the documents listed in condition 2(a) of Schedule 2
DPI Fisheries	Department of Primary Industries - Fisheries
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EA (MOD 1)	Modification Application DA 128-5-2005 MOD 1 and the accompanying Statement of Environmental Effects titled <i>Proposed Minor Modifications to Lynwood Quarry, Marulan</i> , dated January 2009
EA (MOD 2)	Modification Application DA 128-5-2005 MOD 2 and the accompanying Environmental Assessment titled <i>Environmental Assessment Proposed Modifications to Lynwood Quarry, Marulan</i> , dated October 2010, prepared by Umwelt (Australia) Pty Limited, including the response to submissions dated January 2011
EA (MOD 3)	Modification Application DA 128-5-2005 MOD 3 and the accompanying letter titled <i>Holcim Lynwood DA128-5-2005; DA128-5-2005 Modification 1 and DA128-5-2005 Modification 2</i> , dated June 17 2011, prepared by Holcim (Australia) Pty Ltd
EA (MOD 4)	Modification Application DA 128-5-2005 MOD 4 and the accompanying Environmental Assessment titled <i>Environmental Assessment Lynwood Quarry Extraction Area Modification</i> , dated November 2015 and prepared by Umwelt Australia Pty Limited, including the Response to Submissions document dated February 2016 and additional information provided by Umwelt in the letter regarding the biodiversity offset strategy dated 1 April 2016
EIS	Environmental Impact Statement for the <i>Proposed Lynwood Quarry Marulan, Volumes 1 to 4</i> , dated May 2005
EPA	Environment Protection Authority
EPL	Environment Protection Licence issued under the POEO Act
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
Incident	A set of circumstances that: <ul style="list-style-type: none"> causes, or threatens to cause, material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this consent
INP	<i>NSW Industrial Noise Policy</i> (NSW EPA, 2000)
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this consent, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage,

	sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarry products	Includes all saleable quarry products, but excludes tailings and other wastes
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials on the site and the associated removal of vegetation, topsoil and overburden
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, ensuring it is safe, stable, non-polluting environment and appropriately vegetated
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
Statement of Commitments	The Applicant's commitments set out in Appendix 11
TSC Act	<i>Threatened Species Conservation Act 1995</i>

3. In the definition for "Licence", replace the reference to "OEH" with "EPA".
4. Delete all references to "Director-General" and replace with "Secretary".
5. Delete all references to "NOW" and replace with "DPI Water".
6. Delete all references to "Sydney Catchment Authority" and replace with "WaterNSW".
7. Delete all references to "RTA" and replace with "RMS".
8. Replace all references to "the Applicant shall", or "The Applicant shall", with "the Applicant must", or "The Applicant must", respectively.
9. Delete conditions 2, 3, 4, 4A, 5 and 6 of Schedule 2, including the headings, and replace with:

TERMS OF APPROVAL

2. The Applicant must carry out the development:
 - (a) generally in accordance with the EIS, EA (Mod 1), EA (Mod 2), EA (Mod 3) and EA (Mod 4); and
 - (b) in accordance with the Development Layout Plan, the Statement of Commitments and the conditions of this consent.

Notes:

- *The Development Layout Plan is included in Appendix 2.*
- *The Statement of Commitments is included in Appendix 11.*

3. If there is any inconsistency between the documents identified in condition 2(a), the more recent document shall prevail to the extent of the inconsistency. The conditions of this consent shall prevail to the extent of any inconsistency with the documents identified in condition 2(a) or the Statement of Commitments.
4. The Applicant must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent (including any stages of these documents);
 - (b) any reviews, reports or audits commissioned by the Department regarding compliance with this consent; and
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON APPROVAL

5. The Applicant may carry out quarrying operations as part of the development until 1 January 2038.

Note: Under this consent, the Applicant is required to rehabilitate lands associated with the development and carry out additional undertakings to the satisfaction of the Secretary. Consequently this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of lands associated with the development and those undertakings have been carried out to a satisfactory standard.

6. *Deleted.*

10. After condition 12 of Schedule 2, insert the following:

*NSW Government
Department of Planning & Environment*

PRODUCTION DATA

- 13. The Applicant must:
 - (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review.
- 11. In condition 1 of Schedule 3, delete the note.
- 12. In conditions 2, 21, 22, 23, 24, 47 and 51 of Schedule 3, delete the word “shall” and replace with “must”.
- 13. Delete conditions 3 and 4 of Schedule 3, including the headings, and replace with the following:

Noise Impact Assessment Criteria

- 3. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 1 at any residence on privately-owned land.

Noise Assessment Location	Day	Evening	Night	
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)
1	35	35	35	45
2	35	35	35	45
3	35	35	35	45
4	35	37	35	46
5	35	35	35	46
6	35	37	36	46
7	38	38	35	55
8	39	38	36	55
9	39	39	37	56
10	42	42	40	53
11	35	35	36	47
12	37	37	36	47
13	40	38	37	47
14	35	35	35	47
15	35	35	35	47
16	35	35	35	45

Table 1: Noise Criteria dB(A)

Note: Receiver locations are shown on the plan in Appendix 3.

Noise generated by the development is to be measured in accordance with the relevant requirements of the INP (as may be updated from time-to-time). Appendix 10 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Operating Conditions

- 4. The Applicant must:
 - (a) implement best practice management to minimise the operational noise of the development;
 - (b) implement all reasonable and feasible measures to minimise road transportation noise associated with the development;
 - (c) minimise the noise impacts of the development during meteorological conditions when the noise criteria in this consent do not apply (see Appendix 10);
 - (d) carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent; and
 - (e) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent,

to the satisfaction of the Secretary.

14. Delete condition 6 of Schedule 3, including the heading, and replace with the following:

Noise Management Plan

6. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. In addition to the standard requirements for management plans (see condition 2 of Schedule 5) this plan must:
- (a) be submitted to the Secretary for approval by 30 November 2016, unless otherwise agreed by the Secretary;
 - (b) describe the measures that would be implemented to ensure:
 - compliance with the noise criteria in this consent;
 - best practice management is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 10);
 - (c) describe the proposed noise management system; and
 - (d) include a monitoring program that will be put in place to measure noise from the development against the noise criteria in Table 1, including noise monitoring to validate the predicted noise impacts for Location 11 contained in EA (Mod 4), and which evaluates and reports on the effectiveness of the noise management system on site.

The Applicant must implement the management plan as approved from time to time by the Secretary.

15. Delete condition 11 of Schedule 3 and replace with the following:

Blast Management Plan

11. The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Secretary. In addition to the standard requirements for management plans (see condition 2 of Schedule 5) this plan must:
- (a) be submitted to the Secretary for approval by 30 November 2016, unless otherwise agreed by the Secretary;
 - (b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this consent;
 - (c) include a monitoring program for evaluating and reporting on compliance with the blasting criteria in this consent; and
 - (d) include a protocol for investigating and responding to complaints.

The Applicant must implement the management plan as approved from time to time by the Secretary.

16. Delete conditions 13 to 15 of Schedule 3, including the headings, and replace with:

Operating Conditions

13. The Applicant must:
- (a) implement best practice management to minimise the dust emissions of the development;
 - (b) carry out periodic air quality monitoring to determine whether the development is complying with the relevant conditions of this consent;
 - (c) regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this consent;
 - (d) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events; and
 - (e) minimise the area of surface disturbance and maximise progressive rehabilitation of the site, to the satisfaction of the Secretary.

Quarry-owned Land

14. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in Tables 6-8 at any occupied residence on quarry-owned land unless:
- (a) the tenant has been notified of any health risks associated with such exceedances in accordance with the notification requirements under Schedule 4 of this consent; and
 - (b) the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice, to the satisfaction of the Secretary.

Air Quality Management Plan

15. The Applicant must prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. In addition to the standard requirements for management plans (see condition 2 of Schedule 5) this plan must:
- (a) be submitted to the Secretary for approval by 30 November 2016, unless otherwise agreed by the Secretary;
 - (b) be prepared in consultation with the EPA;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the relevant conditions of this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
 - (d) describe the proposed air quality management system; and
 - (e) include an air quality monitoring program that:
 - is capable of evaluating the performance of the development;
 - includes a protocol for determining any exceedances of the relevant conditions of consent;
 - effectively supports the air quality management system; and
 - evaluates and reports on the adequacy of the air quality management system.

The Applicant must implement the management plan as approved from time to time by the Secretary.

Meteorological Monitoring

- 15A. For the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.

Greenhouse Gas Emissions

- 15B. The Applicant must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.

17. Delete the note after the heading "SURFACE AND GROUND WATER" and replace with the following:

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.

18. In conditions 16 and 17 of Schedule 3, delete the word "License" and replace with "Licence".

19. In condition 18 of Schedule 3:

- (a) at the end of paragraph (a), delete the word "and";
- (b) at the end of paragraph (b), delete the full stop and insert instead:
"; and
- (c) Sediment Dams G1, G2, G3, G4, L2, L3 and L4 are constructed to manage the 95th percentile 5 day rainfall event."; and
- (c) delete the first dot point in the notes and replace with:
 - Locations of the Sediment Dams referred to in this condition are shown on the plans in Appendix 4.

20. In condition 19 of Schedule 3, replace all references to "OEH" with "EPA".

21. Delete condition 20 of Schedule 3 and replace with:

20. The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Secretary. In addition to the standard requirements for management plans (see condition 2 of Schedule 5) this plan must:
- (a) be prepared in consultation with the EPA, WaterNSW, DPI Water and DPI Fisheries;
 - (b) be submitted to the Secretary for approval by 30 November 2016, unless otherwise agreed by the Secretary;
 - (c) include a Water Balance;
 - (d) include an Erosion and Sediment Control Plan;
 - (e) include a Surface Water Monitoring Program;
 - (f) include a Ground Water Monitoring Program; and
 - (g) include a Surface and Ground Water Response Plan to address any potential adverse impacts associated with the development.

The Applicant must implement the management plan as approved from time to time by the Secretary.

22. Delete condition 25 of Schedule 3, including the heading, and replace with:

Waterway Crossings

25. The vehicular crossing of Lockyersleigh Creek as detailed in EA (MOD 4) must be designed and constructed in accordance with the *Policy and Guidelines for Fish Friendly Water Crossings* (DPI Fisheries, 2004) and *Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (2004) to the satisfaction of DPI Fisheries. Design plans should be submitted to DPI Fisheries for approval prior to construction.
23. In the Notes to condition 29 of Schedule 3, delete the word “shall” and replace with “must”.
24. After condition 33 of Schedule 3, insert the following:

Monitoring of Quarry Product Transport

- 33A. The Applicant must keep accurate records of all laden truck movements from the site (weekly, monthly and annually) and publish a summary of records in its Annual Review.
25. Delete conditions 34 to 36 of Schedule 3, including the headings, and replace with:

Protection of Aboriginal Sites

34. The Applicant must ensure that the development does not cause any direct or indirect impact on identified Aboriginal sites located outside the approved disturbance area of the development. Only those Aboriginal sites identified within the approved Aboriginal Cultural Heritage Management Plan (see condition 35) or an approved Aboriginal Heritage Impact Permit may be impacted within the approved disturbance area of the development.

Aboriginal Cultural Heritage Management Plan

35. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - be prepared in consultation with OEH and local Aboriginal stakeholders;
 - be submitted to the Secretary for approval by 30 November 2016, unless the Secretary agrees otherwise;
 - include the following:
 - a Conservation Management Plan that details how the Cultural Heritage Management Zones (shown conceptually on the plan in Appendix 6) are managed;
 - a detailed archaeological salvage program for Aboriginal sites/objects within the approved disturbance area, including details of how the salvaged Aboriginal objects will be managed and protected; and
 - a description of the measures that would be implemented for:
 - protecting, monitoring and managing Aboriginal sites outside the approved disturbance area;
 - maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site;
 - managing the discovery of any human remains or previously unidentified Aboriginal objects on site, including (in the case of human remains) stop work provisions and notification protocols;
 - ongoing consultation with local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage; and
 - ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions.

The Applicant must implement the management plan as approved from time to time by the Secretary.

36. *Deleted*
26. In condition 37 of Schedule 3:
- before the words “Aboriginal objects”, insert the words “previously unrecorded”; and
 - delete the words “not listed in Table 10”.
27. After condition 40 of Schedule 3, insert the following:

Lockyersleigh Homestead

- 40A. The Applicant must prepare a structural integrity report for the Lockyersleigh Homestead Property and Garden, subject to receiving the landowner’s agreement, by 30 June 2016.

28. Delete condition 43 of Schedule 3 and replace with:
43. The Applicant must rehabilitate the site in a manner that is generally consistent with the conceptual final landform in Appendix 8, to the satisfaction of the Secretary.
29. In condition 44(a) of Schedule 3:
- (a) in the second dot point, after the words “Habitat Management Area”, insert “(shown conceptually in Appendix 9), unless this area is incorporated into a conservation area subject to a BioBanking agreement”; and
- (b) following the second dot point, insert the following:
- “replace cleared hollow-bearing trees with durable and appropriate nest boxes that reflect the type, size, usability and condition of the hollows to be cleared;”
30. In conditions 46, 47 and 48 of Schedule 3, delete the reference “(see Condition 7 in Schedule 5)”, and replace with “(see condition 11 of Schedule 5)”.
31. After condition 48 of Schedule 3, insert the following:

Retirement of Biodiversity Credits

48A. The Applicant must retire the biodiversity credits specified in Table 11 to the satisfaction of the Secretary and OEH. The retirement of credits must be undertaken in accordance with the *Framework for Biodiversity Assessment - NSW Biodiversity Offsets Policy for Major Projects* by:

- (a) acquiring or retiring credits under the BioBanking Scheme in the TSC Act;
- (b) making payments into an offset fund that has been developed by the NSW Government; or
- (c) providing supplementary measures.

Credits may be retired progressively as the vegetation to be offset by the credits is cleared. By 31 May 2017, the Applicant must retire the credits associated with the projected vegetation clearing for the following five years. Credits must continue to be obtained and retired in five-yearly increments prior to clearance of the area of vegetation expected to be cleared in the forthcoming five years. Each Annual Review required under condition 10 of Schedule 5 must record the number of credits retired in the reporting year (or previously) and the area of vegetation expected to be cleared in the forthcoming five years.

Credit Type	Credits to be Retired
Ecosystem Credits	
<i>HN614 Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion</i>	2124
<i>HN570 Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion</i>	881
<i>HN515 Broad-leaved Peppermint – Ribbon Gum grassy open forest in the north-east of the South Eastern Highlands Bioregion</i>	33
Total	3038
Species Credits	
<i>Squirrel Glider (Petaurus norfolcensis)</i>	1725
Total	1725

Table 11: Biodiversity Credits to be retired

Note: The management actions used to generate credits will need to avoid impacting on Aboriginal cultural heritage unless these impacts are identified within an approved Aboriginal Cultural Heritage Management Plan (see condition 35) or an approved Aboriginal Heritage Impact Permit.

32. Delete condition 58 of Schedule 3, including the heading.
33. Delete Schedules 4 and 5 and Appendices 1 to 6, and replace with:

**SCHEDULE 4
ADDITIONAL PROCEDURES**

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing:
 - (a) an exceedance of any relevant criteria in Schedule 3, the Applicant must notify the affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria; and
 - (b) an exceedance of any relevant air quality criteria in Schedule 3, the Applicant must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.
3. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant must:
 - (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 3; and
 - if the development is not complying with these criteria then identify measures that could be implemented to ensure compliance with the relevant criteria; and
 - (b) give the Secretary and landowner a copy of the independent review.

**SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for the environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance; and
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this development consent; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Management Plan Requirements

2. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the development; and
 - effectiveness of any management measures (see (c) above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences;
 - (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
 - (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
 - (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

3. Prior to approval of management plans required under Schedule 3, all existing management plans, monitoring programs, strategies, programs, protocols, etc approved as at the date of approval of Modification 4 must continue to have full force and effect, and may be revised under the requirements of condition 5 below as if subject to the conditions of this consent that applied prior to the approval of Modification 4, or otherwise with the approval of the Secretary.

Updating & Staging Submission of Strategies, Plans or Programs

4. To ensure the strategies, plans or programs under this consent are updated on a regular basis, and that they incorporate any appropriate mitigation measures to improve the environmental performance

of the development, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval. With the agreement of the Secretary, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis.

With the agreement of the Secretary, the Applicant may revise any strategy, plan or program approved under this consent without consulting with all the parties nominated under the applicable conditions of consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

Revision of Strategies, Plans & Programs

5. Within 3 months of the submission of an:
 - (a) incident report under condition 8 below;
 - (b) Annual Review under condition 10 below;
 - (c) audit report under condition 11 below; and
 - (d) any modifications to this consent,the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent, to the satisfaction of the Secretary.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.

Adaptive Management

6. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.

COMMUNITY CONSULTATIVE COMMITTEE

7. The Applicant must operate a Community Consultative Committee (CCC) for the development, to the satisfaction of the Secretary. This CCC must be operated in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version)

Notes:

- The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.
- In accordance with the guideline, the committee should be comprised of an independent chair and appropriate representation from the Applicant, Council, and the local community.

REPORTING

Incident Reporting

8. The Applicant must notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the development, the Applicant must notify the Secretary and any other relevant agencies as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

9. The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

ANNUAL REVIEW

10. By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must review the environmental performance of the development to the satisfaction of the Secretary. This review must:
 - (a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - requirements of any plan or program required under this consent;
 - the monitoring results of previous years; and
 - the relevant predictions in the documents listed in condition 2(a) of Schedule 2;
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies;
 - (f) describe what measures will be implemented over the current financial year to improve the environmental performance of the development.
 - (g) describe the area of vegetation cleared as part of the development and identify the area proposed to be cleared over the next 5 years;
 - (h) calculate the number of additional BioBanking (or equivalent) credits that will need to be purchased, before that clearing can be done; and
 - (i) report on the number of BioBanking (or equivalent) credits that have been purchased to allow ongoing clearing and completion of stages.

The Applicant must ensure that copies of the Annual Review are submitted to Council and are available to the Community Consultative Committee (see condition 7 of Schedule 5) and any interested person upon request.

INDEPENDENT ENVIRONMENTAL AUDIT

11. By 30 September 2017, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies and the CCC;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under the these approvals; and
 - (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

12. Within 6 weeks of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, Council, EPA and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

13. By 30 November 2016, unless otherwise agreed by the Secretary, the Applicant must:
 - (a) make the following information publicly available on its website:
 - the documents listed in condition 2(a) of Schedule 2;
 - current statutory approvals for the development;
 - approved strategies, plans or programs;
 - a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
 - a complaints register, which is to be updated on a quarterly basis;

- the Annual Reviews (over the last 5 years);
 - any independent environmental audit, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Secretary; and
 - keep this information up-to-date,
- to the satisfaction of the Secretary.

APPENDIX 1: SCHEDULE OF LAND

Land to which the Development Application refers:

Lot	DP	Owner
112	750029	Holcim
1	1116876	Essential Energy
2	1116876	Holcim
230	750029	Holcim
294	750029	Holcim
3 - 4	1036993	Holcim
1	1074819	Holcim
1	1117910	Holcim
1 and 3	1074107	Holcim
10	700579	Holcim
7001	1025603	Crown Land
7002	1025604	Crown Land
2 - 15	196132	Holcim
2 – 4/Section 5	758653	Holcim
1/Section 5	758653	Crown Land
Part 7 and Section 1	758653	Holcim
10/Section 10	758653	Privately Owned
10 - 11	111641	Holcim
2	214304	Holcim
1 - 14	797340	Holcim
1 – 6	1140546	Holcim
8	1112296	Holcim
3	111640	Holcim
1 - 2	1111583	Holcim

Lot	DP	Owner
2	1117910	Goulburn Mulwaree Council
2	1107232	Holcim
1 - 3	1155889	Crown
7308	1160864	Crown
103	1167866	Roads and Maritime Service
101	1167866	Crown
6	1140546	Privately Owned
		Part Joarimin Creek
		Part Main Southern Railway
		Part Hume Highway
		Part Marulan South Road
		Part Stoney Creek Road
		Part Jerrara Road
		Crown Land and Crown road reserves within the DA area

APPENDIX 2: DEVELOPMENT LAYOUT

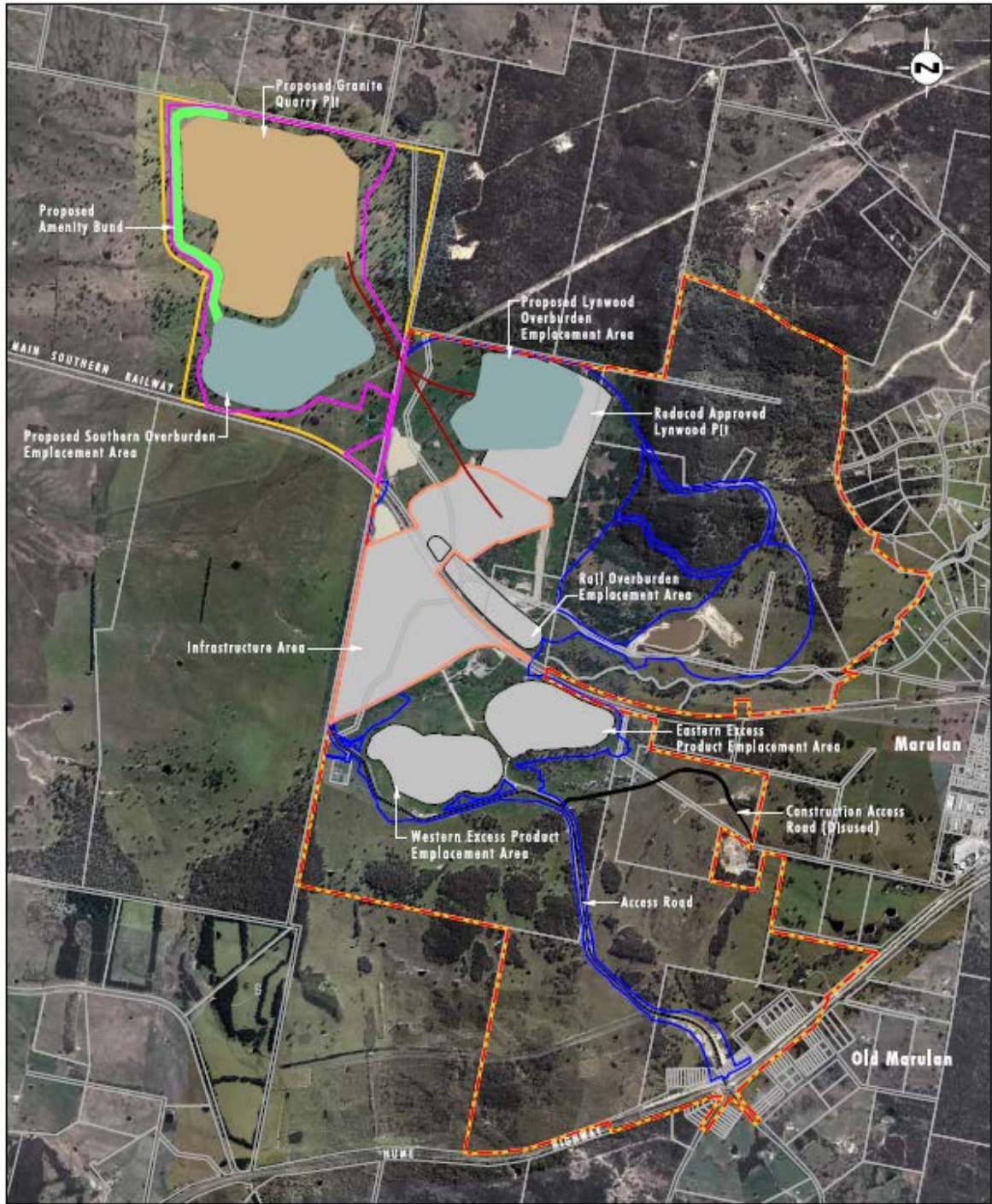


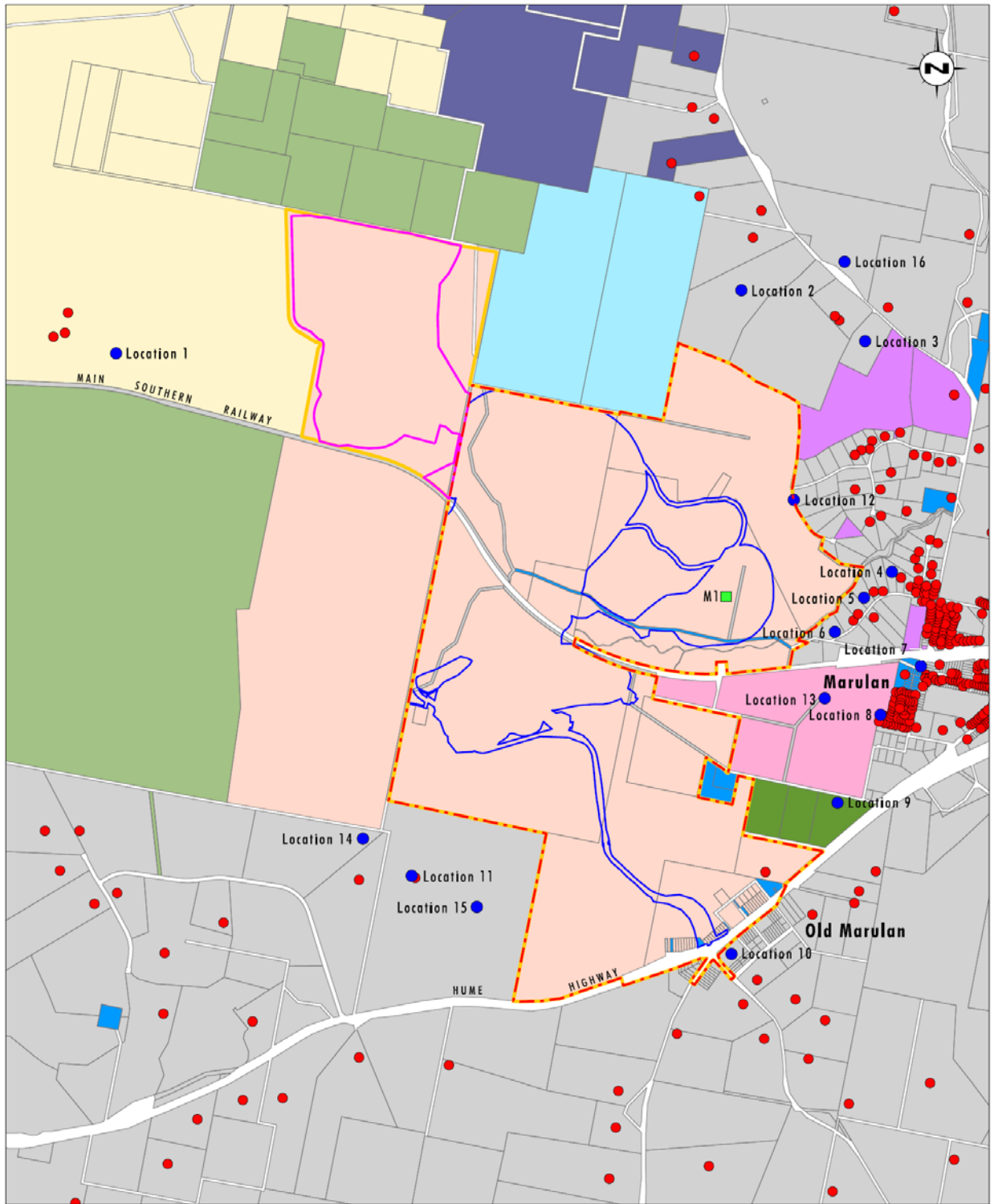
Image Source: Google Earth (2012), Helcim (2012, 2014)
 Data Source: LPI (2014), Helcim Australia (2015)
 Note: Generally in accordance with Lynwood Quarry Extraction Area Modification Environmental Assessment, November 2015

Legend

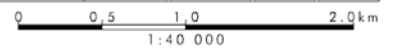
- Approved Project Area
- Modification Project Area
- Approved Disturbance Footprint
- Proposed Granite Pit Disturbance Footprint
- Existing and Approved Infrastructure Area
- Existing and Approved Lynwood Employment Areas
- Proposed Conceptual Quarry Pit
- Proposed Conceptual Overburden Employment Area
- Proposed Conceptual Amenity Bund
- Indicative Alignment of Main Haul Road

FIGURE 1
 Conceptual Lynwood Quarry Extraction Area
 Modification Project Layout

APPENDIX 3: NOISE RECEIVER LOCATIONS



Data Source: LPI (2014), Holcim Australia (2014)



Legend

- | | | |
|--|-------------------|--------------------------|
| Approved Project Area | Oliveri | Residence Location |
| Modification Project Area | Onions Investment | Residence/Noise Receiver |
| Approved Disturbance Footprint | Private Land | Holcim Weather Station |
| Proposed Granite Pit Disturbance Footprint | Gunlake | |
| Crown Land | Ranken Investment | |
| Tailored Property | Rawson | |
| Holcim Australia | South Creek Dairy | |

FIGURE 4.4

Land Ownership, Residence Location and Background Noise Monitoring Locations

APPENDIX 4: LOCATION OF SEDIMENT DAMS

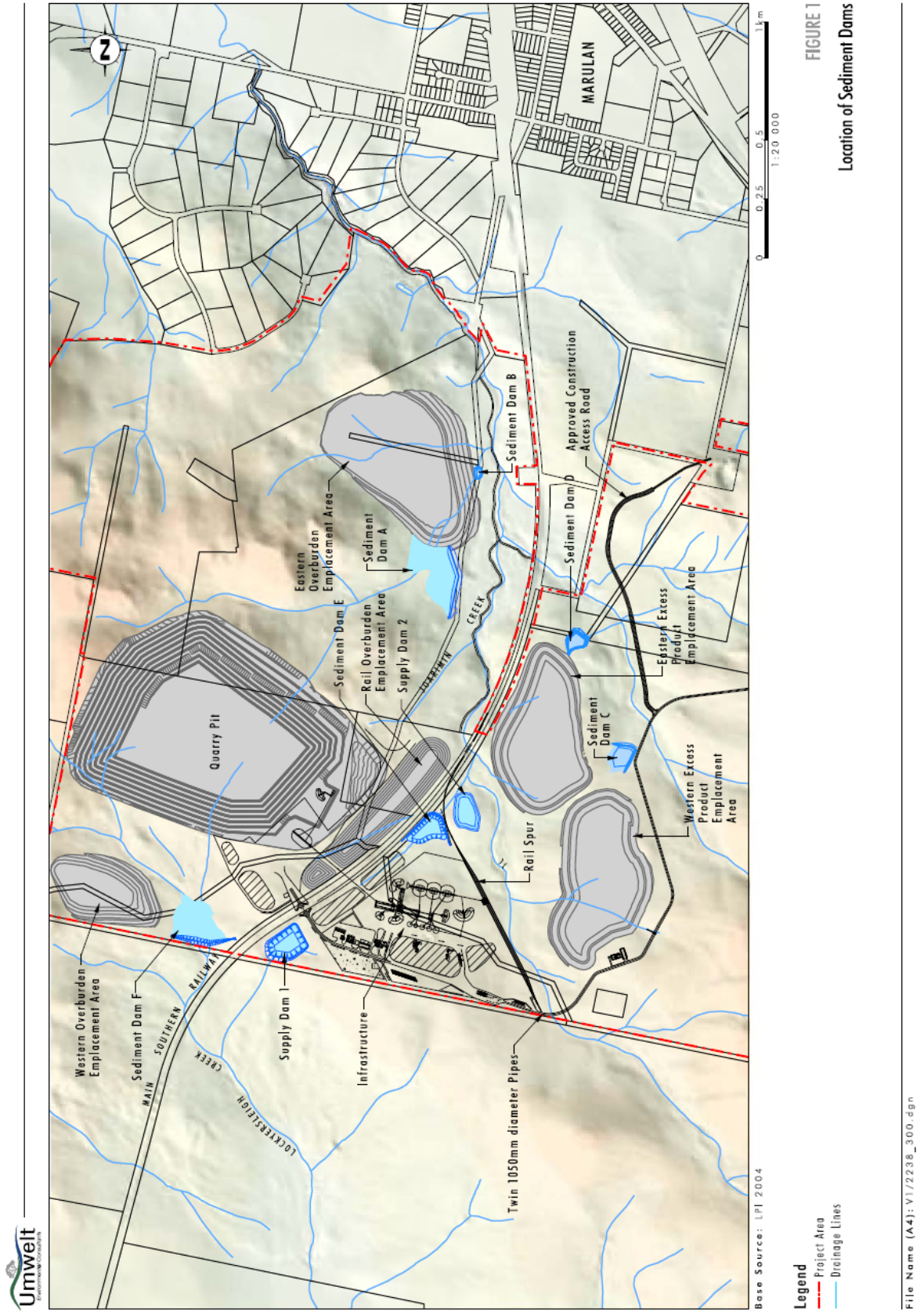


FIGURE 1
Location of Sediment Dams

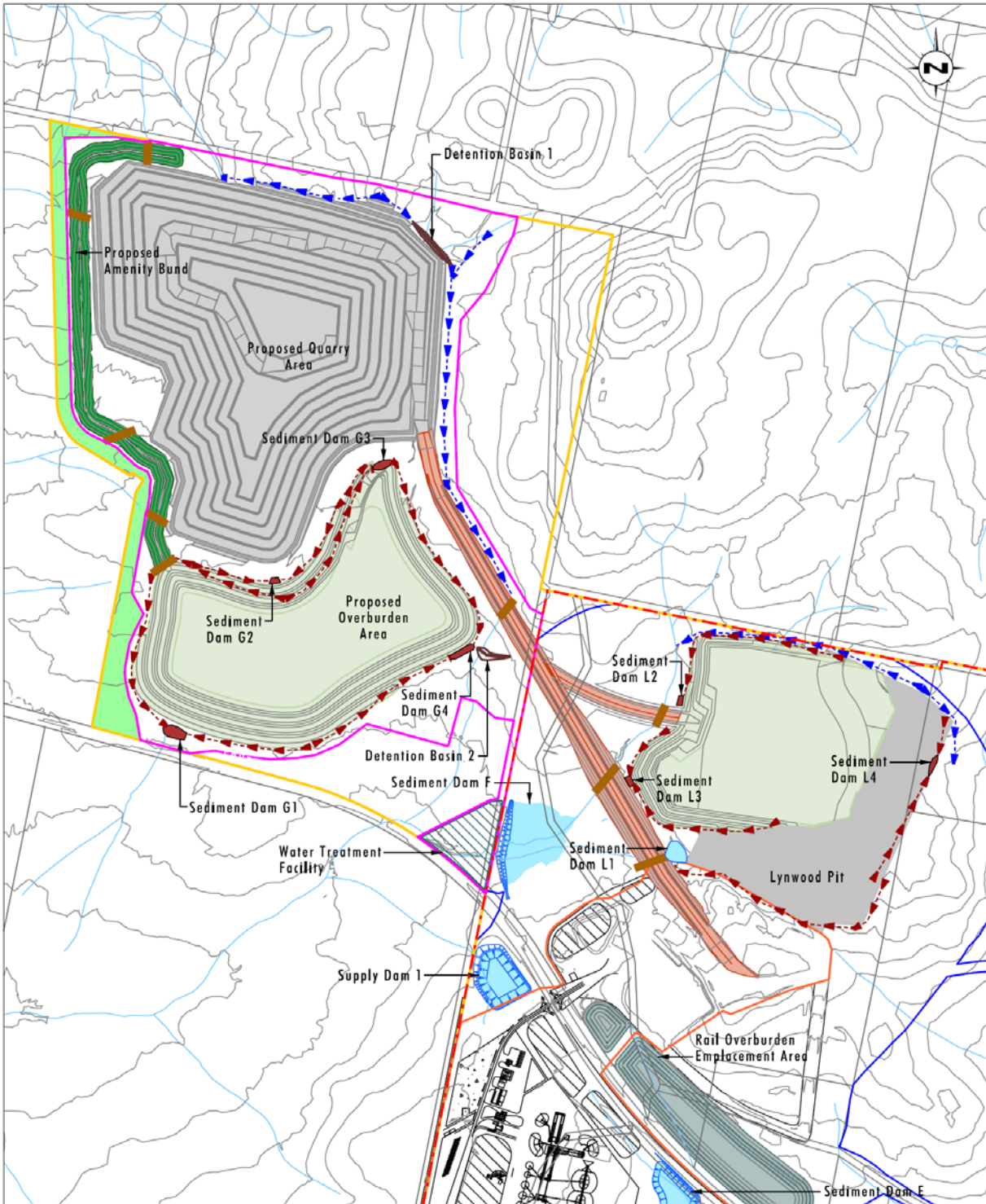
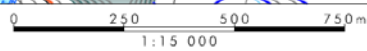


Image Source: Google Earth (2014)
 Data Source: LPI (2009), Holcim Australia (2014)
 Notes: 5m Contour Interval. Conceptual only and subject to detailed design.



