

APPENDIX 13
Aboriginal Cultural Heritage
Management Plan



Aboriginal Cultural Heritage Management Plan

Wallerawang Quarry Modification 3 Project

Acknowledgement

Walker Quarries acknowledge Traditional Owners of the area on which this assessment took place and pay respect to their beliefs, cultural heritage and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

ABBREVIATIONS AND GLOSSARY

ACHAR	Aboriginal Cultural Heritage Assessment Report. As set out in the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> , all developments where harm to Aboriginal objects is likely must be assessed in an ACHAR.
ACHCRs	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> . Guidelines for conducting Aboriginal community consultation for developments where harm to Aboriginal objects is likely.
AHIMS	Aboriginal Heritage Information Management System. Administered by Department of Premier and Cabinet, AHIMS is the central register of all Aboriginal sites within NSW.
BCD:	Biodiversity and Conservation Division. Government department, part of the Environment, Energy and Science cluster within DPIE, tasked with ensuring compliance with the NPW Act.
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> under Part 6 NPW Act. Set of guidelines framing Aboriginal archaeological investigations in NSW.
DPIE	NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development.
NPW Act	<i>National Parks and Wildlife Act 1974</i> . Primary legislation governing Aboriginal cultural heritage within NSW.
OEH	Office of the Environment and Heritage. Former government department tasked with ensuring compliance with the NPW Act. Superseded by BCD.
PAD	Potential archaeological deposit. Indicates that a particular location has potential to contain subsurface archaeological deposits, although no Aboriginal objects are visible.
RAP	Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.
SEE	Statement of Environmental Effect
SSD	State Significant Development

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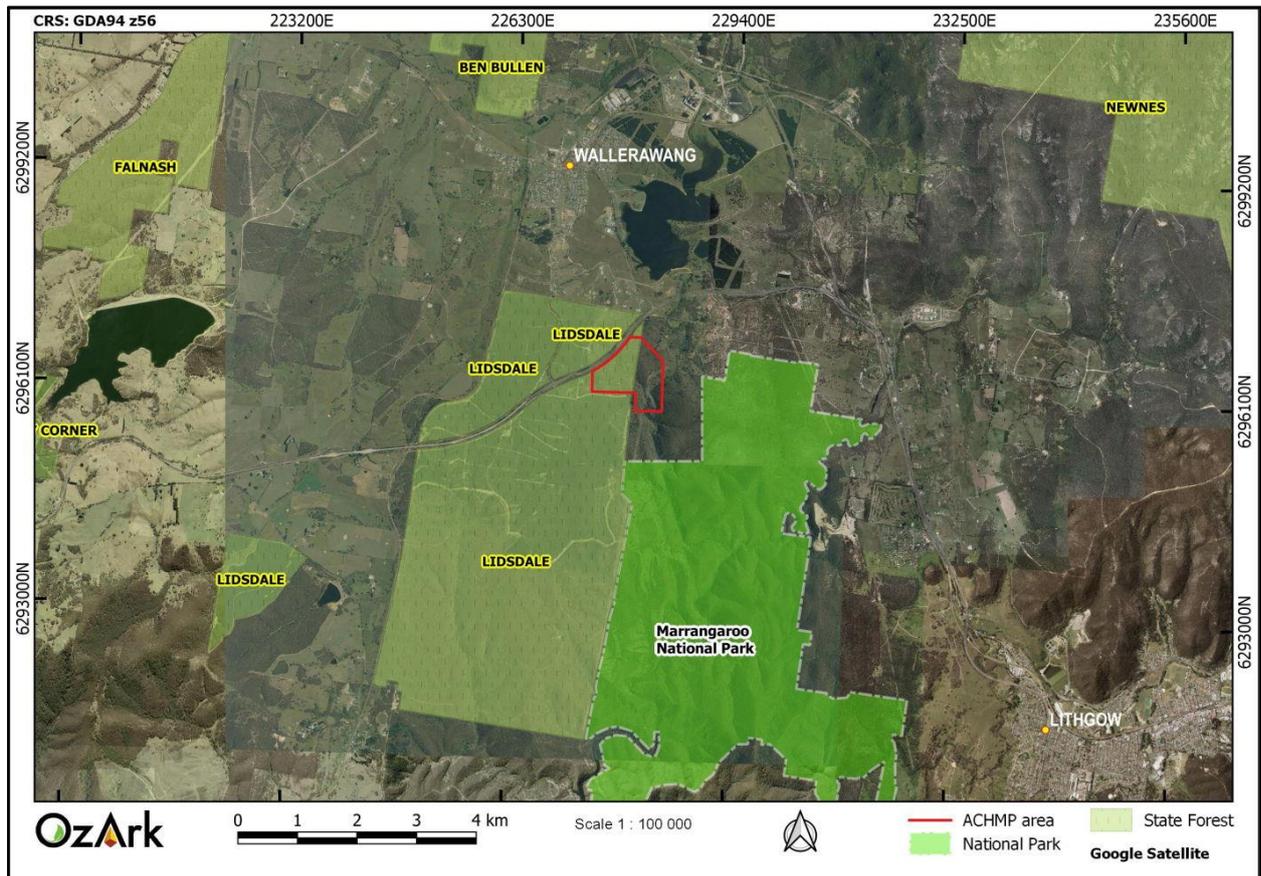
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1 INTRODUCTION

This Aboriginal Cultural Heritage Management Plan (the Plan) is for the Wallerawang Quarry (DA 344-11-2001 as modified) (the project). This Plan was initiated by the consent for DA 344-11-2001 Modification 3 (MOD3). The project is in the City of Lithgow Local Government Area (LGA) approximately eight kilometres (km) northwest of Lithgow NSW (**Figure 1-1**).

Figure 1-1: Map showing the location of the project.



1.1 BACKGROUND INFORMATION

Ten hectares (ha) of the project area was subject to Aboriginal archaeological assessment by Silcox (2000), resulting in the identification of one site (WQ1; AHIMS 45-1-2802). OzArk (2018) were engaged to verify the condition of WQ1 and complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) to support a Statement of Environmental Effects (SEE) for a State Significant Development (SSD) modification to DA 344-11-2001 (MOD3).

1.2 PURPOSE AND SCOPE OF THIS PLAN

This Plan will guide the heritage management policies for the project and create a framework for unanticipated finds, ongoing community consultation and internal policy review throughout the life of the project.

The Plan is limited to the ACHMP Area shown on **Figure 1-2** and addresses the conditions of consent of DA 344-11-2001 (as modified). The ACHMP Area includes the current Wallerawang Quarry Mining Lease (ML) 1633, as well as the expanded lease area included in Modification 3.

Figure 1-2: Aerial showing the area covered by the Plan.



2 LEGISLATIVE FRAMEWORK

2.1 PLAN COMPLIANCE WITH DEVELOPMENT CONSENT CONDITIONS

The project was assessed under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). All Aboriginal sites within the project area are afforded legislative protection under the *National Parks and Wildlife Act 1974* (NPW Act).

This Plan has been developed to meet consolidated consent condition 23C for the project.

Table 2-1: Plan compliance with the consent conditions.

Development Consent Condition	Context of the Condition	Concordance in this report
23 C a)	Preparation of an ACHMP by a qualified and experienced person.	Section 2.3
23 C b)	ACHMP be prepared with BCD and RAPs.	Section 3
23 C c) (i)	Comply with the conditions of consent.	Section 2.1
23 C c) (ii)	Aboriginal cultural heritage inductions for all workers.	Section 5.1
23 C c) (iii)	Protect, monitor and manage identified Aboriginal sites and places.	Section 5.2
23 C c) (iv)	Protect Aboriginal sites and places outside the approved disturbance area from project related impacts.	Section 5.6
23 C c) (v)	Manage the potential discovery of human remains or new Aboriginal objects over the life of the project.	Section 5.5
23 C c) (vi)	Maintain and manage access for Aboriginal stakeholders to Aboriginal site or places outside approved disturbance area.	Section 5.3
23 C d)	Care, control and storage of artefacts salvaged on site, including. AHIMS Site #45-1-2802.	Section 5.2.2
23 D.	Work not to commence until ACHMP endorsed by BCD Secretary.	Section 6
23 E.	Implementation of the ACHMP.	Section 6

2.2 PLAN REVIEW

This Plan will be reviewed within three months of submitting further modifications to the project and subject to review after every three years of operation.