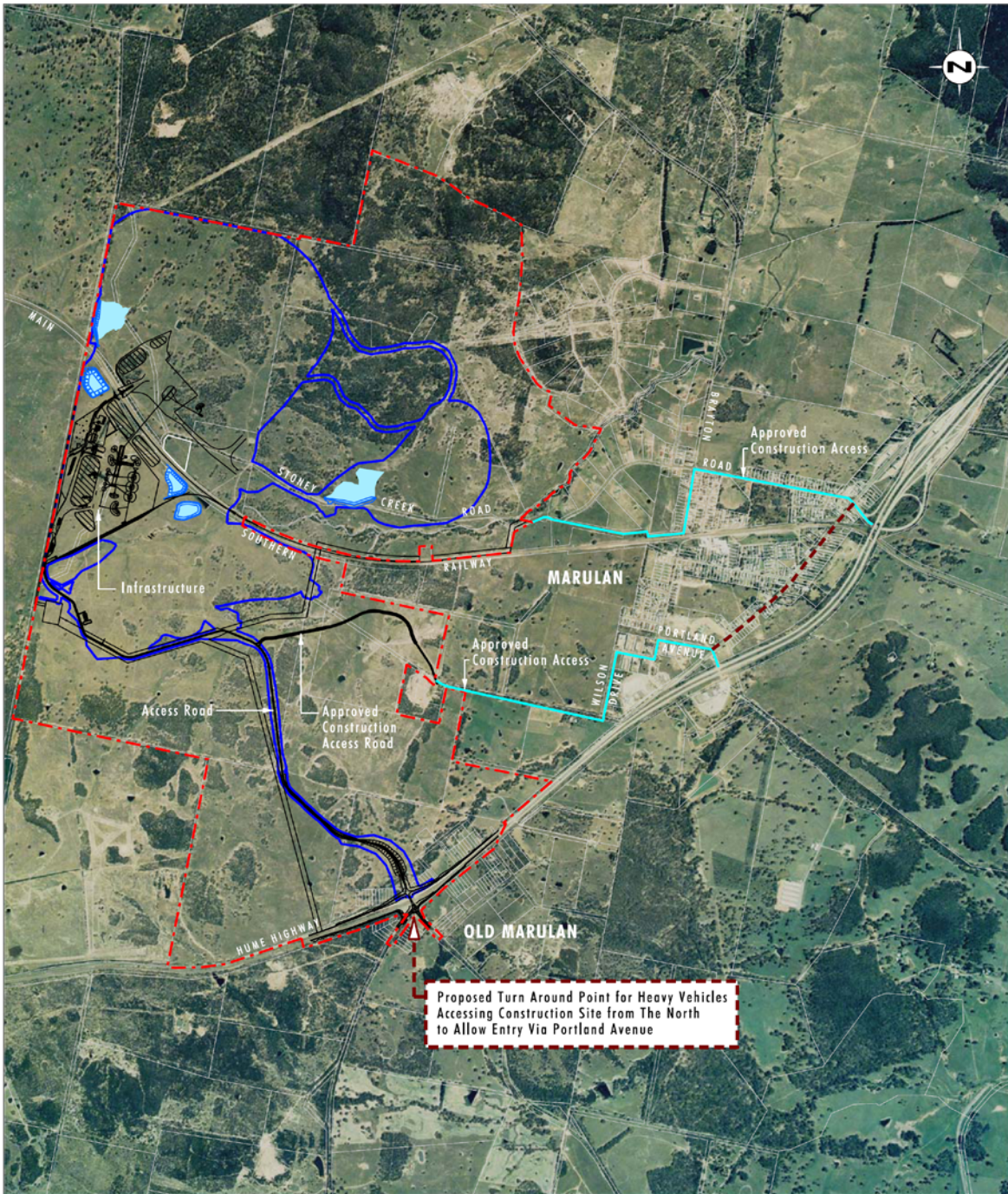
Legend

- | | | |
|--|--------------------------------------|-------------|
| Approved Project Area | Existing Dam | Dirty Drain |
| Modification Project Area | Proposed Overburden Emplacement Area | Culvert |
| Lynwood Infrastructure Area | Proposed Vegetation Buffer Zone | |
| Approved Disturbance Footprint | Proposed Amenity Bund | |
| Proposed Granite Pit Disturbance Footprint | Proposed Haul Road | |
| Lynwood Infrastructure Layout | Clean Dam | |
| Quarry Pit | Diversion Drain | |
| Approved Emplacement Area | Sediment Dam | |

FIGURE 6.16

Conceptual Water Management System - Stage 6

APPENDIX 5: CONSTRUCTION TRAFFIC ROUTES



Source: LPI 2004, Readymix Holdings Pty Ltd (Aerial Photo March 2005)

0 0.5 1.0 1.5 km
1:32 000

Legend

- - - Project Area
- Disturbance Footprint
- Approved Construction Access
- - - Proposed Construction Access

FIGURE 1
Construction Traffic Routes
Through Marulan Township

File Name (A4): V1/2238_305.dgn

APPENDIX 6: CULTURAL HERITAGE MANAGEMENT ZONE

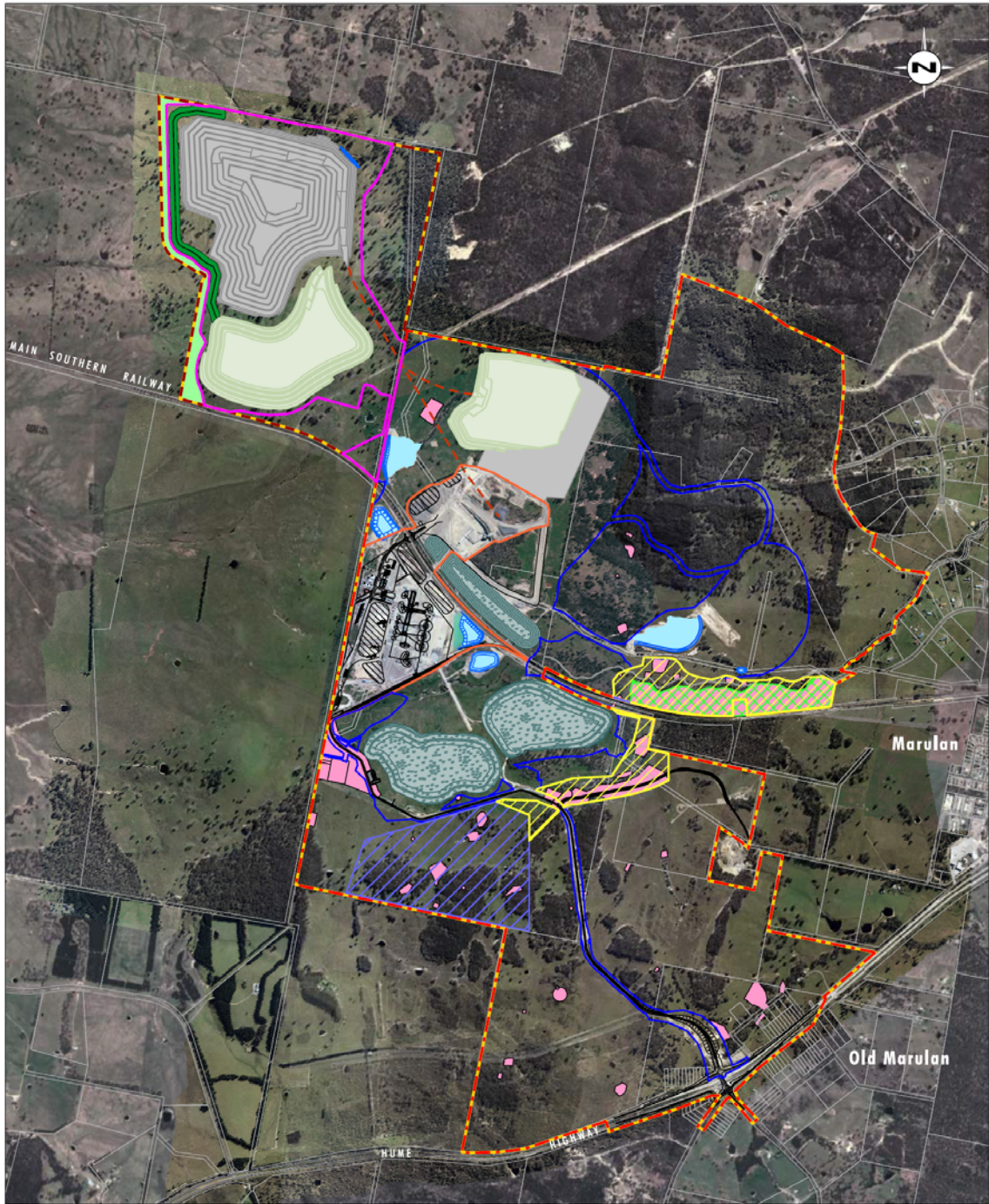


Image Source: Google Earth (2012), Holcim (2012, 2014)
 Data Source: LPI (2014), Holcim Australia (2015)

0 0.5 1.0 1.5 km
 1:30 000

Legend

- ▬ Approved Project Area
- ▬ Modification Project Area
- ▬ Lynwood Infrastructure Facilities
- ▬ Approved Disturbance Footprint
- ▬ Proposed Granite Pit Disturbance Footprint
- ▬ Lynwood Infrastructure Layout
- ▬ Quarry Pit
- ▬ Dam
- ▬ Proposed Overburden Emplacement Area
- ▬ Proposed Vegetation Buffer Zone
- ▬ Proposed Amenity Bund
- - - Proposed Haul Road
- ▬ Cultural Heritage Management Zone
- ▬ Cultural Heritage Management Zone Extension
- ▬ Joarimin Creek South
- ▬ Areas Identified as PAD
- ▬ Emplacement Area

FIGURE 6.47

Proposed Extended Cultural Heritage Management Zone and Areas Recorded as PAD within the Approved Project Area

34. Delete Appendix 8, and replace with the following:

APPENDIX 8: CONCEPTUAL REHABILITATION PLAN

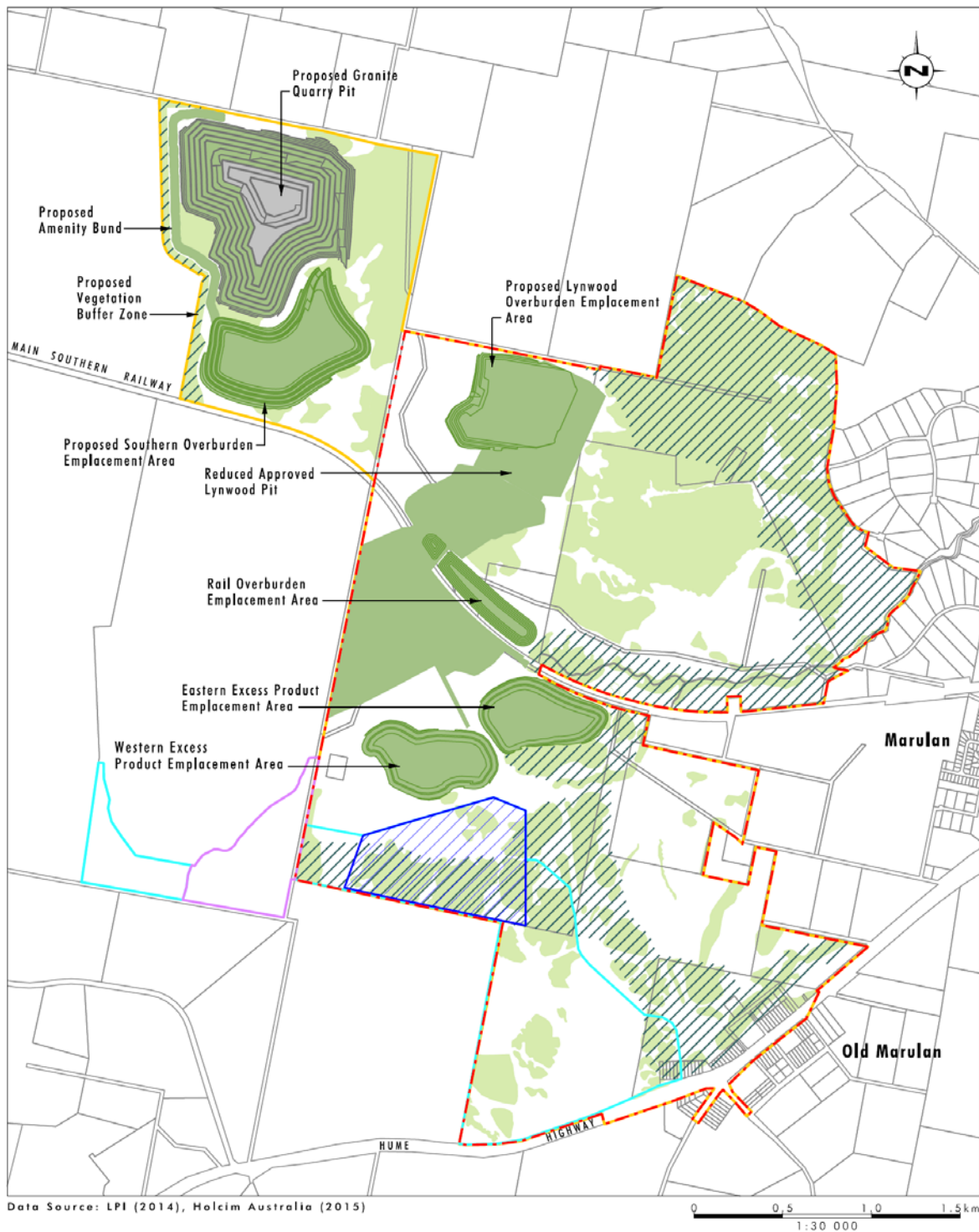


FIGURE 6.52
Conceptual Final Rehabilitation

35. Delete Appendix 10, and replace with the following:

APPENDIX 10: NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 1 apply under all meteorological conditions except the following:
 - (a) monitoring locations for the collection of representative noise data;
 - (a) wind speeds greater than 3 metres/second at 10 metres above ground level; or
 - (b) stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
 - (c) stability category G temperature inversion conditions.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions must be that recorded by the meteorological station required under condition 15A of Schedule 3.

Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this consent.
4. Unless otherwise directed by the Secretary, attended quarterly monitoring is to be used to evaluate compliance with the relevant conditions of this consent.

Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.

5. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the INP (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

36. After Appendix 10, insert the following:

APPENDIX 11: STATEMENT OF COMMITMENTS

(Final May 2016)

The Environmental Assessment for Modification Application DA 128-5-2005 MOD 4 (EA (MOD 4)) in its entirety is the guiding document which provides context to the following commitments made by in relation to the Lynwood Extraction Area Modification Project. The EA (MOD 4) is to be used as the reference for interpreting how Holcim Australia will operate to implement these commitments.

Modification Project Management and Mitigation Measures

Management Plans

The approved Lynwood Quarry Environmental Management Strategy and environmental management plans will be revised and updated as part of the implementation of the Modification Project.

Noise

The design of the Modification Project incorporates the measures proposed in the 2004 Noise Impact Assessment (Heggies Australia, 2004) and 2010 modification (Umwelt, 2009a), where they are still applicable noting the proposed changes to Lynwood Quarry.

In addition to the noise management measures (outlined in Appendix 4 of the EA (MOD 4)), the following measures are proposed to be incorporated into the routine operation of the quarry over the life of the Modification Project to further minimise noise impacts:

- The use of broad band reversing alarms instead of beeper style alarms on all mobile equipment.
- The management of mobile machines during adverse weather conditions when wind conditions or inversion conditions enhance the noise propagation towards sensitive receiver locations. This could include, but not be limited to:
 - ensuring the sales loader operates behind the product stockpile during adverse weather conditions in the evening and night time period; and/or
 - moving quarrying activities to locations deeper in the quarry pit during adverse weather conditions and ceasing operations in exposed areas (e.g. on the face of the overburden emplacement areas).
- Regular inspection and maintenance of noise attenuation systems on quarry equipment.
- Implementation of a process for periodic review of noise performance of equipment.

Blasting

Holcim Australia has an existing blast management and monitoring system in place at Lynwood Quarry which will be implemented for the Modification Project including:

- design of each blast to meet the required criteria and considering the particular needs, location, geological conditions of each blast. Appropriate blast initiation sequences will be used to minimise impacts with blast MIC limited as required to meet vibration and overpressure criteria
- a pre-blast review of environmental conditions (including weather conditions) to avoid blasting in conditions which may significantly increase blasting impacts or dust impacts
- blasts are typically undertaken between 10 am and 3 pm noting that blasting is permitted to be undertaken between 9 am and 5 pm Monday to Saturday
- a blast monitoring system is in place at Lynwood Quarry with the results of monitoring used to assess compliance and feedback into the site blast model to provide for ongoing refinement of blast design. The blast monitoring program will be updated as part of the implementation of the Modification Project
- a blast notification process in accordance with Condition 10 of Schedule 3 of the development consent which requires Holcim Australia to notify residents of upcoming blasts, operate a blasting hotline and keep the community informed about this hotline.

Holcim Australia will, subject to agreement of the landowner, commission a structural assessment of Lockyersleigh Homestead and the associated heritage structures to confirm the suitability of blast limits for these structures.

Air quality

Holcim Australia will continue to implement the existing air quality management and monitoring system in place at Lynwood Quarry which includes both engineering and operations controls measures as outlined in Section 6.5.5 of the EA (MOD 4).

The existing air quality monitoring program will be revised as operations commence in the Granite Pit with monitoring locations revised as indicated in Figure 2.5 of the Response to Submissions report. This monitoring program may be revised over the life of the Project with any changes outlined in the Air Quality Management Plan.

Biodiversity

Holcim Australia will implement the following biodiversity controls:

- a robust tree felling procedure as outlined in Appendix 7 of the EA (MOD 4) will be implemented to minimise the potential for impacts on native fauna species (focusing on threatened species) as a result of the clearing of hollow-bearing trees
- nest boxes will be established in retained vegetation in proximity to the proposed disturbance footprint to mitigate the loss of hollow-bearing trees
- targeted weed management measures including regular weed inspections and weed control and eradication techniques such as herbicides, physical removal and prompt revegetation of bare areas will be implemented in the Modification Project Area
- targeted feral animal management measures will be implemented in accordance with Holcim Australia's existing Landscape Management Plan
- traffic control measures/speed limits/signage will be implemented on haul roads to minimise fauna injury/road kills, as much as possible.

Holcim Australia will deliver a Biodiversity Offset Strategy for the Modification Project in accordance with the NSW Biodiversity Offsets Policy for Major Projects.

Surface Water

Holcim Australia will update the Lynwood Quarry Water Management Plan. This will include an update to the Lockyersleigh Creek Riparian Area Management Plan.

Key surface water management controls for the Modification Project will include:

- Erosion and sediment controls will set out and monitored during construction and operation in accordance with the Blue Book (Landcom, 2004 and DECC, 2008).
- Monitoring of water imported to site, water used on site and water discharged following the guidelines for *Water Reporting Requirements for Mines* (NSW Office of Water, undated), where applicable.
- The existing surface water monitoring program will be updated to include four additional sites as shown in Figure 2.2 of the Response to Submissions report. The final details of the proposed surface water monitoring program will be contained within the updated Water Management Plan.
- The water quality parameters and frequency of sampling will remain as for the existing approved operations. Flow monitoring will continue to be undertaken by visual observation of the flows during water quality sampling (flow, no-flow).

Groundwater

Holcim Australia will extend the current groundwater monitoring program, which includes both groundwater level and quality, to include the new monitoring piezometers that were constructed for the Granite Pit during the exploration drilling phase. Details of these locations are provided in Appendix 9 of the EA (MOD 4). These bores will be monitored until they are progressively removed by the progression of the Granite Pit or as otherwise refined via the Water Management Plan.

Social Impact and Opportunities

Holcim Australia will implement the following measures in relation to mitigating social impacts and maximising opportunities:

Visual

- Ongoing liaison with interested members of the Towrang community with regard to lighting and other visual impacts as appropriate.
- Ongoing discussion with key residents in Marulan and surrounds.
- Implementation of the visual management measures outlined later in this section.

Land Management

- Where appropriate, consult with neighbouring landholders when undertaking pest and weed management activities.

Population Change (infrastructure and services)

- Continue implementation of the community fund.

Land Use and Industry Diversity

- Consider potential benefits to the local tourist industry when determining community contributions, in consultation with relevant community and business stakeholders as relevant throughout the life of operations.

Trust and Reputation

- Existing engagement to continue as appropriate, with a focus on respectful, honest and open communications.
- Continue to communicate regularly with nearby and interested stakeholders regarding:
 - ongoing operations on site
 - residents' experience of impacts such as dust, noise, blasting, traffic, heritage and impacts to water
 - visual impacts, particularly with interested members of the Towrang community
- Holcim Australia will periodically review the operation and membership of the CCC, in line with the 2007 *Guidelines for establishing and operating Community Consultative Committees for Mining Projects*, to ensure that membership is appropriate for the issues discussed and that matters discussed and minutes are distributed (for example via email) to all interested community stakeholders more widely
- Utilise additional communication channels such as local newsletter, updates and local blogs.

Monitoring

- Undertake social monitoring as outlined in Table 6.14 of the EA (MOD 4).

Visual Amenity

The following measures will be implemented as part of the Modification Project to minimise visual impacts:

- Amenity Bund – an approximately 12 metre high amenity bund (and 14 metres in spot locations, as required) will be constructed along the western boundary of the Granite Pit Area. This bund will be constructed as part of the initial establishment phases of the Granite Pit so that it is in place for the life of the quarry operations. The outer face of the bund will be revegetated (through direct seeding or tube stock) as quickly as possible so that trees, over time, will contribute to the overall visual screening of the quarry operations.
- Lighting – there will be no fixed lighting in the Granite Pit Area.
- Lighting – quarry operations on the surface including topsoil stripping, overburden extraction and overburden emplacement will be daytime operations only (consistent with current development consent conditions) and therefore do not have any potential to result in lighting impacts.
- Lighting – quarrying within the Granite Pit will occur in the evening period (up to 10 pm, consistent with current development consent conditions) but will be managed so that extraction activities are undertaken in areas that are not visible from the potential viewing locations to the west (i.e. on lower benches or on the western face of the quarry), with mobile lighting plant kept low and pointing down, facing away from western residences and kept to the minimum needed for operational safety.
- Lighting – a bund will be constructed along the western and southern faces of the haul road from the Granite Pit to the infrastructure area. The purpose of this bund will be to seek to screen the headlights of vehicles operating on the haul during the evening period (6pm to 10pm). The bunding will be approximately 5 metres high.
- Overburden emplacement – Holcim Australia will seek to construct the outer edges of the overburden emplacement areas first, creating an approximate 5-10 metre high bund behind which overburden emplacement activities will continue. This will provide visual screening of ongoing emplacement activities and allow timely rehabilitation of the outer face of the emplacement area to minimise visual impacts (noting that once rehabilitated the emplacement areas will start to blend into the existing environment and not be as visually prominent).
- Overburden emplacement – emplacement areas will be rehabilitated as soon as practicable after final shaping, with progressive rehabilitation to be undertaken over the life of the quarry so that the externally visible disturbed area is kept as small as practicable. Revegetation will be undertaken as discussed in Section 6.15 of the EA (MOD 4) to result in mixed grassland and woodland vegetation that will be similar in visual character to the surrounding natural landscape.
- Overburden emplacement - the surface of the Southern Overburden Emplacement Area and the Lynwood Overburden Emplacement area will be shaped to have swales, small drainage hollows and a locally irregular landform to resemble, where practicable, the natural surrounding landform.

- Quarry operations – the upper western facing benches of the Granite Pit (which are in overburden material) will be shaped and rehabilitated progressively as the quarry progresses. These areas will be visible from a small number of elevated properties in Towrang and so will be rehabilitated as soon as practicable to reduce visibility.
- Maintenance – Holcim Australia will maintain the amenity bund and its vegetative cover so that it remains effective for the duration of the quarry operations.

Note: as discussed in the EA, the priority for emplacement of overburden will be 1 - construction of haul roads to allow quarrying, 2 - construction of the visual bund, 3 - construction of the outer faces of the overburden emplacement areas.

Aboriginal Cultural Heritage

Holcim Australia will update the Aboriginal Cultural Heritage Management Plan (ACHMP) for Lynwood Quarry. Holcim Australia will implement the Aboriginal Cultural Heritage management actions detailed in Section 6.9.9 of the EA (MOD 4).

Historic Heritage

The historic heritage management measures to be implemented for the Modification Project are as follows:

- Blasting is to be designed so that vibration does not exceed 5 mm/s at the Lockyersleigh Homestead and outbuildings with blasts monitored to confirm compliance.
- Subject to agreement of the landowner, an inspection will be undertaken to confirm the structural integrity of Lockyersleigh Homestead and associated outbuildings to confirm that a maximum ground vibration limit with a peak particle velocity of 5 mm/s is appropriate.
- In the unlikely event that unexpected archaeological remains or potential heritage items not identified as part of this report are discovered during the Modification Project, all works in the immediate area will cease. The remains and potential impacts will be assessed by a qualified archaeologist or heritage consultant and, if necessary, the Heritage Branch, OEH notified in accordance with Section 146 of the *Heritage Act 1977*.
- If potential human remains are located following any surface disturbance, all works will halt in the immediate area to prevent any further impacts to the remains. The NSW Police will be contacted immediately.

Gas Pipeline Hazards

The key technical control measures to be implemented as part of the Modification Project include:

- pipelines will be designed in accordance with relevant standards
- geotechnical assessment will be undertaken to determine soil stability at pipeline crossing location prior to construction activities
- civil design of the haul road/pipeline crossing will be undertaken so that the installed road meets load bearing capacity requirements and relevant standards
- use of appropriate equipment to minimise the impact on the pipes in the event of contact
- use of process and design controls including limited excavation depths, buffer distances and designated crossings to limit potential for contact with or overstress of the pipes during haul road construction.

The key non-technical safeguards and procedures to be implemented as part of the Modification Project for works in the vicinity of the gas pipeline will include:

- assessment of process designs, site layout and design changes
- procedural control including APA Group's Daily Permit System, site inductions and other procedures
- operating procedures, including awareness and training
- cessation of operations in adverse weather conditions and where practical covering of exposed pipelines
- implementation of site speed limit, driver training, route selection and physical barriers where appropriate
- provision of physical controls including fencing of site during construction
- limiting access to authorised personnel only and implementation of security patrol if necessary
- appropriate training and supervision of operations
- provision of ongoing maintenance and operation procedures.

Greenhouse Gas and Energy

As part of the Modification Project Holcim Australia will review opportunities for reducing energy consumption on an ongoing basis during the detailed design process and once the operation has commenced including:

- setting energy use and greenhouse emission reduction targets
- using energy monitoring and auditing as a management tool
- providing training on energy management to site personnel
- monitoring the fuel efficiency of diesel equipment

- considering the energy efficiency of new equipment when making purchasing decisions
- using high efficiency electric motors.

Rehabilitation

The key elements of the rehabilitation strategy for the Modification Project will include:

- the timely and progressive rehabilitation of disturbed areas
- the surface of the Southern Overburden Emplacement Area and the Lynwood Overburden Emplacement area will be shaped to have swales, small drainage hollows and a generally irregular landform to resemble the natural surrounding landform
- stripped topsoil will be placed in stockpiles in depths of up to approximately three metres and will be seeded with a cover crop if they are to remain in place for longer than approximately six months
- shaped areas will be covered with topsoil where practicable
- areas where topsoil has been replaced will be seeded with a native species and cover crop mix with intent of achieving mixed grassland and woodland native vegetation communities
- selected surface habitat features consisting of large rocks, logs and trees from clearing undertaken in the Modification Project Area will also be placed across the rehabilitated area, where practicable
- upon closure of the quarry, unless an alternative use of the quarry infrastructure is identified, the infrastructure will be removed and the areas containing the surface infrastructure will be recontoured. The reshaped areas will then be seeded with a native species and cover crop mix with the intent of achieving mixed grassland and woodland native vegetation communities
- upon closure of the quarry, the haul roads would also be removed and water management controls either removed or modified to assist in stabilisation of the final landform and to capture any sediment runoff from the rehabilitated areas.

Towrang Working Group Objectives and Commitments

As part of the stakeholder engagement program for the Modification Project, a working group was formed between members of the Towrang community and Holcim Australia. An outcome of this working group is a set of objectives and commitments proposed to mitigate the impacts to the Towrang Valley and its surrounds (Towrang NSW 2580). The objectives and commitments have been agreed between the Towrang community representatives and Holcim Australia.

These objectives and associated commitments apply to the operations in the Granite Pit Area only and are not intended to be applied to the Approved Operations with the exception of the *Off Site Lighting Impacts Objective* and associated commitments.

The *Off Site Lighting Impact Objective* has been made with the intent of minimising or preventing off site lighting impacts generated at the administration buildings, administration car park area, car park entry road, weighbridge, refueling areas and conveyor lights which exist below the height of the lighting screens. The associated commitments have been drafted to reflect the intention of the Off Site Lighting Impact Objective.

The outcomes of the Towrang working group process, including the commitments that will be implemented as part of the Modification Project are provided below. Holcim recognise that while the commitments were made to address the concerns of the Towrang community they will also provide benefits to communities to the east and south of the quarry.

The outcomes of the Towrang working group process, including the commitments that will be implemented as part of the Modification Project are provided below.

Holcim Australia Pty Ltd (Holcim) operates the Lynwood Quarry. Holcim is proposing to modify the Lynwood development consent through Modification 4 and open a new granite pit on Holcim owned land. The granite pit will replace the ignimbrite material currently being extracted. The granite material is better suited to providing consistent aggregate products for the life of the quarry. Throughout the assessment process Holcim has actively engaged with the surrounding communities to present the proposed changes contained in Modification 4 and listened to community feedback and concerns.

In response to concerns raised by members of the Towrang community regarding aspects of the operations at the Lynwood Quarry and potential impacts from the Modification 4, Holcim has developed a set of objectives and commitments which we believe will minimise potential impacts to the Towrang community. Holcim recognise that it is up to Holcim to develop the systems to achieve the objectives

Holcim propose the following;

Proposed Granite Pit

Objectives

Holcim will do everything practicable to ensure operational elements for the proposed granite quarry pit and associated works, including haul roads, trucks, plant and machinery are fully screened from sight from all existing residences in the Towrang Valley and surrounds.

Holcim will do everything practicable to ensure operational elements of the proposed granite quarry pit and associated works, including haul road traffic, plant and machinery do not impact the existing residences in the Towrang Valley and surrounds as far as is practicable in relation to noise, dust and vibration.

It is understood that the building of the bunds, haul roads, and overburden mounds will be visible during construction and maintaining vegetation, however Holcim will undertake these activities in a way to limit the offsite visual, noise and dust impacts.

Holcim's Commitments

Holcim proposes to achieve the objectives through commitments included in our Environmental Assessment and project description lodgement to the State Government.

These commitments include:

- A 12 metre high amenity bund will be constructed adjacent to the western boundary of the proposed granite pit. A 12 metre high amenity bund connecting with the western amenity bund will be constructed adjacent the northern boundary of the proposed granite pit. The northern amenity bund will extend from the western boundary and will terminate before it intersects with the tributary which flows from the northern extent of the project area toward Lockyersleigh Creek. At spot locations the bund may be extended to 14 metres in height if required.
- Holcim will re-vegetate the granite pit eastern overburden bench as soon as practicable.
- Holcim will plant suitable native species to thickly vegetate the western and northern faces of the amenity bunds to grow to a height of 2-3 metres above the bund height.
- Holcim will engage a suitably qualified botanist/horticulturalist to ensure appropriate plants are chosen to ensure a thick, evergreen, robust screen can be achieved.
- In addition to the amenity bund, where required, Holcim propose to use semi-permanent visual screens to shield the overburden removal activities. The screens will be of sufficient height to obscure vision of mobile plant undertaking top soil and overburden removal activities. The screens will be repositioned as the overburden removal activities progress through the development stages.
- Holcim will construct bunding along the western and southern faces of the haul road to screen vehicle movements leaving the pit and traveling to the established primary crusher. The proposed bunding will be of a height of 5 metres where required to screen vehicle movements, entering and leaving the pit and travelling to and from quarry processing facilities.
- Holcim will ensure that noise escaping from the granite pit operation will be minimised as far as practicable and will undertake noise attenuation measures as required, including, if necessary, the use of rubberised liners in the truck bodies.
- All crushing of material from the granite pit will be conducted at the existing crushing facilities. Holcim will only use machinery required to undertake extraction as per our development conditions, including drilling, blasting, loading, hauling, dust suppression, overburden removal and activities related to these operations.
- Overburden will only be removed during daylight hours.

Required Maintenance:

- Holcim will ensure that the amenity bund is properly maintained to ensure its efficacy for the duration of the quarry license.
- Holcim will ensure all bund vegetation is appropriately maintained, watered, fertilized and where required replaced or replanted from time to time to ensure the objective of the bund and vegetation is continually achieved.
- When from time to time during the quarry license period improved technical innovations emerge that would deliver an improved outcome to the above objective Holcim will promptly adopt those innovations where practicable.
- Trucks will be maintained to ensure noise reduction measures do not diminish over time.

Off Site Lighting Impacts

Objective

Holcim will do everything practicable to prevent and or minimise any off site lighting impacts from the Lynwood Quarry to all existing residences in the Towrang Valley and surrounds.

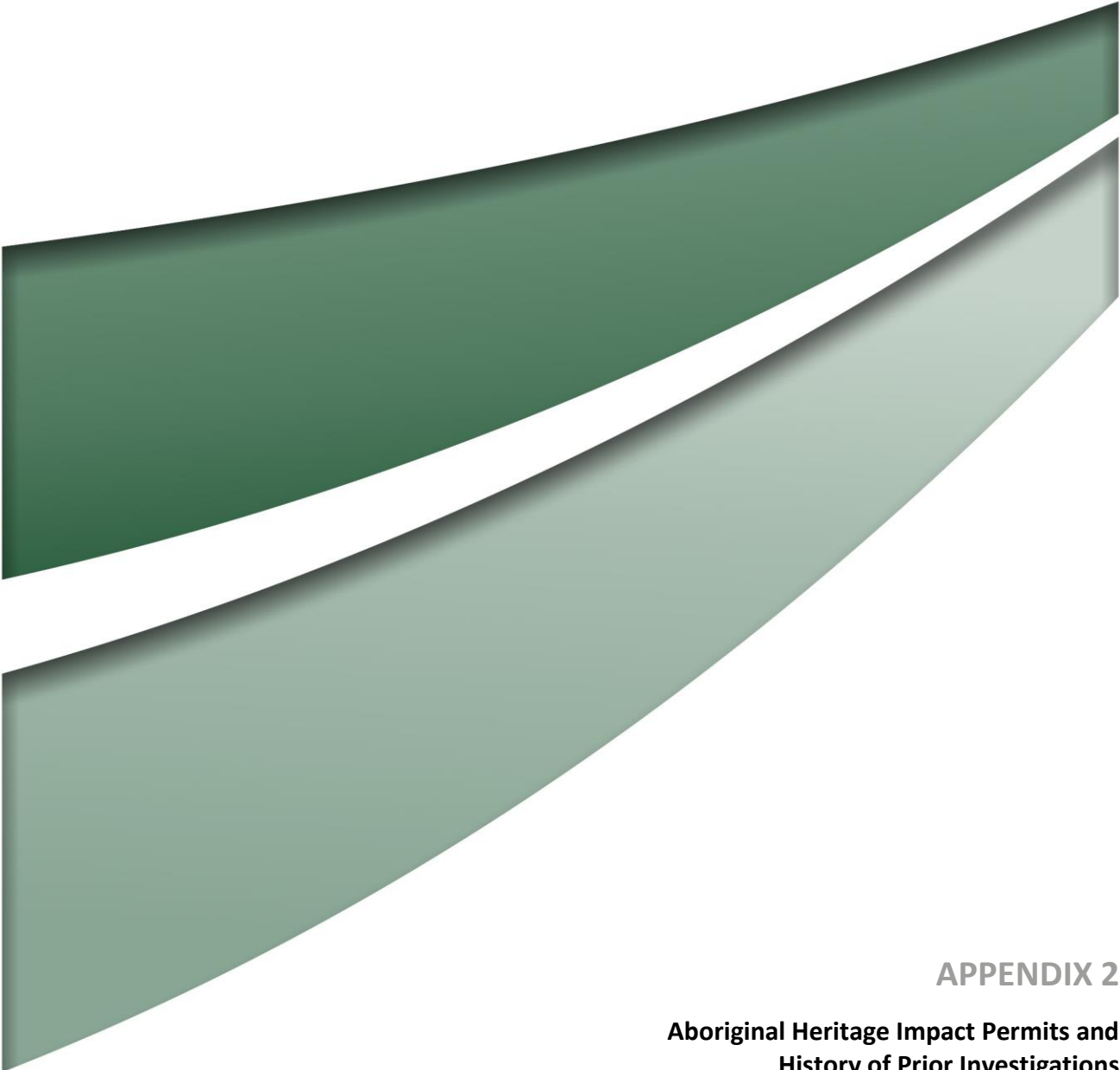
Holcim's Commitments

- Holcim will build a light proof fence with a minimum height of 9 metres along the full length of the western boundary of the car park access road and car park, shielding from view all road lighting and car park lighting fittings.

- *Holcim will reduce the height of all light fittings used to illuminate the car park access road and car park to a height no greater than 8.5 metres above ground level. Holcim will cut off the surplus length of all light poles along the car park access road and in the car park just above the light fittings at 8.5 metres and ensure the light fitting cannot be moved to a greater height.*
- *All conveyor lights above the lighting screens are to be by default turned off and only illuminate when required maintenance or repair. When such maintenance or repair has been completed the conveyor lights will be turned off again.*
- *All conveyor lights above the lighting screen will be fitted with appropriate screens or light shades to reduce as far as is practicable any off site lighting impacts*
- *Holcim has committed to re-examine the Webb lighting report and to review the lights on the upper sections of the conveyor system. If additional screening is possible and practicable Holcim will modify accordingly.*
- *The list of recommendations made by Webb, presented and discussed at meeting 24 April 2015, includes a number of activities including adjusting light angles, reducing some 400w luminaires with 150w luminaires etc. Holcim will update the list of adjustments and attached to the Statement of Commitments with agreement that these light reduction modifications not be diminished or reduced, but they can be, by agreement, improved upon when the opportunity arises.*

Maintenance:

- *Holcim will maintain and repair when necessary the light proof fence so that for the duration of the licence period, and during any renewed licence period, the fence will achieve the stated objective.*
- *Holcim will ensure that at no time light fittings are mounted at a height greater than that of the light proof fence, with the exception of the current conveyor lights which exist above the lighting screen. Holcim have committed to installing switches controlling the upper half of the conveyor lights which exist above the lighting screens. Holcim commit to only using the lights to undertake emergency maintenance at night time as required.*
- *When from time to time during the quarry license period improved technical innovations emerge that would deliver an improved outcome to the above objective Holcim will promptly adopt those innovations where practicable.*



APPENDIX 2

Aboriginal Heritage Impact Permits and History of Prior Investigations

Appendix 2 - History of Aboriginal Heritage Impact Permits and Prior Archaeological Investigations

Background

Schedule 3, Condition 36 (b) of the May 2005 Development Consent, identified a requirement for a subsurface testing and salvage program for Aboriginal sites located within the Lynwood Quarry Ignimbrite Pit development impact area prior to the commencement of construction of infrastructure and quarry development. Condition 37 also identified a requirement for monitoring of all topsoil stripping 'unless the DEC [Department of Environment and Conservation] approves otherwise'. In line with the requirements of the Department of Environment and Climate Change (now the Office of Environment and Heritage -OEH), an upfront subsurface testing program was developed incorporating the known sites and all of the Archaeological Terrain Units (ATUs) within the Lynwood Quarry Ignimbrite Pit disturbance footprint. The subsurface testing of the ATUs was endorsed by the DECC and the relevant Aboriginal Parties as a suitable alternative to ongoing monitoring of ground disturbing works. Thus Condition 37 has been satisfied by the subsurface investigations and salvage subsequently completed in compliance with AHIPs endorsed by DECC.

Since the May 2005 approval of the Lynwood Quarry development a number of Aboriginal Heritage Impact Permits (AHIPs) have been approved by OEH (refer to attached AHIPs). As part of the subsurface testing of the ATUs a number of new sites were identified within the project disturbance footprint and these sites and all sites previously known (with the exception of MRN25 and MRN69) within the project disturbance footprint were subsequently been salvaged between 2007 and 2011.

The final salvage program for the Ignimbrite Pit was undertaken under OEH AHIP #1100264 approved by OEH on 20 May 2009. OEH AHIP #1100264 was provided for the 30 year life of the Lynwood Quarry Project and thus remains an active AHIP.

On 1 June 2009 Holcim requested a correction to the conditions of the AHIP related to the MRN28 site (General Operational Conditions 16 and 17) as these conditions were not relevant to that site. On 2 June 2009 the DECC provided a modification to the AHIP to remove reference to MRN28 within the relevant conditions.

In April 2011 Holcim requested a variation to AHIP #1100264 to include an area related to minor modifications to infrastructure (Umwelt 2010). The variation related specifically to five areas of potential archaeological deposit (PADs) within a minor modification area associated with the Ignimbrite Pit. The variation to AHIP #1100264 was approved by OEH on 12 May 2011 (Variation Notice # 1128050 - refer to attached AHIP).

In June 2016 Holcim requested a variation to AHIP #1100264 to include the Ignimbrite Pit Area related to the approved Modification 4. The variation to AHIP #1100264 was approved by OEH on 29 July 2016 (Variation Notice # C0002066 - refer to attached AHIP variation for details).

Staged Salvage Program

Ignimbrite Pit Area

The Lynwood Quarry Ignimbrite Pit subsurface investigation and salvage program has been undertaken as a staged process. In July 2007, Readymix (now Holcim) provided the DECC (now OEH) with an AHIP application and an accompanying Research Design and Methodology for the subsurface testing and salvage program for Lynwood Quarry, including the cultural heritage works required by Country Energy (now Essential Energy) (Umwelt 2007a, 2007b, 2007c). The following three stages were approved by the DECC under AHIP #1077225 and AHIP #1077294:

- Stage 1 – subsurface testing and salvage of power pole locations (Stage 1A) and subsurface testing of the ATUs associated with the Country Energy substation site and construction access road corridor (Stage 1B). This stage also included artefact and data analysis, reporting and the preparation of the accompanying AHIP application to enable works required by Country Energy to proceed (Stage 1C) (Umwelt 2008a)
- Stage 2 – subsurface testing of known sites (Stage 2A) and the remaining ATUs (Stage 2B) within the Lynwood Quarry development impact area (including those to be impacted by decommissioning of a 132 kV feeder), monitoring of Section 60 Heritage investigations within Old Marulan (Stage 2C), artefact and data analysis, reporting, and the preparation of a s.90 AHIP application to enable works required by Readymix to proceed (Stage 2D) (Umwelt 2008a, 2008b, 2008c, 2008d, 2008E); and
- Stage 3 – further subsurface salvage if required (Stage 3A) and preparation of a final report incorporating the results of all previous stages (Stage 3B).

Stage 1 was completed in September 2007 and a report on the results provided to the DECC in January 2008 (Umwelt 2008a). Subsequently an AHIP application for the Country Energy impact areas was provided to the DECC in March 2008 (Umwelt 2008d) and approval of this AHIP (#1089392) was provided by the DECC in June 2008. The final works under AHIP #1089392 were undertaken in June 2009 and were documented in the Stage 3B report (Umwelt 2013).

Stage 2 was completed in April 2008 and a report on the results of Stage 2 was provided to the DECC in August 2008, concurrently with an AHIP application for the final Stage 3A salvage (Umwelt 2008e, 2008f).

An AHIP application for the final Stage 3A investigations was forwarded to the DECC by CEMEX (now Holcim) in September 2008 (Umwelt 2008f). As part of ongoing consultation with the DECC it was recognised that the prior subsurface testing of ATU 7PA (very gentle slope in the porphyritic adamellite) was of an area that was not typical of the remainder of the ATU. It was further observed that a very small ATU (7AD – very gentle slope in the adamellite dykes and sills) measuring approximately 400 metres by 200 metres was missed during the earlier subsurface testing program. Therefore, when providing the final AHIP (#1100264) for the Stage 3A salvage on 20 May 2009, the DECC included within General Operational Condition 13; that CEMEX was to undertake the ‘subsurface testing of two further Archaeological Terrain Units (ATUs) (7PA #51-6-0647 & 7AD #51-6-0648) within the Lynwood Quarry development impact footprint’. The subsurface testing was to be undertaken ‘using the same methodology as that implemented for the ATUs previously tested under s.87 AHIP #1077225’ (Umwelt 2008).

Subsurface testing of ATU 7PA and 7AD was undertaken during the period 23 and 27 June 2009. A subsequent report was provided to DECC in July 2009 (Umwelt 2009), detailing the results of the subsurface testing. Based on the results of the subsurface testing no further salvage was required within these ATUs.

The (then) final Stage 3A subsurface investigation and salvage program for the Approved disturbance footprint was undertaken over the period 28 October 2009 to 22 January 2010. This included broad area manual excavation within site MRN27 and surface collection of MRN62, MRN64 and MRN77 under AHIP #1100264.

Subsequently further subsurface investigations were undertaken within PADs 2 to 5 following further survey and assessment (Umwelt 2010) and an application for a variation to AHIP #1100264. The variation was approved on 12 May 2011 and the subsurface investigations were undertaken over the period 31 May to 3 June 2011. A report was completed and was provided to OEH (Umwelt 2011).

Following completion of all archaeological investigations required within the Lynwood Quarry Ignimbrite Pit Area Umwelt (2013) is currently undertook detailed artefact analysis and prepared the reporting for Stage 3B that incorporated all of the results of Stages 1 to 3 and which addressed the research questions posed for the salvage program.

The Registered Aboriginal Parties participated in all subsurface testing and salvage programs within the Ignimbrite Pit Area and copies of all completed reports have been provided to the Registered Aboriginal Parties for their review, input and comment.

Granite Pit Area

Umwelt (2015) prepared the Aboriginal Cultural Heritage and Archaeological Assessment (ACHAA) for the Lynwood Quarry Extraction Area Modification (Modification 4) on behalf of Holcim to assess the potential Aboriginal cultural and archaeological impacts of the proposed Granite Pit and associated infrastructure. During the preparation of the ACHAA meetings were held with Department of Planning and Environment (DP&E) on 15 May 2015 and OEH on 11 June 2015 to determine the appropriate methodology for the Aboriginal consultation process for the ACHAA and to determine whether it was appropriate to undertake any requisite archaeological subsurface testing and surface collection and subsurface salvage of Aboriginal sites (where warranted) post approval as a staged program under a variation to Holcim Australia's existing AHIP #1100264.

OEH understood the rationale for this approach (having a single management strategy across both the existing Lynwood Quarry Ignimbrite Pit Area and the then proposed Granite Pit Area) and was supportive, providing a full ACHAA was prepared to inform the modification application (Umwelt 2015). DP&E subsequently approved the Lynwood Quarry Extraction Area Modification with all subsequent site conservation and site/PAD investigations and salvage within the Granite Pit Area to be undertaken under a variation to AHIP #1100264 and in accordance with a revised version of the Lynwood Quarry Aboriginal Heritage Management Plan (AHMP – Umwelt 2011). The revised AHMP forms the main text of this document.

On 28 June 2016 (Umwelt 2016a) Holcim applied to OEH for a variation to AHIP #1100264. Subsequently OEH provided approval of the variation on 29 July 2016. The variation approved a staged process of subsurface testing, salvage and reporting using the same Research Design and Methodology used for the Ignimbrite Pit area.

Stage 1 salvage of site MRN25 (#51-5-0266) (Umwelt 2016b) and the Stage 2A surface collection of sites and subsurface testing of PADs to be impacted by early works was completed in August 2016 (Umwelt 2016c and in prep.).

Part of the Stage 1 salvage - the removal of the scarred sections of the trunks of LKST1 (#51-6-0772) and LKST2 (#51-6-0773) was not undertaken at this time.

It was subsequently decided that LKST1 (#51-6-0772) could be conserved and OEH was advised of this change to the conditions of the variation to AHIP #1100264 on 23 May 2017.

The scarred section of LKST2 (#51-6-0773) was removed on 7 – 9 June 2017. The scarred section of the tree has been temporarily placed to the east and outside the quarry impact area. The scarred section of the tree will be moved upslope and to its permanent position in consultation with OEH and the Registered Aboriginal Parties.

Stage 2B will include the subsurface testing of PAD6 (#51-6-0777) if this becomes necessary. Holcim currently has no plans to impact the PAD which will be fenced and monitored annually until impact is required or for the life of the quarry.

Stage 3 was the salvage excavation of LKAS7 (formerly PAD4 - #51-6-0775).

Stage 4 will be the final report which will include the results all archaeological investigations in Stages 1 to 3 of the Ignimbrite Pit subsurface testing and salvage program.

References

Umwelt (Australia) Pty Limited. 2007a. *Review of Environmental Factors for Proposed Electrical Transmission Lines, Marulan, NSW*. A report prepared for Country Energy. February 2007.

Umwelt (Australia) Pty Limited. 2007b. Aboriginal Archaeological Assessment of Transmission Line Easements and a Proposed Substation Location near, Marulan, NSW. Appendix 6. *Review of Environmental Factors for Proposed Electrical Transmission Lines, Marulan, NSW*. A report prepared for Country Energy. February 2007.

Umwelt (Australia) Pty Limited 2007c. *Research Design and Methodology for Section 87 Subsurface Testing and Section 90 Collection for the Development Impact Area, Lynwood Quarry, Marulan*. Report to the Department of Environment and Climate Change on behalf of Rinker Australia Pty Limited. July 2007.

Umwelt (Australia) Pty Limited. 2008a. *Stage 1 Report - Lynwood Quarry Project Area Marulan, NSW Section 87 Subsurface Testing and Section 90 Salvage under Aboriginal Heritage Impact Permits #1077225 and #1077294*. January 2008.

Umwelt (Australia) Pty Limited. 2008b. *Review of Environmental Factors for Project Amendments, to Electrical Transmission Line Project, Marulan, NSW*. A report prepared for Country Energy. March 2008.

Umwelt (Australia) Pty Limited. 2008c. *Aboriginal Archaeological Assessment for a Review of Environmental Factors for Project Amendments to Electrical Transmission Line Project, Marulan, NSW*. A report prepared for Country Energy. March 2008.

Umwelt (Australia) Pty Limited. 2008d. *Documentation to Accompany a s87/90 Aboriginal Heritage Impact Permit for Works within the Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for Country Energy. March 2008.

Umwelt (Australia) Pty Limited. 2008e. *Stage 2 Report. Lynwood Quarry Project Area, Marulan, NSW Section 87 Subsurface Testing and Section 87/90 Salvage under Aboriginal Heritage Impact Permits #1077225 and #1077294*. A report prepared for CEMEX Australia. July 2008.

Umwelt (Australia) Pty Limited. 2008f. *Documentation to Accompany a s87/90 Aboriginal Heritage Impact Permit for Works within the Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for CEMEX Australia. September 2008.

Umwelt (Australia) Pty Limited. 2009a. *Documentation to Accompany an s87 Aboriginal Heritage Impact Permit for Further Subsurface Testing of Archaeological Terrain Units Works he Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for CEMEX Australia. February 2009.

Umwelt (Australia) Pty Limited. 2009b. *Stage 2 Report - Lynwood Quarry Project Area Marulan, NSW: Results of Subsurface Testing of Archaeological Terrain Units under s.87/90 AHIP #1100264*. A report prepared for CEMEX Australia. August 2009.

Umwelt (Australia) Pty Limited. 2010. *Aboriginal Cultural and Archaeological Assessment – Proposed Minor Modifications to Lynwood Quarry, Marulan*. A report prepared for Holcim Australia (Australia) Pty Limited. October 2010.

Umwelt (Australia) Pty Limited. 2011. *Preliminary Results of Subsurface testing of PAD5 and Monitoring of Works in PADs 2, 3 and 4 in Compliance with AHIP #1100264*. A report prepared for Holcim Australia (Australia) Pty Limited. August 2011.

Umwelt (Australia) Pty Limited. 2013. *Stage 3 Report. Lynwood Quarry Project Area, Marulan, NSW. Integrated Results of Section 87 Subsurface Testing and Section 87/90 Salvage under Aboriginal Heritage Impact Permits #1077225, #1077294, #1089392 and #1100264*. A report in prepared for Holcim Australia (Australia) Pty Limited. August 2013.

Umwelt (Australia) Pty Limited. 2016a. *Lynwood Quarry Extraction Area Modification – Request for a Variation to Section 87/90 Aboriginal Heritage Impact Permit #1100264 to allow for Staged Archaeological Investigations and Site Salvage*. A report in prepared for Holcim Australia (Australia) Pty Limited. June 2016.

Umwelt (Australia) Pty Limited. 2016b. *Lynwood Quarry Extraction Area Modification Stage 1 Archaeological Salvage Program – Notification of Completion of Salvage of MRN25 (#51-6-0266) and Intention to Commence Works Associated with Haul Road Construction*. A report prepared for Holcim Australia (Australia) Pty Limited. August 2016.

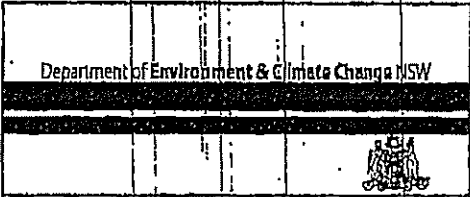
Umwelt (Australia) Pty Limited. 2016c. *Lynwood Quarry Extraction Area Modification Part Stage 2 Archaeological Salvage Program – Subsurface Testing of PAD4 (#51-6-0775) Undertaken Under a Variation to Aboriginal Heritage Impact Permit #1100264*. A report prepared for Holcim Australia (Australia) Pty Limited. August 2016.

Umwelt (Australia) Pty Limited. in prep. *Lynwood Quarry Extraction Area Modification Stage 2A Summary Results of the Surface Collection and Subsurface Testing*. A report in preparation for Holcim Australia (Australia) Pty Limited.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



AHIP number: 1077225

AHIP Issued To:

RINKER AUSTRALIA PTY LIMITED,
ABN 87 099 732 297,
PO BOX 258,
PENRITH NSW 2751
STANDARD POST

**Permit to disturb or excavate land for the purpose of discovering Aboriginal
objects**

Permit to disturb or move Aboriginal objects on land

DECC office issuing this AHIP

Department of Environment and Climate Change (NSW)

South Branch, 6 Rutledge Street Queanbeyan, NSW 2620

Tel: 6298 9707

Fax: 6299 4281

Short description of activity and/or location

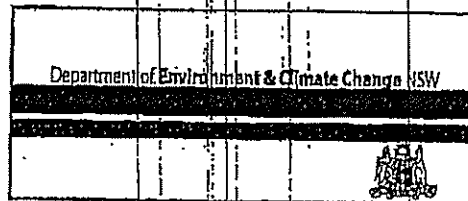
Assessment of development impact at Lynwood Quarry, Manulan as described
in Schedule A and shown on the map at Attachment A

**Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information
about this AHIP is also set out after the Dictionary**

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



PERMIT TO DISTURB OR EXCAVATE LAND FOR THE PURPOSE OF DISCOVERING ABORIGINAL OBJECTS

PERMIT TO DISTURB OR MOVE ABORIGINAL OBJECTS ON LAND

Background

On 23-Jul-2007 an application was made by Rinker Australia Pty Ltd (ABN 870 997 322 97) to the Director-General of the Department of Environment and Climate Change for a permit pursuant to s.87 of the National Parks and Wildlife Act 1974. The s. 87 permit will allow the applicant to undertake subsurface testing and salvage of known sites and Archaeological Terrain Units that will be impacted by construction works to be conducted within the development area by Rinker Australia Pty Ltd and Country Energy. The results of the subsurface testing will be used to determine where section 90 consent will be required within the quarry development impact area.

Permit issued subject to conditions

A permit is issued to:

- (a) disturb or excavate the land as described in Schedule A for the purpose of discovering Aboriginal objects, and
- (b) disturb or move on land Aboriginal objects identified in Schedule C

but only as expressly provided by the conditions of this AHIP.

This permit is issued pursuant to section 87 of the National Parks and Wildlife Act 1974.

Mr Michael Hood

Manager

South

(by Delegation)

DATED: 27-Aug-2007

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974

Department of Environment & Climate Change NSW



CONDITIONS OF AHIP

Schedule A: Land to which this AHIP applies:

Lynwood Quarry, Marulan, Lots 1 (DP1074819), 2 (DP10748197), 3 (DP1036993 & 1074819), 4 (DP1036993), 7 (DP588696), 112 (DP750029) and 229 (DP750029) (DA-128-5-2005) including Archaeological Terrain Units 4BP (testing location SS), 6BP (testing location M), 6PA (testing location O), R6PA (testing location V) and R6BP (testing location W) as shown on Attachment 'A' and 'B'

Schedule B: Protected Aboriginal objects which must not be disturbed or moved

Burials

All human remains in, on or under the land.

Aboriginal objects as identified on AHIMS (and shown on Attachments 'A' and 'B')

AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0059	Marulan Quarry 1	artefact	771860	6152890
51-6-0242	MRN1	artefact	773179	6153116
51-6-0243	MRN2	artefact	773077	6153038
51-6-0244	MRN3	artefact	773043	6152939
51-6-0245	MRN4	artefact	772313	6152581
51-6-0246	MRN6	artefact	772404	6152969
51-6-0249	MRN8	modified tree	771061	6153668
51-6-0250	MRN9	stone arrangement	771252	6153592
51-6-0251	MRN10	modified tree	771061	6153698
51-6-0252	MRN11	modified tree	771093	6153692
51-6-0253	MRN12	artefact	771280	6154097
51-6-0254	MRN13	artefact	771280	6153826
51-6-0255	MRN14	artefact	771473	6153969
51-6-0256	MRN15	artefact	771943	6154215
51-6-0257	MRN16	artefact	772268	6154312

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974

Department of Environment & Climate Change NSW



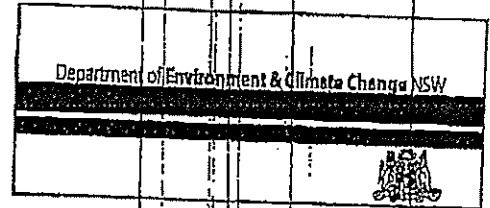
AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0258	MRN17	artefact	772419	6154447
51-6-0259	MRN18	artefact	772327	6153801
51-6-0260	MRN19	artefact	772518	6153894
51-6-0261	MRN20	artefact	771379	6154194
51-6-0262	MRN21	artefact	771559	6153669
51-6-0263	MRN22	artefact	771713	6153691
51-6-0284	MRN23	modified tree	771379	6154194
51-6-0265	MRN24	artefact	771946	6153098
51-6-0271	MRN30	artefact	772067	6155501
51-6-0275	MRN34	artefact	772295	6155492
51-6-0279	MRN38	artefact	772284	6154878
51-6-0280	MRN39	artefact	772446	6154865
51-6-0281	MRN40	artefact	772486	6154771
51-6-0282	MRN41	artefact	772484	6154804
51-6-0283	MRN42	artefact	772598	6154873
51-6-0284	MRN43	artefact	772719	6154744
51-6-0285	MRN44	artefact	772901	6154842
51-6-0286	MRN45	artefact	772982	6154825
51-6-0287	MRN46	artefact	773309	6154841
51-6-0288	MRN47	artefact	773860	6155644
51-6-0290	MRN49	modified tree	772377	6156399
51-6-0291	MRN50	artefact	772321	6155554
51-6-0292	MRN51	modified tree	772334	6155662
51-6-0101	IF1	artefact	774550	6152900
51-6-0102	IF2	artefact	777420	6153370
51-6-0103	IF3	artefact	774500	6153170
51-6-0456	Marulan T1 S1	artefact	772277	6154747
51-6-0457	Marulan T1 S2	artefact	772737	6154670
51-6-0458	Marulan T1 S3	artefact	772940	6154663
51-6-0459	Marulan T1 S4	artefact	772938	6154692
51-6-0460	Marulan T1 S5	artefact	773044	6154689
51-6-0461	Marulan T1 S6	artefact	773166	6154689

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects

Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0462	Marulan T1 S7	artefact	773226	6154711
51-6-0463	Marulan T1 S8	artefact	773240	6154960
51-6-0464	Marulan T1 S9	artefact	773312	6154703
51-6-0465	Marulan T5 S1	artefact	772250	6154716
51-6-0466	T5 S2	artefact	772238	6154707
51-6-0467	Marulan T6 S1	artefact	772216	6152641
51-6-0468	Marulan T6 S2	artefact	772010	6153579
51-6-0470	Marulan T6 S3	artefact	771997	6153599
51-6-0469	Marulan T6 S4	artefact	772089	6153660

Schedule C: Aboriginal objects which may be disturbed or moved

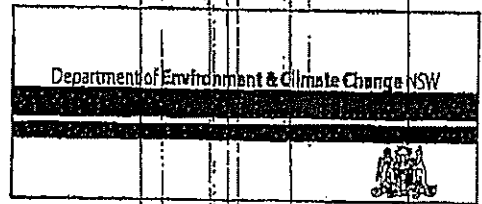
AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0060	Marulan Quarry 2	artefact	772450	6153000
51-6-0246	MRN5	artefact	772404	6152969
51-6-0248	MRN7	artefact	771306	6154825
51-6-0266	MRN25	artefact	771243	6156845
51-6-0267	MRN26	artefact	772059	6155842
51-6-0268	MRN27	artefact	772232	6155840
51-6-0269	MRN28	artefact	772784	6155926
51-6-0274	MRN33	artefact	771484	6155470
51-6-0276	MRN35	artefact	773340	6155286
51-6-0277	MRN36	artefact	773255	6155299
51-6-0278	MRN37	artefact	773251	6155251
51-6-0289	MRN48	artefact	772161	6155992
51-6-0293	MRN52	artefact	772516	6155170

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects

Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



Salvage area

All Aboriginal objects in, on or under that part of the land which is identified on the map at Attachment B' as a salvage (shown as Archaeological Terrain Unit subsurface testing locations) area, including the following Aboriginal objects but excluding any Aboriginal objects described in Schedule B.

Salvage of specific Aboriginal objects

SITE NAME	FEATURE TYPE	MAP REFERENCE	EASTINGS	NORTHINGS
Marulan Quarry 2	artefact	Towrang 8828-1-S	772450	6153000
MRN5	artefact	Towrang 8828-1-S	772404	6152969
MRN7	artefact	Towrang 8828-1-S	771306	6154825
MRN25	artefact	Towrang 8828-1-S	771243	6156345
MRN26	artefact	Towrang 8828-1-S	772059	6155842
MRN27	artefact	Towrang 8828-1-S	772232	6155840
MRN28	artefact	Towrang 8828-1-S	772784	6155926
MRN33	artefact	Towrang 8828-1-S	771484	6155470
MRN35	artefact	Towrang 8828-1-S	773340	6155286
MRN36	artefact	Towrang 8828-1-S	773255	6155299
MRN37	artefact	Towrang 8828-1-S	773251	6155251
MRN48	artefact	Towrang 8828-1-S	772161	6155992
MRN52	artefact	Towrang 8828-1-S	772516	6155170

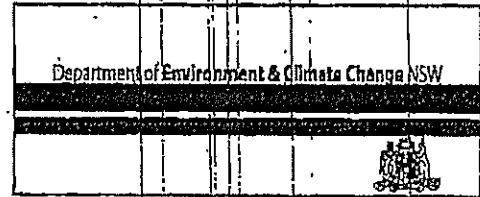
Schedule D: Temporary storage location for certain salvaged objects

Offices of Umwelt (Australia) Pty Ltd (ABN 18 059 519 041), 2/20 The Boulevard, Toronto NSW 12283.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



COMMENCEMENT AND OVERSIGHT OF ACTIVITIES RELATING TO THIS AHIP

Commencement of AHIP

1. This AHIP commences on the date it is signed unless otherwise provided by this AHIP.

Duration of AHIP

2. Unless otherwise revoked in writing, this AHIP remains in force for:
(a) six (6) months from the date of commencement; or
(b) the date on which the subsurface testing and salvage report is submitted,
whichever is the sooner.

Responsibility for compliance with conditions of AHIP

3. The AHIP holder must ensure that all of its employees, contractors, sub-contractors, agents and invitees are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the activities relating to this AHIP

4. The AHIP holder must appoint a suitably qualified and experienced individual who is responsible for overseeing, for and on behalf of the AHIP holder, the activities relating to this AHIP.
5. The individual appointed must be the individual nominated in the application form.
6. If an alternative individual is appointed whilst this AHIP remains in force, the AHIP holder must advise the DECC office in writing within 14 days of the new appointment.

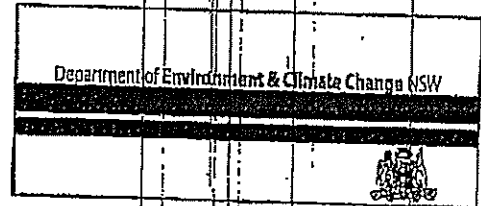
Notification of commencement of work

7. Prior to the proposed commencement of activities authorised by this AHIP, the AHIP holder must give the DECC office written notice of the proposed commencement date of those activities.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



GENERAL OPERATIONAL CONDITIONS

Activities must not disturb or excavate any land

8. The AHIP holder must not disturb or excavate any land for the purpose of discovering an Aboriginal object, except as otherwise expressly provided by a condition of this AHIP.

Activities must not move or disturb Aboriginal objects

9. The AHIP holder must not move or disturb any Aboriginal objects, except as otherwise expressly provided by a condition of this AHIP.

Activities must be in accordance with methodology

10. Activities must be carried out in accordance with the methodology specified in the application to which this AHIP applies, except as otherwise expressly provided by a condition of this AHIP.

Activities must also be carried out in accordance with the Aboriginal Heritage Management Plan (AHMP) that has been approved by DECC, particularly:

The Management Committee will be set up to oversee the implementation of the AHMP prior to the commencement of the Section 87 subsurface testing and salvage program and prior to the commencement of any ground disturbing works related to the Country Energy works and the quarry construction phase. Names of the Management Committee members must be provided to DECC prior to commencement of the Section 87 subsurface testing and salvage program.

The first monitoring program to be conducted within the Cultural Heritage Management Zone (CHMZ) by the Management Committee must be undertaken prior to commencement of substantial construction works within the development impact area.

The Rinker Australia Pty Ltd Project Manager or Environmental Manager, as representatives of the Management Committee, will report on activities required by the AHMP within the Annual Environmental Management Report (AEMR). The AEMR must be provided to DECC.

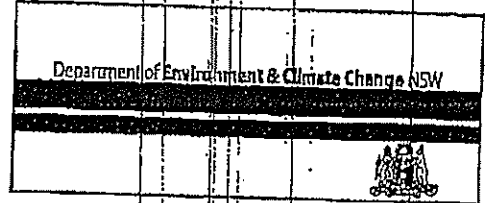
AHIP does not authorise damage under s.90 of the Act

11. Nothing in this AHIP authorises any person to damage an Aboriginal object in, on or under the land.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



PROTECTION OF ABORIGINAL OBJECTS

Protected Aboriginal objects

- 12. The AHIP holder must not move or disturb protected Aboriginal objects specified in Schedule B.
- 13. To the fullest extent possible, each protected Aboriginal object must be clearly marked so as to provide a clear visual marker to persons on foot or in vehicles in the vicinity of that Aboriginal object.
- 14. The AHIP holder must ensure that persons entering the land such as employees, contractors, sub-contractors, agents and invitees have a copy of any Map referred to in Schedule B.
- 15. Appropriate sediment control measures must be installed and operated so as to prevent any disturbance of a protected Aboriginal object.
- 16. Vehicles must not be driven on or in the immediate vicinity of a protected Aboriginal object.

SALVAGE WORK AND RELATED ACTIONS

Salvage of Aboriginal objects

- 17. The AHIP holder may disturb or move Aboriginal objects in, on or under each salvage area for the purpose of their salvage, other than protected Aboriginal objects in the salvage area.
- 18. The salvage work must occur in accordance with 'Lynwood Quarry Marulan Aboriginal Heritage Management Plan' (Umwelt, July 2007) including the methodology described in 'Appendix 1 Section 87 PRP and Section 87/Section 90 Consent Applications and Research Design and Methodology', except as otherwise expressly provided by a condition of this AHIP.

Temporary storage of salvaged Aboriginal objects

- 19. Any Aboriginal objects which are to be moved as part of the salvage works must be moved as soon as practicable to a temporary storage location nominated in Schedule D, pending any agreement reached as to the long term management of the salvaged Aboriginal objects.
- 20. The AHIP holder is responsible for the protection of any salvaged Aboriginal objects stored at each temporary storage location.

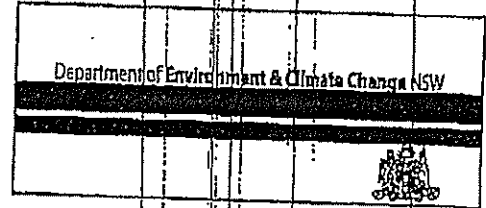
ANALYSIS OF ABORIGINAL OBJECTS

- 21. This AHIP does not authorise the movement or disturbance of any Aboriginal objects for the purpose of invasive analysis.
- 22. The AHIP holder must ensure that any disturbance or movement of any Aboriginal objects for the purpose of non invasive analysis is minimised to the fullest extent practicable.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



NOTIFICATION AND REPORTING CONDITIONS

Human remains

23. If any human remains are located in, on or under the land, AHIP holder must:
- not disturb or move these remains;
 - immediately cease all work at the particular location;
 - notify DECC's Environment Line on 131 555 and the local police as soon as practicable and provide any available details of the remains and their location; and
 - not recommence any work at the particular location unless authorised in writing by the DECC.

Incidents which may breach the Act or AHIP

24. The AHIP holder must notify the DECC office in writing as soon as practicable after becoming aware of:
- any failure to comply with s.86 of the Act not authorised by an AHIP;
 - any contravention of the conditions of this AHIP;
 - any contravention of s.90 of the Act not authorised by an AHIP.

Reports about incidents which may breach the Act or AHIP

25. Where an authorised officer reasonably suspects that an incident which may have breached the Act or AHIP has occurred, the officer may request in writing that the AHIP holder prepare a written report about that incident. The report must discuss:
- the nature of the incident;
 - the nature and location of relevant Aboriginal objects or Aboriginal places, referring to and providing maps and photos where appropriate;
 - the impact of the incident on Aboriginal objects or Aboriginal places;
 - any conditions of an AHIP which may have been breached; and
 - the measures which have been taken or will be taken to prevent a recurrence of the incident.
26. The report must be provided to the DECC office by the due date specified by the authorised officer.

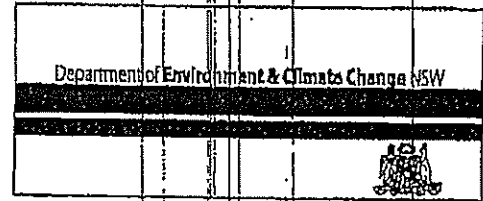
Report about investigation of Aboriginal objects under s.87

27. If investigation is authorised by this AHIP, the AHIP holder must prepare an investigation report after completing the investigation. The report must:
- provide a short summary of the report;

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land.

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



- (b) in relation to any identified Aboriginal objects which remain in situ on the land, provide a brief overview of the type and locations of those Aboriginal objects and any of those objects which either the AHIP holder or, if applicable, any representatives from local Aboriginal groups consider to be of particular significance;
- (c) detail any potential archaeological deposits;
- (d) detail and evaluate the effectiveness of any monitoring activities and mitigation measures that were implemented.

Due date for report

28. The Investigation report must be provided to the DECC office within six (6) months of the date of commencement of this AHIP.

Report about disturbance or movement of Aboriginal objects under s.87

29. If any disturbance or movement of Aboriginal objects is authorised by this AHIP, the AHIP holder must provide to the DECC office a salvage report as soon as practicable after completing the salvage. The report must include:
- (a) details of the nature and type of Aboriginal objects disturbed or moved at each salvage area, and the location to and from which the objects were moved;
 - (b) a description of the methods of excavation, movement and salvage used;
 - (c) a plan of each salvage area and location from and to which the objects were moved;
 - (d) any ongoing consultation with or involvement of any local Aboriginal groups in relation to this AHIP;
 - (e) detail and evaluate the effectiveness of any monitoring activities and mitigation measures that were implemented;
 - (f) produce and review the effectiveness of any management plan which was in place;
 - (g) detail the results of any non invasive analysis carried out on the Aboriginal objects;
 - (h) if any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now located at the temporary storage location,
 - (i) detail any long term management arrangement for the salvaged Aboriginal objects;
 - (j) detail any community collection undertaken by the local Aboriginal groups.

Due date for report about salvage or movement

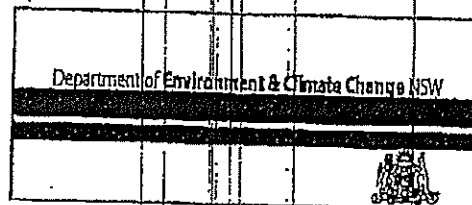
30. The salvage report must be provided to the DECC office within six (6) months of commencement of this AHIP.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects

Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



Provision of copies of reports to local Aboriginal groups

31. The AHIP holder must provide a copy of each report provided to the DECC under this AHIP to each local Aboriginal group, within 14 days after each report is provided to the DECC.

Disclosure of information pursuant to lawful requirement

32. This AHIP does not prevent the disclosure of any information or document in DECC's possession in accordance with any lawful requirement.

Making copies of reports

33. By providing a report, the AHIP holder agrees that DECC can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.
34. DECC is entitled to make copies of any reports provided to DECC under this AHIP.

OTHER GENERAL CONDITIONS

Indemnity

35. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from
- (i) any damage or destruction to any real or personal property; and
 - (ii) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Release

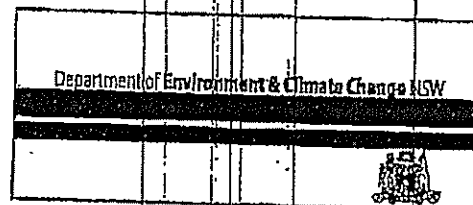
36. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from
- (i) any damage or destruction to any real or personal property; and
 - (ii) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects

Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



Ongoing obligation to comply with due dates

37. Where a condition of this AHIP specifies a date by which something must be done or ceased to be done, the AHIP holder has a continuing obligation to comply with that condition after that date (subject to any written revocation or variation of the AHIP by DECC).

Written notice

38. Any requirement to provide written notice to the DECC office in this AHIP may be complied with by faxing the notice to the DECC office's fax number or by sending by registered mail to the DECC office's address. The DECC office's contact details are specified at the front of this AHIP.

DICTIONARY

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

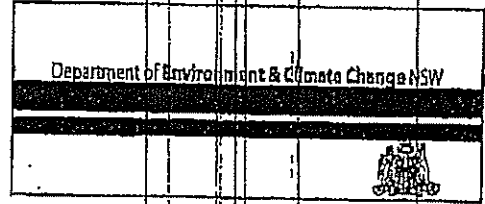
Aboriginal object(s)	has the same meaning as in the Act
Aboriginal place	has the same meaning as in the Act
Act	means the National Parks and Wildlife Act 1974
AHIMS	means the Aboriginal Heritage Information Management System maintained by DECC
AHIP holder	means the person listed on the cover page under the heading "AHIP issued to"
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Authorised officer	means an employee of the DECC who is appointed as authorised officer under s.156B of the Act
Damage	in relation to an Aboriginal object or Aboriginal place, unless otherwise specified in this AHIP, includes destruction and defacement
DECC	Department of Environment and Climate Change (NSW)
DECC office	means the office listed on the cover page of this AHIP
Director-General	means the Director-General of DECC
Invasive analysis	Any analysis of an Aboriginal object that damage the Aboriginal object

...nt to disturb or excavate land for the purpose of discovering
...original objects

Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



Local Aboriginal groups

means the following the following groups:

Pejar Local Aboriginal Land Council

81 Bourke Street, Goulburn NSW 2580.

Contact person: Delise Freeman

Gundungurra Tribal Council Aboriginal Corporation

14 Oak Street, Katoomba NSW 2780

Contact person: Sharon Brown

Gundungurra Aboriginal Heritage Association Inc.