Unscheduled review or changes to the Plan will be made should any of the following occur:

- Incidents involving Aboriginal cultural heritage
- Identification of new Aboriginal sites
- Approved changes of scope that introduce or remove impacts to Aboriginal heritage.

Changes to this Plan will be presented to Registered Aboriginal Parties (RAPs) and the Biodiversity and Conservation Division (BCD) for review and comment unless the changes fall into a category of routine updates (such as adding sites to an inventory list after a survey or

updating AHIMS data as part of approved salvage operations), in which case relevant parties will be notified as is appropriate.

2.3 PREPARATION OF THIS PLAN

In recognition of the requirements of Condition 23 C a), this Plan has been prepared by Dr Alyce Cameron and Harrison Rochford of OzArk Environment and Heritage Management (OzArk). Details of Alyce Cameron's and Harrison Rochford's capabilities and experience is provided in **Appendix 1**.

3 CONSULTATION GUIDELINES

3.1 ABORIGINAL COMMUNITY CONSULTATION

3.1.1 Aboriginal community consultation for the SEE

Consultation with the Aboriginal community was undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRs) (DECCW 2010) during the approvals process for the project. Stage 1 advertising for expressions of interest in the project began on 15 May 2018. The following organisations expressed interest in being RAPs for the project:

- Yurrandaali Cultural Services
- Barraby Cultural Services
- Murra Bidgee Mullangari Aboriginal Corporation Cultural Heritage
- Mingaan Wiradjuri Aboriginal Corporation
- Merrigarn
- Muragadi Heritage Indigenous Corporation
- Yulay Cultural Service
- Warrabinga Native Title Aboriginal Corporation
- Gundungurra Tribal Council Aboriginal Corporation
- Bathurst Local Aboriginal Land Council

All RAPs were provided with the proposed survey methodology during stage 2/3 of the ACHCRs and presented the draft ACHAR for comment on the 30 April 2018 as part of Stage 4 of the ACHCRs.

3.1.2 Aboriginal community consultation on this Plan

All RAPs received a copy of the draft Plan on 17 March 2020 with a request that any comments be received by OzArk by 31 March 2020. A list of the RAPs that were consulted on the Plan is provided in **Appendix 2**.

As of 14 April 2020, one comment was offered from Barraby Cultural Services on 3 April 2020 indicating that they had no suggestions or queries of the Plan.

3.1.3 Protocol for continued Aboriginal community consultation

Changes to the Plan will be provided to the RAPs for review unless the changes are minor in nature (i.e. updating inventories or Aboriginal heritage Information management System [AHIMS] data, as defined in **Section 2.2**).

3.2 CONSULTATION WITH EXTERNAL STAKEHOLDERS

This Plan has been prepared in consultation with the BCD within the Department of Planning, Industry and Environment (DPIE). BCD were sent a draft for review on 14 April 2020 and requested that **Figure 5-1** be updated to include BCD notification in the human skeletal remains protocol (**Appendix 3**). This was included in the finalised Plan on 5 May 2020.

4 ABORIGINAL CULTURAL HERITAGE

4.1 IDENTIFIED ABORIGINAL CULTURAL HERITAGE

The ACHAR for the project was completed by OzArk in June 2019. There is one Aboriginal site in the project area: WQ1 (AHIMS 45-1-2802). The site covers an area of approximately 65 metres (m) x 27 m and contains up to 16 artefacts (**Table 4-1**). The location of site WQ1 is shown on **Figure 4-1**.

Table 4-1: Site details of WQ1.

Site number	Site name	GDA Zone 56 Easting	GDA Zone 56 Northing	Details
45-1-2802	WQ1	227905	6296556	Artefact scatter (65 m x 27 m) featuring 16 artefacts, predominantly flakes manufactured from quartz and mudstone.

4.2 SUMMARY OF IMPACTS

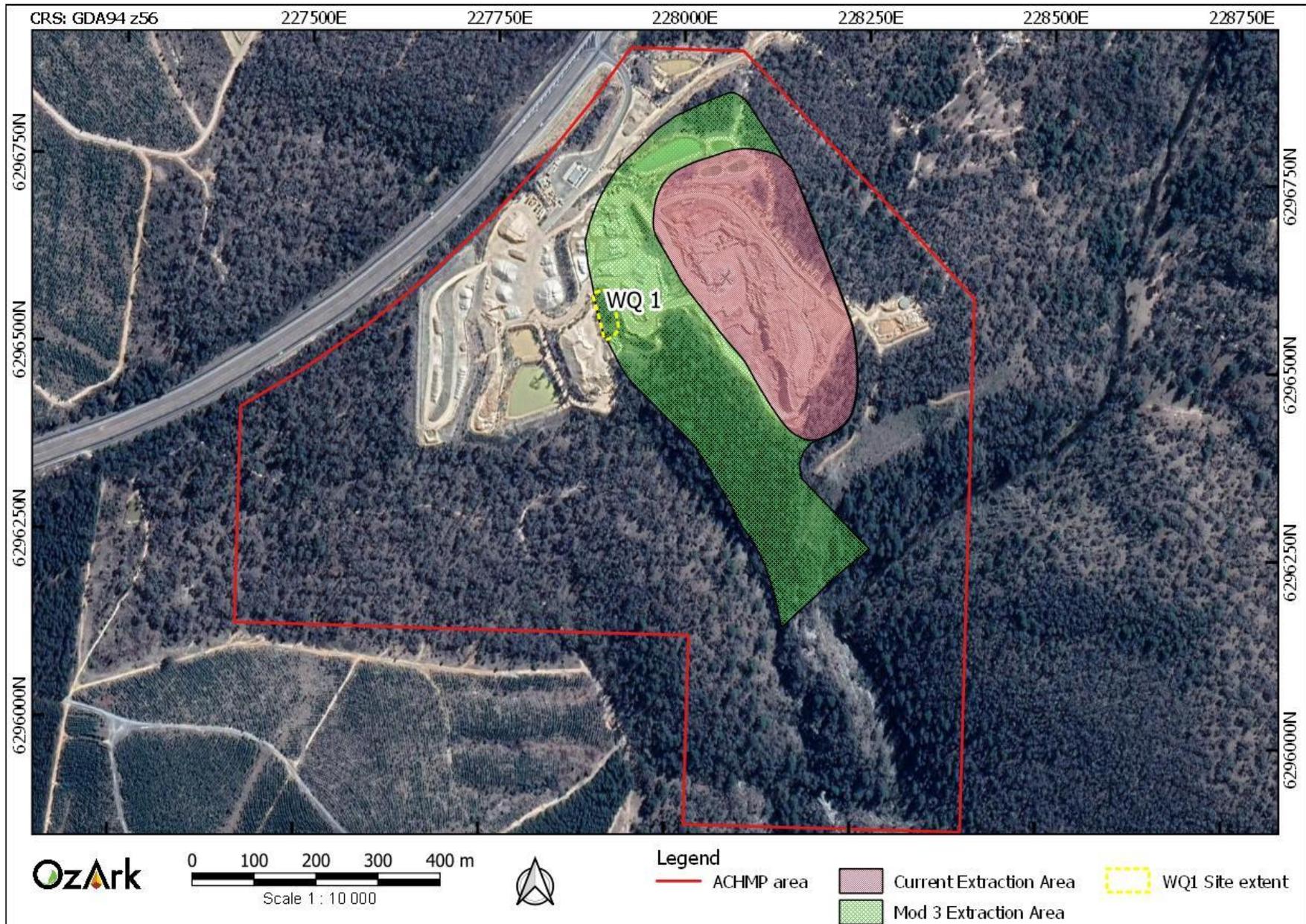
The Aboriginal site, AHIMS 45-1-2802 (WQ1), will be disturbed by the project. **Table 4-2** summarises the assessment of the impact to AHIMS 45-1-2802.