PO Box 31, Lawson NSW 2783

Contact person: Merle Williams

Peter Falk Consultancy

PO Box 392, Bundanoon NSW 2578

Contact person: Peter Falk

Non-invasive analysis

Any analysis of an Aboriginal object that does not damage the Aboriginal object

Protected Aboriginal objects

means those Aboriginal objects which are described in Schedule B

Salvage

the recovery of Aboriginal objects in accordance with the archaeological methodology accompanying the application, as modified by the conditions of this AHIP.

Salvage area

means an area described as a salvage area in Schedule C

Standards and Guidelines Kit

means the Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW National Parks and Wildlife Service 1997) as amended or replaced from time to time

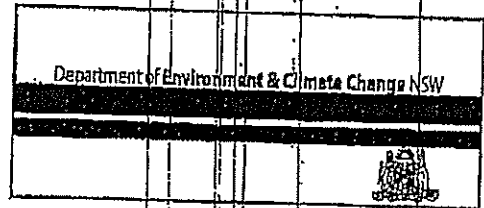
Temporary storage location

means a location specified at Schedule D

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



INFORMATION ABOUT THIS AHIP

Responsibilities of AHIP holder

The AHIP holder is responsible for ensuring the AHIP holder's employees, contractors/sub-contractors agents, invitees are made aware of and comply with the conditions of this AHIP.

Penalties for breach of the Act

Significant penalties can be imposed by a court for failure to obtain or breach of an AHIP. The DECC can also issue penalty notices.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the National Parks and Wildlife Act

Newly identified Aboriginal objects need to be notified to the Director-General under s.91 of the Act using the form available on www.environment.nsw.gov.au

Stop work orders and interim protection orders may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth).

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

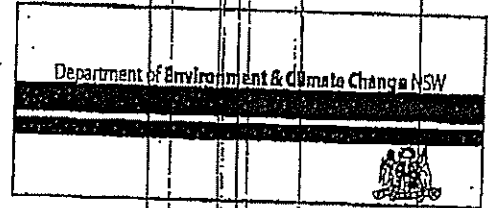
Variation of AHIP

The AHIP holder may apply to the DECC office in writing for a variation of any conditions of an AHIP. Requests for variations may need to be accompanied by evidence of further consultation with interested parties including Aboriginal stakeholders and in some cases may include payment of fees. The conditions of an AHIP may be varied at any time at the discretion of the Director-General. The AHIP holder may appeal a decision of the Director General to vary the conditions of the AHIP.

Permit to disturb or excavate land for the purpose of discovering
Aboriginal objects
Permit to disturb or move Aboriginal objects on land.

Aboriginal Heritage Impact Permit

Section 87 of the National Parks and Wildlife Act 1974



Transfer of AHIP

An AHIP is not transferable. The surrender or revocation of an existing AHIP could occur at the same time an AHIP is issued to the new AHIP holder.

Revocation of AHIP

An AHIP may be revoked at any time at the discretion of the Director General. Prior to revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

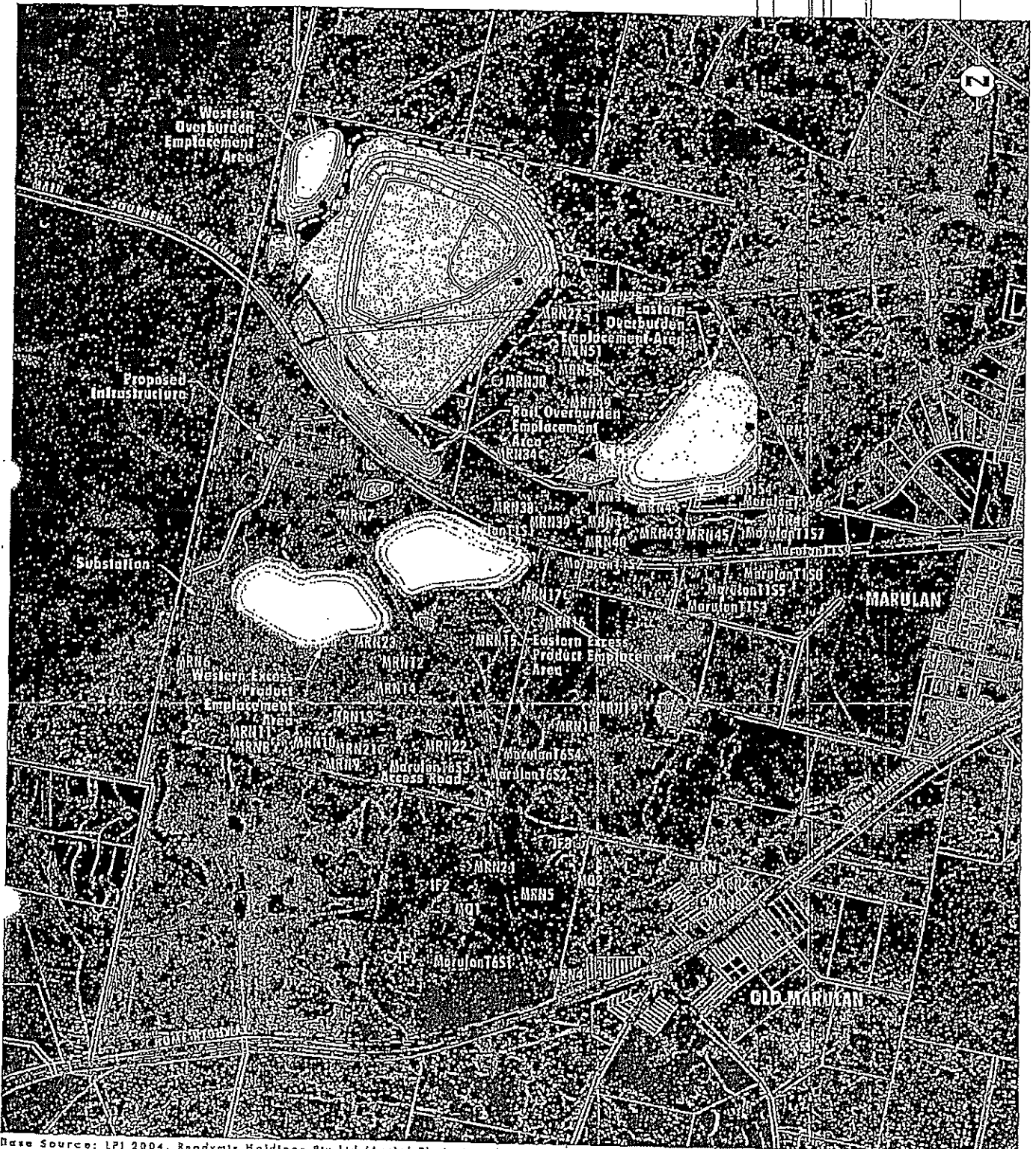
Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

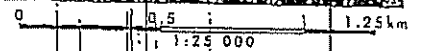
AHIP does not authorise damage, destruction or defacement of Aboriginal objects

It is an offence to knowingly damage, destroy or deface or knowingly cause or permit the damage, destruction or defacement of an Aboriginal object or Aboriginal place without consent. A consent under s.90 of the Act is required.

Attachment 'A'



Base Source: LPI 2004, ReadyMix Holdings Pty Ltd (Aerial Photo March 2005)



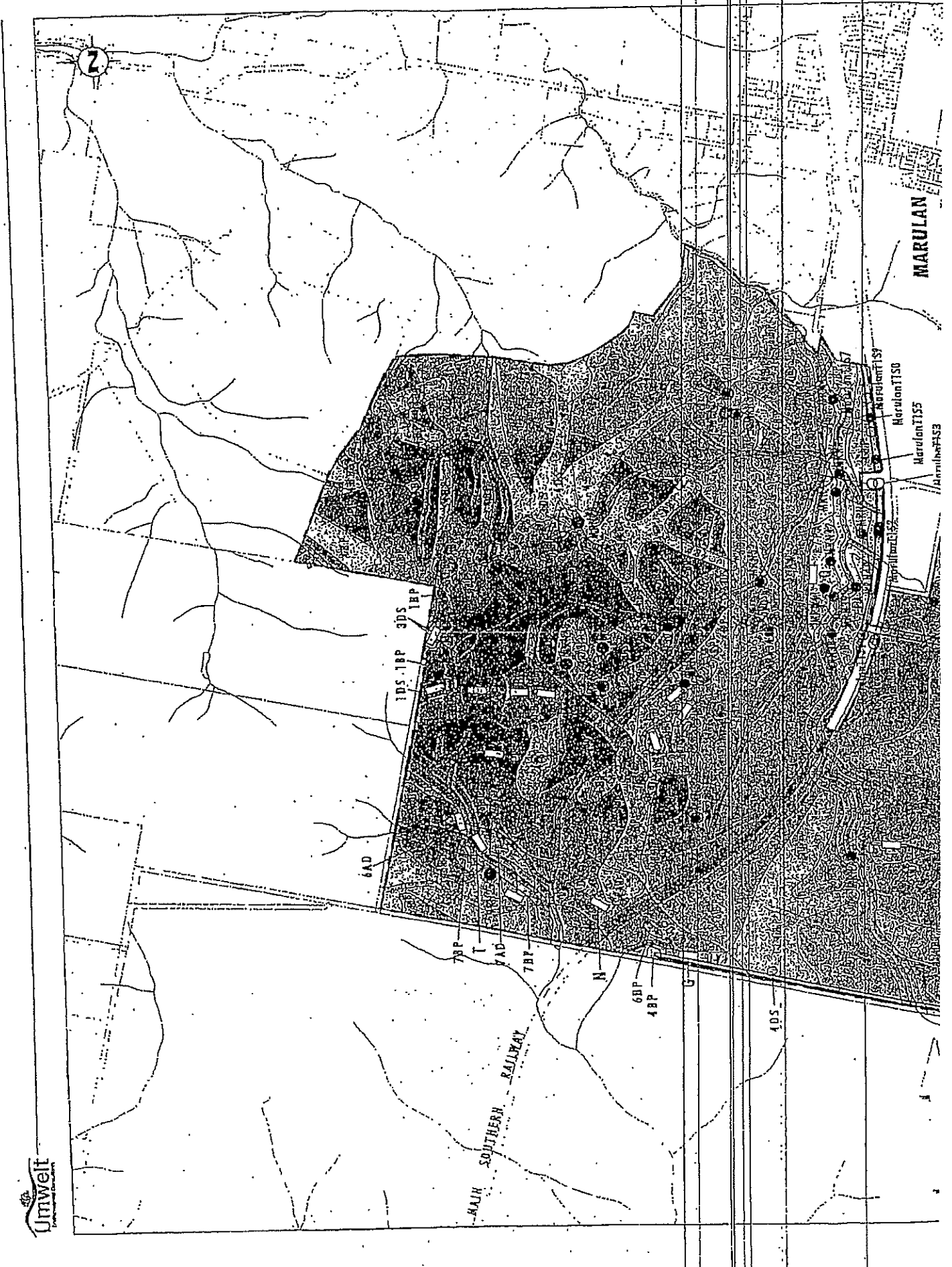
Legend

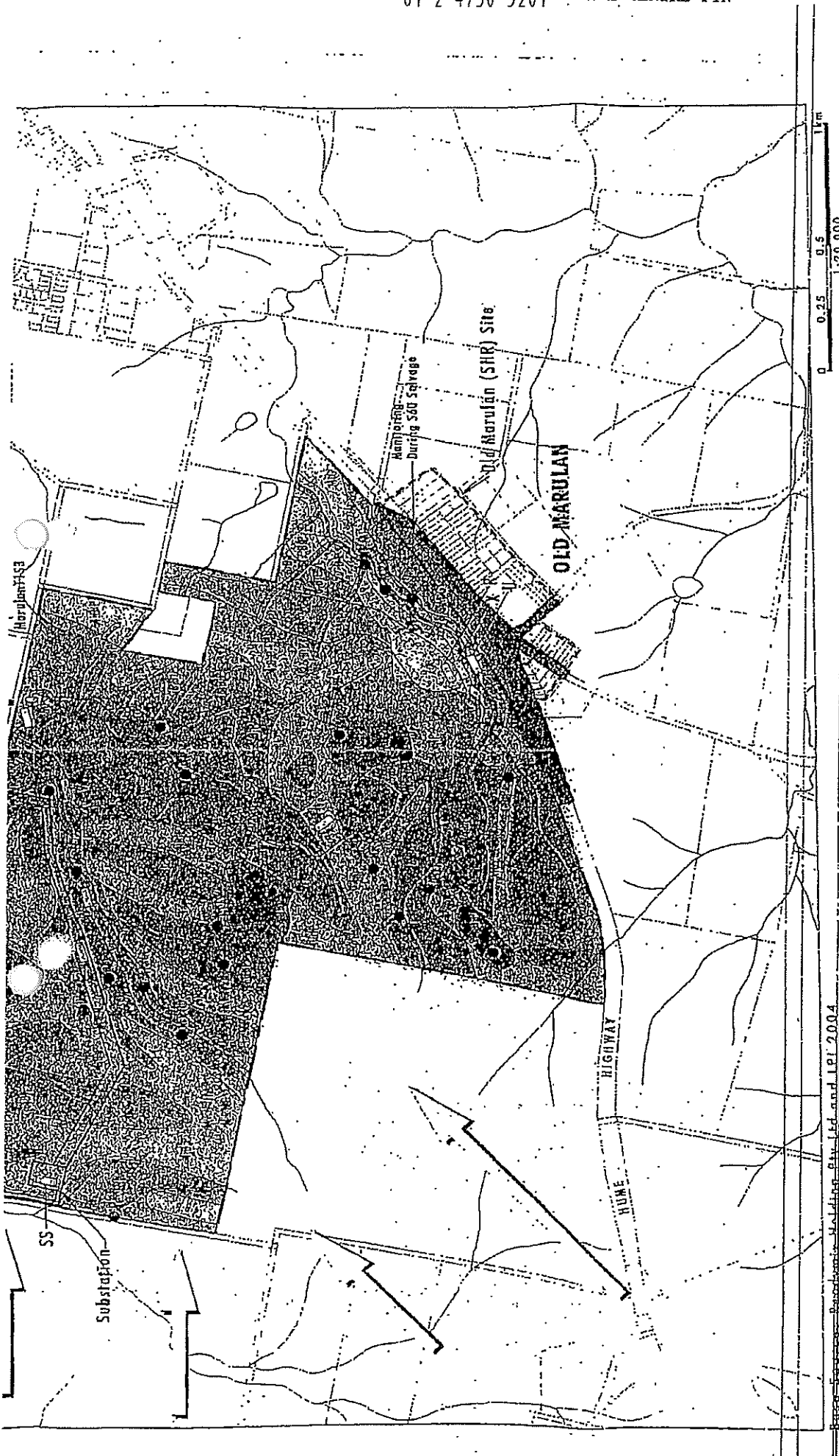
- Project Area
- Haul Road
- Artifact Sculler
- Isolated Find
- ⊕ Stone Arrangement
- ⊗ Scattered Tree
- △ Grinding Stone
- Proposed Transmission Line Easements
- Proposed Decommissioned Section of 132kV Transmission Line
- Sites Managed In-situ
- Sites Recorded During the CE Survey to be Managed In-situ

FIGURE 1.4

Country Energy Infrastructure

Attachment 'B'





Base: Geoscience Australia, Mapping by Led and Lepi 2004

Legend

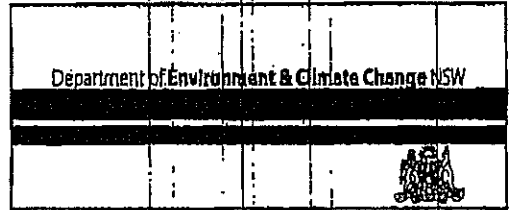
[Symbol]	Project Area	[Symbol]	Artefact Scatter	[Symbol]	Sites to be Subsurface Tested
[Symbol]	Modified	[Symbol]	Isolated Find	[Symbol]	Interchange Construction Footprint
[Symbol]	Creek Lines	[Symbol]	Stone Arrangement		
[Symbol]	High Point Rocky Ridge Crest or Rocky Spur Crest	[Symbol]	Scarred Tree		
[Symbol]	Gentle Slope	[Symbol]	Artefact Scatter (CE)		
[Symbol]	Very Gentle Slope	[Symbol]	Isolated Find (CE)		
[Symbol]	Saddle on Ridge Crest	[Symbol]	Grinding Stone (CE)		
[Symbol]	Saddle on Spur Crest	[Symbol]	Drainage		
[Symbol]	High Point Rocky Ridge Crest or Rocky Spur Crest	[Symbol]			
[Symbol]	Adomalite Dyke/Stilis				
[Symbol]	Adomalite Dyke/Stilis				
[Symbol]	Deep Sand				
[Symbol]	Ridge Crest				
[Symbol]	Spur Crest				
[Symbol]	Modern to Slina				

FIGURE 3.2
Sites and Archaeological Terrain Units Proposed for Subsurface Testing

Permit to disturb or move Aboriginal objects on land
Consent to destroy, deface or damage Aboriginal objects or an
Aboriginal place

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974



AHIP number: 1077294

AHIP Issued To:

RINKER AUSTRALIA PTY LIMITED,
ABN 87 099 732 297,
PO BOX 258,
PENRITH NSW 2751
STANDARD POST

**Permit to disturb or move Aboriginal objects on land
Consent to destroy, deface or damage Aboriginal objects**

DECC Office issuing this AHIP

Department of Environment and Climate Change (NSW)

South Branch, 6 Rutledge Street Queanbeyan, NSW 2620

Tel: 6298 9707

Fax: 6299 4281

Short description of activity and/or location

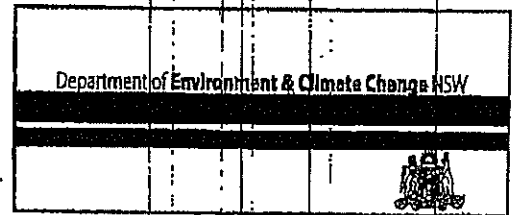
Assessment of development impact at Lynwood Quarry, Manulan as described
in Schedule A and shown on the map at Attachment 'A'

**Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information
about this AHIP is also set out after the Dictionary.**

Permit to disturb or move Aboriginal objects on land
 Consent to destroy, deface or damage Aboriginal objects or an
 Aboriginal place

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974.



PERMIT TO DISTURB OR MOVE ABORIGINAL OBJECTS ON LAND

CONSENT TO DESTROY, DEFACE AND DAMAGE ABORIGINAL OBJECTS

Background

On 23-Jul-2007 an application was made to the Director-General of the Department of Environment and Climate Change for a permit pursuant to s.87 and consent pursuant to s.90 of the National Parks and Wildlife Act 1974. The s. 87 permit and s.90 consent will allow the applicant to undertake subsurface testing and monitoring at 22 Country Energy electricity line pole emplacement locations and at the Old Marulan Section 60 (Heritage Act) non-Indigenous heritage excavations. The permit/consent will allow the applicant to salvage or destroy Aboriginal objects that are observed during the testing and/or monitoring, except where those objects are determined to be of high significance. In other words the permit/consent allows the applicant to salvage or destroy low density stone artefacts but does not allow the applicant to salvage Aboriginal objects that occur within a flaking floor or that constitute charcoal hearth deposits.

Permit issued subject to conditions

A permit is issued to disturb or move on land Aboriginal objects identified in Schedule C but only as expressly provided by the conditions of this AHIP.

This permit is issued pursuant to section 87 of the National Parks and Wildlife Act 1974.

Consent given subject to conditions

A consent is given to destroy, deface and damage Aboriginal objects identified in Schedule E, in accordance with the conditions of this AHIP.

This consent is given pursuant to section 90 of the National Parks and Wildlife Act 1974.

A handwritten signature in black ink, appearing to read "Michael Hood", written over a dotted line.

Mr Michael Hood

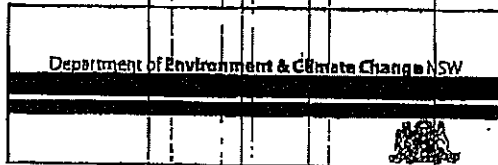
Manager

South

(by Delegation)

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

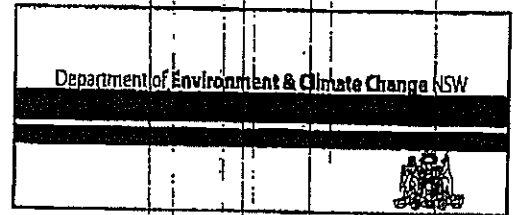


DATED: 27-Aug-2007

Permit to disturb or move Aboriginal objects on land
Consent to destroy, deface or damage Aboriginal objects or an
Aboriginal place

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974



Schedule A: Land to which this AHIP applies

Lynwood Quarry, Marulan, Lots 1 (DP1074819), 2 (DP10748197), 3 (DP1036993 & 1074819), 4 (DP1036993), 7 (DP588696), 112 (DP750029) and 229 (DP750029) (DA-128-5-2005) as shown on Attachment B.1.A

[Handwritten signature]
23/8

Schedule B: Protected Aboriginal objects

Burials

All human remains in, on under the land.

Aboriginal objects as identified on AHIMS

AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0059	Marulan Quarry 1	artefact	771860	6152890
51-6-0242	MRN1	artefact	773179	6153116
51-6-0243	MRN2	artefact	773077	6153038
51-6-0244	MRN3	artefact	773043	6152939
51-6-0245	MRN4	artefact	772313	6152581
51-6-0246	MRN6	artefact	772404	6152969
51-6-0249	MRN8	modified tree	771061	6153658
51-6-0250	MRN9	stone arrangement	771252	6153592
51-6-0251	MRN10	modified tree	771061	6153698
51-6-0252	MRN11	modified tree	771093	6153692
51-6-0253	MRN12	artefact	771280	6154097
51-6-0254	MRN13	artefact	771280	6153826
51-6-0255	MRN14	artefact	771473	6153969
51-6-0256	MRN15	artefact	771943	6154215
51-6-0257	MRN16	artefact	772268	6154312
51-6-0258	MRN17	artefact	772419	6154447
51-6-0259	MRN18	artefact	772327	6153801
51-6-0260	MRN19	artefact	772518	6153894
51-6-0261	MRN20	artefact	771379	6154194
51-6-0262	MRN21	artefact	771559	6153669

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0263	MRN22	artefact	771713	6153691
51-6-0264	MRN23	modified tree	771379	6154194
51-6-0265	MRN24	artefact	771946	6153098
51-6-0271	MRN30	artefact	772067	6155501
51-6-0275	MRN34	artefact	772295	6155492
51-6-0279	MRN38	artefact	772284	6154878
51-6-0280	MRN39	artefact	772446	6154865
51-6-0281	MRN40	artefact	772486	6154771
51-6-0282	MRN41	artefact	772484	6154904
51-6-0283	MRN42	artefact	772598	6154873
51-6-0284	MRN43	artefact	772719	6154744
51-6-0285	MRN44	artefact	772901	6154842
51-6-0286	MRN45	artefact	772982	6154825
51-6-0287	MRN46	artefact	773309	6154841
51-6-0288	MRN47	artefact	773860	6155644
51-6-0290	MRN49	modified tree	772377	6156899
51-6-0291	MRN50	artefact	772321	6155564
51-6-0292	MRN51	modified tree	772334	6155662
51-6-0101	IF1	artefact	774550	6152900
51-6-0102	IF2	artefact	777420	6153370
51-6-0103	IF3	artefact	774500	6158170
51-6-0456	Marulan T1 S1	artefact	772277	6154747
51-6-0457	Marulan T1 S2	artefact	772737	6154670
51-6-0458	Marulan T1 S3	artefact	772940	6154663
51-6-0459	Marulan T1 S4	artefact	772938	6154692
51-6-0460	Marulan T1 S5	artefact	773044	6154689
51-6-0461	Marulan T1 S6	artefact	773166	6154689
51-6-0462	Marulan T1 S7	artefact	773226	6154711
51-6-0463	Marulan T1 S8	artefact	773240	6154960
51-6-0464	Marulan T1 S9	artefact	773312	6154703
51-6-0465	Marulan T5 S1	artefact	772250	6154716
51-6-0466	T5 S2	artefact	772238	6154707

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS
51-6-0467	Marulan T6 S1	artefact	772216	6152641
51-6-0468	Marulan T6 S2	artefact	772010	6153579
51-6-0470	Marulan T6 S3	artefact	771997	6153599
51-6-0469	Marulan T6 S4	artefact	772089	6153660

Schedule C: Aboriginal objects which may be disturbed or moved**Salvage area**

All Aboriginal objects in, on or under that part of the land which is identified on the map shown at Attachment 'B' as a subsurface testing and salvage area, including the following Aboriginal objects but excluding any Aboriginal objects described in Schedule B.

Salvage of specific Aboriginal objects

SITE NAME	SITE TYPE	MAP REFERENCE*	EASTINGS	NORTHINGS
not applicable	n/a	n/a	n/a	n/a

Schedule D: Temporary storage location for certain salvaged objects

Offices of Umwelt (Australia) Pty Ltd (ABN 18 059 519 041), 2/20 The Boulevard, Toronto NSW 2283.

Schedule E: Aboriginal objects to be destroyed, damaged or defaced

Aboriginal objects on, in or under the land which are identified in the map at Attachment 'B' other than the protected Aboriginal objects described in Schedule B.

A and B

2/2/07

Schedule F: Proposed works

Proposed works include subsurface testing and monitoring at 22 Country Energy electricity line pole emplacement locations and at the Old Marulan Section 60 (Heritage Act) non-Indigenous heritage excavations. The permit/consent will allow the applicant to salvage or destroy Aboriginal objects that are observed during the testing and/or monitoring except where those objects are determined to be of high significance.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW

**COMMENCEMENT AND OVERSIGHT OF ACTIVITIES RELATING TO THIS AHIP****Commencement of AHIP**

1. This AHIP commences on the date it is signed unless otherwise provided by this AHIP.
2. The AHIP holder must not, in a salvage area described in an AHIP that remains in force, commence activities that would damage, destroy or deface any Aboriginal object or Aboriginal Place, unless the following have taken place:
 - (a) the salvage works described in that AHIP have been completed; and
 - (b) the AHIP holder responsible for the salvage works has notified the DECC in writing that those works have been completed.

→ before the p/oes can go in must put in a letter or final SPO report

Duration of AHIP

3. Unless otherwise revoked in writing, this AHIP remains in force for:
 - (a) Ten (10) years from the date of commencement; or
 - (b) the date on which the salvage report and s90 damage report is submitted, whichever is the sooner.

Responsibility for compliance with conditions of AHIP

4. The AHIP holder must ensure that all of its employees, contractors, sub-contractors, agents and invitees are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the activities relating to this AHIP

5. The AHIP holder must appoint a suitably qualified and experienced individual who is responsible for overseeing, for and on behalf of the AHIP holder, the activities relating to this AHIP.
6. The individual appointed must be the individual nominated in the application form.
7. If an alternative individual is appointed whilst this AHIP remains in force, the AHIP holder must advise the DECC office in writing within 14 days of the new appointment.

Notification of commencement of work

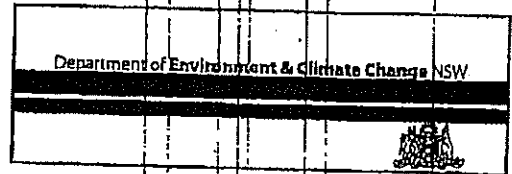
8. Prior to the proposed commencement of activities authorised by this AHIP, the AHIP holder must give the DECC office written notice of the proposed commencement date of those activities.

GENERAL OPERATIONAL CONDITIONS**Activities must not move or disturb Aboriginal objects**

9. The AHIP holder must not move or disturb any Aboriginal objects, except as otherwise expressly provided by a condition of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



Activities must not damage Aboriginal objects

10. The AHIP holder must not damage Aboriginal objects other than those Aboriginal objects specified in Schedule E.

Activities must be in accordance with methodology

11. Activities must be carried out in accordance with the methodology specified in the application to which this AHIP applies, except as otherwise expressly provided by a condition of this AHIP.

Activities must also be carried out in accordance with the Aboriginal Heritage Management Plan (AHMP) that has been approved by DECC, particularly:

The Management Committee will be set up to oversee the implementation of the AHMP prior to the commencement of the Section 87 subsurface testing and salvage program and prior to the commencement of any ground disturbing works related to the Country Energy works and the quarry construction phase. Names of the Management Committee members must be provided to DECC prior to commencement of the Section 87 subsurface testing and salvage program.

The first monitoring program to be conducted within the Cultural Heritage Management Zone (CHMZ) by the Management Committee must be undertaken prior to commencement of substantial construction works within the development impact area.

The Rinker Australia Pty Ltd Project Manager or Environmental Manager, as representatives of the Management Committee, will report on activities required by the AHMP within the Annual Environmental Management Report (AEMR). The AEMR must be provided to DECC.

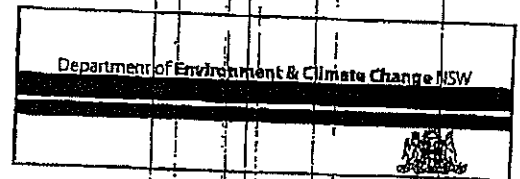
PROTECTION OF ABORIGINAL OBJECTS

Protection of Aboriginal objects

12. The AHIP holder must ensure that Aboriginal objects specified in Schedule B are not damaged.
13. To the fullest extent possible, each protected Aboriginal object must be clearly marked so as to provide a clear visual marker to persons on foot or in vehicles in the vicinity of that Aboriginal object.
14. The AHIP holder must ensure that persons entering the land such as employees, contractors, sub-contractors, agents and invitees, have a copy of any Map referred to in Schedule B.
15. Appropriate sediment control measures must be installed and operated so as to prevent any disturbance of a protected Aboriginal object.
16. Vehicles must not be driven on or in the immediate vicinity of a protected Aboriginal object.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



SALVAGE WORK AND RELATED ACTIONS

Salvage of Aboriginal objects

17. The AHIP holder may disturb or move Aboriginal objects in, on or under each salvage area for the purpose of their salvage, other than protected Aboriginal objects in the salvage area.
18. The salvage work must occur in accordance with 'Lynwood Quarry Marulan Aboriginal Heritage Management Plan' (Umwelt, July 2007) including the methodology described in 'Appendix 1 Section 87 PRP and Section 87/Section 90 Consent Applications and Research Design and Methodology', except as otherwise expressly provided by a condition of this AHIP.

Temporary storage of salvaged Aboriginal objects

19. Any Aboriginal objects which are to be moved as part of the salvage works must be moved as soon as practicable to a temporary storage location nominated in Schedule D, pending any agreement reached as to the long term management of the salvaged Aboriginal objects.
20. The AHIP holder is responsible for the protection of any salvaged Aboriginal objects stored at each temporary storage location.

NOTIFICATION AND REPORTING CONDITIONS

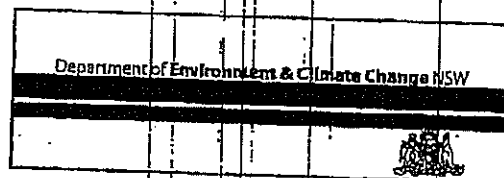
Human remains

21. If any human remains are disturbed in, on or under the land, the AHIP holder must:
 - (a) not disturb or move these remains;
 - (b) immediately cease all work at the particular location;
 - (c) notify DECC's Environment Line on 131 555 and the local police as soon as practicable and provide any available details of the remains and their location; and
 - (d) not recommence any work at the particular location unless authorised in writing by the DECC.

Incidents which may breach the Act or AHIP

22. The AHIP holder must notify the DECC office in writing as soon as practicable after becoming aware of:
 - (a) any contravention of s.90 or s.86 of the Act not authorised by an AHIP;
 - (b) any contravention of the conditions of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit**Reports about incidents which may breach the Act or AHIP**

23. Where an authorised officer reasonably suspects that an incident which may have breached the Act or AHIP has occurred, the officer may request in writing that the AHIP holder prepare a written report about that incident. The report must discuss:

- (a) the nature of the incident;
- (b) the nature and location of relevant Aboriginal objects or Aboriginal places, referring to and providing maps and photos where appropriate;
- (c) the impact of the incident on Aboriginal objects or Aboriginal places;
- (d) any conditions of an AHIP which may have been breached; and
- (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.

24. The report must be provided to the DECC office by the due date specified by the authorised officer.

Report about disturbance or movement of Aboriginal objects under s.87

25. If any disturbance or movement of Aboriginal objects is authorised by this AHIP, the AHIP holder must provide to the DECC office a salvage report as soon as practicable after completing the salvage. The report must include:

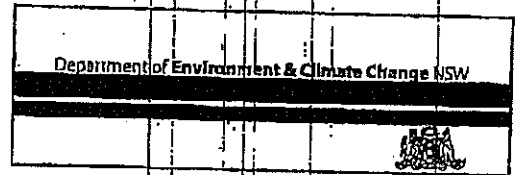
- (a) details of the nature and type of Aboriginal objects disturbed or moved at each salvage area, and the location to and from which the objects were moved;
- (b) a description of the methods of excavation, movement and salvage used;
- (c) a plan of each salvage area and location from and to which the objects were moved;
- (d) any ongoing consultation with or involvement of any local Aboriginal groups in relation to this AHIP;
- (e) detail and evaluate the effectiveness of any monitoring activities and mitigation measures that were implemented;
- (f) produce and review the effectiveness of any management plan which was in place;
- (g) detail the results of any non invasive analysis carried out on the Aboriginal objects;
- (h) if any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now located at the temporary storage location;
- (i) detail any long term management arrangement for the salvaged Aboriginal objects;
- (j) detail any community collection undertaken by the local Aboriginal groups.

Due date for report about salvage or movement

26. The salvage report must be provided to the DECC office within two (2) years of the date of commencement of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



Report about damage to Aboriginal objects under s.90

27. The AHIP holder must prepare a report about the activities relating to the damage of Aboriginal objects as consented to by this AHIP, as soon as practicable after completing the activities. The report must:
- include a short summary of the report;
 - provide details of the objects which were fully or partially damaged in the course of undertaking the activities;
 - describe any ongoing consultation with or involvement of representatives of local Aboriginal groups in relation to this AHIP;
 - describe how any protected Aboriginal objects were managed during the period covered by the AHIP;
 - comment on the effectiveness of monitoring activities and mitigation measures that were implemented; and
 - comment on the effectiveness of any management plan which was in place.
28. The report must be provided to the DECC office within two (2) years of the date of commencement of this AHIP.

Provision of copies of reports to local Aboriginal groups

29. The AHIP holder must provide a copy of each report provided to the DECC under this AHIP to each local Aboriginal group, within 14 days after each report is provided to the DECC.

Disclosure of information pursuant to lawful requirement

30. This AHIP does not prevent the disclosure of any information or document in DECC's possession in accordance with any lawful requirement.

Making copies of reports

31. By providing a report, the AHIP holder agrees that DECC can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.
32. DECC is entitled to make copies of any reports provided to DECC under this AHIP.

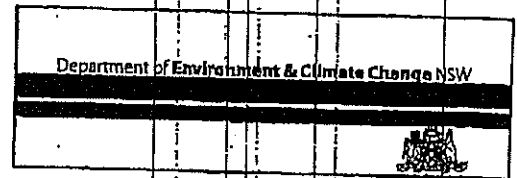
OTHER GENERAL CONDITIONS

Indemnity

33. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions,

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from

- (i) any damage or destruction to any real or personal property; and
- (ii) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Release

34. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from

- (i) any damage or destruction to any real or personal property; and
- (ii) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

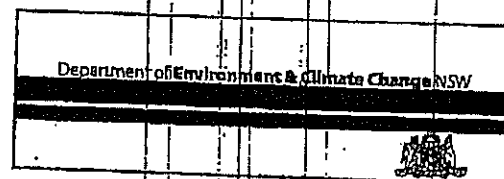
Ongoing obligation to comply with due dates

35. Where a condition of this AHIP specifies a date by which something must be done or ceased to be done, the AHIP holder has a continuing obligation to comply with that condition after that date (subject to any written revocation or variation of the AHIP by DECC).

Written notice

36. Any requirement to provide written notice to the DECC office in this AHIP may be complied with by faxing the notice to the DECC office's fax number or by sending by registered post to the DECC office's address. The DECC office's contact details are specified at the front of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

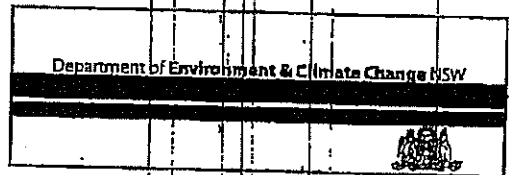
Aboriginal Heritage Impact Permit**DICTIONARY**

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal object(s)	has the same meaning as in the Act
Aboriginal place	has the same meaning as in the Act
Act	means the National Parks and Wildlife Act 1974
AHIMS	means the Aboriginal Heritage Information Management System maintained by DECC
AHIP holder	means the person listed on the cover page under the heading "AHIP issued to"
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Authorised officer	means an employee of the DECC who is appointed as authorised officer under s.156B of the Act
Damage	in relation to an Aboriginal object or Aboriginal place, unless otherwise specified in this AHIP, includes destruction and defacement
DECC	Department of Environment and Climate Change (NSW)
DECC office	means the office listed on the cover page of this AHIP
Director-General	means the Director-General of DECC
Invasive analysis	Any analysis of an Aboriginal object that damage the Aboriginal object
Local Aboriginal groups	means the following the following groups: Pejar Local Aboriginal Land Council 81 Bourke Street, Goulburn NSW 2580 Contact person: Delise Freeman Gundungurra Tribal Council Aboriginal Corporation 14 Oak Street, Katoomba NSW 2780 Contact person: Sharon Brown

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



Gundungurra Aboriginal Heritage Association Inc.