Table 4-2: Impact assessment.

Site Number & Name	Type of Harm (Direct/Indirect/None)	Degree of Harm (Total/Partial/None)	Consequence of Harm (Total/Partial/No Loss of Value)	Potential impact
45-1-2802 (WQ1)	Direct	Total	Total loss of value	The Quarry operations will extend over the entire area comprising the site. As such all artefacts and site features will be subject to direct impact from the work.

It was concluded in the ACHAR that the impact to recorded site WQ1 would result in a medium loss of heritage value from the regional Aboriginal cultural heritage values.

Figure 4-1: Location of WQ1 within the extraction area.



5 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE

Appropriate management of cultural heritage items is primarily determined on the basis of their assessed significance as well as the potential impacts of the proposed development.

5.1 CULTURAL HERITAGE AWARENESS

All staff and contractors engaged in works disturbing ground or vegetation at the site will be given an induction that includes information on the Aboriginal cultural values and artefacts present in the area. This will include staff and contractors being made aware of their responsibilities under NPW Act and the location of known sites.

All employees, contractors, sub-contractors and visitors to the ACHMP Area have an obligation to avoid harming Aboriginal heritage unless engaged in approved development activity in an area where Aboriginal salvage obligations have been met as described in this plan.

The definition of harm used in this plan stems from the definition in Section 5 of the NPW Act. The examples used below are for illustrative purposes and are not exhaustive.

Harm to an Aboriginal object or Aboriginal site means:

- Moving or collecting stone artefacts (although picking up artefacts and inspecting them is acceptable as long as they are immediately returned to their original location)
- Disturbing the earth where stone artefacts are located, e.g. by earthworks for drains, roads, etc.
- Breaking stone artefacts, e.g. by running over them in a vehicle
- Causing damage to a grinding groove sandstone platform by creating or exacerbating cracks
- Cutting down, disturbing or otherwise marking scarred trees.

The Aboriginal heritage induction will include the following points expressed in plain language:

- Further Aboriginal sites may occur across the ACHMP Area
- Aboriginal sites are of great significance to the Aboriginal community, are important to the wider community and will be treated with respect
- Aboriginal sites are protected by law. The development consent for the mine includes conditions allowing impact to certain specified Aboriginal sites described in the SEE and this Plan
- The Aboriginal site in the ACHMP Area is a stone tool site
- Aboriginal sites can be hard to recognise, so if unsure, check
- Aboriginal artefacts are often hidden within the topsoil and are not readily visible. The apparent absence of a site does not mean it is no longer in existence.

5.2 MANAGEMENT OF SITE WQ1

Impact avoidance to WQ1 (artefacts and site features of AHIMS 45-1-2802) is not considered feasible. **Table 4-2** describes the disturbance to WQ1. The management of WQ1 was the subject of a detailed ACHAR (OzArk 2019), which concluded that the site should be subject to a collection of surface artefacts as described in **Section 5.2.1**.

5.2.1 Surface salvage

Objects from WQ1 will be recorded and collected from the whole of the site area by a qualified archaeologist together with RAPs. In the interim, the site will be fenced to prevent any damage or inadvertent entry into the site by quarry operations until the recovery process is complete.

The following methodology will be followed for the surface collection of Aboriginal artefacts at the site:

- All visible artefacts at the site will be flagged
- The artefacts will be photographed after flagging and before recording
- The following information will be collected for each artefact:
 - GPS location
 - type
 - size
 - reduction level
 - raw material
 - any relevant notes.
- Once all recording is complete, the artefacts will be collected and placed in appropriately labelled bags
- The recording and analysis of the artefacts recovered will be largely completed in the field and this data will be interpreted and documented in a salvage report to BCD and the RAPs
- The supervising archaeologist would be responsible for submitting an *Aboriginal Site Impact Recording Form (ASIRF)* to the AHIMS to update the register with the results of the salvage works at the site..

5.2.2 Care and control of salvaged materials

Any salvaged artefacts will be reburied at a location where future developments will not occur and as close as possible to their original location. This will take place in accordance with Requirement 26 "*Stone artefact deposition and storage*" in the Code of Practice. A site card will be submitted to AHIMS to record the relocation area and the previous AHIMS site status for WQ1 must be updated to 'destroyed'.

5.3 SITE MONITORING

After salvage operations, the artefact relocation area will be surrounded by an exclusion zone and monitored by the proponent's environmental team. RAPs will be present during the artefact relocation.

5.4 PROTOCOL FOR UNANTICIPATED FINDS

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

Protocol to be followed in the event that previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the works associated with the project, the proponent must:
 - a. Not further harm the object
 - b. Immediately cease all work at the location
 - c. Secure the area by cordoning off the site with a 10-metre buffer, to avoid further harm to the Aboriginal object
 - d. Notify BCD as soon as practical on 131 555, providing any details of the Aboriginal object and its location
 - e. Not recommence any work at the location unless authorised in writing by BCD.
2. In the event that Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area must be secured to prevent unauthorised access and NSW Police and BCD contacted (see **Section 5.5** for further details)
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s)
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with BCD directions
 - c. Updating this Plan, including consultation with RAPs and the assessment of the significance of the find(s).

Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur once the updated Plan for the project has been endorsed by the

Secretary (or their delegate), or the Secretary is satisfied that measures to be implemented in respect of the Aboriginal object or Aboriginal place and makes a written direction in that regard.

5.5 HUMAN SKELETAL REMAINS PROTOCOL

Figure 5-1 outlines the protocol to be consulted in the event of human remains being discovered during the project.

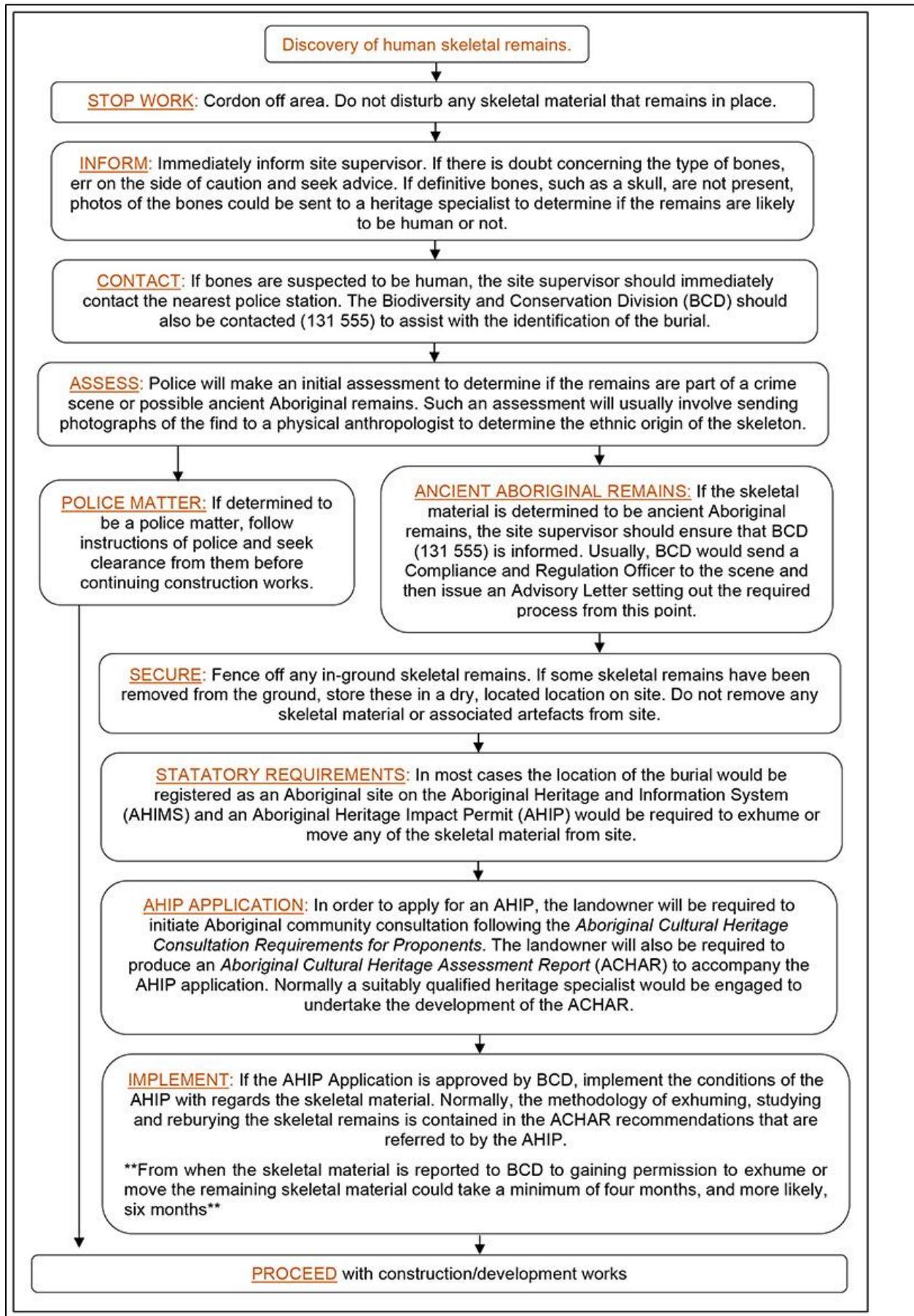
5.6 ACTIVITIES OUTSIDE CURRENT APPROVAL AREAS

Any proposed works outside the current approval area resulting in vegetation clearing or ground surface disturbance will require heritage assessment involving a suitably qualified archaeologist and RAPs.

5.7 POST OPERATIONS MANAGEMENT

The Rehabilitation Management Plan for the project will include provisions for the long-term conservation of all remaining Aboriginal sites at the end of the project, including any sites created by artefact reburial.

Figure 5-1: Human skeletal remains protocol.



6 ROLES, RESPONSIBILITIES AND TIMEFRAMES

The roles, responsibilities and timeframes regarding this Plan are outlined in **Table 6-1**.

Table 6-1. Roles responsibilities and timeframes.

Title	Organisation	Roles and Responsibilities	Timeframe	Development Consent Condition
Quarry Manager, qualified heritage consultant	Walker Quarries, OzArk	Preparation of an ACHMP by a qualified and experienced person.	Before project work commences	23 C a)
Quarry Manager, qualified heritage consultant	Walker Quarries, OzArk	ACHMP be prepared with BCD and RAPs.	Before project work commences	23 C b)
Quarry Manager	Walker Quarries	Comply with the conditions of consent.	Ongoing	23 C c) (i)
Quarry Manager	Walker Quarries	Aboriginal cultural heritage inductions for all workers.	Ongoing	23 C c) (ii)
Quarry Manager	Walker Quarries	Protect, monitor and manage identified Aboriginal sites and places.	Ongoing	23 C c) (iii)
Quarry Manager	Walker Quarries	Protect Aboriginal sites and places outside the approved disturbance area from project related impacts.	Ongoing	23 C c) (iv)
Quarry Manager	Walker Quarries	Manage the potential discovery of human remains or new Aboriginal objects over the life of the project.	Ongoing	23 C c) (v)
Quarry Manager	Walker Quarries	Maintain and manage access for Aboriginal stakeholders to Aboriginal site or places outside approved disturbance area.	Ongoing	23 C c) (vi)
Quarry Manager	Walker Quarries	Care, control and storage of artefacts salvaged on site, including. AHIMS Site #45-1-2802.	Ongoing	23 C d)
Quarry Manager	Walker Quarries	Work not to commence until ACHMP endorsed by BCD Secretary.	Before project work commences	23 D.
Quarry Manager	Walker Quarries	Implementation of the ACHMP.	Ongoing	23 E.

REFERENCES

- DECCW 2010 Department of Environment, Climate Change and Water, Sydney (now OEH). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.
- DECCW 2010b Department of Environment, Climate Change and Water, Sydney (now OEH). *Aboriginal Cultural Heritage Consultation Requirements for*
- OzArk 2019 OzArk 2019. *Aboriginal and Historic Cultural Heritage Assessment Report: Wallerawang Quarry Extension Project*. June 2019. Report to Umwelt (Australia) on behalf of Walker Quarries.
- Silcox 2000 Silcox, R. *Archaeological Assessment for a Proposed Hardrock Quarry, Wallerawang*. Report to Pacrim Environmental Pty Ltd.

APPENDIX 1: AUTHORS' CURRICULUM VITAE

DR ALYCE CAMERON

PHD B ARTS (HONS)

Senior Archaeologist



Alyce has over ten years' experience as an archaeologist, and a PhD in archaeology and palaeoanthropology from the Australian National University. She has demonstrated experience in completing field surveys in remote locations, working with Traditional Owners and reporting on complex and large-scale projects. Alyce has supervised and coordinated teams in the field, and produced cultural heritage management plans. She has liaised with Aboriginal groups and clients to achieve positive outcomes.

PROFESSIONAL EXPERIENCE

2019	TransGrid: Line 948 #44-2-0172 ACHAR and AHIP application. Line 22 and Line 25/26 due diligence assessments. Line 993 due diligence assessment. Line 948/94X due diligence assessment.
2019	Archaeological salvage and research program of a site at a solar farm, Parkes, GRS Australia.
2019	Archaeological assessment and reporting, 90 km pipeline project, Blayney, Bathurst and Portland, Blakely's Environmental.
2019	Historic archaeological impact assessment report, Old Dubbo Gaol, 3-D Projects.
2019	Archaeological assessment and reporting of a Special Activation Precinct, Parkes, WSP.
2018	Archaeological assessment and reporting: Line 96L Lismore to Tenterfield, TransGrid; housing subdivision, Thurgoons, Blueprint Planning; proposed solar farm, Narrandera, SLR Consulting; historic mines, Copeland and Coneac, Barrington Tops, Legacy Mines Project, NSW Department of Planning & Environment.
2009-2014	Archaeological assessment for projects in South-west Queensland relating to power, water and gas infrastructure. Conducted cultural heritage inductions. Origin Energy and Santos. Archaeological assessment for mining projects in the Pilbara, Western Australia. BHP Billiton. Archaeological assessment and writing of Cultural Heritage Management Plans for projects throughout Melbourne and South-east Victoria. VicRoads, Parks Victoria, various Local Councils.

SELECTION OF SCIENTIFIC PAPERS AND PUBLICATIONS

Creagh, D. and Cameron, A. 2017. Estimating the Post-Mortem Interval of skeletonized remains: The use of Infrared spectroscopy and Raman spectro-microscopy. <i>Radiation Physics and Chemistry</i> , 137: 225-229. Cameron, A. and Oxenham, M. 2012. Disarticulation sequences and scattering patterns in temperate southeastern Australia. <i>Australian Journal of Forensic Sciences</i> , 44(2): 197-211.
Australian Society for Human Biology 2017 Conference: Ballarat, Victoria (2017): Presented the paper "Crimes scavengers commit: implications of scavenging on taphonomy and the post-mortem interval".
Australian Society for Human Biology 2014 Conference: Adelaide, South Australia (2014): Presented the paper "Estimating the Post Mortem Interval of skeletonized remains: Infra-red and Raman spectrometry". Australian Society for Human Biology 2010 Conference: Auckland, NZ (2010): Presented the paper "A Forensic Study of Disarticulation, Scattering and Scavenging".
Cameron, A. and Oxenham, M. 2012. Disarticulation sequences and scattering patterns in temperate southeastern Australia. <i>Australian Journal of Forensic Sciences</i> , 44(2): 197-211.