PO Box 31, Lawson NSW 2783

Contact person: Merle Williams

Peter Falk Consultancy

PO Box 392, Bundanoon NSW 2578

Contact person: Peter Falk

Non-invasive analysis

Any analysis of an Aboriginal object that does not damage the Aboriginal object

Protected Aboriginal objects

means those Aboriginal objects which are described in Schedule B

Salvage

the recovery of Aboriginal objects in accordance with the archaeological methodology accompanying the application as modified by the conditions of this AHIP.

Salvage area

means an area described as a salvage area in Schedule C

Standards and Guidelines Kit

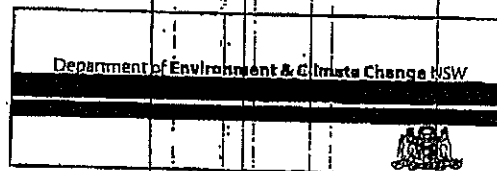
means the Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW National Parks and Wildlife Service 1997) as amended or replaced from time to time

Temporary storage location

means a location specified at Schedule D

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



INFORMATION ABOUT THIS AHIP

Responsibilities of AHIP holder

The AHIP holder is responsible for ensuring the AHIP holder's employees, contractors, sub-contractors, agents, invitees are made aware of and comply with the conditions of this AHIP.

Penalties for breach of the Act

Significant penalties can be imposed by a court for failure to obtain or breach of an AHIP. The DECC can also issue penalty notices.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the National Parks and Wildlife Act

Newly identified Aboriginal objects need to be notified to the Director-General under s.91 of the Act using the form available on www.environment.nsw.gov.au

Stop work orders and interim protection orders may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth).

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

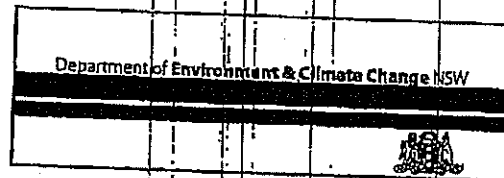
This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the DECC office in writing for a variation of any conditions of an AHIP. Requests for variations may need to be accompanied by evidence of further consultation with interested parties including Aboriginal stakeholders and in some cases may include payment of fees. The conditions of an AHIP may be varied at any time at the discretion of the Director-General. The AHIP holder may appeal a decision of the Director General to vary the conditions of the AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit



Transfer of AHIP

An AHIP is not transferable. The surrender or revocation of an existing AHIP could occur at the same time an AHIP is issued to the new AHIP holder.

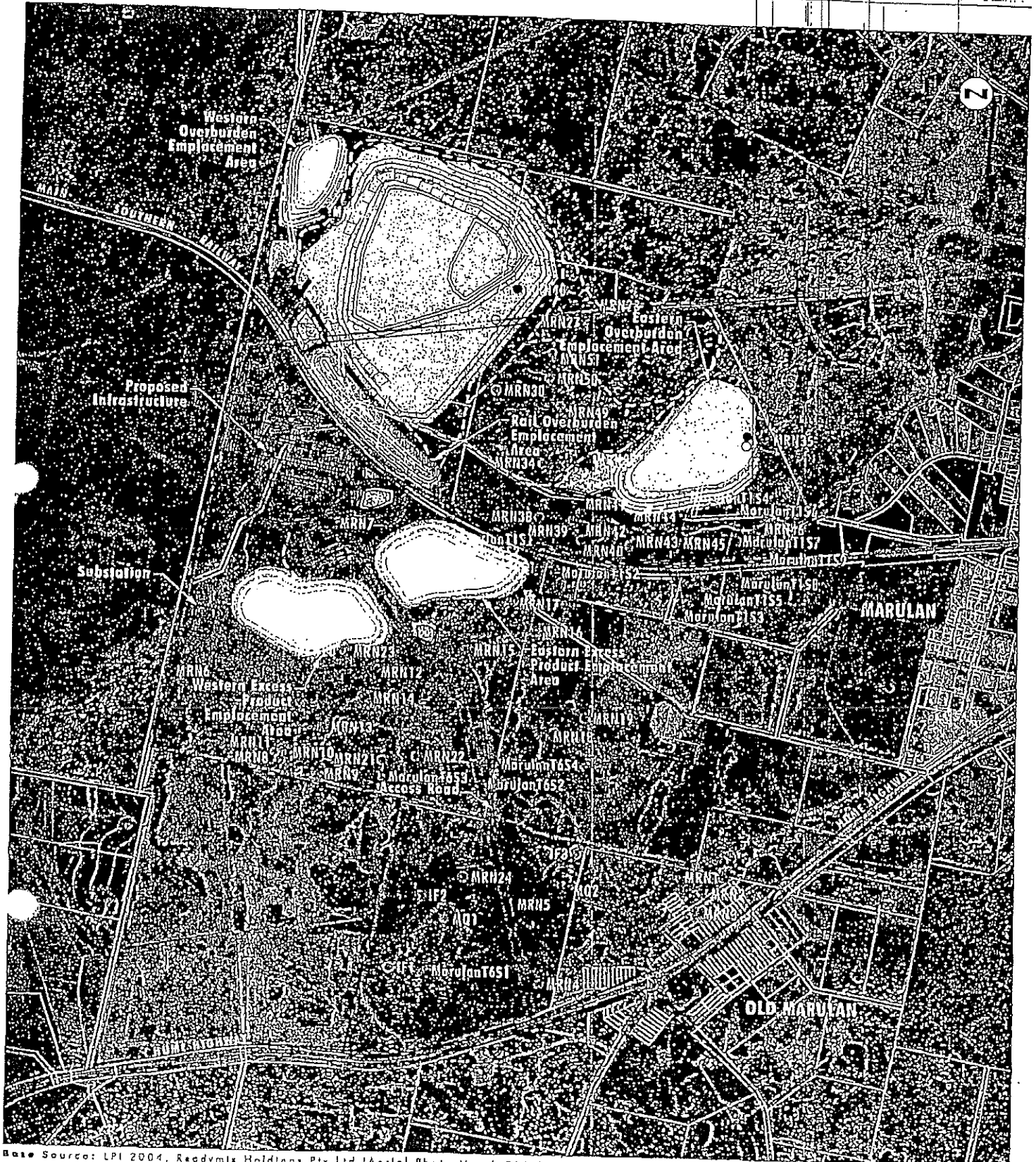
Revocation of AHIP

An AHIP may be revoked at any time at the discretion of the Director General. Prior to revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

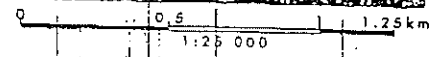
Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

Attachment 'A'



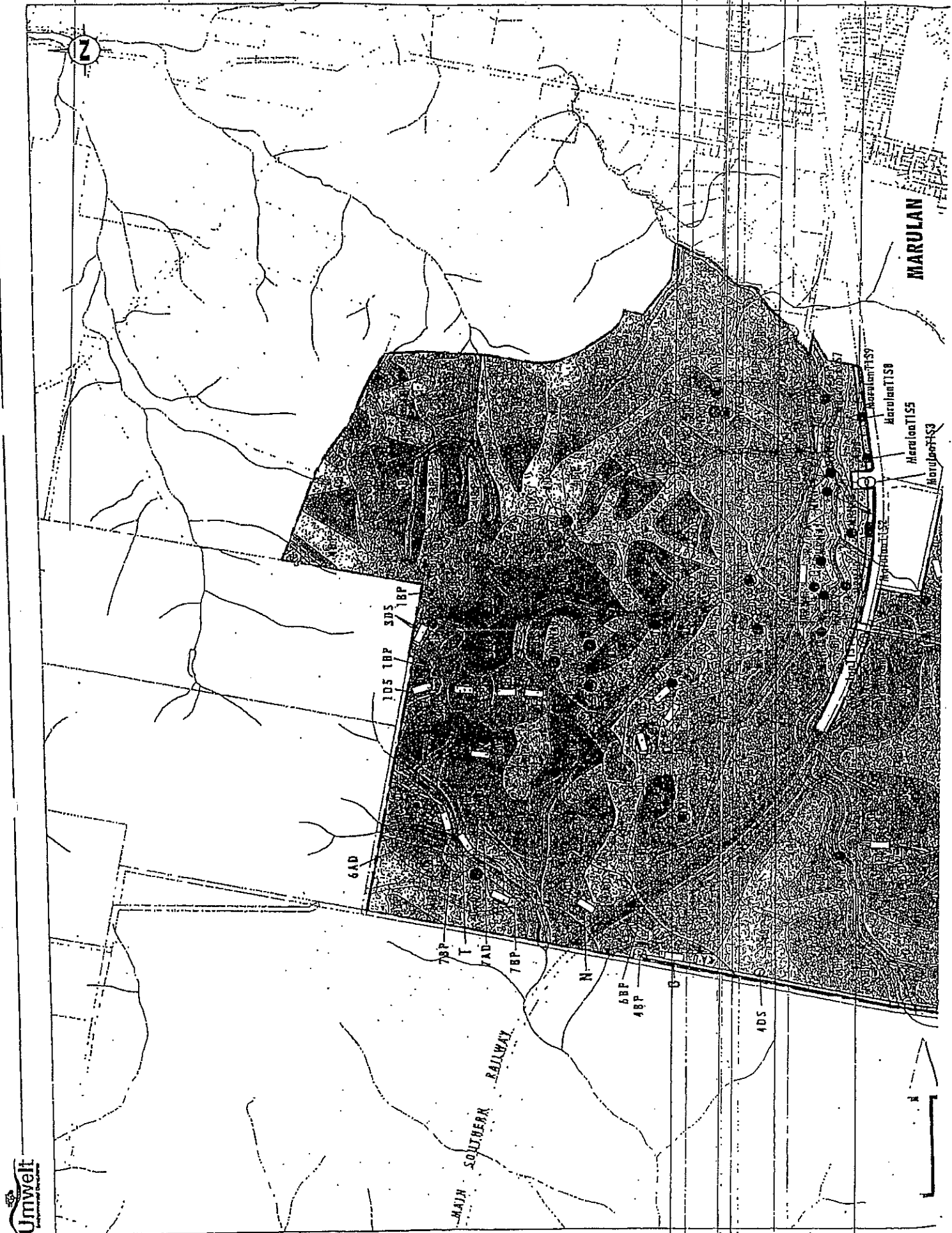
Base Source: LPI 2004, Readymix Holdings Pty Ltd (Aerial Photo March 2005)

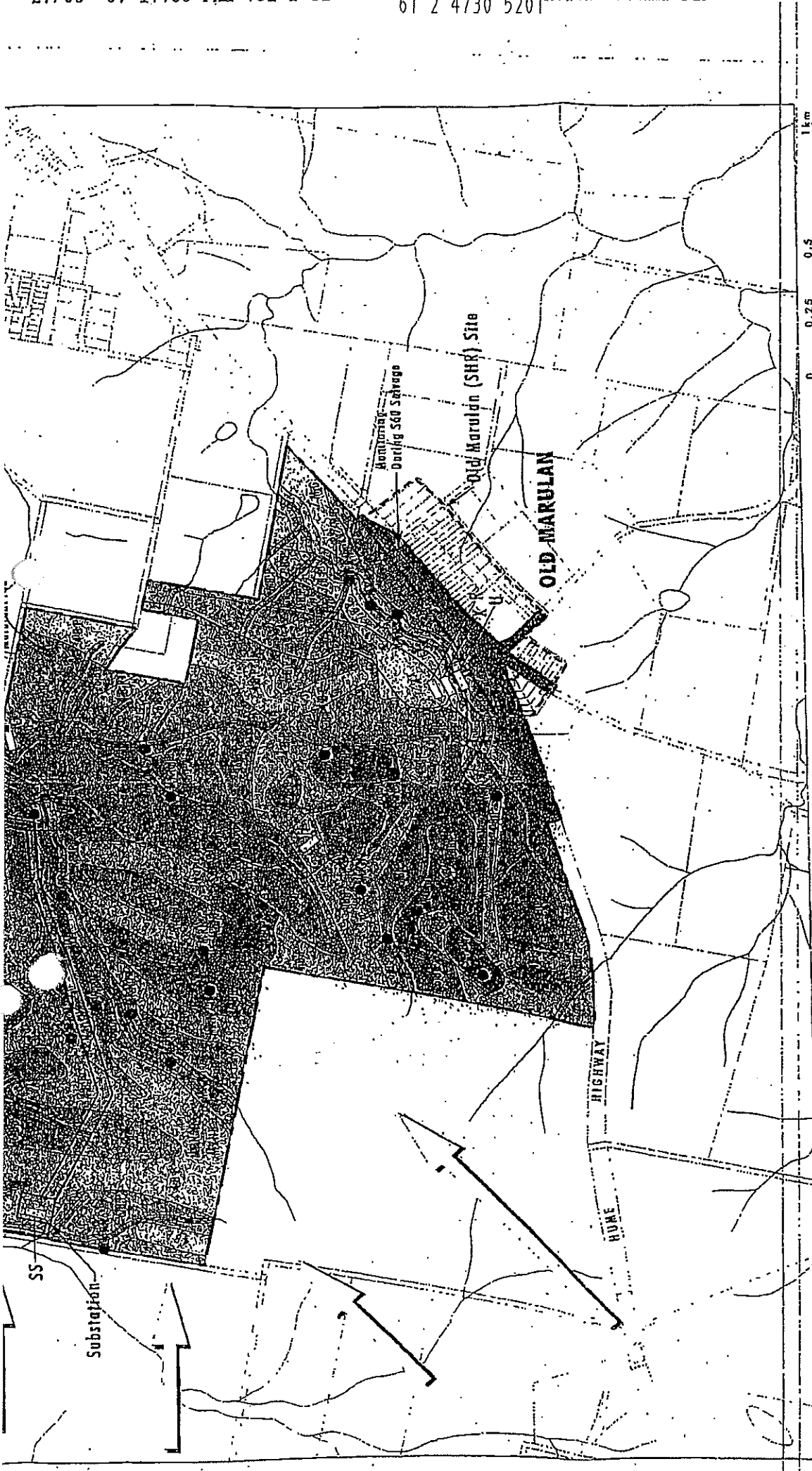


- Legend**
- Project Area
 - Haul Road
 - Artefact Scatter
 - Isolated Find
 - ⊕ Stone Arrangement
 - ♀ Scarred Tree
 - △ Grinding Stone
 - Proposed Transmission Line Easements
 - Proposed Decommissioned Section of 132kV Transmission Line
 - ▨ Sites Managed In-situ
 - ▩ Sites Recorded During the CE Survey to be Managed In-situ

FIGURE 1.4
Country Energy Infrastructure

Attachment 'B'





Base Source: ReadyMix Holding, Pty Ltd, and LPI 2004

Legend

- | | | | |
|------------------------------|-----------------------------------|-----------------------|------------------------------------|
| Project Area | Bitbank Porphyry | Artefact Scatter | Sites to be Subsurface Tested |
| Modified | Siliceous Dyke | Isolated Find | Interchange Construction Footprint |
| Creek Lines | Porphyritic Adomellite | Stone Arrangement | |
| High Point Rocky Ridge Crest | Adomellite Dyke | Scarred Tree | |
| or Rocky Spur Crest | Stage 1 Post Hole Monitoring Area | Artefact Scatter (CE) | |
| Ridge Crest | Prevailing Winds | Isolated Find (CE) | |
| Spur Crest | Archaeological Terrain Unit | Grinding Stone (CE) | |
| Andersite | Subsurface Testing Location | Drainage | |
| Marulan Granite | | | |

FIGURE 3.2
Sites and Archaeological Terrain Units Proposed for Subsurface Testing

61 2 4730 5201



FACSIMILE

<i>To:</i>	Jan Wilson	<i>From:</i>	Richard Savage
<i>Company:</i>	Umwelt	<i>Fax Number:</i>	0249505737
<i>Date:</i>	22.4.08	<i>No. of Pages:</i>	2 (inc cover)
<i>Re:</i>	Variation to s87/90 Permit - Lynwood		

Confidential
 Urgent
 For Review
 Please Comment
 Please Reply

Hi Jan,

Attached for your info is a copy of the approval for the request to vary s87/90 permit #1077294 at Lynwood. It arrived earlier today.

Regards

Richard Savage
Project Manager

Our reference: DOC08/16126
Contact: Stephen Free (02 6298 0372)

Mr Richard Savage
CEMEX Australia Pty Ltd
1 Sheens Lane
CASTLEREAGH NSW 2749

4730-5201
FAXED
Hi Richard,
Originals etc
in the mail
Regards,
Steve

Dear Mr Savage

RE: Request for a Variation to Section 87/Section 90 AHIP #1077294 CEMEX AUSTRALIA Pty Ltd

I refer to your letter of 6 March 2008 formally requesting a variation to Section 87/Section 90 AHIP #1077294 for the Lynwood Quarry at Marulan, NSW.

The variation request has been approved and will allow your company to increase the number of pole location excavations from 22 to 29 (there are still two pole locations left for excavation on the existing s87/90 AHIP) to allow for the excavation and salvage of two pole locations at the south-eastern end of the Country Energy 22kV feeder and seven pole locations from the substation site up the western boundary of the Lynwood Quarry project area and to allow the collection and relocation of artefacts from the track that runs adjacent to pole locations 10 to 21 within the Joarimin Creek South site.

All other consent conditions are unchanged. A copy of this letter will be appended to the DECC copy of the Permit/Consent #1077294 as a record of the variation. A copy of this consent/permit variation has been sent to Gundungarra Aboriginal Heritage Association Inc (GAHA), Gundungarra Tribal Council Aboriginal Corporation (GTCAC), Peter Falk Consultancy (PFC), Pejar Local Aboriginal Land Council (PLALC) and the Goulburn Mulwaree Shire Council.

Should you have any queries regarding this variation, please contact Stephen Free, Senior Aboriginal Heritage Officer/Archaeologist on 02 6298 0372.

Yours sincerely



MARK SHEAHAN
Acting Manager
Planning and Aboriginal Heritage
Environment Protection and Regulation Division South

15 April 2008

- 7 JUL 2008

Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974 (NPW Act)

Department of Environment & Climate Change NSW



Your reference: 2455/JM/JW/040408
Our reference: AHIMS No. 2963 / FIL07/1670
Contact: 6298 9707

COUNTRY ENERGY,
ABN 37 428 185 226,
PO BOX 718,
QUEANBEYAN NSW 2620
STANDARD POST

ABORIGINAL HERITAGE IMPACT PERMIT

Dear Mr Stonestreet

RE: Country Energy substation and associated infrastructure, Lynwood Quarry Marulan

I refer to your application for an Aboriginal Heritage Impact Permit under section 87 and section 90 of the *National Parks and Wildlife Act 1974* (NPW Act), and accompanying information provided for the Country Energy substation and associated infrastructure project at Lynwood Quarry, Marulan received by the Department of Environment and Climate Change (NSW) (DECC) on 8 April 2008 and (where information has been received on different days) 20 June 2008, 24 June 2008 and 26 June 2008 respectively.

DECC has considered the application and supporting information provided and has decided to issue an AHIP subject to conditions. The AHIP is attached.

You should read the AHIP carefully and ensure you comply with its conditions.

You should note that it is an offence under the NPW Act to fail to comply with the conditions of the AHIP. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is \$22,000.

You should note that it is an offence under the NPW Act to knowingly destroy, deface or damage, or knowingly cause or permit the destruction or defacement of (or damage to) an Aboriginal object or Aboriginal place without consent. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is \$22,000.

You may appeal to the Minister if dissatisfied with any condition of this AHIP. The appeal must be in writing and set out the basis for the appeal. The deadline for lodging the appeal is 28 days after the date this AHIP was issued.

Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974 (NPW Act)

Department of Environment & Climate Change NSW



If you have any questions, or wish to discuss this matter further please contact Dr Philip Boot on 6298 9707.

..... *M. Sheahan*

MARK SHEAHAN

Manager, Planning and Aboriginal Heritage (South)

Environment Protection and Regulation Group

(by Delegation)

Date:

27 June 2008

Fax to: Jan Wilson of: Umwelt
Fax no: 49505737
From: Philip Boot of: DECC
Phone: 62989707

cc:

Date: 27 June 2008

No of pages (including this page):

RE: s87/90 AHIP application for Country Energy work at Lynwood Quarry, Marulan

Please find the AHIP attached. Note that Attachment 'A' is not attached (it is Fig.1.4 from the Umwelt 2008 document supporting the AHIP application). I will post out the complete AHIP next week.

Regards
Phil

PO Box A280 Sydney South NSW 1232
59-61 Goulburn St Sydney NSW 2000
Tel: (02) 9995 5000 Fax: (02) 9995 5999
TTY (02) 9211 4723
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of **Environment & Climate Change** NSW



This facsimile may contain PRIVILEGED AND/OR CONFIDENTIAL INFORMATION intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering it to the person to whom it is addressed, YOU MAY NOT COPY OR DELIVER THIS MESSAGE TO ANYONE ELSE. If you receive this facsimile by mistake please telephone the nominated office (reverse charges) Thank you

Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974 (NPW Act)

Department of Environment & Climate Change NSW



Your reference: 2455/JM/JW/040408
Our reference: AHIMS No. 2963 / FIL07/1670
Contact: 6298 9707

COUNTRY ENERGY,
ABN 37 428 185 226,
PO BOX 718,
QUEANBEYAN NSW 2620
STANDARD POST

ABORIGINAL HERITAGE IMPACT PERMIT

Dear Mr Stonestreet

RE: Country Energy substation and associated infrastructure, Lynwood Quarry Marulan

I refer to your application for an Aboriginal Heritage Impact Permit under section 87 and section 90 of the *National Parks and Wildlife Act 1974* (NPW Act), and accompanying information provided for the Country Energy substation and associated infrastructure project at Lynwood Quarry, Marulan received by the Department of Environment and Climate Change (NSW) (DECC) on 8 April 2008 and (where information has been received on different days) 20 June 2008, 24 June 2008 and 26 June 2008 respectively.

DECC has considered the application and supporting information provided and has decided to issue an AHIP subject to conditions. The AHIP is attached.

You should read the AHIP carefully and ensure you comply with its conditions.

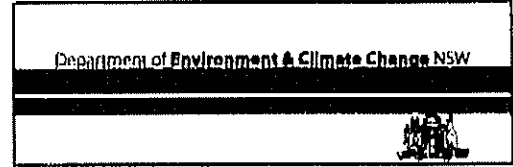
You should note that it is an offence under the NPW Act to fail to comply with the conditions of the AHIP. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is \$22,000.

You should note that it is an offence under the NPW Act to knowingly destroy, deface or damage, or knowingly cause or permit the destruction or defacement of (or damage to) an Aboriginal object or Aboriginal place without consent. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is \$22,000.

You may appeal to the Minister if dissatisfied with any condition of this AHIP. The appeal must be in writing and set out the basis for the appeal. The deadline for lodging the appeal is 28 days after the date this AHIP was issued.

Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974 (NPW Act)



If you have any questions, or wish to discuss this matter further please contact Dr Philip Boot on 6298 9707.

..... *M Sheahan*

MARK SHEAHAN

Manager, Planning and Aboriginal Heritage (South)

Environment Protection and Regulation Group

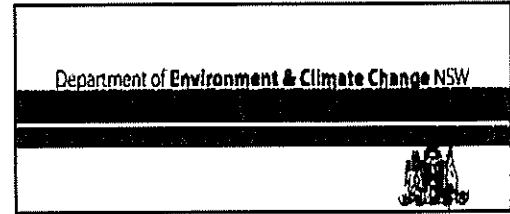
(by Delegation)

Date: 27 *June* 2008

Permit to disturb or move Aboriginal objects on land
Consent to destroy, deface or damage Aboriginal objects

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974



AHIP number: 1089392

AHIP Issued To:

COUNTRY ENERGY,
ABN 37 428 185 226,
PO BOX 718,
QUEANBEYAN NSW 2620
STANDARD POST

DECC Office issuing this AHIP:

Department of Environment and Climate Change (NSW)
South Branch, 6 Rutledge Street Queanbeyan, NSW 2620
Tel: 6298 9707
Fax: 6299 4281

Short description of activity and/or location

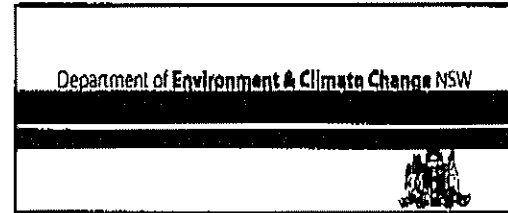
Protection, monitoring and salvage of Aboriginal objects to be impacted during construction of the Country Energy substation, construction access road, power line poles and excavation of an underground power cable trench at Lynwood Quarry, Marulan as described in Schedule A and shown on the map at Attachment 'A'.

Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information about this AHIP is also set out after the Dictionary.

Permit to disturb or move Aboriginal objects on land
Consent to destroy, deface or damage Aboriginal objects

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974



PERMIT TO DISTURB OR MOVE ABORIGINAL OBJECTS ON LAND

CONSENT TO DESTROY, DEFACE AND DAMAGE ABORIGINAL OBJECTS

Background

On 08-Apr-2008 an application was made to the Director-General of the Department of Environment and Climate Change for a permit pursuant to s.87 and a consent pursuant to s.90 of the National Parks and Wildlife Act 1974.

Permit issued subject to conditions

A permit is issued to disturb or move on land Aboriginal objects identified in Schedule C but only as expressly provided by the conditions of this AHIP.

This permit is issued pursuant to section 87 of the National Parks and Wildlife Act 1974.

Consent given subject to conditions

A consent is given to destroy, deface and damage Aboriginal objects identified in Schedule E, in accordance with the conditions of this AHIP.

This consent is given pursuant to section 90 of the National Parks and Wildlife Act 1974.

A handwritten signature in black ink, appearing to read "M Sheahan", written over a horizontal dotted line.

MARK SHEAHAN

Manager, Planning and Aboriginal Heritage (South)
Environment Protection and Regulation Group

(by Delegation)

DATED: 27/6/08

Permit to disturb or move Aboriginal objects on land
Consent to destroy, deface or damage Aboriginal objects

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974

Department of Environment & Climate Change NSW



CONDITIONS OF AHIP

Schedule A: Land to which this AHIP applies

Lynwood Quarry Marulan, Lot 229 DP 750029, Parish of Marulan, Brayton Road Marulan as shown on Attachment 'A'.

Schedule B: Protected Aboriginal objects

Burials

All human remains in, on under the land.

Aboriginal objects as Identified on AHIMS

AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS	DATUM - AGD or GDA
51-6-0526	Joarmin Creek South	artefact	773000	6154740	AGD
51-6-0256	MRN15	artefact	771835	6154178	AGD
51-6-0529	MRN55	artefact	772562	6154395	AGD
51-6-0530	MRN56	artefact	772276	6154249	AGD
51-6-0531	MRN57	artefact	772277	6154604	AGD
51-6-0532	MRN58	artefact	772245	6154419	AGD
51-6-0533	MRN59	artefact	771915	6154303	AGD

Schedule C: Aboriginal objects which may be disturbed or moved

Salvage area

All Aboriginal objects in, on or under that part of the land which is identified on the map at Attachment 'A' as a salvage or monitoring area, including the following Aboriginal objects but excluding any Aboriginal objects described in Schedule B.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW

**Salvage of specific Aboriginal objects**

AHIMS SITE ID	SITE NAME	SITE FEATURE	EASTINGS	NORTHINGS	DATUM - AGD or GDA
51-6-0608	MRN53	artefact	771612	6154199	AGD
51-6-0528	MRN54	artefact	770697	6154339	AGD

Schedule D: Temporary storage location for certain salvaged objects

Offices of Umwelt (Australia) Pty Ltd (ABN 18 059 519 041), 2/20 The Boulevard, Toronto NSW 2283.

Schedule E: Aboriginal objects to be destroyed, damaged or defaced

All Aboriginal objects in, on or under that part of the land which are identified in the map at Attachment 'A' other than the protected Aboriginal objects described in Schedule B.

Schedule F: Proposed works

Proposed works include monitoring topsoil removal from the Country Energy substation site; collection of any Aboriginal objects observed during monitoring; collection of one surface artefact that was recorded during previous subsurface testing conducted at the substation (affects site 51-6-0528, MRN54); laying of geotextile and fill over the ground surface at three sensitive locations on the construction access road (at 51-6-0256, MRN15; 51-6-0529, MRN55; and 51-6-0530, MRN56) and two associated power pole locations (within site 51-6-0526, Joarmin Creek South); construction of the access road, culverts and tail drains within a 40 m wide access road corridor; construction of two tail drains outside the road corridor within Archaeological Terrain Unit (ATU) 6BP (no site impacts); excavation of an 1100 m trench for an underground 22kV power cable within ATUs 6BP and 4BP (affects sites 51-6-0608, MRN53 and 51-6-0528, MRN54); construction of the substation in ATU 4BP; and placement of two power poles in two sensitive locations in ATUs 7BP and 4BP that have previously been tested and salvaged.

COMMENCEMENT AND OVERSIGHT OF ACTIVITIES RELATING TO THIS AHIP**Commencement of AHIP**

1. This AHIP commences on the date it is signed unless otherwise provided by this AHIP.
2. The AHIP holder must not, in a salvage area described in an AHIP that remains in force, commence activities that would damage, destroy or deface any Aboriginal object or Aboriginal Place, unless the following have taken place:
 - (a) the salvage works described in that AHIP have been completed; and

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



- (b) the AHIP holder responsible for the salvage works has notified the DECC in writing that those works have been completed.

Duration of AHIP

3. Unless otherwise revoked in writing, this AHIP remains in force for:
- (a) Ten (10) years from the date of commencement; or
 - (b) the date on which the salvage report and s90 damage report, is submitted, whichever is the sooner.

Responsibility for compliance with conditions of AHIP

4. The AHIP holder must ensure that all of its employees, contractors, sub-contractors, agents and invitees are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the activities relating to this AHIP

5. The AHIP holder must appoint a suitably qualified and experienced individual who is responsible for overseeing, for and on behalf of the AHIP holder, the activities relating to this AHIP.
6. The individual appointed must be the individual nominated in the application form.
7. If an alternative individual is appointed whilst this AHIP remains in force, the AHIP holder must advise the DECC office in writing within 14 days of the new appointment.

Notification of commencement of work

8. Prior to the proposed commencement of activities authorised by this AHIP, the AHIP holder must give the DECC office written notice of the proposed commencement date of those activities.

GENERAL OPERATIONAL CONDITIONS

Activities must not move or disturb Aboriginal objects

9. The AHIP holder must not move or disturb any Aboriginal objects, except as otherwise expressly provided by a condition of this AHIP.

Activities must not damage Aboriginal objects

10. The AHIP holder must not damage Aboriginal objects other than those Aboriginal objects specified in Schedule E.

Aboriginal Heritage Impact Permit



Activities must be in accordance with methodology

11. Activities must be carried out in accordance with the methodology specified in the application to which this AHIP applies, except as otherwise expressly provided by a condition of this AHIP.

PROTECTION OF ABORIGINAL OBJECTS

Protection of Aboriginal objects

12. The AHIP holder must ensure that Aboriginal objects specified in Schedule B are not damaged.
13. To the fullest extent possible, each protected Aboriginal object must be clearly marked so as to provide a clear visual marker to persons on foot or in vehicles in the vicinity of that Aboriginal object.
14. The AHIP holder must ensure that persons entering the land such as employees, contractors, sub-contractors, agents and invitees have a copy of any Map referred to in Schedule B.
15. Appropriate sediment control measures must be installed, operated and maintained so as to prevent any disturbance of a protected Aboriginal object.
16. Vehicles must not be driven on or in the immediate vicinity of a protected Aboriginal object.

SALVAGE WORK AND RELATED ACTIONS

Salvage of Aboriginal objects

17. The AHIP holder may disturb or move Aboriginal objects in, on or under each salvage area for the purpose of their salvage, other than protected Aboriginal objects in the salvage area.
18. The salvage work must occur in accordance with the methodology described in 'Documentation to accompany a s87/90 Aboriginal Heritage Impact Permit for works within the Lynwood Quarry Project Area, Marulan, NSW' (Umwelt March 2008), except as otherwise expressly provided by a condition of this AHIP. An additional requirement not listed in the application methodology has been incorporated into this AHIP that requires the proponent to ensure that topsoil is stripped in 3 m wide transects to allow monitoring to proceed effectively.

Temporary storage of salvaged Aboriginal objects

19. Any Aboriginal objects which are to be moved as part of the salvage works must be moved as soon as practicable to a temporary storage location nominated in Schedule D, pending any agreement reached as to the long term management of the salvaged Aboriginal objects.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



20. The AHIP holder is responsible for the protection of any salvaged Aboriginal objects stored at each temporary storage location.

NOTIFICATION AND REPORTING CONDITIONS

Human remains

21. If any human remains are disturbed in, on or under the land, the AHIP holder must:
- (a) not further disturb or move these remains;
 - (b) immediately cease all work at the particular location;
 - (c) notify DECC's Environment Line on 131 555 and the local police as soon as practicable and provide any available details of the remains and their location; and
 - (a) not recommence any work at the particular location unless authorised in writing by the DECC.

Incidents which may breach the Act or AHIP

22. The AHIP holder must notify the DECC office in writing as soon as practicable after becoming aware of:
- (a) any contravention of s.90 or s.86 of the Act not authorised by an AHIP;
 - (b) any contravention of the conditions of this AHIP.

Reports about incidents which may breach the Act or AHIP

23. Where an authorised officer reasonably suspects that an incident which may have breached the Act or AHIP has occurred, the officer may request in writing that the AHIP holder prepare a written report about that incident. The report must detail:
- (a) the nature of the incident;
 - (b) the nature and location of relevant Aboriginal objects or Aboriginal places, referring to and providing maps and photos where appropriate;
 - (c) the impact of the incident on Aboriginal objects or Aboriginal places;
 - (d) any conditions of an AHIP which may have been breached; and
 - (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.
24. The report must be provided to the DECC office by the due date specified by the authorised officer.

Report about disturbance or movement of Aboriginal objects under s.87

25. If any disturbance or movement of Aboriginal objects is authorised by this AHIP, the AHIP holder must provide to the DECC office a salvage report as soon as practicable after completing the salvage. The report must include:

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



- (a) details of the nature and type of Aboriginal objects disturbed or moved at each salvage area, and the location to and from which the objects were moved;
- (b) a description of the methods of excavation, movement and salvage used;
- (c) a plan of each salvage area and location from and to which the objects were moved;
- (d) any ongoing consultation with or involvement of any local Aboriginal groups in relation to this AHIP;
- (e) detail and evaluate the effectiveness of any monitoring activities and mitigation measures that were implemented;
- (f) produce and review the effectiveness of any management plan which was in place;
- (g) detail the results of any non invasive analysis carried out on the Aboriginal objects;
- (h) if any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now located at the temporary storage location,
- (i) detail any long term management arrangement for the salvaged Aboriginal objects;
- (j) detail any community collection undertaken by the local Aboriginal groups.

Due date for report about salvage or movement

26. The salvage report must be provided to the DECC office within two (2) years of the date of commencement of this AHIP.

Report about damage to Aboriginal objects under s.90

27. The AHIP holder must prepare a report about the activities relating to the damage of Aboriginal objects as consented to by this AHIP, as soon as practicable after completing the activities. The report must:
- (a) include a short summary of the report;
 - (b) provide details of the objects which were fully or partially damaged in the course of undertaking the activities;
 - (c) describe any ongoing consultation with or involvement of representatives of local Aboriginal groups in relation to this AHIP;
 - (d) describe how any protected Aboriginal objects were managed during the period covered by the AHIP;
 - (e) comment on the effectiveness of monitoring activities and mitigation measures that were implemented; and
 - (f) comment on the effectiveness of any management plan which was in place.
28. The report must be provided to the DECC office within two (2) years of the date of commencement of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW

**Provision of copies of reports to local Aboriginal groups**

29. The AHIP holder must provide a copy of each report provided to the DECC under this AHIP to each local Aboriginal group, within 14 days after each report is provided to the DECC.

Copy of this AHIP to be provided to local Aboriginal groups

30. The AHIP holder must provide a copy of this AHIP to each local Aboriginal group, within 14 days of receipt of the AHIP from DECC.

OTHER GENERAL CONDITIONS**Indemnity**

31. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from
- (i) any damage or destruction to any real or personal property; and
 - (ii) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Release

32. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from
- (i) any damage or destruction to any real or personal property; and
 - (ii) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Ongoing obligation to comply with due dates

33. Where a condition of this AHIP specifies a date by which something must be done or ceased to be done, the AHIP holder has a continuing obligation to comply with that condition after that date (subject to any written revocation or variation of the AHIP by DECC).

Written notice

34. Any requirement to provide written notice to the DECC office in this AHIP may be complied with by faxing the notice to the DECC office's fax number or by sending by registered post to the DECC office's address. The DECC office's contact details are specified at the front of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW

**DICTIONARY**

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal object(s)	has the same meaning as in the Act
Aboriginal place	has the same meaning as in the Act
Act	means the National Parks and Wildlife Act 1974
AHIMS	means the Aboriginal Heritage Information Management System maintained by DECC
AHIP holder	means the person listed on the cover page under the heading "AHIP issued to"
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Authorised officer	means an employee of the DECC who is appointed as authorised officer under s.156B of the Act
Community collection	means the recovery of Aboriginal objects by representative(s) of the Aboriginal community
Damage	in relation to an Aboriginal object or Aboriginal place, unless otherwise specified in this AHIP, includes destruction and defacement
DECC	Department of Environment and Climate Change (NSW)
DECC office	means the office listed on the cover page of this AHIP
Director-General	means the Director-General of DECC
Invasive analysis	Any analysis of an Aboriginal object that damage the Aboriginal object
Land	means the land described at Schedule A
Local Aboriginal groups	means the following the following groups: Pejar Local Aboriginal Land Council PO Box 289 Goulburn NSW 2580 Delise Freeman (tel: 4822 3552)

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



Gundungurra Tribal Council Aboriginal Corporation

PO Box 7244 Laura NSW 2780

Sharon Brown (tel: 4782 7976)

Gundungurra Aboriginal Heritage Association Inc.

PO Box 31 Lawson NSW 2783

Sharyn Halls (tel: 4757 3223)

Peter Falk Consultancy

PO Box 392 Bundanoon 2578

Peter Falk (tel: 4869 4179)

Non-invasive analysis

Any analysis of an Aboriginal object that does not damage the Aboriginal object

Protected Aboriginal objects

means those Aboriginal objects which are described in Schedule B

Salvage

the recovery of Aboriginal objects in accordance with the archaeological methodology accompanying the application, as modified by the conditions of this AHIP.

Salvage area

means an area described as a salvage area in Schedule C

Standards and Guidelines Kit

means the Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW National Parks and Wildlife Service 1997) as amended or replaced from time to time

Temporary storage location

means a location specified at Schedule D

INFORMATION ABOUT THIS AHIP**Responsibilities of AHIP holder**

The AHIP holder is responsible for ensuring the AHIP holder's employees, contractors, sub-contractors agents, invitees are made aware of and comply with the conditions of this AHIP.

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



Penalties for breach of the Act

Significant penalties can be imposed by a court for failure to obtain or breach of an AHIP. The DECC can also issue penalty notices.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the National Parks and Wildlife Act

Newly identified Aboriginal objects need to be notified to the Director-General under s.91 of the Act using the form available on www.environment.nsw.gov.au

Stop work orders and interim protection orders may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth).

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the DECC office in writing for a variation of any conditions of an AHIP. Requests for variations may need to be accompanied by evidence of further consultation with interested parties including Aboriginal stakeholders and in some cases may include payment of fees. The conditions of an AHIP may be varied at any time at the discretion of the Director-General. The AHIP holder may appeal a decision of the Director General to vary the conditions of the AHIP.

Transfer of AHIP

An AHIP is not transferable. The surrender or revocation of an existing AHIP could occur at the same time an AHIP is issued to a new AHIP holder.

Revocation of AHIP

An AHIP may be revoked at any time at the discretion of the Director General. Prior to revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP

s. 90 & s.87 of the National Parks and Wildlife Act 1974

Aboriginal Heritage Impact Permit

Department of Environment & Climate Change NSW



holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land

Disclosure of information pursuant to lawful requirement

This AHIP does not prevent the disclosure of any information or document in DECC's possession in accordance with any lawful requirement.

Making copies of reports

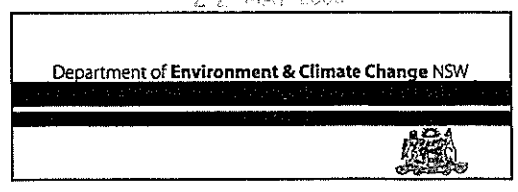
By providing a report, the AHIP holder acknowledges that DECC can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.

DECC is able to make copies of any reports provided to DECC under this AHIP.

22 MAY 2009

Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974 (NPW Act)



Your reference: AHIP Application September 2009
Our reference: AHIMS No. 3116 / DOC09/8053
Document number: 1101356
Contact: Stephen Free 02 6229 7087

FAXED
11:50am
20/05/09

Umwelt ① 02-4950-5737
CEMEX ② 02-4730-5201

CEMEX AUSTRALIA PTY LIMITED,
ABN 87 099 732 297,
PO BOX 258,
PENRITH NSW 2751
STANDARD POST

ABORIGINAL HERITAGE IMPACT PERMIT AHIP No: 1100264

Dear Mr Richard Savage,

RE: LYNWOOD QUARRY PROJECT AREA

I refer to your application for an Aboriginal Heritage Impact Permit under SECTION 87 AND SECTION 90 of the *National Parks and Wildlife Act 1974* (NPW Act), and accompanying information provided for the Lynwood Quarry Project Area received by the Department of Environment and Climate Change (NSW) (DECC) on 4 September 2008 and 16 February 2009 respectively.

DECC has considered the application and supporting information provided and has decided to issue an AHIP for the thirty year life of the project, subject to conditions . The AHIP is attached.

You should read the AHIP carefully and ensure you comply with its conditions. In particular please note the following conditions:

- Conditions 3, 8, 11, 12, 13, 14, 15, 16, 17, 18, 20, 23, 24 and 30.

You should note that it is an offence under the NPW Act to fail to comply with the conditions of the AHIP. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is, if corporation, \$22,000>.

You should note that it is an offence under the NPW Act to knowingly destroy, deface or damage, or knowingly cause or permit the destruction or defacement of (or damage to) an Aboriginal object or Aboriginal place without consent. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is, if corporation, \$22,000>.

Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974 (NPW Act)

Department of Environment & Climate Change NSW



You may appeal to the Minister if dissatisfied with any condition of this AHIP. The appeal must be in writing and set out the basis for the appeal. The deadline for lodging the appeal is 28 days after the date this AHIP was issued.

If you have any questions, or wish to discuss this matter further please contact Stephen Free on 02 6229 7087.

Mr Michael Hood

Manager Planning & Aboriginal Heritage Section

South

(by Delegation)

Date: 20-May-2009

Aboriginal Heritage Impact Permit

Section 90 of the National Parks and Wildlife Act 1974



04-Feb-2009

AHIP number: 1100264

AHIMS number: 3116

AHIP Issued To:

CEMEX AUSTRALIA PTY LIMITED,
ABN 87 099 732 297,
PO BOX 258,
PENRITH NSW 2751
STANDARD POST

DECC Office issuing this AHIP

Department of Environment and Climate Change (NSW)
Environment Protection & Regulation South Branch
02 6229 7987
02 6229 7001

Short description of activity and/or location

CEMEX Australia (formerly Readymix) received Development Consent (DA-128-5-2005) to establish the Lynwood Quarry west of Marulan, NSW, on 21 December 2005. Schedule 3, Condition 36 (b) of the Development Consent, identified the requirement for CEMEX to undertake a subsurface testing and salvage program for its development impact area prior to the commencement of quarry development. Condition 37 also identified a requirement for monitoring of all topsoil stripping unless DECC approved otherwise.

Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information about this AHIP is also set out after the Dictionary.

Aboriginal Heritage Impact Permit

Section 90 of the National Parks and Wildlife Act 1974



CONSENT TO DESTROY, DEFACE AND DAMAGE ABORIGINAL OBJECTS

Background

On 15 September 2008 and 4 February 2009 an application was made to the Director-General of the Department of Environment and Climate Change for a consent pursuant to s.87/90 of the National Parks and Wildlife Act 1974.

The CEMEX Australia (formerly Readymix) Lynwood Quarry project has long been recognised as being of state significance by the Government of NSW, due to its ability to provide a new source of aggregate and sand for the Sydney construction industry, one operations at the Penrith lakes Scheme cease. CEMEX Australia (formerly Readymix) received Development Consent (DA-128-5-2005) to establish the Lynwood Quarry west of Marulan, NSW, on 21 December 2005. Schedule 3, Condition 36 (b) of the Development Consent, identified the requirement for CEMEX to undertake a subsurface testing and salvage program for its development impact area prior to the commencement of quarry development. Condition 37 also identified a requirement for monitoring of all topsoil stripping unless DECC approved otherwise.

In consultation with DECC and the relevant stakeholders, CEMEX developed an upfront subsurface testing program incorporating the known sites and all of the Archaeological Terrain Units (ATUs) within its development footprint. The subsurface testing of the ATUs followed by further salvage was endorsed by DECC and the relevant Aboriginal stakeholder groups as a suitable alternative to ongoing monitoring of ground disturbance works.

In July 2007, Readymix provided DECC with a s87/90 AHIP application and an accompanying research design and methodology for the subsurface testing and salvage program for Lynwood Quarry including the cultural heritage works required by Country Energy. The s87/90 investigations were designed as a three stage process approved by DECC under s87 AHIP #1077225 and combined s87/90 AHIP #1077294.

Stage 1 was completed in September 2007 and a report on the results provided to DECC in January 2008. Subsequently a s87/90 AHIP application for the Country Energy impact areas was provided to DECC in March 2008 and approval of this s87/90 AHIP #1089392 was provided by DECC in June 2008.

Stage 2 fieldwork was undertaken from February to April 2008 and a report on the results of Stage 2 was provided to DECC in September 2008.

The salvage program arising from the results of Stage 2 forms part of Stage 3 which will be the final stage of the subsurface investigation program. Stage 3 also includes detailed artefact analysis for assemblages recovered from all three investigative stages and compilation and interpretation of all the information derived from surface surveys and the subsurface investigations.

A s87/90 application for the final Stage 3 investigations was received by DECC in September 2008.

The application for s87/90 Consent to Destroy with Salvage and Care and Control is for 27 Aboriginal sites and 28 Archaeological Terrain Units (ATUs) as detailed in Schedule C.

Aboriginal Heritage Impact Permit

Section 90 of the National Parks and Wildlife Act 1974



Consent given subject to conditions

A consent is given to destroy, deface and damage Aboriginal objects identified in Schedule C, in accordance with the conditions of this AHIP.

This consent is given pursuant to section 87/90 of the National Parks and Wildlife Act 1974.

A handwritten signature in black ink, appearing to be 'Michael Hood', written over a horizontal dotted line.

Mr Michael Hood

Manager Planning & Aboriginal Heritage Section

South

(by Delegation)

DATED: 20-May-2009

Aboriginal Heritage Impact Permit

Section 87 & 90 of the National Parks and Wildlife Act 1974



CONDITIONS OF AHIP

Schedule A: Land to which this AHIP applies

Lynwood Quarry Project Area, Brayton Road, Marulan, NSW – Lots 1 (DP1074819), 2 (DP1077748197), 3 (DP1036993 & 1074819), 4 (DP1036993), 7 (DP588696), 112 (DP750029 and 229 (DP750029 (DA – 128-5-2005) AS AT Attachment A.

Schedule B: Protected Aboriginal objects

Burials

All human remains in, on under the land.

Aboriginal Sites

MRN69 AHIMS #51-6-0630 E772511 N6154929

All Aboriginal objects in areas outside those described in Schedule C.

Schedule C: Aboriginal objects to be destroyed, damaged or defaced

All Aboriginal objects in, on or under that part of the land which is identified on Towrang 1:25K EIS for the Proposed Lynwood Quarry, Marulan, Volumes 1 – 4 detailed in Table 1 Aboriginal Sites and Archaeological Terrain Units (ATUs) other than the protected Aboriginal objects described in Schedule B.

Table 1 Aboriginal Sites/Archaeological Terrain Units

AHIMS Site ID	Site Name	Site Feature	Eastings	Northings	
51-6-0060	MQ2	Artefact Scatter	772450	6153000	
51-6-0246	MRN5	Artefact Scatter	772404	6152969	
51-6-0248	MRN7	Artefact Scatter	771306	6154825	
51-6-0256	MRN15	Artefact Scatter	771943	6154215	
51-6-0266	MRN25	Artefact Scatter	771243	6156340	
51-6-0267	MRN26	Artefact Scatter	772059	6155842	
51-6-0268	MRN27	Artefact Scatter	772232	6155840	
51-6-0269	MRN28	Artefact Scatter	772784	6155926	
51-6-0274	MRN33	Artefact Scatter	771484	6155470	
51-6-0276	MRN35	Artefact Scatter	773340	6155286	
51-6-0277	MRN36	Artefact Scatter	773255	6155299	
51-6-0278	MRN37	Isolated Find	773251	6155251	
51-6-0289	MRN48	Artefact Scatter	772161	6155992	
51-6-0239	MRN52	Isolated Find	772516	6155170	
51-6-0621	MRN60	Isolated Find	772118	6156552	
51-6-0622	MRN61	Artefact Scatter	772028	6155544	
51-6-0623	MRN62	Artefact Scatter	772072	6156534	
51-6-0624	MRN63	Isolated Find	772044	6156170	

Aboriginal Heritage Impact Permit

51-6-0625	MRN64	Artefact Scatter	771357	6154669	
51-6-0626	MRN65	Artefact Scatter	771960	6155515	
51-6-0627	MRN66	Artefact Scatter	771136	6156243	
51-6-0628	MRN67	Artefact Scatter	771098	6155887	
51-6-0629	MRN68	Artefact Scatter	772764	6152846	
51-6-0631	MRN70	Isolated Find	772755	6152859	
51-6-0632	MRN71	Artefact Scatter	772797	6152713	
51-6-0633	MRN72	Artefact Scatter	772868	6152814	
51-6-0637	MRN77	Artefact Scatter	770207	6155168	

Archaeological Terrain Units (ATUs) Description

1BP – high point on rocky ridge crest in Bindook Porphyry
1DS – high point on rocky ridge crest in deep sands
2BP – high point on rocky spur crest in Bindook Porphyry
3BP – ridge crest on Bindook Porphyry
3DS – ridge crest on deep sands
4AD – spur crest in Adamellite Dykes and Sills
4BP – spur crest in the Bindook Porphyry
4DS – spur in deep sands in Bindook Porphyry
4PA – spur crest in Porphyritic Adamellite
4SD – spur crest on a Siliceous Dyke
5BP – moderate slope in Bindook Porphyry
5DS – moderate slope in deep sands
6AD – gentle slope in Adamellite Dykes and Sills
6BP – gentle slope on Bindook Porphyry
6DS – gentle slope in deep sands
6MG – gentle slope in Marulan Granite
6PA – gentle slope on Porphyritic Adamellite
7a – very gentle slope in Andesite
7AD – very gentle slope in Adamellite Dykes and Sills
7BP – very gentle slope in Bindook Porphyry
7PA – very gentle slope in Porphyritic Adamellite
R6AD – gentle slope in riparian corridor in Adamellite Dykes and Sills
R6BP – gentle slope within the riparian corridor in the Bindook Porphyry
R7BP – very gentle slope in riparian corridor in Bindook porphyry
R7AD – very gentle slope in riparian corridor in Adamellite Dykes and Sills
R7MG – very gentle slope in riparian corridor in Marulan Granite
S3BP – saddle on ridge crest in Bindook Porphyry
S4BP – saddle on a spur crest in the Bindook Porphyry

Schedule D: Proposed works

The Aboriginal sites and ATUs included in this application will be subject to impact by various developments associated with the approved Lynwood Quarry including: quarry development, overburden and excess product emplacement areas, infrastructure areas, haul roads, dams and the main access road.

Impact is necessary to construct and operate the approved Lynwood Quarry project.

The care and control of all Aboriginal objects recovered from the Lynwood Quarry development footprint is already covered by Care and Control Permits #2761 (related to s87/90 AHIP #1077294) and #2762 (related to s87 AHIP #1077225) approved by DECC on 27 August 2007. Until such time

Aboriginal Heritage Impact Permit



as the final artefact analysis and reporting are completed, the artefacts recovered as part of Stage 1 and Stage 2 investigations will be temporarily stored at Umwelt's Toronto Offices as per Schedule D of AHIPs #1077225 and #1077294.

In relation to any artefacts recovered during site salvage under this final Stage 3 s87/90 AHIP, it is proposed to apply for a variation to existing Care and Control Permit #2761 to enable the care and Control of any artefacts salvaged in the same manner.

COMMENCEMENT AND OVERSIGHT OF ACTIVITIES RELATING TO THIS AHIP

Commencement of AHIP

1. This AHIP commences on the date it is signed unless otherwise provided by this AHIP.
2. The AHIP holder must not, in a salvage area described in an AHIP that remains in force, commence activities that would damage, destroy or deface any Aboriginal object or Aboriginal Place, unless the following have taken place:
 - (a) the salvage works described in that AHIP have been completed; and
 - (b) the AHIP holder responsible for the salvage works has notified the DECC in writing that those works have been completed.

Duration of AHIP

3. Unless otherwise revoked in writing, this AHIP remains in force for:
 - (a) 30 years from the date of commencement; or
 - (b) the date on which the final s.90 report, is submitted,whichever is the sooner.

Responsibility for compliance with conditions of AHIP

4. The AHIP holder must ensure that all of its employees, contractors, sub-contractors, agents and invitees are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the activities relating to this AHIP

5. The AHIP holder must appoint a suitably qualified and experienced individual who is responsible for overseeing, for and on behalf of the AHIP holder, the activities relating to this AHIP.
6. The individual appointed must be the individual nominated in the application form.
7. If an alternative individual is appointed whilst this AHIP remains in force, the AHIP holder must advise the DECC office in writing within 14 days of the new appointment.
8. The AHIP holder must only utilise the following suitably qualified archaeologists who will be supervising and/or undertaking the project archaeological work:
 - Jan Wilson (Manager, Cultural Heritage)

Aboriginal Heritage Impact Permit



- Nicola Roche (Senior Archaeologist)
- Kym McNamara (Archaeologist)
- Julian Travaglia (Archaeologist)
- Amanada Reynolds (Archaeologist)

Notification of commencement of work

9. Prior to the proposed commencement of activities authorised by this AHIP, the AHIP holder must give the DECC office written notice of the proposed commencement date of those activities.

GENERAL OPERATIONAL CONDITIONS

Activities must not damage Aboriginal objects

10. The AHIP holder must not damage Aboriginal objects other than those Aboriginal objects specified in Schedule C.
11. The AHIP holder must stop work and contact DECC if a potential knapping event, charcoal feature, or significant artefact is located during subsurface investigations:
 - All excavation work will cease within the relevant square/squares;
 - The excavation supervisor is to contact DECC who will provide guidance as to the management required to allow continuation of excavation activities.

Activities must be in accordance with methodology

12. Activities must be carried out in accordance with the methodology specified in the application to which this AHIP applies, except as otherwise expressly provided by a condition of this AHIP.
13. The subsurface testing of the two further Archaeological Terrain Units (ATUs) (7PA #51-6-0647 & 7AD #51-6-0648) within the Lynwood Quarry development impact footprint is to be undertaken using the same methodology as that implemented for the ATUs previously tested under s87 AHIP #1077225.
14. The AHIP holder is advised that ATUs 7AD and 7PA are included in Table 1 as being approved for disturbance once the subsurface testing of these ATUs has been completed and an appropriate management strategy has been agreed with the Aboriginal stakeholders and DECC and appropriate salvage undertaken (if required).
15. The AHIP holder must fence and eventually bury MRN25 (#51-6-0266) for its conservation.
16. The AHIP holder must conserve sections of ATU 4DS within the broader project area and specifically to the south-east and directly adjacent to the sites MRN27 and 28 which will be subject to only partial consent.
17. The AHIP holder is approved to conduct further subsurface investigation of MRN 27 and 28 in order to salvage those areas of the sites that have the greatest potential to provide complex assemblages and as a further offset for the loss of the sites.

Aboriginal Heritage Impact Permit



18. Monitoring is not required by this permit for sites MRN 26, 27, 28, 33, 35, 36, 37, 48, 52, 60, 61, 62, 63, 64, 65, 66, 67, 68, 70, 71, 72 and 77. The AHIP holder and Aboriginal stakeholder groups may undertake monitoring of these sites if they reach agreement to do so.

PROTECTION OF ABORIGINAL OBJECTS

Protection of Aboriginal objects

19. The AHIP holder must ensure that Aboriginal objects specified in Schedule B are not damaged.
20. To the fullest extent possible, each protected Aboriginal object must be clearly marked so as to provide a clear visual marker to persons on foot or in vehicles in the vicinity of that Aboriginal object.
21. The AHIP holder must ensure that persons entering the land such as employees, contractors, sub-contractors, agents and invitees have a copy of any Map referred to in Schedule B.
22. Appropriate sediment control measures must be installed, operated and maintained so as to prevent any disturbance of a protected Aboriginal object.
23. Vehicles must not be driven on or in the immediate vicinity of a protected Aboriginal object.
24. The AHIP holder must ensure that all sites (excluding sites listed in Condition 18) within the development impact area and the broader Lynwood Quarry project area are monitored annually until such time as they are impacted by development; or in the case of the sites outside the development impact area, throughout the 30 year life of the quarry as per the Lynwood Quarry Aboriginal Heritage Management Plan 2007.

NOTIFICATION AND REPORTING CONDITIONS

Human remains

25. If any human remains are disturbed in, on or under the land, the AHIP holder must:
- (a) not further disturb or move these remains;
 - (b) immediately cease all work at the particular location;
 - (c) notify DECC's Environment Line on 131 555 and the local police as soon as practicable and provide any available details of the remains and their location; and
 - (d) not recommence any work at the particular location unless authorised in writing by the DECC.

Incidents which may breach the Act or AHIP

26. The AHIP holder must notify the DECC office in writing as soon as practicable after becoming aware of:

Aboriginal Heritage Impact Permit



- (a) any contravention of s.90 or s86 of the Act not authorised by an AHIP;
- (b) any contravention of the conditions of this AHIP.

Reports about incidents which may breach the Act or AHIP

27. Where an authorised officer reasonably suspects that an incident which may have breached the Act or AHIP has occurred, the officer may request in writing that the AHIP holder prepare a written report about that incident. The report must detail:
- (a) the nature of the incident;
 - (b) the nature and location of relevant Aboriginal objects or Aboriginal places, referring to and providing maps and photos where appropriate;
 - (c) the impact of the incident on Aboriginal objects or Aboriginal places;
 - (d) any conditions of an AHIP which may have been breached; and
 - (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.
28. The report must be provided to the DECC office by the due date specified by the authorised officer.

Report about damage to Aboriginal objects under s.90

29. The AHIP holder must prepare reports about the activities relating to the damage of Aboriginal objects as consented to by this AHIP, as soon as practicable after completing the activities. The reports must:
- (a) include a short summary of the report;
 - (b) provide details of the objects which were fully or partially damaged in the course of undertaking the activities;
 - (c) describe any ongoing consultation with or involvement of representatives of local Aboriginal groups in relation to this AHIP;
 - (d) describe how any protected Aboriginal objects were managed during the period covered by the AHIP;
 - (e) comment on the effectiveness of monitoring activities and mitigation measures that were implemented; and
 - (f) comment on the effectiveness of any management plan which was in place.
30. The reports must be provided to the DECC office within two years of the activity taking place.

Provision of copies of reports to local Aboriginal groups

31. The AHIP holder must provide a copy of each report provided to the DECC under this AHIP to each local Aboriginal group, within 14 days after each report is provided to the DECC.

Copy of this AHIP to be provided to local Aboriginal groups

Aboriginal Heritage Impact Permit



32. The AHIP holder must provide a copy of this AHIP to each local Aboriginal group, within 14 days of receipt of the AHIP from DECC.

OTHER GENERAL CONDITIONS

Indemnity

33. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Release

34. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Director-General of DECC, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising out of or in connection with any activities undertaken pursuant to this AHIP.

Ongoing obligation to comply with due dates

35. Where a condition of this AHIP specifies a date by which something must be done or ceased to be done, the AHIP holder has a continuing obligation to comply with that condition after that date (subject to any written revocation or variation of the AHIP by DECC).

Written notice

36. Any requirement to provide written notice to the DECC office in this AHIP may be complied with by faxing the notice to the DECC office's fax number or by sending by registered post to the DECC office's address. The DECC office's contact details are specified at the front of this AHIP.

DICTIONARY

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal Heritage Impact Permit



Aboriginal object(s)	has the same meaning as in the Act
Aboriginal place	has the same meaning as in the Act
Act	means the National Parks and Wildlife Act 1974
AHIMS	means the Aboriginal Heritage Information Management System maintained by DECC
AHIP holder	means the person listed on the cover page under the heading "AHIP issued to"
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Authorised officer	means an employee of the DECC who is appointed as authorised officer under s.156B of the Act
Community collection	means the recovery of Aboriginal objects by representative(s) of the Aboriginal community
Damage	in relation to an Aboriginal object or Aboriginal place, unless otherwise specified in this AHIP, includes destruction and defacement
DECC	Department of Environment and Climate Change (NSW)
DECC office	means the office listed on the cover page of this AHIP
Director-General	means the Director-General of DECC
Invasive analysis	Any analysis of an Aboriginal object that damage the Aboriginal object
Land	means the land described at Schedule A
Local Aboriginal groups	means the following the following groups: <ol style="list-style-type: none">1. Pejar Local Aboriginal Land Council (PLALC) 81 Bourke Street PO Box 289 GOULBURN NSW 2580 Contact Person: Delice Freeman2. Gundungurra Tribal Council Aboriginal Corporation 14 Oak Street Katoomba PO Box 7

Aboriginal Heritage Impact Permit



CRANEBROOK NSW 2780

Contact Person: Sharon Brown

3. Gundungurra Aboriginal Heritage Association Incorporated

PO Box 31

LAWSON NSW 2783

Contact Person: Merle Williams

4. Peter Falk Consultancy

PO Box 392

BUNDANOON NSW 2578

Contact Person: Peter Falk

Non-invasive analysis	Any analysis of an Aboriginal object that does not damage the Aboriginal object
Protected Aboriginal objects	means those Aboriginal objects which are described in Schedule B
Salvage	the recovery of Aboriginal objects in accordance with the archaeological research methodology accompanying the application, as modified by the conditions of this AHIP
Standards and Guidelines Kit	means the Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW National Parks and Wildlife Service 1997) as amended or replaced from time to time

INFORMATION ABOUT THIS AHIP

Responsibilities of AHIP holder

The AHIP holder is responsible for ensuring the AHIP holder's employees, contractors, sub-contractors agents, invitees are made aware of and comply with the conditions of this AHIP.

Penalties for breach of the Act

Significant penalties can be imposed by a court for failure to obtain or breach of an AHIP. The DECC can also issue penalty notices.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Aboriginal Heritage Impact Permit



Other relevant provisions of the National Parks and Wildlife Act

Newly identified Aboriginal objects need to be notified to the Director-General under s.91 of the Act using the form available on www.environment.nsw.gov.au

Stop work orders and interim protection orders may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth).

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the DECC office in writing for a variation of any conditions of an AHIP. Requests for variations may need to be accompanied by evidence of further consultation with interested parties including Aboriginal stakeholders and in some cases may include payment of fees. The conditions of an AHIP may be varied at any time at the discretion of the Director-General. The AHIP holder may appeal a decision of the Director General to vary the conditions of the AHIP.

Transfer of AHIP

An AHIP is not transferable. The surrender or revocation of an existing AHIP could occur at the same time an AHIP is issued to a new AHIP holder.

Revocation of AHIP

An AHIP may be revoked at any time at the discretion of the Director General. Prior to revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

Disclosure of information pursuant to lawful requirement

Aboriginal Heritage Impact Permit



This AHIP does not prevent the disclosure of any information or document in DECC's possession in accordance with any lawful requirement.

Making copies of reports

By providing a report, the AHIP holder acknowledges that DECC can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.

DECC is able to make copies of any reports provided to DECC under this AHIP.

Variation of Aboriginal Heritage Impact Permit



Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

Your reference: Application for variation of AHIP 1100264 dated 8-4-11
Our reference: AHIMS No. 3116 / FIL07/1670-04/-06, DOC11/18267
Notice number: 1128050
Contact: Dr Philip Boot, tel: (02) 6229 7088

CEMEX AUSTRALIA PTY LIMITED,
ABN 87 099 732 297,
PO BOX 258,
PENRITH NSW 2751

NOTICE OF VARIATION OF ABORIGINAL HERITAGE IMPACT PERMIT NO. 1100264

Issued pursuant to section 90D(5) *National Parks and Wildlife Act 1974*

BACKGROUND

- A. CEMEX AUSTRALIA PTY LIMITED (now HOLLIM (AUSTRALIA) PTY LIMITED) (the applicant) applied to the Office of Environment and Heritage (OEH), formerly the Department of Environment, Climate Change and Water, to vary Aboriginal Heritage Impact Permit No. 1100264 (the AHIP) granted under section 90D *National Parks and Wildlife Act 1974* (NPW Act). The AHIP authorises the carrying out of Harm to Aboriginal Objects.
- B. OEH received the application on 13-Apr-2011.
- C. OEH has considered the matters set out in section 90K of the NPW Act.

VARIATION OF ABORIGINAL HERITAGE IMPACT PERMIT

1. OEH has decided to grant this variation. By this notice OEH varies AHIP No. 1100264 in the following manner:

Variation 1

"Schedule C on pages 4 and 5 of 14", which states that:

"Schedule C: Aboriginal objects to be destroyed, damaged or defaced

All Aboriginal objects in, on or under that part of the land which is identified on Towrang 1:25K EIS for the Proposed Lynwood Quarry, Marulan, Volumes 1 – 4 detailed in Table 1 Aboriginal Sites and Archaeological Terrain Units (ATUs) other than the protected Aboriginal objects described in Schedule B.

Variation of Aboriginal Heritage Impact Permit



Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

Table 1 Aboriginal Sites/Archaeological Terrain Units

AHIMS Site ID	Site Name	Site Feature	Eastings	Northings
51-6-0060	MQ2	Artefact Scatter	772450	6153000
51-6-0246	MRN5	Artefact Scatter	772404	6152969
51-6-0248	MRN7	Artefact Scatter	771306	6154825
51-6-0256	MRN15	Artefact Scatter	771943	6154215
51-6-0266	MRN25	Artefact Scatter	771243	6156340
51-6-0267	MRN26	Artefact Scatter	772059	6155842
51-6-0268	MRN27	Artefact Scatter	772232	6155840
51-6-0269	MRN28	Artefact Scatter	772784	6155926
51-6-0274	MRN33	Artefact Scatter	771484	6155470
51-6-0276	MRN35	Artefact Scatter	773340	6155286
51-6-0277	MRN36	Artefact Scatter	773255	6155299
51-6-0278	MRN37	Isolated Find	773251	6155251
51-6-0289	MRN48	Artefact Scatter	772161	6155992
51-6-0239	MRN52	Isolated Find	772516	6155170
51-6-0621	MRN60	Isolated Find	772118	6156552
51-6-0622	MRN61	Artefact Scatter	772028	6155544
51-6-0623	MRN62	Artefact Scatter	772072	6156534
51-6-0624	MRN63	Isolated Find	772044	6156170
51-6-0625	MRN64	Artefact Scatter	771357	6154669
51-6-0626	MRN65	Artefact Scatter	771960	6155515
51-6-0627	MRN66	Artefact Scatter	771136	6156243
51-6-0628	MRN67	Artefact Scatter	771098	6155887
51-6-0629	MRN68	Artefact Scatter	772764	6152846
51-6-0631	MRN70	Isolated Find	772755	6152859
51-6-0632	MRN71	Artefact Scatter	772797	6152713
51-6-0633	MRN72	Artefact Scatter	772868	6152814
51-6-0637	MRN77	Artefact Scatter	770207	6155168

Archaeological Terrain Units (ATUs) Description
1BP – high point on rocky ridge crest in Bindook Porphyry
1DS – high point on rocky ridge crest in deep sands
2BP – high point on rocky spur crest in Bindook Porphyry
3BP – ridge crest on Bindook Porphyry
3DS – ridge crest on deep sands
4AD – spur crest in Adamellite Dykes and Sills
4BP – spur crest in the Bindook Porphyry
4DS – spur in deep sands in Bindook Porphyry
4PA – spur crest in Porphyritic Adamellite
4SD – spur crest on a Siliceous Dyke
5BP – moderate slope in Bindook Porphyry
5DS – moderate slope in deep sands
6AD – gentle slope in Adamellite Dykes and Sills
6BP – gentle slope on Bindook Porphyry
6DS – gentle slope in deep sands 6MG – gentle slope in Marulan Granite
6PA – gentle slope on Porphyritic Adamellite
7a – very gentle slope in Andesite
7AD – very gentle slope in Adamellite Dykes and Sills
7BP – very gentle slope in Bindook Porphyry

Variation of Aboriginal Heritage Impact Permit



Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

7PA – very gentle slope in Porphyritic Adamellite
R6AD – gentle slope in riparian corridor in Adamellite Dykes and Sills
R6BP – gentle slope within the riparian corridor in the Bindook Porphyry
R7BP – very gentle slope in riparian corridor in Bindook porphyry
R7AD – very gentle slope in riparian corridor in Adamellite Dykes and Sills
R7MG – very gentle slope in riparian corridor in Marulan Granite
S3BP – saddle on ridge crest in Bindook Porphyry
S4BP – saddle on a spur crest in the Bindook Porphyry

is replaced by:

"Schedule C: Aboriginal objects to be destroyed, damaged or defaced

All Aboriginal objects in, on or under that part of the land which is identified on Towrang 1:25K EIS for the Proposed Lynwood Quarry, Marulan, Volumes 1 – 4 detailed in Table 1 Aboriginal Sites and Archaeological Terrain Units (ATUs) other than the protected Aboriginal objects described in Schedule B.

Table 1 Aboriginal Sites/Archaeological Terrain Units

AHIMS Site ID	Site Name	Site Feature	Eastings	Northings
51-6-0060	MQ2	Artefact Scatter	772450	6153000
51-6-0246	MRN5	Artefact Scatter	772404	6152969
51-6-0248	MRN7	Artefact Scatter	771306	6154825
51-6-0256	MRN15	Artefact Scatter	771943	6154215
51-6-0266	MRN25	Artefact Scatter	771243	6156340
51-6-0267	MRN26	Artefact Scatter	772059	6155842
51-6-0268	MRN27	Artefact Scatter	772232	6155840
51-6-0269	MRN28	Artefact Scatter	772784	6155926
51-6-0274	MRN33	Artefact Scatter	771484	6155470
51-6-0276	MRN35	Artefact Scatter	773340	6155286
51-6-0277	MRN36	Artefact Scatter	773255	6155299
51-6-0278	MRN37	Isolated Find	773251	6155251
51-6-0289	MRN48	Artefact Scatter	772161	6155992
51-6-0239	MRN52	Isolated Find	772516	6155170
51-6-0621	MRN60	Isolated Find	772118	6156552
51-6-0622	MRN61	Artefact Scatter	772028	6155544
51-6-0623	MRN62	Artefact Scatter	772072	6156534
51-6-0624	MRN63	Isolated Find	772044	6156170
51-6-0625	MRN64	Artefact Scatter	771357	6154669
51-6-0626	MRN65	Artefact Scatter	771960	6155515
51-6-0627	MRN66	Artefact Scatter	771136	6156243
51-6-0628	MRN67	Artefact Scatter	771098	6155887
51-6-0629	MRN68	Artefact Scatter	772764	6152846
51-6-0631	MRN70	Isolated Find	772755	6152859
51-6-0632	MRN71	Artefact Scatter	772797	6152713
51-6-0633	MRN72	Artefact Scatter	772868	6152814

Variation of Aboriginal Heritage Impact Permit



Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

51-6-0637	MRN77	Artefact Scatter	770207	6155168	
51-6-0687	MRN PAD1	Potential Archaeological Deposit (PAD)	772003	6154380	
51-6-0688	MRN PAD2	PAD	770980	6154500	
51-6-0689	MRN PAD3	PAD	770793	6154712	
51-6-0690	MRN PAD4	PAD	770777	6154748	
51-6-0691	MRN PAD5	PAD	770870	6154866	

Archaeological Terrain Units (ATUs) Description

1BP – high point on rocky ridge crest in Bindook Porphyry
1DS – high point on rocky ridge crest in deep sands
2BP – high point on rocky spur crest in Bindook Porphyry
3BP – ridge crest on Bindook Porphyry
3DS – ridge crest on deep sands
4AD – spur crest in Adamellite Dykes and Sills
4BP – spur crest in the Bindook Porphyry
4DS – spur in deep sands in Bindook Porphyry
4PA – spur crest in Porphyritic Adamellite
4SD – spur crest on a Siliceous Dyke
5BP – moderate slope in Bindook Porphyry
5DS – moderate slope in deep sands
6AD – gentle slope in Adamellite Dykes and Sills
6BP – gentle slope on Bindook Porphyry
6DS – gentle slope in deep sands
6MG – gentle slope in Marulan Granite
6PA – gentle slope on Porphyritic Adamellite
7a – very gentle slope in Andesite
7AD – very gentle slope in Adamellite Dykes and Sills
7BP – very gentle slope in Bindook Porphyry
7PA – very gentle slope in Porphyritic Adamellite
R6AD – gentle slope in riparian corridor in Adamellite Dykes and Sills
R6BP – gentle slope within the riparian corridor in the Bindook Porphyry
R7BP – very gentle slope in riparian corridor in Bindook porphyry
R7AD – very gentle slope in riparian corridor in Adamellite Dykes and Sills
R7MG – very gentle slope in riparian corridor in Marulan Granite
S3BP – saddle on ridge crest in Bindook Porphyry
S4BP – saddle on a spur crest in the Bindook Porphyry

Variation 2

“Condition 13 on page 7 of 14”, which states that:

- “13. The subsurface testing of the two further Archaeological Terrain Units (ATUs) (7PA #51-6-0647 & 7AD #51-6-0648) within the Lynwood Quarry development impact footprint is to be undertaken using the same methodology as that implemented for the ATUs previously tested under s87 AHIP #1077225”

Variation of Aboriginal Heritage Impact Permit



Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

is replaced by:

- "13. The subsurface testing of the two further Archaeological Terrain Units (ATUs) (7PA #51-6-0647 & 7AD #51-6-0648) and the five further Potential Archaeological Deposits (PADs) (51-6-0687, 51-6-0688, 51-6-0689, 51-6-0690 and 51-6-0691) within the Lynwood Quarry development impact footprint (as shown on the map at Appendix A, Figure 1) is to be undertaken using the same methodology as that implemented for the ATUs previously tested under s87 AHIP #1077225".
2. You must provide a copy of this AHIP variation notice to each Registered Aboriginal Party referenced in AHIP number 1100264, within 14 days.