OzArk
Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

OzArk Environment & Heritage

EDUCATION

2011-2017	Doctor of Philosophy, Australian National University, Canberra
2008	Bachelor of Arts (Honours), Australian National University, Canberra
2005-2007	Bachelor of Arts, Australian National University, Canberra

WORK HISTORY

2018 – present	<p>OzArk Environment & Heritage, Archaeologist</p> <ul style="list-style-type: none"> • Report writing: Historic archaeological reports, Aboriginal heritage reports, Aboriginal Cultural Heritage Assessment Reports • Plan and undertake excavations and assessments for large- and small-scale development projects, small local projects, and remote projects • Liaise with diverse client base, community stakeholders, OEH Cultural Heritage Unit and EPRD, Aboriginal community consultation, external authorities, contractors and the general public • Develop and maintain a GIS database using QGIS and ArcGIS • Archival recording including photography, report writing and collation in archival quality materials • Production of Statement of Heritage Impact (SoHI) reports and historical archaeological research • Post-excavation artefact processing, cataloguing and analysis
2015 2011-2013	<p>Australian National University, lecturer, assistant teacher</p> <ul style="list-style-type: none"> • Provide lectures, fieldwork and laboratories for undergraduate and post-graduate students. • Assessed reports and graded items • Supervised and taught students during excavations and surveys • Preparing manuscripts for publication
2011-2014	<p>Heritage Consulting Australia, Project archaeologist and cultural heritage induction trainer</p> <ul style="list-style-type: none"> • Conduct field surveys for cultural heritage in rural Queensland • Present Cultural Heritage Inductions on behalf of Heritage Consulting Australia for Origin Energy and contractors
2010-2011	<p>Ironbark Heritage and Environment, Archaeologist</p> <ul style="list-style-type: none"> • Conduct field surveys within small teams over large areas of the Pilbara, Western Australia • Statistical analysis of data • GIS skills
2009-2010	<p>Dr Vincent Clark & Associates, Project Manager and Cultural heritage Advisor; Archaeologist</p> <ul style="list-style-type: none"> • Supervised projects and produced reports within the context of legislation • Supervised and coordinated teams of full-time and casual staff during field work • Production of cultural heritage management plans, archaeological reports and due diligence assessments • Liaised with Aboriginal groups and clients • Conduct database searches and submit site cards

LICENCES AND TRAINING

WH&S Induction Training for Construction Work – General Course
4WD training and defensive driver training
Working near tracks (railways)

HARRISON ROCHFORD

M. PHILOSOPHY (ARTS & SOCIAL SCIENCES),
B LIBERAL STUDIES (ADVANCED) (PSYCHOLOGY/ANCIENT HISTORY)(HONS)

Heritage Officer



Harrison is a recent Masters graduate with a focus on historic heritage. Harrison combines his research knowledge with practical experience focusing on historic heritage. He has extensive experience in in-depth research into a variety of historical learnings, including ancient Greece. Harrison also assists the archaeologists with Aboriginal heritage impact assessments and he uses his extensive editorial experience to assist with editing of reports.

SELECT OZARK PROJECTS

2019	Kamilaroi Highway — Turrawan to Baan Baa road rehabilitation, Heritage Officer. Assist with letter report production.
2019	Narrabri Shire Council Aboriginal Cultural Heritage Report — Original research, community consultation and report production
2019	Broken Hill North Strategic Historic Heritage Management Plan — Developing heritage legislation compliance and long-term heritage management strategy.
2019	Taronga Western Plains Zoo — Aboriginal Cultural Heritage Assessment Report (ACHAR) and Aboriginal Heritage Impact Permit (AHIP) application.
2020	Northparkes Mine — multiple Due Diligence inspections and assessments for proposed exploration.

EDUCATION

2015 - 2018	Masters Philosophy (Arts and Social Sciences), University of Sydney
2014	Bachelor of Liberal Studies (Advanced) (Psychology/Ancient History) (Hons), University of Sydney

WORK HISTORY

2013-2018 (Part-time)	<p>Department of Classics and Ancient History, University of Sydney Research Assistant</p> <ul style="list-style-type: none"> Researching and compiling bibliographies and reports on a broad range of historical topics Editing and formatting academic works to meet strict publication guidelines Developing and distributing promotional material for University of Sydney events in Classics and Ancient History
2018 (Part-time)	<p>Indigenous Tutoring Assistance Scheme, University of Sydney Academic mentor</p> <ul style="list-style-type: none"> Providing specialised assistance for students taking Ancient History subjects Transforming and adapting existing learning materials to ensure consistent engagement and achievement throughout the course Student welfare
2016-2017 (Part-time)	<p>Department of Classics and Ancient History, University of Sydney Sessional Teaching Staff</p>

OzArk
Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830
Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

OzArk Environment & Heritage

	<ul style="list-style-type: none"> • Producing and delivering specific education content to first- and second-year undergraduate students • Assist academics in developing and delivering consistent pedagogical approaches • Responding and adapting to student queries and feedback
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TRAINING

2019	White Card Certificate
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APPENDIX 2: STAKEHOLDER CONSULTATION LOG AND CORRESPONDENCE

Aboriginal Community Consultation Log

Date	Organisation	Comment	Method
17.3.20	Yurrandaali Cultural Services	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Barraby Cultural Services	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Murra Bidgee Mullangari Aboriginal Corporation	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	MINGAAN WIRADJURI ABORIGINAL CORPORATION	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Merrigarn	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Muragadi Heritage Indigenous Corporation	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Yulay Cultural Services	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email

17.3.20	Warrabinga Native Title Claimants Aboriginal Corporation	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Gundungurra Tribal Council Aboriginal Corporation	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Bathurst LALC	RH sent copy of the ACHMP Report for review. Feedback closes 31.3.20	email
17.3.20	Merrigarn	RTS	RTS
17.3.20	Merrigarn	RH re sent to alternative email	email
3.4.20	Barraby Cultural Services	RH received email - received thanks	email

Example letter

	<p>OzArk Environment & Heritage</p> <p>Dubbo T: 02 6882 0118</p> <p>Queanbeyan enquiry@ozarkelhm.com.au</p> <p>Newcastle www.ozarkelhm.com.au</p>	<p>ABN 59 104 582 354</p> <p>145 Wingewarra St</p> <p>PO Box 2069</p> <p>DUBBO NSW 2830</p>
<p>17th March 2020</p>		
<p>Members</p> <p>Bathurst Local Aboriginal Land Council</p> <p>c/- [REDACTED]</p> <p>149 Russell St</p> <p>Bathurst NSW 2795</p> <p>bathlalc2@bigpond.com</p>		
<p style="text-align: center;"><i>ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN WALLERAWANG QUARRY MODIFICATION 3 PROJECT.</i></p>		
<p>Dear Members,</p>		
<p>In June 2019 OzArk completed the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Wallerawang Quarry Extension Project contained within Mining Lease (ML) 1633. The ACHAR was to inform the application for Modification 3 to DA 344-11-2001 that proposed an extension to the Wallerawang Quarry and ML 1633.</p>		
<p>The OzArk assessment indicated that the extension would result in harm to one Aboriginal site: AHIMS #45-1-2802 (WQ1), a site containing 16 artefacts predominantly within extensive exposures in the southern portion of the site with further artefacts recorded along a disused vehicle track in the western portion of the site.</p>		
<p>DA 344-11-2001 Modification 3 has now been consented and an Aboriginal Cultural Heritage Management Plan (ACHMP) has been developed to manage Aboriginal cultural heritage at the Wallerawang Quarry. This plan sets out the methodology for the salvage of site WQ1, as well as the procedures for unanticipated finds elsewhere at the Wallerawang Quarry.</p>		
<p>We are sending you this draft version of the ACHMP for your information. Should you have any comments on this ACHMP, please contact us before COB Tuesday 31st March 2020 so that we may consider your suggestions before the plan is submitted to the Department of Planning, Industry and Environment for approval.</p>		
<p>With thanks,</p>		
<p></p> <p>Rebecca Hardman Community Liaison & Administration</p>		

APPENDIX 3: BCD CONSULTATION

Our ref: DOC20/340369
Your Ref: DA344-11-2001

Harrison Rochford
Heritage Officer
OzArk Environment and Heritage
harrison@ozarkehm.com.au

Dear Harrison

Wallerawang Quarry Modification 3 Project – Aboriginal Cultural Heritage Management Plan

Thank you for your email dated 14 April 2020 to the Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment inviting comments on the Aboriginal Cultural Heritage Management Plan (ACHMP) for the Wallerawang Quarry Modification 3 project.