Mr Dimitri Young

Acting Manager Landscape & Aboriginal Heritage
Protection

South - Queanbeyan

(by Delegation)

Date: 12-May-2011

INFORMATION ABOUT THIS VARIATION NOTICE

- Details provided in this notice will be available on OEH's Public Register in accordance with section 188F of the NPW Act.
- You should read this Variation Notice carefully and ensure that you continue to comply with all conditions of the original AHIP 1100264 issued on 20-May-2009, as amended by this Variation Notice. The format of this Variation Notice requires that it must be read in conjunction with the original AHIP.

When this notice begins to operate

- The variations to the AHIP specified in this notice begin to operate immediately from the date of this Variation Notice, unless another date is specified in this notice.

Variation of Aboriginal Heritage Impact Permit



Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

Variation of this notice

- This Variation Notice may only be varied by subsequent notices issued by OEH.

Appeals against this decision

- You can appeal against this decision to the Land and Environment Court. The deadline for lodging the appeal is 21 days after the date that this notice was issued.

Variation of Aboriginal Heritage Impact Permit

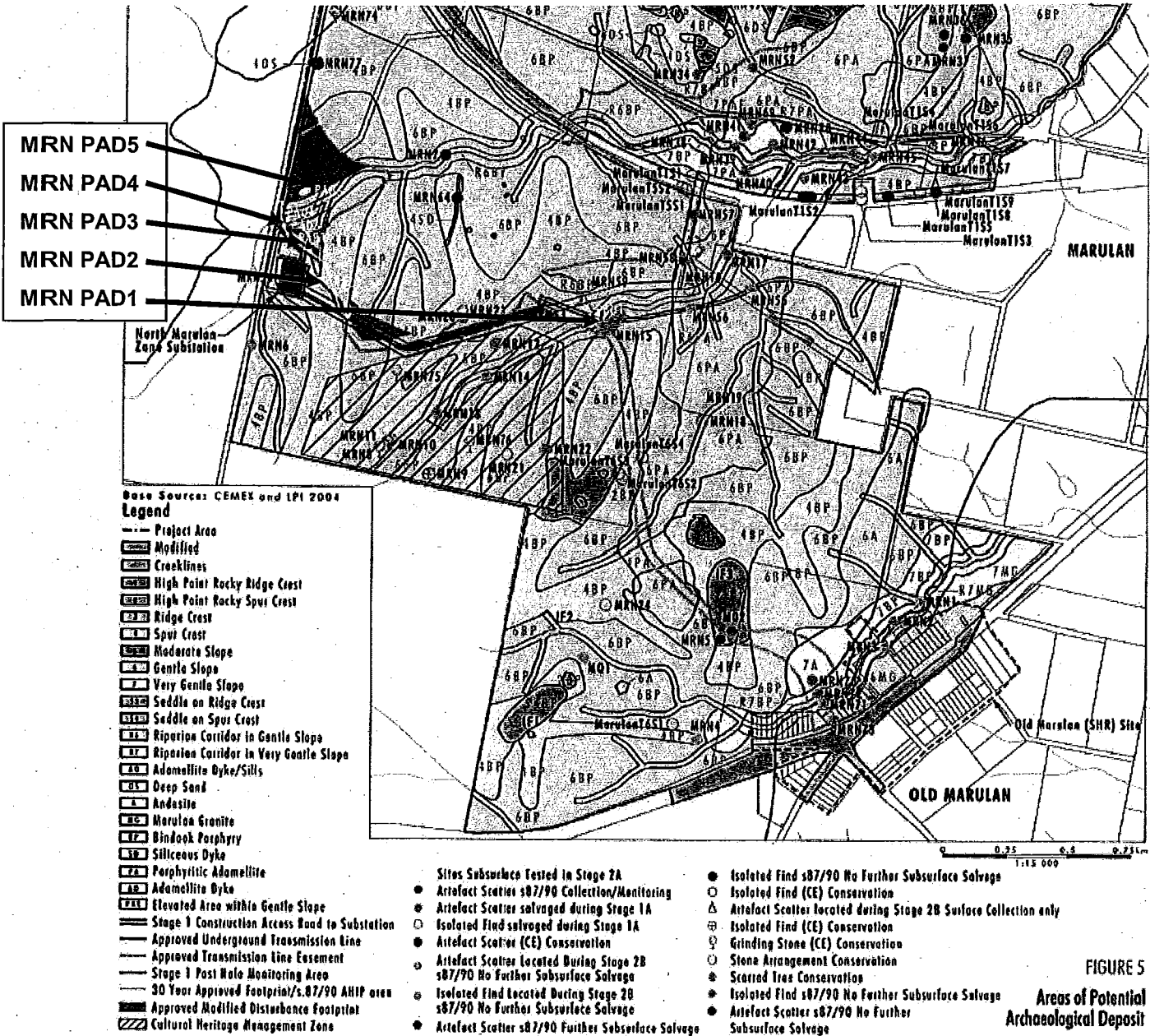


Environment,
Climate Change
& Water

National Parks and Wildlife Act 1974 (NPW Act)

APPENDIX A

Figure 1 – Locations of MRN PAD1 (51-6-0687), MRN PAD2 (51-6-0688), MRN PAD3 (51-6-0689), MRN PAD4 (51-6-0690) and MRN PAD5 (51-6-0691)



Your reference: Email dated 1 June 2009
Our reference: Variation Letter dated 2 June 2009

Mr Richard Savage
Project Manager
CEMEX Australia Pty Ltd
PO Box 258
PENRITH NSW 2751

Dear Mr Savage,

**Re: CEMEX Lynwood Quarry Project - Aboriginal Heritage Impact Permit #1100264 -
Modification to Consent**

I refer to the email of 1 June 2009 from your company's consultants Umwelt (Australia) Pty Ltd regarding the application from CEMEX (Australia) Pty Ltd to modify a conditions of consent for the Department of Environment and Climate Change (DECC) Lynwood Quarry Project Aboriginal Heritage Impact Permit (AHIP) #1100264.

As you would be aware, the Department of Environment and Climate Change (DECC) has issued an Aboriginal Heritage Impact Permit (AHIP) to permit the excavation, salvage and destruction of Aboriginal objects at Lynwood Quarry.

DECC has considered the application to amend the AHIP to delete the conditions relevant to subsurface salvage of Aboriginal site MRN28 (DECC AHIMS #51-6-0269) and advise that AHIP Conditions 16 and 17 have been amended accordingly. As per AHIP Conditions 2 and 9, please advise the Aboriginal stakeholders of the amendment to the AHIP. The amended AHIP will be forwarded to your office.

Thank you for your advice regarding the commencement of the subsurface testing of Archaeological Terrain Units (ATUs) 7PA and 7AD.

If you have any questions, or wish to discuss this matter further please contact Stephen Free on 02 6229 7087.

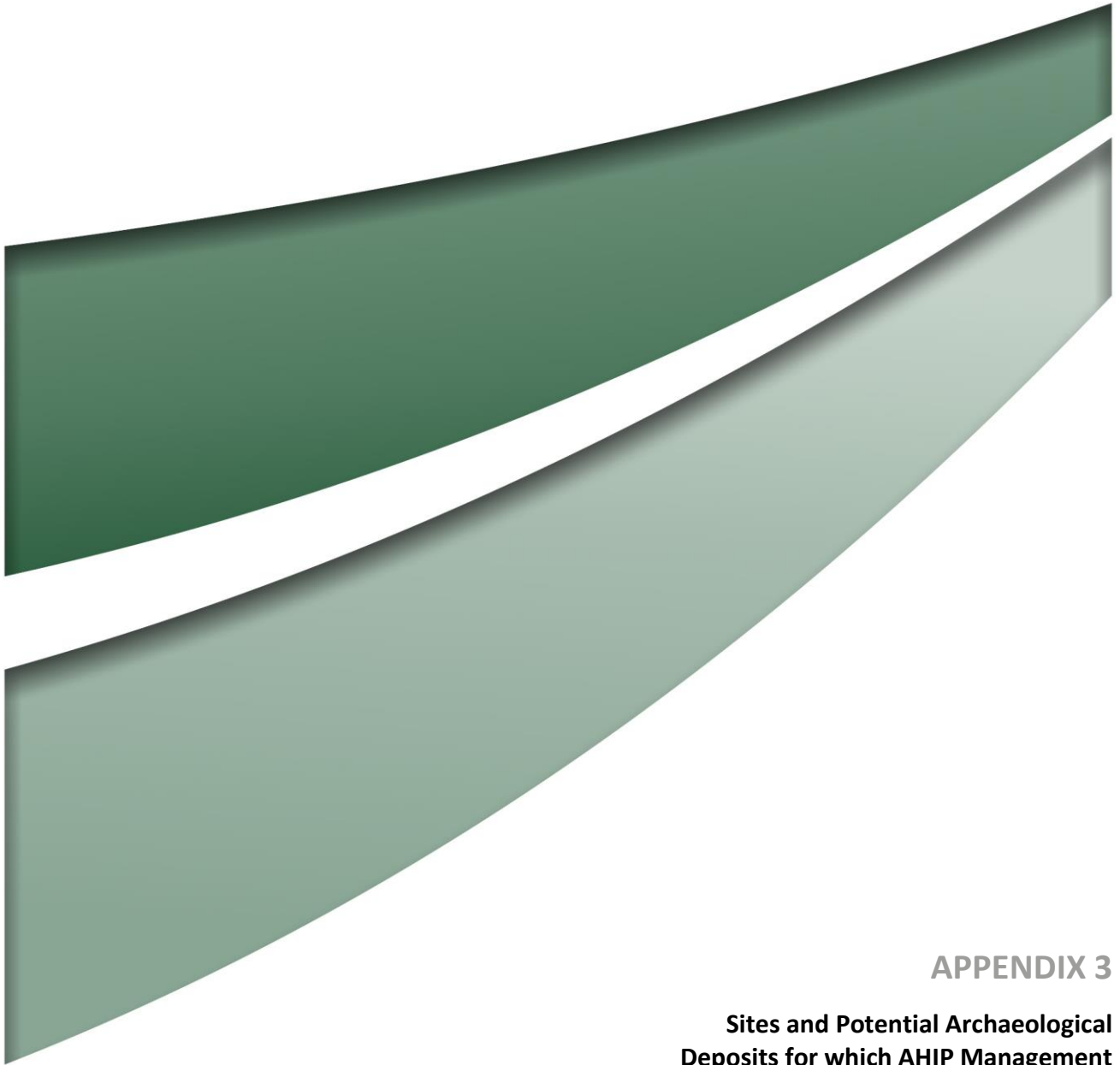
Yours sincerely



Michael Hood
Manager, Landscape and Aboriginal Heritage Protection (South)
Environment Protection and Regulation

PO Box 733 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW
Tel: (02) 6229 7000 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of **Environment and Climate Change** NSW



APPENDIX 3

**Sites and Potential Archaeological
Deposits for which AHIP Management
Requirements are Complete**

Appendix 3 - Sites and Potential Archaeological Deposits for which AHIP Management Requirements are Complete

Table 1 lists the Aboriginal sites, potential archaeological deposits and their associated ATUs for which all surface collection, subsurface testing and salvage requirements have been fulfilled. The table also provides information in relation to the archaeological investigations undertaken and the relevant OEH AHIP under which the testing/salvage was completed. Figures 3.1 and 3.2 in the main text show the location of the sites and PADs.

Table 1 - Aboriginal Sites with No further Requirements Prior to Impact

Site Name	AHIMS #	Site Type	Management Completed
MRN5/MQ2	51-6-0246	Artefact Scatter	Surface collection and subsurface investigation under AHIP #1077225 and approved for impact under AHIP #1100264. No further requirements.
MRN7	51-6-0248	Artefact Scatter	Subsurface testing was not possible under AHIP #1077225 as artefacts washed away in 2007 floods. Approved for impact by infrastructure development under AHIP #1100264. No further requirements.
MRN25	51-6-0266	Artefact Scatter	Surface collection and subsurface investigation under AHIP #1077225 and approved for impact by haul road construction under a variation to AHIP #1100264. Further surface collection and subsurface salvage completed under the variation to AHIP #1100264. No further requirements.
MRN26	51-6-0267	Artefact Scatter	Subsurface tested and collected under AHIP #107725 and approved for impact by quarry expansion under AHIP #1100264. No further requirements.
MRN27	51-6-0268	Artefact Scatter	Subsurface tested under AHIP #1077225, subsurface and surface salvaged under AHIP #1100264. Approved for partial impact under AHIP #1100264. No further requirements.
MRN28	51-6-0269	Artefact Scatter	Subsurface tested and collected under AHIP #107725 and approved for impact by haul road construction under AHIP #1100264
MRN33	51-6-0274	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by quarry development under AHIP #1100264. No further requirements.

Site Name	AHIMS #	Site Type	Management Completed
MRN35	51-6-0276	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by Eastern Overburden Emplacement development under AHIP #1100264. No further requirements.
MRN36	51-6-0277	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by Eastern Overburden Emplacement development under AHIP #1100264. No further requirements.
MRN37	51-6-0278	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by Eastern Overburden Emplacement development under AHIP #1100264. No further requirements.
MRN48	51-6-0289	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by quarry development under AHIP #1100264. No further requirements.
MRN52	51-6-0239	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by haul road construction under AHIP #1100264. No further requirements.
MRN53	51-6-0527	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by Country Energy access road construction under AHIP #1089393. No further requirements.
MRN54	51-6-0258	Artefact Scatter	Subsurface testing under AHIP #1077225. Salvaged under AHIP #1089393 ahead of construction of the Country Energy North Marulan Zone Substation. No further requirements.
MRN57	51-6-0530	Artefact Scatter	Subsurface tested and salvaged under AHIP #1022294 ahead of impact by Country Energy pole emplacement. No further requirements
MRN58	51-6-0532	Artefact Scatter	Subsurface tested and salvaged under AHIP #1022294 ahead of impact by Country Energy pole emplacement. No further requirements
MRN59	51-6-0533	Isolated Find	Subsurface tested and salvaged under AHIP #1022294 ahead of impact by Country Energy pole emplacement. No further requirements

Site Name	AHIMS #	Site Type	Management Completed
MRN60	51-6-0621	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by haul road construction and quarry expansion under AHIP #1100264. No further requirements.
MRN61	51-6-0622	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by quarry expansion under AHIP #1100264. No further requirements.
MRN62	51-6-0623	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by haul road construction and quarry expansion under AHIP #1100264. No further requirements.
MRN63	51-6-0624	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by quarry expansion under AHIP #1100264. No further requirements.
MRN64	51-6-0625	Artefact Scatter	Subsurface testing under AHIP #1077225. Further collection and approval for impact by development of the Western Excess Product Emplacement Area under AHIP #1100264. No further requirements.
MRN65	51-6-0626	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact quarry expansion under AHIP #1100264. No further requirements.
MRN66	51-6-0627	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by haul road construction and the development of the Western Overburden Emplacement Area under AHIP #1100264. No further requirements.
MRN67	51-6-0628	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by haul road construction/quarrying under AHIP #1100264. No further requirements.
MRN68	51-6-0629	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by haul road construction under AHIP #1100264. No further requirements.
MRN70	51-6-0631	Isolated Find	Subsurface testing under AHIP #1077225. Approved for impact by access road construction under AHIP #1100264. No further requirements.

Site Name	AHIMS #	Site Type	Management Completed
MRN71	51-6-0632	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by access road construction under AHIP #1100264. No further requirements.
MRN72	51-6-0633	Artefact Scatter	Subsurface testing under AHIP #1077225. Approved for impact by access road construction under AHIP #1100264. No further requirements.
MRN73	51-6-0638	Artefact Scatter	Located during historic heritage investigations under s60 Permit #2006/S60/082, and s65A Permit #2007/s65A/11. Approved for impact by access road construction/overpass. Artefacts collected initially under AHIP #1077294 and then under AHIP #1100264 until impacted. No further requirements.
MRN77	51-6-0649	Artefact Scatter	Collected under AHIP #1100264 ahead of impact by infrastructure construction. No further requirements.
MRN78	51-6-0647	Artefact Scatter	Subsurface tested under variation to AHIP #1100264. Approved for impact by haul road construction under a variation to AHIP #1100264. No further requirements.
MRN79	51-6-0648	Artefact Scatter	Subsurface tested under variation to AHIP #1100264. Approved for impact by haul road construction under a variation to AHIP #1100264. No further requirements.
MRN80 (formerly PAD5)	51-6-0690	Artefact Scatter	Subsurface testing and salvage under variation to AHIP #1100264 ahead of impact from rail siding development. No further requirements.
MRN81 (part of PAD3 – PAD3 still extant)	51-6-0694	Potential Archaeological Deposit	Monitoring of trench excavation under variation to AHIP #1100264 ahead of impact from access road development. No further requirements for MRN81, however, PAD3 still extant and not to be impacted.
LKIF2	51-6-0769	Isolated Find	Surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LKIF3	51-6-0771	Recorded as an Isolated Find now an Artefact Scatter	Surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.

Site Name	AHIMS #	Site Type	Management Completed
LKAS1 incorporating PAD3	51-6-0784	Artefact Scatter	Subsurface tested and surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LKAS2	51-6-0785	Artefact Scatter	Surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LKAS3	51-6-0779	Artefact Scatter	Surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LKAS4	51-6-0778	Artefact Scatter	Surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LA31E incorporating PAD1E	51-6-0782	Artefact Scatter	Subsurface tested and surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LA31W incorporating PAD1W	51-6-0783	Artefact Scatter	Subsurface tested and surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LA32	51-6-0387	Isolated Find	Surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LKAS7 (formerly PAD4)	51-6-0775	Artefact Scatter	Subsurface tested, subsurface investigation and surface collection under variation to AHIP #1100264 ahead of impact from quarry development. No further requirements.
LKAS8 (formerly PAD2)	51-6-0774	Artefact Scatter	Subsurface tested under variation to AHIP #1100264 ahead of impact from overburden emplacement. No further requirements.
LKAS9 (formerly PAD5)	51-6-0776	Artefact Scatter	Subsurface tested under variation to AHIP #1100264 ahead of impact from overburden emplacement. No further requirements.

Your reference: Email dated 1 June 2009
Our reference: Variation Letter dated 2 June 2009

Mr Richard Savage
Project Manager
CEMEX Australia Pty Ltd
PO Box 258
PENRITH NSW 2751

Dear Mr Savage,

**Re: CEMEX Lynwood Quarry Project - Aboriginal Heritage Impact Permit #1100264 -
Modification to Consent**

I refer to the email of 1 June 2009 from your company's consultants Umwelt (Australia) Pty Ltd regarding the application from CEMEX (Australia) Pty Ltd to modify a conditions of consent for the Department of Environment and Climate Change (DECC) Lynwood Quarry Project Aboriginal Heritage Impact Permit (AHIP) #1100264.

As you would be aware, the Department of Environment and Climate Change (DECC) has issued an Aboriginal Heritage Impact Permit (AHIP) to permit the excavation, salvage and destruction of Aboriginal objects at Lynwood Quarry.

DECC has considered the application to amend the AHIP to delete the conditions relevant to subsurface salvage of Aboriginal site MRN28 (DECC AHIMS #51-6-0269) and advise that AHIP Conditions 16 and 17 have been amended accordingly. As per AHIP Conditions 2 and 9, please advise the Aboriginal stakeholders of the amendment to the AHIP. The amended AHIP will be forwarded to your office.

Thank you for your advice regarding the commencement of the subsurface testing of Archaeological Terrain Units (ATUs) 7PA and 7AD.

If you have any questions, or wish to discuss this matter further please contact Stephen Free on 02 6229 7087.

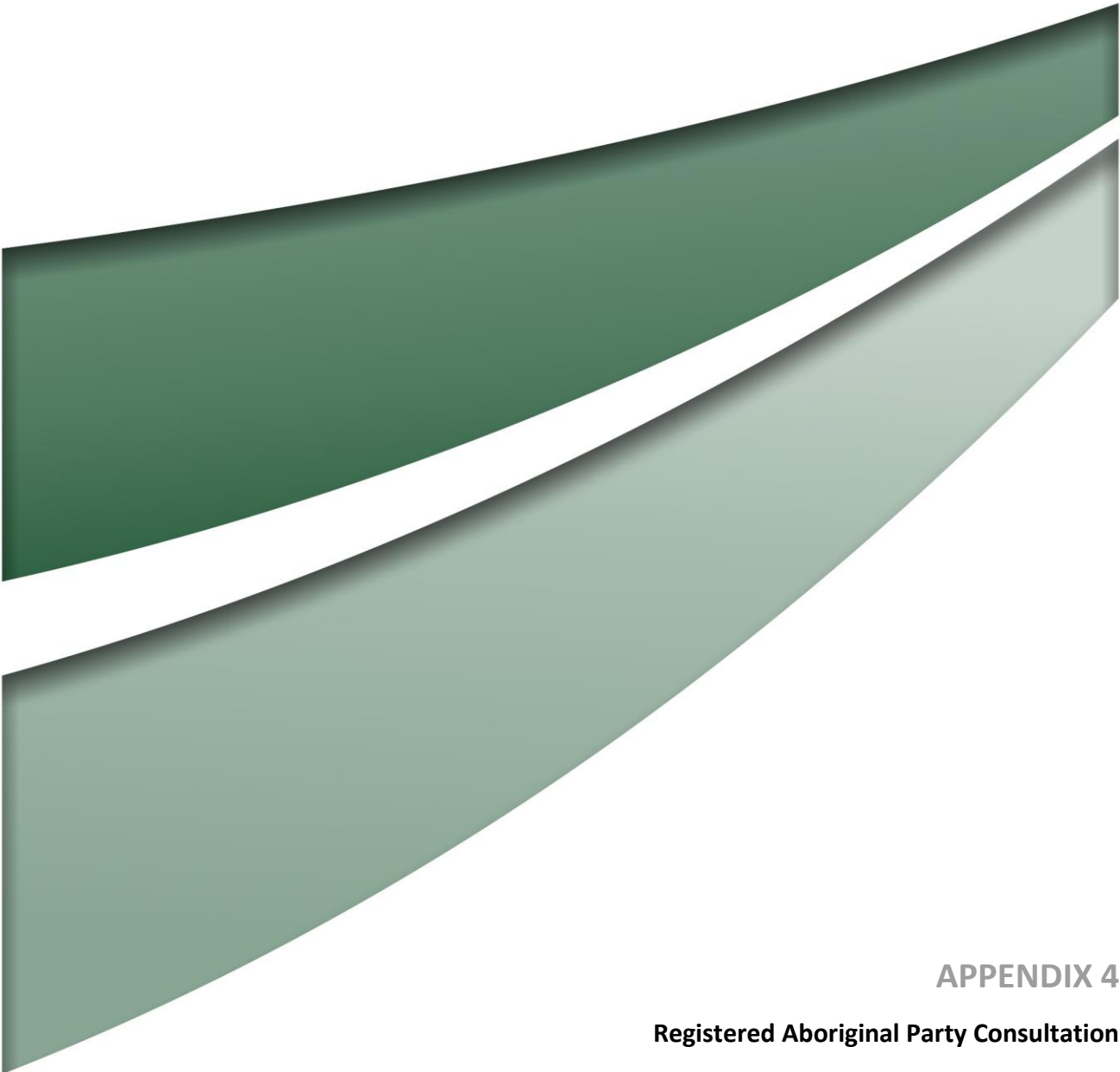
Yours sincerely



Michael Hood
Manager, Landscape and Aboriginal Heritage Protection (South)
Environment Protection and Regulation

PO Box 733 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW
Tel: (02) 6229 7000 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of **Environment and Climate Change** NSW



APPENDIX 4

Registered Aboriginal Party Consultation

Janice Wilson

From: Sharyn Halls [ghal6522@bigpond.net.au]
Sent: Sunday, 5 February 2017 12:47 PM
To: Alana White; Janice Wilson
Subject: Re: Final Draft AHMP (our reference 3330M V4)

Hi Alana

We need to talk about the Aboriginal Management Group and the way we monitor each year and every 3 years

We need a copy of how it was first set up and a copy of what has now been put in so can't comment until we all sit down and go through it together as a Management committee

Thanks Sharyn

Sent from my iPhone

On 6 Jan 2017, at 9:38 pm, Alana White <alana.white@lafargeholcim.com> wrote:

Hi all,

Please see the attached draft Aboriginal Heritage Management Plan drafted by Jan at Umwelt. Please provide comments back by close of business 6 February 2017. If you have any questions, please feel free to call either myself or Jan.

Hope this finds you all well

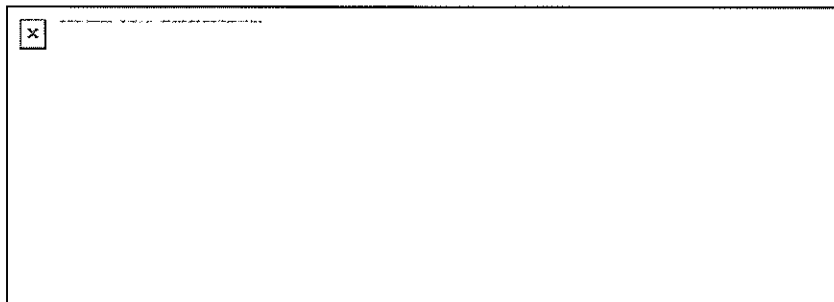
Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



"The 2030 Plan" The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

From: Alana White< alana.white@lafargeholcim.com>
Sent: Tuesday, 24 July 2018 9:58 AM
To: Janice Wilson
Subject: Fwd: AHMP - review
Attachments: 3330_R34_V5_Final AHMP for RAP Review.zip

Alana White
Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

----- Forwarded message -----

From: Alana White <alana.white@lafargeholcim.com>
Date: 13 June 2018 at 09:08
Subject: Fwd: AHMP - review
To: Sharyn Halls <ghal6522@bigpond.net.au>

Alana White
Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

----- Forwarded message -----

From: **Alana White** <alana.white@lafargeholcim.com>

Date: 24 April 2018 at 11:06

Subject: AHMP - review

To: Sharyn Halls <ghal6522@bigpond.net.au>, Shaun Brown <shaun@gundungurra.org.au>, delisefreeman1 delisefreeman1 <delisefreeman1@bigpond.com>

Hi all,

Please see attached the Aboriginal Heritage Management Plan for review. Please have comments back to me by COB May 31. As with all the management plans, no response will mean endorsement.

This plan was reviewed based on the changes to the AHIP and commits Holcim to the protection to LKST1 and the relocation and protection of LKST2 among the other conditions.

The MOU and contract negotiations for the keeping place are separate to this document.

I'm hoping to have a committee meeting in the near future to discuss the results from last years monitoring, plan the activities on site and to also start the contract negotiations. I will be in touch with times and dates soon. We are going to competitive tender for the Archaeological Rep on the committee which will delay the setting of the date. Again, if you have anyone you would like to receive the scope of works for the tender, please let me know.

I hope you are all safe and well.

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

----- Forwarded message -----

From: **Alana White** <alana.white@lafargeholcim.com>

Date: 24 April 2018 at 11:06

Subject: AHMP - review

To: Sharyn Halls <ghal6522@bigpond.net.au>, Shaun Brown <shaun@gundungurra.org.au>, delisefreeman1 delisefreeman1 <delisefreeman1@bigpond.com>

Hi all,

Please see attached the Aboriginal Heritage Management Plan for review. Please have comments back to me by COB May 31. As with all the management plans, no response will mean endorsement.

This plan was reviewed based on the changes to the AHIP and commits Holcim to the protection to LKST1 and the relocation and protection of LKST2 among the other conditions.

The MOU and contract negotiations for the keeping place are separate to this document.

I'm hoping to have a committee meeting in the near future to discuss the results from last years monitoring, plan the activities on site and to also start the contract negotiations. I will

be in touch with times and dates soon. We are going to competitive tender for the Archaeological Rep on the committee which will delay the setting of the date. Again, if you have anyone you would like to receive the scope of works for the tender, please let me know.

I hope you are all safe and well.

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm day**

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

----- Forwarded message -----

From: **Alana White** <alana.white@lafargeholcim.com>

Date: 14 June 2018 at 12:56

Subject: AHMP Review

To: Shaun Brown <shauneeb1983@gmail.com>, Sharyn Halls <ghal6522@bigpond.net.au>, Dawn Harris <trindall1956@gmail.com>, V Brown <vaimoana.kengike15@gmail.com>

https://www.dropbox.com/s/c1k18110wsz2gtt/3330_R34_V5_Final%20AHMP%20for%20RAP%20Review.pdf?dl=0

Hi all

Above is a link that will take you to the aboriginal heritage management plan reviewed for the works we did with the indigenous tree. Can you please review this as soon as you can and give me any feedback. If I don't hear from you by 14 July, we will assume you are happy with the contents.

The review of the management plan is relatively minor with only a few changes. Regardless we want to make sure you're comfortable and that we have accurately recorded the agreements. The contract for the keeping place is a separate consideration that will be dealt with when we all meet next.

As you are reviewing the document, if you have any questions please don't hesitate to give me a call.

As I said over the phone we are hoping to have a meeting in August, if there are any weeks that you are unavailable in this month please let me know. It will most likely be a few days that we would like to have you here.

Hope this finds you all well – if you have any issues in downloading the report please give me a call

All the best

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

----- Forwarded message -----

From: **Alana White** <alana.white@lafargeholcim.com>

Date: 13 June 2018 at 09:07

Subject: Fwd: AHMP - review

To: Sharyn Halls <ghal6522@bigpond.net.au>

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan

----- Forwarded message -----

From: **Alana White** <alana.white@lafargeholcim.com>

Date: 24 April 2018 at 11:06

Subject: AHMP - review

To: Sharyn Halls <ghal6522@bigpond.net.au>, Shaun Brown <shaun@gundungurra.org.au>, delisefreeman1 delisefreeman1 <delisefreeman1@bigpond.com>

Hi all,

Please see attached the Aboriginal Heritage Management Plan for review. Please have comments back to me by COB May 31. As with all the management plans, no response will mean endorsement.

This plan was reviewed based on the changes to the AHIP and commits Holcim to the protection to LKST1 and the relocation and protection of LKST2 among the other conditions.

The MOU and contract negotiations for the keeping place are separate to this document.

I'm hoping to have a committee meeting in the near future to discuss the results from last years monitoring, plan the activities on site and to also start the contract negotiations. I will be in touch with times and dates soon. We are going to competitive tender for the Archaeological Rep on the committee which will delay the setting of the date. Again, if you have anyone you would like to receive the scope of works for the tender, please let me know.

I hope you are all safe and well.

Alana White

Senior Environment and Community Liaison
Lynwood, Holcim (Australia) Pty Ltd

Make today a **zeroHarm** day

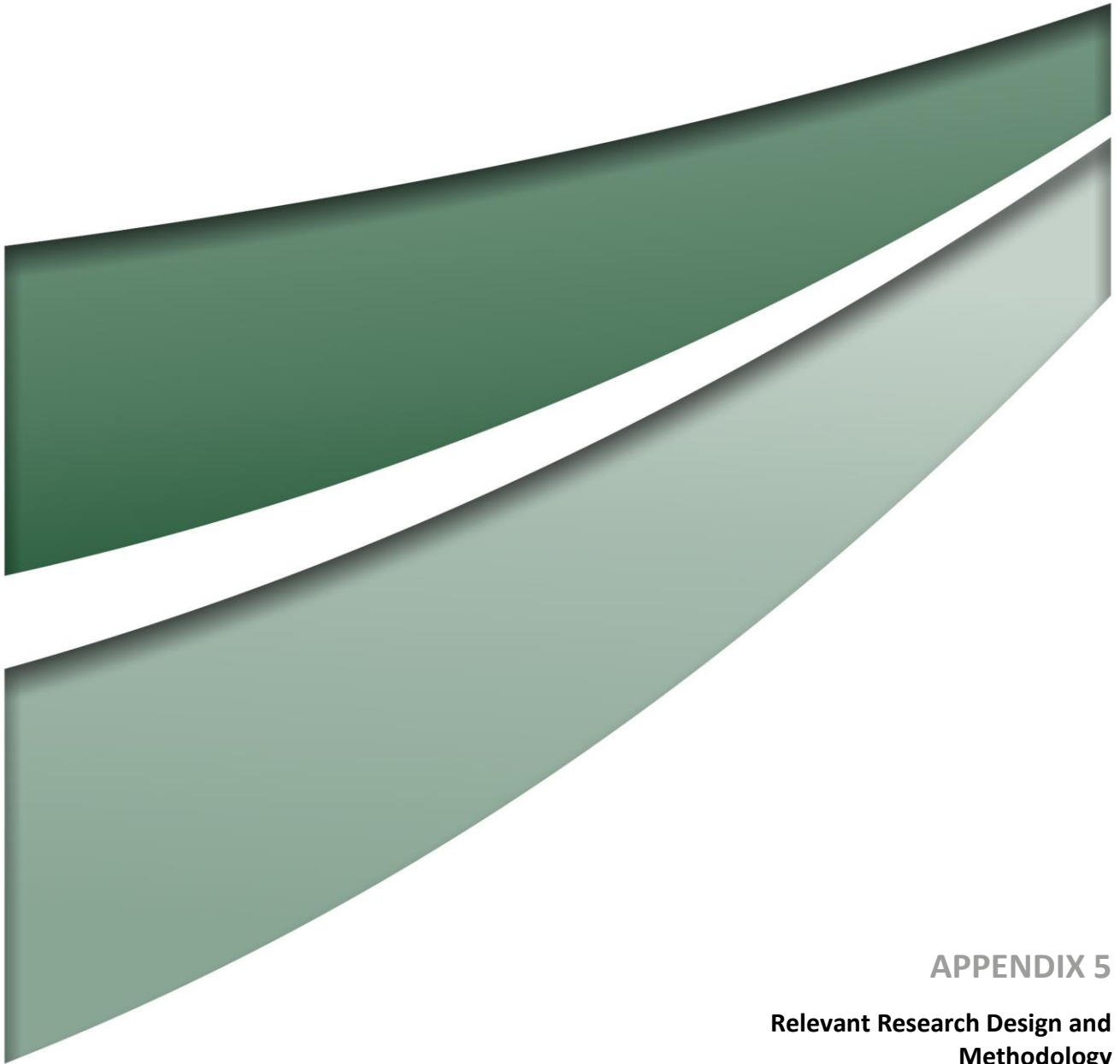
PO Box 76
Marulan NSW 2579
Mobile +61 429 790 795
Email: alana.white@holcim.com

www.holcim.com.au

Please consider the environment before printing this e-mail.



“The 2030 Plan” The LafargeHolcim Sustainability Strategy - Click [HERE](#) for details of the Plan



APPENDIX 5

Relevant Research Design and Methodology

Appendix 5 – Research Design and Methodology

It is noted that Holcim has already completed all surface collections, subsurface testing and salvage required by AHIP #1100264 within the Ignimbrite Pit Area. Holcim has also completed all of the surface collections, the majority of the subsurface testing and salvage required by AHIP #1100264 within the Granite Pit Area (for details refer to **Appendix 3**). The following approved research design and methodology was applicable to all archaeological investigations and salvage to date and will continue to apply for the remaining site and PAD in the Granite Pit Area that require further investigation (PAD6) and management (LKST2).

Approved Research Design and Methodology

All subsurface testing, salvage and artefact analysis has been undertaken throughout the life of the Lynwood Quarry Project Area using a consistent Research Design and Methodology (Umwelt 2007, 2008a, 2008b, 2009a, 2015, 2016a) and reporting process (Umwelt 2008a, 2008e, 2009b, 2013, 2016a, 2016b, 2016c and in prep). All remaining archaeological investigations for the Granite Pit Area will be undertaken using the same research design and methodology with the aim of obtaining comparable results that can be used to continue to refine interpretations of Aboriginal use of the Marulan landscape and to continue to refine answers to the research questions set by the registered Aboriginal parties and endorsed by OEH.

In compliance with AHIP #1100264, following each subsurface testing program component (which now relates only to PAD6), Holcim Australia, in consultation with the registered Aboriginal parties, will have a suitably qualified archaeologist prepare a report on the outcomes of the subsurface testing. In addition to reporting on the outcomes of the subsurface testing the report will set out the requirements for further subsurface salvage (where warranted). The report will be provided to the registered Aboriginal parties and OEH and no further salvage and/or site/PAD impact by works will be undertaken until OEH has approved the salvage methodology and/or impact by works without further salvage.

Reports will also be provided to OEH following the removal of the LKST1 and LKST2 scarred trees and the salvage of LKAS7/PAD4.

Aboriginal Site Impact Recording forms will be provided to OEH following scarred tree removal and following subsurface testing and salvage of sites/PADs.

At the conclusion of the remaining archaeological investigations across the Granite Pit Area, Holcim will provide the funding for a report that will analyse the results of the surface collections, subsurface testing and salvage program and which will build on the information gained from the archaeological investigations within the Ignimbrite Pit Area and from other archaeological investigations in the Marulan area that have been completed and reported at that time.

Research Themes and Questions

The research design as prepared by Umwelt (2008a, 2008b) in consultation with the registered Aboriginal parties and as approved by OEH focuses on four themes as detailed below:

1. Is the distribution and density of the surface artefacts within the ATUs a true reflection of Aboriginal occupation patterns?
2. Does the distribution and density of the surface sites (including scarred trees, boulder used for grinding and the stone arrangement) and artefacts and subsurface artefacts and features (if any) reflect the pattern of differential use of the landscape predicted from the ethnography/ethnohistory and Aboriginal oral history?

3. What does the artefactual evidence recovered indicate about Aboriginal use of the landscape?
4. Is it possible to provide some chronology for Aboriginal use of the Lynwood Quarry project area?

In order to address the Research Themes a series of questions were posed which linked Themes 1, 2, 3 and 4 together and these were used to prepare a hypothesis for Aboriginal use of the landscape within the Lynwood Quarry project area (Umwelt 2013).

1. Does the surface distribution and density of artefacts within the ATUs reflect the distribution and density of artefacts in a subsurface context?
2. Are there differences (e.g. artefact numbers, artefact and raw material types, reduction methods, retouch type) between the surface and subsurface assemblages and/or between the ATUs?
3. What are the locally available resources (environmental and cultural)?
4. What stone resources were transported into the area and from where?
5. Have local resources influenced site location and site use?
6. How far back in time does Aboriginal occupation of the area extend?
7. Is there evidence to indicate Aboriginal occupation continued after initial European settlement?

Methodology

Scarred Tree Removal

The scarred tree removal will be undertaken by a qualified arborist. The scarred sections of the tree will be heavily padded prior to works commencing in order to prevent accidental damage. The limbs of the trees above the scars and the section of the trunk above the scars will be removed. The scarred section of the trees will then be supported by a crane while the trunks are cut off below the scarred sections. The heavily padded scarred sections of the tree trunk will then be placed into the back of a flat bed truck using the crane. Tyres or some other form of padding will be used as cushioning in the back of the truck to support the scarred sections of the tree trunks. The scarred sections of the trunks will then be transported back to the Holcim Office to be placed in proximity to the existing MRN74 scarred tree. The scarred sections of the tree will be temporarily supported on tyres or some other form of suitable padding until such time as they as they can be mounted (either lying or standing depending on the arborist's recommendations) and covered by a roofed enclosure.

Archaeological Investigations

Surface Collection

The surface collection methodology was as follows:

- flag surface artefacts
- photograph artefact distribution
- record grid coordinates for individual artefacts
- prepare a site plan
- collect surface artefact(s) and bag individually in appropriately labelled bags and retained for analysis.

Subsurface Testing of Sites with Potential Archaeological Deposits (and their associated Archaeological Terrain Units)

Initially any surface artefacts were collected using the methodology set out above. The subsurface testing of the site was then undertaken as follows:

- excavate 0.5 metre squares along two lines set at right angles to each other that cut through the site/PAD area
- the 0.5 metre squares will be at 5 metre intervals and will extend across the site/PAD area and at least 5 metres beyond
- the 0.5 metre squares will be excavated using a spade and/or trowel
- the soil will be removed as 10 centimetre arbitrary spits
- the excavation will continue to clay or bedrock except in areas of deep sands where excavation will not exceed 50 cm (for safety reasons – if there are still artefacts at this depth the site may be subject to further salvage). Excavation will also cease following the removal of two sterile spits if agreed by the registered Aboriginal party representatives and the archaeologist
- all excavated soil will be sieved using 5 mm and 2 mm nested sieves
- soil samples will be collected from each spit for geomorphological analysis as required
- all artefacts recovered will be placed in appropriately labelled bags and retained for analysis.

The aim of the subsurface testing was to define the area of the site and the nature of its contents.

Subsurface Testing of Potential Archaeological Deposits

The methodology proposed for the subsurface testing of PADs was/will be as follows:

- each of the subsurface testing locations will be marked out with a 50 metre by 5 metre grid
- a series of 0.5 metre squares will be excavated at 5 metre intervals along the 50 metre length of one side of the grid (a total of 11 x 0.5 metre squares). If no artefacts are located there will be no further subsurface testing required. If artefacts are located in any of the squares a parallel second row of squares will be excavated along the second side of the grid (a further 11 x 0.5 metre squares)
- each square will be excavated using a spade and/or trowel
- soil will be removed as 10 centimetre spits
- excavation will continue to clay or bedrock, except in areas of deep soils/sands where the excavations will cease at 50 centimetre or when two sterile spits have been removed (whichever occurs first)
- all soil/sand excavated will be sieved using 5 millimetre and 2 millimetre nested sieves
- soil samples will be collected from each spit for geomorphological analysis as required
- squares with artefacts will have their stratigraphic profile recorded
- all artefacts recovered will be placed in appropriately labelled bags and retained for analysis.

The aim of the subsurface testing of the PADs was/is to determine if they contained/contain artefactual material and the nature and density of that artefactual material.

Manual Excavation Methodology

If the nature and density of artefactual material recovered from either the sites or PADs was/is assessed as warranting further salvage the following methodology will be implemented as previously endorsed by the registered Aboriginal parties and OEH under AHIP #1100264:

- a 2 metre by 2 metre square will be excavated centred on the 50 centimetre Test Pit which contained the highest density artefactual material
- additional 1 metre squares will be added around the periphery of the initial 2 metre by 2 metre square to follow areas of higher artefact density and/or features such as hearths, cooking pits/heat treatment pits/knapping floors
- a minimum of 20 x 1 metre squares will be excavated
- the 1 metre squares will be excavated stratigraphically and in 5 centimetre spits within deposits where a single stratigraphic layer exceeds 5 centimetres
- the 1 metre squares will be excavated as four, 50 centimetre quadrats
- excavation will continue until either the B soil horizon (clay) is reached and/or decomposed bedrock/bedrock is encountered or until all participants agree that excavation can stop (at least two sterile spits will be removed from the A2 soil horizon before excavation ceases in areas where deposits are very deep)
- the excavations will be undertaken using trowels and spades and all artefacts located within the excavations will be recorded using X, Y, Z coordinates
- stratigraphic profiles will be prepared for the excavation
- all soil/sand removed will be sieved using 5 millimetre and 2 millimetre nested sieves. The only exception to this will be sediments associated with a hearth or cooking pit/heat treatment pit. If a feature of this nature is encountered all the deposit removed will be retained for laboratory analysis (e.g. microscopic and macroscopic plant/seed collection, flotation to collect charcoal if charcoal is scarce and/or highly fragmented)
- soil samples will be collected from each spit of each square and from any features for Munsell, pH testing and geomorphic analysis as required
- wherever possible suitable materials will be collected for the generation of absolute dates
- any features such as hearths, cooking pits and heat treatment pits encountered will be excavated first in cross-section and then in their entirety (and separate to the remainder of the square – refer to methodology below)
- all artefacts collected will be retained for analysis during the final reporting process for any Lynwood Quarry cultural heritage investigations before being returned to the Lynwood Quarry Office complex where there will be a facility for their care and display

- the results of the manual excavations will be reported in a final report prepared for the cultural heritage investigations conducted within the Granite Pit Area.

Excavation Methodology for Features

Should/if a possible hearth, cooking pit/heat treatment pit or knapping floor have been/be identified during salvage activities, the following management strategy was/is proposed:

- the surface of the feature will be cleaned back (using trowels and brushes as required) to allow the edges of the feature to be identified
- the top of the feature will be photographed and a plan drawn
- the feature will then be excavated in cross-section (half-sectioned) to investigate the dimensions and orientation of the feature to more accurately assess whether it is a cultural or natural feature (for example, a burnt tree root/stump)
- the deposits from the feature will be excavated separately to the surrounding deposit to avoid contamination
- if it was identified as a cultural feature, it was to be photographed in cross-section and a stratigraphic profile of the cross-section was to be recorded
- if identified as a cultural feature, it will be excavated in its entirety
- all excavated materials from the feature will be retained for analysis and samples of relevant materials will be sent for additional analysis, including radiocarbon dating where applicable and
- following the removal of the entire feature the excavation will resume using the methodology outlined above.

Methodology for Detailed Artefact Analysis

The detailed artefact analysis is scheduled to be undertaken in 2018. All artefacts will be analysed using at least x10 magnification. Edges and artefacts suspected of having use-wear or residues will be inspected using at least x30 magnification. Artefacts suitable for residue and use-wear analysis will be set aside for this form of analysis following the Stage 3 salvage.

The artefact analysis will centre on inter-assemblage comparisons for those assemblages located during the subsurface testing and salvage. Numerous attributes (as described below) will be recorded, though not all will be analysed as part of the current investigations. Full details of the artefact data for all of the assemblages, however, will be presented within the final report, so that the data will be available for other analysts.

Discussion of Attributes to be Recorded for Analysis

The attributes to be recorded for the artefacts recovered from the development impact area are outlined below. A discussion follows each attribute, detailing the proposed method of recording, potential problems with the method proposed, and the possible behavioural implications of each attribute.

Not all attributes can be measured on all artefacts (e.g. termination type cannot be measured on proximal flake pieces). Therefore, after a discussion of the most basic common attributes, subsequent attributes are divided into sections, with subsections for categories.

Umwelt, systematically record the same attributes for all assemblages with the ultimate objective of setting up a database that is comparable intra and inter-regionally.

Common Attributes

Artefact Type

Description: Artefact class is a technological category reflecting the mechanical processes which resulted in the physical form of the artefact at the time of recovery. Classes used will include flakes, broken flakes, retouched flakes, flaked pieces, cores, flakes used as cores, hammerstones, grindstones, ground-edge axes, heat-shattered fragments, and non-diagnostic fragments.

Problems: Classing artefacts does not usually entail significant problems, other than occasional ambiguities between flaked pieces and broken flakes, and between (retouched) flakes and flakes used as cores (see **Retouch** for a further explanation).

Uses: This category will be used to assess differences in provisioning strategies (e.g. core provisioning vs flake provisioning), differences in site function/use (e.g. presence/absence of grindstones), and the taphonomic effects of fire on site integrity (e.g. differences in the ratio of heat shattered fragments: other artefact classes).

Raw Material

Description: A largely self-explanatory attribute, raw materials expected to be present include silcrete, quartz, crystalline tuff, quartzite, chert and basic volcanics.

Problems: This category is usually without problems, for analysts with a geological background.

Uses: Raw material is an important attribute, which may broadly indicate the place of origin of an artefact. The dominance of one raw material or another may also be used to group or differentiate sites. Raw material is also frequently used in concert with attributes in the creation of analytic units for more in-depth inter and intra site comparisons.

Artefact Weight

Description: Artefact weight will be measured for all artefacts to one tenth of a gram.

Problems: This attribute does not entail any difficulties.

Uses: Weight is an effective approximation of volume for a given raw material. As such it most accurately reflects the amount of stone being brought to a site. Average weight within a given artefact class is also a good indication of the amount of 'stress' that has been placed on the provisioned material. Large pieces of stone still retaining usable potential are unlikely to be discarded when people are conserving their technological resources (for example, as they move increasingly away from places where replacement material is available). Alternatively, when people are close to the raw material source, or when they are provisioning larger amounts of material to a site, the pressure on the 'exhaustion threshold' is relieved and there should be a resultant rise in the average weight of discarded artefacts.

Dimensions

Percussive Dimensions

Description: Percussive dimensions measure the length of the flake in the direction of force application from the point that force was applied. In this regard it relates to the length of core face that was removed during the manufacture of the artefact. Width is oriented across the face of the flake from the mid-point of length, and thickness from the mid-point of length and width of the ventral to the corresponding point on the ventral.

Problems: While not as arbitrary as maximum dimensions, there is some uncertainty as to what these attributes are actually measuring in terms of the flake manufacturing process.

Use: Variations in average flake dimensions, and in the distribution of flake sizes in histograms, are expected to correlate with differences in the provisioning and reduction strategies at different places. For example, the reduction of cores at a site will produce a large number of moderate to small flakes and some larger flakes. As a result, the histogram of flake length will show a relatively consistent increase in number of flakes from large to small. Contrastingly, when most flakes are the result of retouching or maintenance tasks on other flakes, the majority of the flakes remaining should be very small, with comparably few large to moderate flakes. However, it may be the case that a few moderate to large flakes will be discarded at the site as they are exhausted through excessive/heavy retouch or simply thrown away prior to a reprovisioning event. In such a case, a histogram of artefact size should show a bimodality in regard to length (a small peak in the moderate range and a large peak in the small range), and an even more pronounced bimodality in regard to thickness (most retouching flakes being very thin).

Maximum Dimensions

Description: Maximum length, width and thickness will be measured on all artefacts. 'Length' will arbitrarily be measured along the longest plain, with width the longest of the plains at 90° to length, and thickness measured at 90° to both.

Problems: There are no problems associated with taking this measurement, although it needs to be noted that the definitions of length, width and thickness are entirely arbitrary and do not reflect any aspect of artefact manufacture.

Uses: This measure is most useful as a broad measure of size, and may have a role in assessing fragmentation rates (particularly in the case of heat-shattered fragments) and calculating Minimum Numbers of Artefacts (MNA).

Cortex – Amount and Type

Description: Cortex refers to the 'skin' of a rock – the surface that has been weathered to a different texture and colour by exposure to the elements over a long period. The amount of cortex as a percentage of surface area will be measured on all artefacts (in relation to flakes, cortex can, by definition only occur on the dorsal and platform surfaces). The nature of cortex – its shape and texture – will vary depending on where the raw material was sourced. Cortex will be recorded in all instances where cortex is present.

Problems: This is a relatively unambiguous descriptive category.

Use: When a natural cobble is first selected it will usually be covered in cortex. Therefore the first artefacts produced from it will have a complete coverage of cortex on the dorsal side (primary reduction). As the cobble is increasingly reduced the amount of cortex on each artefact will rapidly decrease (secondary reduction) until it ceases to be present on artefacts (tertiary reduction). As a result of this trend, it should

be possible to determine how early in the reduction sequence the artefact was produced. If large numbers of artefacts or a high proportion of the artefacts of a raw material retain cortex it may indicate that the site is located in close proximity to the source. Differences between the proportions of artefacts retaining cortex between different raw material sites indicates relative differences in distance to source. This does not necessarily mean distance in terms of measurable distance across the landscape; it may also reflect length of time since leaving the source. For example, the last campsite when a group is returning to the source of the raw material may be very close to the source in terms of distance, but distant in terms of time elapsed since the group left the source. If artefacts with cortex are occurring in sites a long distance from the place of origin of the natural cobble, then it is likely that cobbles were being transferred to the site when still only slightly reduced. This would imply an attempt to maximise the amount of stone being provisioned with the weight of transported material being a relatively minor concern.

Cortex type may help to clarify the source of the raw material (e.g. from river gravels [rounded, cortex many microscopic conchoidal fractures], surface scree [cortex weathered, porous, often oxidised, can be angular or rounded] or from outcrops [dependent on raw material type, more likely to have flat angular surfaces or recorticated flake scars]).

Attributes to be Recorded on Flakes

In most circumstances flakes, whether broken or whole, will account for the majority of artefacts in an assemblage. Flakes are frequently produced in large numbers during reduction events, though most are never subject to use. Flakes are generally inferred to be the most utilitarian of the basic artefact categories, usually possessing a sharp edge along the entire circumference when whole and amenable to reworking patterns which may yield formal 'implements' or 'tools', such as backed artefacts and scrapers.

Knapping Type

Description: Three main knapping methods are used in the production of flakes, resulting in flakes with distinctive characteristics. The first is freehand percussion, where the objective piece is held in the hand and struck with a hard hammer (e.g. a hammerstone), resulting in 'classic' flakes with a single bulb, and a ringcrack/PFA. The second is bipolar, where the objective piece is rested against an anvil and struck. This results in flakes that have straight sheer faces and crushing at both ends. The third is pressure flaking, where an indenter is placed against the edge from which the flake is to be removed and force is applied. The resulting flakes have a characteristically diffuse bulb, with no errature scar and no PFA.

Problems: Ambiguities do exist in this classification, and the identification of pressure flakes in particular may be difficult, however difficulties are expected to be relatively infrequent.

Use: Freehand percussion, bipolar and pressure flaking are all different approaches to reduction, with different advantages and disadvantages. Pressure flaking is the most controlled method, in terms of how much force is applied and to where. However, pressure flaking does not produce large flakes and is usually associated with fine retouching work. Bipolar reduction is usually viewed as a system employed to increase core use-life. As cores become small their inertia thresholds drop making it difficult to reduce flakes via the freehand method. Resting the core and applying bipolar technique allows flakes to be reduced from a core too small to hold or from small round pebbles with no platform angle to initiate reduction. Pressure flaking when undertaken using an anvil often results in a form of bipolar reduction. Patterns in the distribution of flakes resulting from backing may be used to locate areas of backed artefact manufacture. Patterns in the distribution of flakes produced by bipolar knapping maybe used to indicate where there was pressure to maximize core potential.

Artefact Type

Description: Artefact type is a formal (e.g. less strictly technological), nominal category, similar to artefact class. Artefact types expected to be located include bondi points, microliths, scrapers, and adzes.

Problems: Ambiguity is an inherent feature of artefact typology, with the lines between different types frequently imprecise. Working definitions for each class used will be specified in the text of the analysis.

Use: Despite the problem discussed above, typology proceeds on the basis that at different places and at different times people manufactured artefacts with specific shapes and characteristics. As a result, the general period during which an artefact was made can be inferred if it is of a specific form. It is also not uncommon to infer that a given artefact form implies a given artefact function, and that from the shape of the artefact the activities taking place at the site can be specified, though these suggestions so far lack archaeological support. The problems with both of these uses are well documented, and any such inferences drawn here will be sparing. There is, however, some potential benefit in approaches based on subsistence patterns and the organization of technology. On this basis, it may be possible to make some assertions from artefact typology as to the way subsistence may have been organized at different places through the landscape.

Artefact Breakage

Description: At a basic level, flakes break in six different ways. Three are transverse (at 90° to the direction of percussion) – proximal, medial, distal; two are longitudinal (along the plane of percussion) – left, right (oriented from the ventral view); and one ambiguous – marginal (where dorsal and ventral can be clearly distinguished, but the margin from which the piece has detached is uncertain). All such breaks will be recorded.

Problems: It is occasionally difficult to be certain of the breakage on an artefact. In most cases, however, the kind of breakage can be ascertained.

Use: It is important to differentiate broken from complete flakes for the purposes of analysis, as the two are not comparable in regard to a number of measures. The amount of artefact breakage in an assemblage also indicates the degree of fragmentation to which the assemblage has been subject. In highly fragmented assemblages, the actual number of artefacts represented may be significantly exaggerated. Quantifying breakage allows a more accurate approximation of artefact numbers to be made.

Heat Affect

Description: Heat will affect artefacts in different ways, depending on the way it has occurred. Most heat affected flakes on fine-grained material will reveal a greasy surface lustre on newly flaked surfaces and some discoloration (e.g. porcellanite turns from white to blue), however as heat becomes excessive signs such as potlidding (the ‘popping’ of small plate-like pieces off the flake) or crazing (multiple fracture lines in multiple directions across the face of the flake) will occur. The presence of any of these features will be recorded.

Problems: This is a relatively unambiguous descriptive attribute for fine-grained materials – its application to coarse-grained materials is perhaps less certain.

Use: Trends in the spatial distribution of heat-affected artefacts may be used to indicate either heat-treatment (the controlled application of heat to improve flaking qualities) or post-depositional burning (uncontrolled heating through bush-fires or stump burning) depending on the signs of heating and associated archaeological features (e.g. hearths).

Platform Size – Width and Thickness

Description: The platform is the surface into which force is applied in the formation of a flake. Platform width is measured across the platform in the same direction as flake width, while platform thickness follows flake thickness.

Problems: Some ambiguity exists on ‘where to stop measuring’ platform width and thickness, particularly on primary cortical flakes on rounded cobbles (the first flakes removed from a natural cobble), and platform surfaces comprised of multiple flake scars. Despite this the measure appears to work quite well for the majority of flakes.

Use: Platform size is expected to decrease under two circumstances. The first is when flakes are produced from small cores. The second is somewhat more speculative and based on the premise of a correlation between very small (focalized) platforms and the production of parallel-sided flakes (blades) associated with backed artefact manufacture.

Differences in platform size averages within and between sites will be examined to test these correlations and to infer what these mean in terms of human behaviour patterns e.g. curation of stone, expedient use of stone.

Platform Surface

Description: Platform surface will be recorded as one of the following: cortical, single flake scar, multiple flake scars, or faceted.

Problems: This is a largely unambiguous descriptive attribute.

Use: The surface of a platform provides information about the history of the core prior to the detachment of the flake, and also about methods employed to control the flaking process. Faceting in particular has been linked to the systematic production of ‘blades’. Patterns in the spatial distribution of these attributes may be used to infer differences in reduction strategies.

Overhang Removal

Description: Frequently prior to the detachment of a flake from a core, the thin overhanging ‘lip’ of the core was removed in order to stop ‘crushing’ or force dissipation at the point of force application. This process is known as overhang removal.

Problems: This is a largely unambiguous descriptive attribute.

Use: Overhang removal is often seen as a form of raw material conservation. If a knapper desires to remove thin flakes from the face of the core by striking close to its edge, overhang removal may avoid the platform crushing and the resultant flake ending in a step termination which must be removed from the face of the core before flake production can continue. Thus, raw materials within assemblages, that have high relative proportions of overhang removal, or total assemblages that have high relative proportions of overhang removal, will be used to indicate raw material conservation, which can then be interpreted in relation to human resource use patterns/preferences.

Dorsal Scar Count

Description: The dorsal face of a flake provides a partial record of previous flaking episodes to have occurred down the core face at or near the same point. The number of flake scars on the dorsal surface of a flake which can be oriented relative to their direction of percussion and which are clearly discernible will be recorded.

Problems: There is some ambiguity in this measure, hence the use of the term ‘clearly discernible’ above. Furthermore, by the nature of the flaking process, each subsequent scar will remove traces of the previous scars, resulting in an incomplete record. For these reasons, this measure needs to be treated with some caution.

Use: Dorsal scar count is a rough indication of how much flaking has occurred prior to the detachment of the flake in question. It also provides a maximum against which to form ratios of ‘aberrant to non-aberrantly terminating scars’, ‘parallel to non-parallel scars’ and ‘number of scars per rotation’ (see next three attributes), all of which may assist in clarifying the reduction process and assist in understanding differences in the Aboriginal use of raw materials and sites.

Number of Aberrantly Terminating Dorsal Scars

Description: Aberrant terminations are further discussed below under **Terminations**. For the purposes of this description it is sufficient to say that flake scars terminating as steps and hinges will be recorded as aberrant in this assessment.

Problems: The problem(s) with this count are the same as those for the previous.

Use: As cores become smaller and more heavily reduced, the inertia threshold will fall and platform angle will increase, resulting in an increase in the number of aberrant terminations as a percentage of the number of flakes removed. Flakes which have a high number of aberrantly terminating flake scars as a percentage of the total are expected to have been produced towards the exhaustion threshold of the core. This measure will be used to indicate pressure on raw material availability and provisioning strategies.

Number of Parallel Flake Scars

Description: A basic count of the number of parallel flake scars.

Problems: As previous.

Use: Examining the ratio of parallel to non-parallel scars on the dorsal surface of flakes may help to clarify the prevalence of ‘blade’ production in the reduction systems at different places. It may also be possible from examining this ratio in relation to flake size to test whether blade production occurred at a specific stage in the reduction sequence, or whether it was present throughout the complete reduction sequence.

Presence of Parallel Arrises

Description: Arrises or dorsal ridges are a way of controlling artefact morphology. Flakes struck down an existing ridge will tend to follow the direction that the ridge takes. This attribute will involve noting the presence or absence of dorsal ridges that run parallel to the length of the flake.

Problems: Unlike the previous measures, this attribute is largely unambiguous.

Use: Like faceting, the presence of parallel arrises is associated with more controlled flaking methods such as blade production. The relationship between flake size and the presence of parallel arrises may provide similar information to the previous attribute (while at a lower resolution, being presence/absence based, this attribute is less ambiguous than number of parallel scars), as well as helping clarify the spatial distribution of different reduction strategies.

Dorsal Scar Rotation Count

Description: As a core is reduced it may be turned or rotated to provide new platforms or overcome problems with increasing platform angles. As a result, flakes may be detached which cut across old flake scars. The result should be apparent as dorsal scars in different direction to the direction of percussion of the flake being recorded.

Problems: The problem with this measure is the same as that for dorsal scar counts in general.

Use: Core rotation is increasingly likely towards the exhaustion threshold of cores, when platform angles increasingly approach or exceed 90° (it becomes very difficult to remove flakes from platforms with angles exceeding 90°). If it is possible to show a correlation between flake size and number of dorsal scar rotations then it will become possible infer from differences in the spatial distribution of this data that core exhaustion was more frequently approached in some areas than in others. If it is not possible to show this correlation, then it may be taken to suggest that core rotation was part of the reduction strategy throughout the reduction continuum.

Termination

Description: Termination refers to the way in which force leaves a core during the detachment of a flake. Every complete flake has a termination. There are patterns in the form which terminations will take, with the four major categories (those to be used here) being: feather, hinge, step, and outrepasse (or plunging).

Problems: This is a largely unambiguous descriptive attribute. The only point at which uncertainty does enter is in differentiating some transversely snapped flakes from step terminated flakes. In the majority of cases, however, this problem does not arise.

Use: Different terminations have different implications both for flake and core morphology. A flake with a feather termination (in which force exits the core at a low or gradual angle) will have a continuous sharp edge around the periphery beneath the platform. This has advantages in terms of the amount of the flake edge which can be used for cutting, and also makes the flake far more amenable to subsequent retouching or resharpening activities. Detaching flakes with feather terminations also has minimal impact on the effective platform angle of the core, and so platform angle thresholds are reached relatively slowly while feather terminating flakes continue to be produced.

Hinge and step terminating flakes have none of these advantages. They result in edges which are amenable neither to cutting nor to retouching. Furthermore, hinge and step terminations lead to rapidly increasing effective platform angles, leading to a requirement for core rejuvenation and core exhaustion. For these reasons, such terminations are considered undesirable or *aberrant*. The number of aberrant flake terminations is expected to increase towards the end of a core's uselife, as reduction in core size and increase in core platform angle make it increasingly difficult to detach feather terminating flakes. In areas where aberrantly terminating flakes are relatively common it may be inferred that core potential was more thoroughly exploited. From this it may in turn be inferred that the pressure to realize core potential (e.g. a strategy of heavy raw material conservation) was greater. Increased mobility/emphasis on portability is one possible explanation of such a pattern.

Outrepasse flakes have the opposite effect on core morphology to step and hinge flakes, in that they remove the entire core face and part of the core bottom. As a result, such flakes may be used to rejuvenate cores in which core angles have become high but which still retain useable potential (e.g. are still quite large). The presence of outrepasse flakes may be taken to indicate core rejuvenation and the requirement to increase core use-life.

Retouch

Description: Retouch is the term given to alterations made to a flake by the striking of subsequent flakes from its surface. Retouching may be done either to alter artefact form or to rejuvenate (resharpen) dulled edges, and possibly both. Degree/amount of will be recorded as presence/absence.

Problems: This is a largely unambiguous descriptive attribute. The only area in which difficulty may arise is in instances where edge damage cannot be differentiated from retouch. This occurs infrequently, as edge damage is usually a modern alteration to artefact form which can be noted through differences in surface colour between the flake scar and the rest of the artefact surface.

Use: The two main uses of retouch need to be separated for the purposes of this discussion. Retouch to achieve form (for example, artefact backing) is distinct from retouch for the purposes of edge rejuvenation. 'Formally retouched' artefacts are anticipated to occur at places of manufacture and places of discard. Importantly, such artefacts will be manufactured prior to use as part of a gearing up or preparation for activities such as hunting. The presence of concentrations of such artefacts, including incomplete specimens may indicate the base-camp locations from which mobile subsistence activities were conducted. Such artefacts are also expected to be present among very small assemblages at distances from occupational foci, as the result of discard, loss, or breakage.

Edge rejuvenation retouch is expected to increase as the availability of replacement materials decreases. Such artefacts are expected to represent 'personal gear', an implement carried with a person and maintained for repeated use. Unlike formally retouched pieces, artefacts with edge rejuvenation will not be produced *in preparation for* activities. The sharpest and most useful edge is a fresh edge. Rather, rejuvenation will occur as need arises. The presence of such artefacts at occupational foci is likely to represent discard following use and prior to reprovisioning/retooling. The percentage of artefacts exhibiting retouch is expected to increase in systems where large amounts of replacement raw material are not available.

It needs to be noted that a third type of retouch also occurs, aimed at neither formalisation of shape or edge rejuvenation. This is when a flake (usually a large to very large flake) has been used for the subsequent production of utilitarian flakes (e.g. when it has been used as a core). This strategy is quite prevalent in NSW. Differentiating such artefacts from other retouched artefacts is empirically difficult, however, is intuitively quite easy. Any such intuitive judgements can, however, be tested during the analysis phase, as such flakes are expected to be quite distinct from other retouched artefacts in size and weight.

Retouch Type

Description: Retouch type is a technological attribute relating the way in which retouch was carried out. Categories to be used are steep, acute, unifacial, bifacial, tranchet and/or used as core.

Problems: This is a largely unambiguous descriptive attribute.

Use: Whether retouch results in a steep or acute edge is important in relation to the possible functions of those edges. Acute retouch results in sharp edges suitable for cutting whilst steep retouch can be used to totally remove a sharp edge (to blunt as in backed artefacts) or to produce thick strong edges suitable for adzing or scraping. Thus, artefact function can be suggested by recording this attribute (residue and use-wear analysis is also planned to substantiate these interpretations). The recording of the technique used for retouch addresses questions related to techniques of implement manufacture and thus another form of human behaviour that can be analysed within and between assemblages.

Retouch Location

Description: Each flake will be divided into eight segments: proximal end, proximal left, proximal right, marginal left, marginal right, distal left, distal right, and distal end; with the presence or absence of retouch in each to be recorded.

Problems: Apportioning sections relies on a visual division of the flake, which may be slightly inaccurate. This is not expected to be a significant effect.

Use: An examination of retouch location may reveal trends in distance decay (e.g. increasing number of margins retouched over distance, or may simply reveal non-random patterns in the way retouching was carried out. If the former, then the trend may be used to suggest trajectories along which flakes were being carried as personal gear. In the case of the latter, the information would provide an insight into the manufacturing/reduction systems being employed.

Attributes to be Recorded on Cores

The following attributes are to be recorded on cores. Most information taken from cores concerns the way in which they were reduced – what pressures, controls and systems were applied.

Percentage of Surface Flaked

Description: This attribute involves an estimate of the percentage of the outer surface of the core which has had flake scars removed from it.

Problems: This is a visual estimate and liable to prove reasonably inaccurate and coarse. Nevertheless, it remains useful.

Use: This measure can be useful in assessing degree of core reduction. In particular, it can be useful in locating areas of heavy core reduction, particularly when used in concert with the following two measures.

Number of Flake Scars

Description: This measure mirrors **dorsal scar count** from the previous section. All scars over the length of 10 mm will be measured (there are usually large numbers of flake scars between 10-3 mm, which relate more to platform preparation than flake production).

Problems: Most of the problems with this measure arise from fact that subsequent scars remove traces of former scars, leaving an incomplete record of the past. As a result, this measure will always underestimate the number of flakes removed from the core.

Use: Dorsal scar count provides an estimate of the amount of reduction to which a core has been subject. Used in concert with measures such as **number of rotations** and **percentage of surface flaked**, it may be help to locate differences in the degree of core reduction at different locations.

Number of Rotations

Description: This measure mirrors **dorsal scar rotation count** as discussed above.

Problems: This measure has the same problems as **number of flake scars**.

Use: Different reduction systems use core rotation in different ways. In some systems, cores are rotated only once, after the striking of the initial flake to form a platform. All subsequent scars are removed in one direction from that platform. Other systems will involve repeated rotations between two platforms, or may involve continuous core rotation and numerous platforms. It may be the case that through the use-life of a core a number of different strategies will be used.

Assessing core rotation may help to clarify reduction systems, and the stage in the reduction system at which the individual core was discarded. This can be used to indicate differences in use of raw materials both within assemblages and between assemblages.

Number of Aberrantly Terminating Scars

Description: Flake scars terminating as steps and hinges will be recorded as aberrant in this assessment.

Problems: There should be no problems with this simple count.

Use: As cores become smaller and more heavily reduced, the inertia threshold will fall and platform angle will increase, resulting in an increase in the number of aberrant terminations as a percentage of the number of flakes removed. Flakes which have a high number of aberrantly terminating flake scars as a percentage of the total are expected to have been produced towards the exhaustion threshold of the core. This measure will be used to indicate pressure on raw material availability and provisioning strategies.

Number of Parallel Flake Scars

Description: A basic count of the number of parallel flake scars.

Problems: There should be no problems with this simple count.

Use: Examining the ratio of parallel to non-parallel scars on cores may help to clarify the prevalence of 'blade' production in the reduction systems at different places. It may also be possible from examining this ratio in relation to flake size to test whether blade production occurred at a specific stage in the reduction sequence, or whether it was present throughout the complete reduction sequence.

Comments

Description: a column will be supplied in the data base for recording comments. This may include comments on attributes such as artefact colour, granularity, presence and nature of inclusions, or other comments that do not fit snugly inside one of the attribute classes.

Problems: There should be no problems.

Use: Descriptions of artefacts can sometimes be useful for assisting in locating conjoins.

Reporting Requirements

AHIP #1100264 allows for a staged reporting process. Thus as components of the overall subsurface testing and salvage program are completed there is a requirement for a summary report to OEH on the outcomes, with a final report providing detailed artefact analysis and which addresses the research questions to be provided to OEH at the completion of all subsurface testing and salvage.

References

- Umwelt (Australia) Pty Limited 2007. *Research Design and Methodology for Section 87 Subsurface Testing and Section 90 Collection for the Development Impact Area, Lynwood Quarry, Marulan*. Report to the Department of Environment and Climate Change on behalf of Rinker Australia Pty Limited. July 2007.
- Umwelt (Australia) Pty Limited. 2008a. Stage 2 Report. Lynwood Quarry Project Area, Marulan, NSW Section 87 Subsurface Testing and Section 87/90 Salvage under Aboriginal Heritage Impact Permits #1077225 and #1077294. A report prepared for CEMEX Australia. July 2008.
- Umwelt (Australia) Pty Limited. 2008b. *Documentation to Accompany a s.87/90 Aboriginal Heritage Impact Permit for Works within the Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for CEMEX Australia. September 2008.
- Umwelt (Australia) Pty Limited. 2009a. *Documentation to Accompany an s.87 Aboriginal Heritage Impact Permit for Further Subsurface Testing of Archaeological Terrain Units Works he Lynwood Quarry Project Area, Marulan, NSW*. A report prepared for CEMEX Australia. February 2009.
- Umwelt (Australia) Pty Limited. 2009b. *Stage 2 Report - Lynwood Quarry Project Area Marulan, NSW: Results of Subsurface Testing of Archaeological Terrain Units under s.87/90 AHIP #1100264*. A report prepared for CEMEX Australia. August 2009.
- Umwelt (Australia) Pty Limited. 2013. Stage 3 Report. Lynwood Quarry Project Area, Marulan, NSW. Integrated Results of Section 87 Subsurface Testing and Section 87/90 Salvage under Aboriginal Heritage Impact Permits #1077225, #1077294, #1089392 and #1100264. A report for Holcim Australia (Australia) Pty Limited. August 2013.
- Umwelt (Australia) Pty Limited 2015. *Lynwood Quarry Extraction Area Modification Aboriginal Cultural Heritage and Archaeological Assessment*. A report prepared for Holcim Australia (Australia) Pty Limited. November 2015.
- Umwelt (Australia) Pty Limited. 2016a. Lynwood Quarry Extraction Area Modification – Request for a Variation to Section 87/90 Aboriginal Heritage Impact Permit #1100264 to allow for Staged Archaeological Investigations and Site Salvage. A report in prepared for Holcim Australia (Australia) Pty Limited. June 2016.
- Umwelt (Australia) Pty Limited. 2016b. Lynwood Quarry Extraction Area Modification Stage 1 Archaeological Salvage Program – Notification of Completion of Salvage of MRN25 (#51-6-0266) and Intention to Commence Works Associated with Haul Road Construction. A report prepared for Holcim Australia (Australia) Pty Limited. August 2016.
- Umwelt (Australia) Pty Limited. 2016c. Lynwood Quarry Extraction Area Modification Part Stage 2 Archaeological Salvage Program – Subsurface Testing of PAD4 (#51-6-0775) Undertaken Under a Variation to Aboriginal Heritage Impact Permit #1100264. A report prepared for Holcim Australia (Australia) Pty Limited. August 2016.
- Umwelt (Australia) Pty Limited. in prep. Lynwood Quarry Extraction Area Modification Stage 2A Summary Results of the Surface Collection and Subsurface Testing. A report in preparation for Holcim Australia (Australia) Pty Limited.



Newcastle

75 York Street
Teralba NSW 2284

Ph. 02 4950 5322

Perth

PO Box 783
West Perth WA 6872
First Floor
7 Havelock Street
West Perth WA 6005

Ph. 1300 793 267

Canberra

PO Box 6135
56 Bluebell Street
O'Connor ACT 2602

Ph. 02 6262 9484

Sydney

50 York Street
Sydney NSW 2000

Ph. 1300 793 267

Brisbane

Level 11
500 Queen Street
Brisbane QLD 4000

Ph. 1300 793 267