It is noted that section 5.4 of the ACHMP notes that both BCD and NSW Police must be contacted if Aboriginal burials are unexpectedly encountered. However, Figure 5.1 states that only the police will be contacted.

It is recommended that the protocol proposal in Figure 5.1 for managing the discovery of human remains be amended to state that the Biodiversity and Conservation Division (BCD) is contacted in addition to NSW Police to assist in identifying if the skeletal remains are that of a traditional Aboriginal burial.

BCD has no further comments to make on the ACHMP.

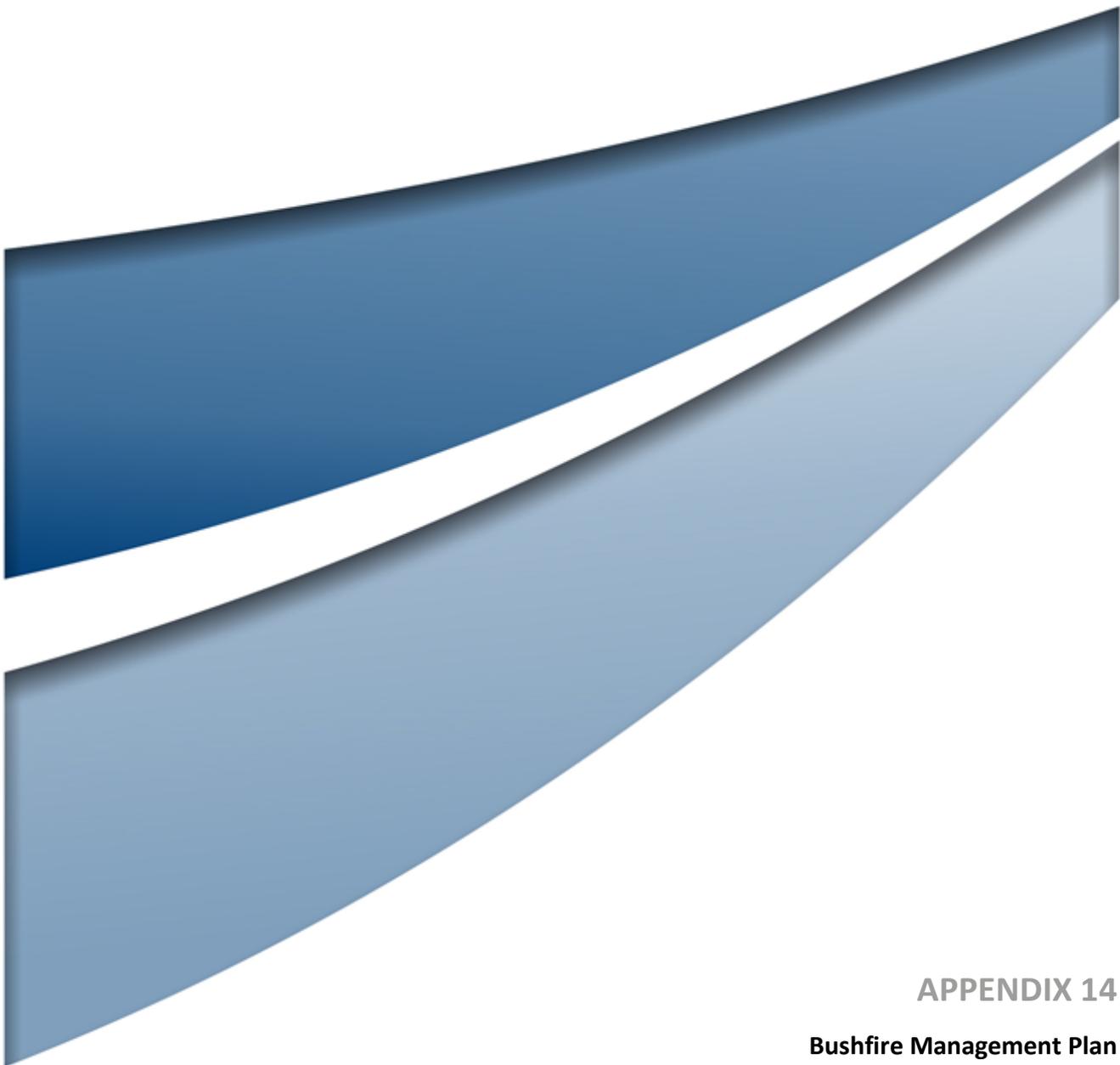
If you require any further information regarding this matter, please contact Phil Purcell, Archaeologist, via phil.purcell@environment.nsw.gov.au or (02) 6883 5341.

Yours sincerely

Renee Shepherd
Acting Senior Team Leader Planning North West – ACH and Special Projects
Biodiversity and Conservation Division

5 May 2020

cc: Matthew Sprott, Director Resource Assessments, P&A Group
Colin Phillips, Team Leader, Minerals Quarry Assessments, P&A Group



APPENDIX 14
Bushfire Management Plan



BUSHFIRE MANAGEMENT PLAN

Wallerawang Quarry

DRAFT FOR DPIE REVIEW

April 2020



BUSHFIRE MANAGEMENT PLAN

Wallerawang Quarry

DRAFT FOR DPIE REVIEW

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Walker Quarries Pty Ltd

Project Director: Alex Irwin
Project Manager: Alex Irwin
Report No. 4433/R07
Date: April 2020



Lithgow

PO Box 307
Lithgow NSW 2790
ABN 82 003 061 890

T | 02 6352 3377
E | accounts@walkerquarries.com.au

www.walkerquarries.com.au

Orange

Office 1
3 Hampden Avenue
Orange NSW 2800

T | 1300 793 267
E | info@umwelt.com.au

www.umwelt.com.au



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Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
Final	Alex Irwin	24 April 2020	Alex Irwin	24 April 2020

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1.0 Introduction

1.1 Scope

This Bushfire Management Plan (BFMP) for the Wallerawang Quarry (the Quarry) has been reviewed and updated by Umwelt (Australia) Pty Limited (Umwelt) on behalf of Walker Quarries Pty Ltd (Walker Quarries) in satisfaction of Condition 40 of Schedule 3 of Development Consent DA 344-11-2001 (DA 344-11-2001). The BFMP is an important tool for Walker Quarries to refer to, for both its staff and contractors, to minimise the risk of fire initiation and/or manage bushfires should they occur within or adjacent to the Quarry.

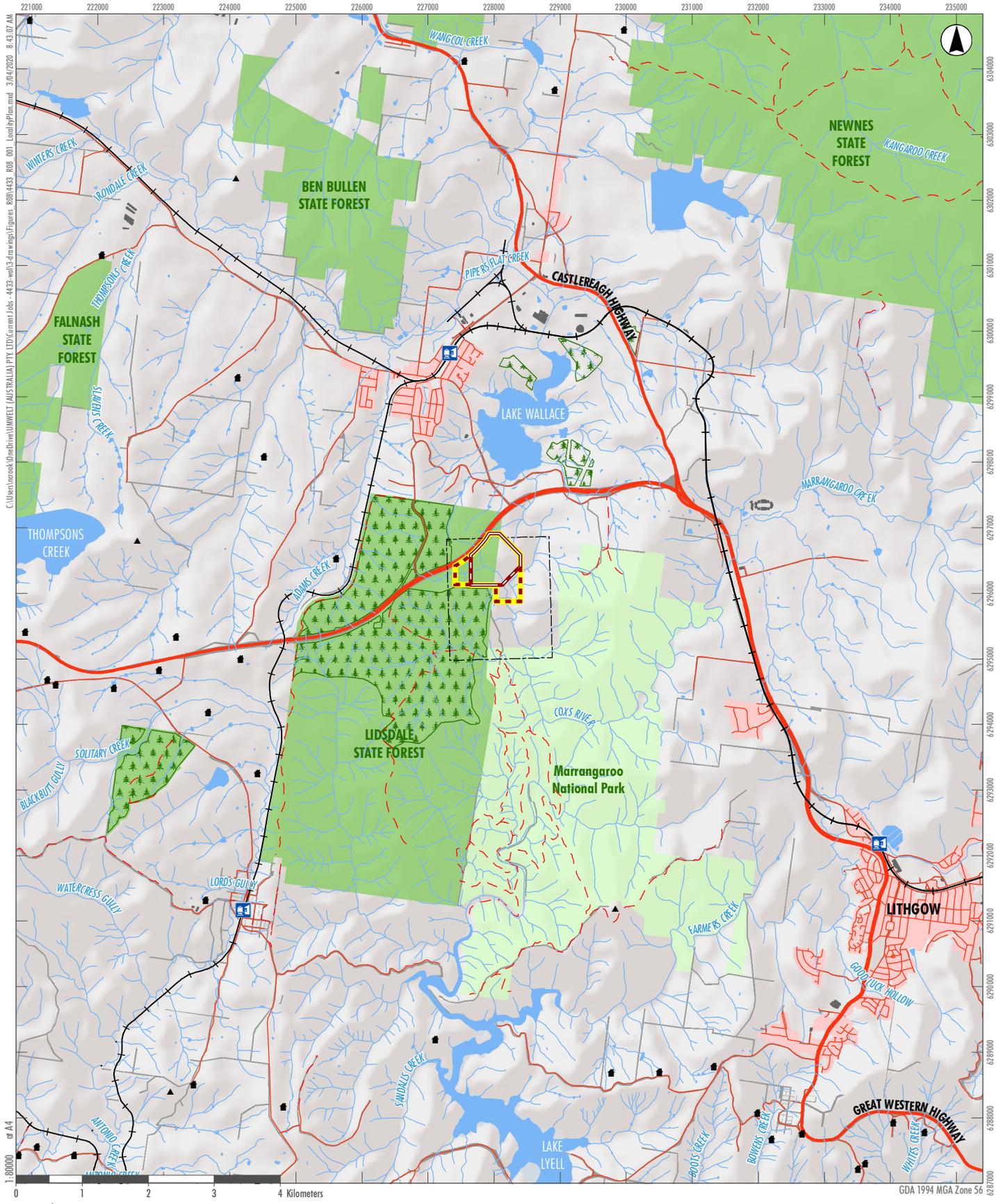
The Wallerawang Quarry (the Quarry) is located approximately 8 kilometres (km) northwest of Lithgow (see **Figure 1.1**) and is operated in accordance with development consent DA 344-11-2001. DA 344-11-2001 approves disturbance up to a maximum of 28.6 ha for the purpose of quartzite and other hard rock extraction, processing, stockpiling, management and on-site disposal of non-saleable (overburden) materials, and ancillary infrastructure. The Quarry is approved to produce 500 000 tonnes per annum (tpa) of hard rock aggregate material and sand.

The BFMP applies to the Quarry Site, as approved by DA 344-11-2001. The Quarry Site covers an area of 61.1 hectares (ha) and coincides with Mining Lease (ML) 1633 and proposed extensions (as applied for to the NSW Division of Resources & Geoscience (DRG) of the Department of Planning, Industry & Environment (DPIE) made on 19 June 2019) and is located on both Crown Land (of Lidsdale State Forest) and freehold land (Lot 6, DP 872230 which is owned by Sitegoal Pty Ltd of which Walker Quarries is a subsidiary) (see **Figure 1.1**). The BFMP covers all activities which may impact on or influence a risk to local bushfire occurrence and/or management.

- Fire initiated on the Quarry Site.
- Fire initiated on Company owned land beyond the Quarry Site.
- Bushfire on adjoining land which threatens assets and human safety of the Quarry Site and surrounding land holdings.

The BFMP addresses the following elements.

- The activities approved under DA 344-11-2001 (as amended 26 February 2020).
- Consultation undertaken during preparation of this Plan.
- Potential sources of fire as a result of Quarry operations.
- The legal and other requirements associated with bushfire management.
- Objectives and key performance outcomes.
- Bushfire management practices that will be implemented during the ongoing operation of the Quarry.
- Incident reporting procedures.
- Roles and responsibilities in implementing the BFMP.
- Competence training and awareness for personnel and contractors.
- Plan review and continual improvement.



Legend

- Quarry Site Boundary
- Quarry Site ML Extension
- Quarry Site (ML1633)
- EL 4473
- State Forest
- NPWS Estate

FIGURE 1.1
Locality Plan

1.2 Plan History

The original BFMP was prepared and provided to the then Department of Planning & Environment (DPE), Lithgow City Council (LCC) and the Wallerawang branch of the NSW Rural Fire Service (RFS) in September 2008. The BFMP was updated in October 2014, and resubmitted to these agencies and authorities prior to the commencement of activities at the Quarry. The October 2014 version of the BFMP was never endorsed by the DPE, and was subsequently updated, submitted to and approved by the DPE in September 2016. [Subsequent versions of the BFMP were submitted to the DPE in November 2017 and February 2019 following Modifications 1 and 2 to DA 344-11-2001.](#)

This version of the BFMP (V1) was reviewed and updated following the approval of Modification 3 to DA 344-11-2001 on 26 February 2020. **Table 1.1** provides the complete history of BFMP review and approval.

Table 1.1 Document Status History

Rev No.	Prepared by		Purpose
	Name	Date	
0	P. Hensley	October 2014	Draft submitted to department prior to commencement
1	RW Corkery & Co	September 2016	Updated and approved following first IEA
2	RW Corkery & Co	November 2017	Updated following Modification 1 (issued August 2017)
3	RW Corkery & Co	September 2018	Updated Following 2 nd IEA
4	RW Corkery & Co	November 2018	Updated following 2018 Annual Review
V0	Alex Irwin	February 2019	Updated following Modification 2 (issued December 2018)
V1	Alex Irwin	March 2020	Updated following Modification 3 (issued February 2020)

1.3 Consultation

A request to provide input to the content of the BFMP (Rev 2) was made to Forestry Corporation NSW (FC NSW) and the Rural Fire Service (RFS) in November 2017. Once drafted, a copy of the BFMP was provided to FC NSW, LCC and the RFS for review prior to finalisation.

FC NSW was again consulted as to content requirements or recommendations of the BFMP on 18 March 2020. A response from FC NSW was received on [8 April 2020 confirming FC NSW as satisfied with the content of the BFMP.](#)

Copies of the consultation, along with the responses of these organisations, are included as **Appendix 1**. **Appendix 2** provides a summary as to how matters raised by FC NSW ([in 2017](#)) have been considered and addressed as part of the preparation of this BFMP.

Any amendments to the BFMP, e.g. as a consequence of changes in personnel, contact details or procedures, will be provided to FC NSW, the RFS, Lithgow City Council (LCC) and the Department of Planning, [Industry & Environment \(DPIE\)](#).

1.4 Quarry Operations and Potential Sources of Fire

Figure 1.2 presents the layout of the Quarry which includes the following features:

- a secured and signed entrance with the Great Western Highway and sealed access road to the main site office, weighbridge and wheel wash.
- site amenities, workshop facilities and parking areas.
- an open cut mining area and haul road.
- crushing, screening and washing facilities, stockpile areas and water management infrastructure.
- various internal roads and erosion and sediment control structures.

An assessment of the bushfire hazard over the Quarry Site was undertaken during the preparation of the EIS (Pacrim, 2001), as well during the preparation of subsequent assessments of modifications to the Quarry (RWC, 2017, Umwelt 2019), confirming a low hazard rating. This notwithstanding, potential sources of fire initiation at the Quarry have been identified as follows:

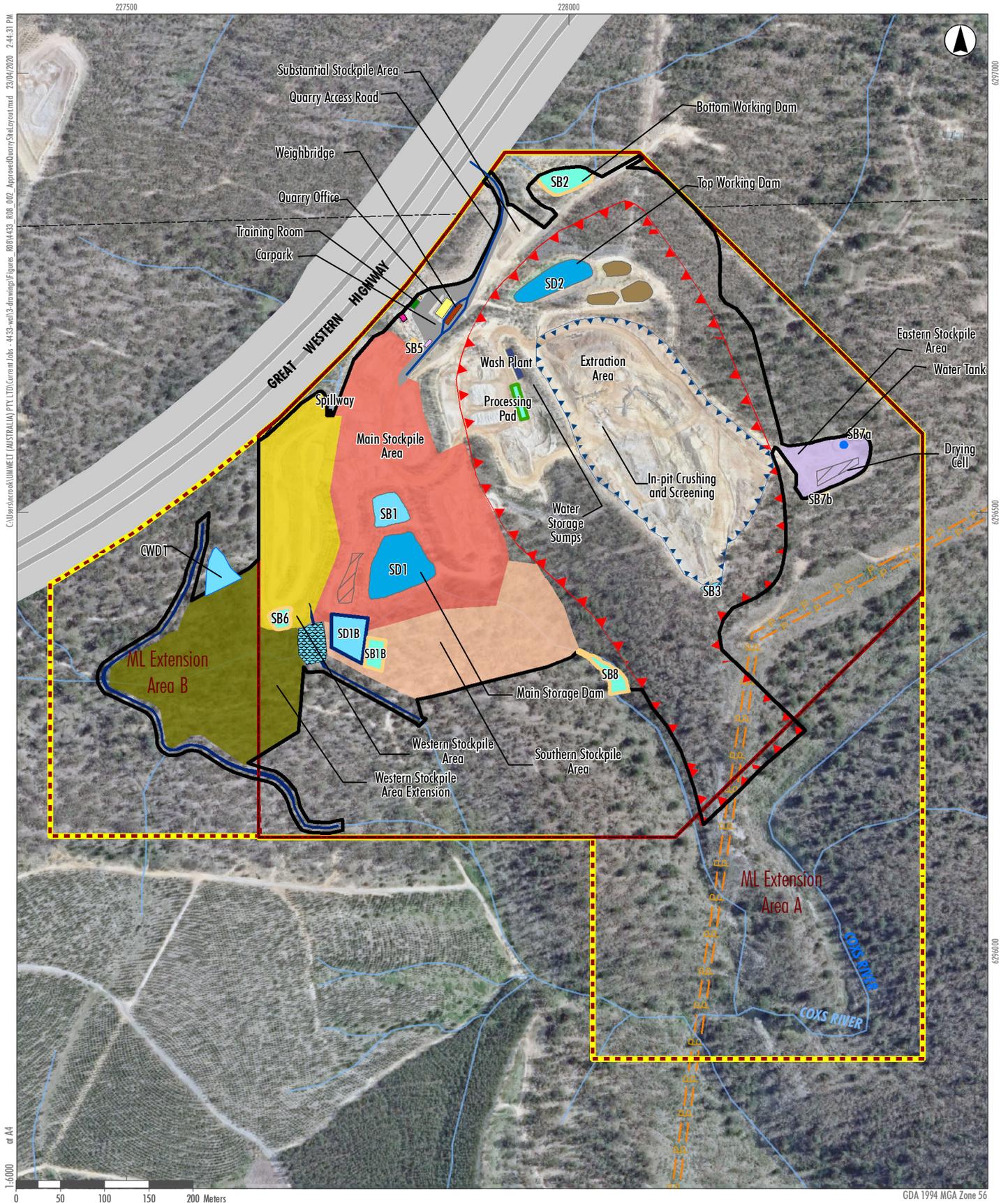
- ignition of fuel or other flammable material on working equipment.
- ignition of fuel or flammable materials during equipment or plant maintenance, e.g. welding, electrical maintenance.
- ignition of vegetation leaf litter within uncleared areas, or areas under rehabilitation as a result of heat or spark from mobile equipment or vehicles.
- inappropriate disposal of cigarettes.
- lightning strike of vegetation or on-site structures.

1.5 Distribution

A copy of the BFMP is held by the Quarry Manager (at the Quarry) and Fire Officer.

A copy of the BFMP has been supplied to:

- The Wallerawang branch of the RFS,
- FC NSW,
- LCC, and
- the DPIE.



- Legend**
- Quarry Site Boundary
 - Quarry Site (ML1633)
 - Quarry Site ML Extension
 - EL 4473
 - Disturbed Areas for Modified Operations
 - Approved Extraction Area
 - Current Extent of Extraction Area
 - Main Stockpile Area (935m AHD)
 - Southern Stockpile Area (935m AHD)
 - Western Stockpile Area
 - Western Stockpile Extension (940m AHD)
 - Eastern Stockpile Area
 - Clean Water Diversion
 - Sediment Basins
 - Settlement Ponds
 - Storage Dam
 - Water Tank
 - Rubbled Lined Drain
 - Clean Water Dam
 - Silt Cells
 - P Electricity Transmission Lines

FIGURE 1.2

Approved Quarry Site Layout

2.0 Regulatory Requirements

2.1 Development Consent DA 344-11-2001

Condition 3(39) of DA 344-11-2001 (as modified on 26 February 2020) provides instruction as to the requirements of Walker Quarries in relation to site preparation and fire response. *Condition 3(40)* requires the preparation of a *Bushfire Management Plan*. **Table 2.1** identifies each of the conditional requirements associated with bushfire management, as well as the preparation of management plans more generally, and identifies the section of this BFMP where each is addressed.

Table 2.1 Bushfire Related Conditional Requirements of DA 344 – 11 – 2001

No	Condition	Section
Bushfire		
3(39)	The Applicant must: a) ensure that the development is suitably equipped to respond to any fires on-site; and b) assist the Rural Fire Service and emergency services to the extent practicable if there is a fire in the vicinity of the site.	4.1, 4.2.1 4.2.2, 4.3
3(40)	The Applicant must prepare a BFMP for the site, in consultation with FC NSW, to the satisfaction of the Rural Fire Service ¹ .	1.3, App 1
Management Plan Requirements		
5(3)	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: (a) a summary of relevant background and baseline data; (b) details of: <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures and 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) any relevant commitments or recommendations identified in the document/s listed in condition 2(c) of Schedule 2; (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria; (e) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the development; and • effectiveness of the management measures set out pursuant to condition 2(c) of Schedule 2; (f) contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; (g) a program to investigate and implement ways to improve the environmental performance of the development over time;	N/A 2.1 N/A 4.3 4.0 4.0 5.0 6.0 7.3

No	Condition	Section
	(h) a protocol for managing and reporting any: <ul style="list-style-type: none"> incident, non-compliance or exceedance of the impact assessment criteria or performance criteria; complaint; or failure to comply with statutory requirements; and (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and (j) a protocol for periodic review of the plan.	5.0 N/A 7.3
5(3A)	The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.	1.3
5(4)	The Applicant must continue to apply existing approved management plans, strategies or monitoring programs that have most recently been approved under this consent, until the approval of a similar plan, strategy or program under this consent.	Noted
5(5)	Within 3 months of the submission of an: <ul style="list-style-type: none"> (a) incident report under condition 9 below; (b) Annual Review under condition 11 below; (c) audit report under condition 14 below; and (d) any modifications to this consent, the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. The applicant must notify the Department in writing of any such review being undertaken. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.	7.3

Note 1: RFS have indicated it does not endorse bushfire management plans and therefore does have any comments to make.

The NSW *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014* (WHS Reg) also includes requirements for controls and safeguards relating to fire. **Table 2.2** identifies the relevant requirements of Schedule 1 of the WHS Reg and identifies the section of this BFMP where each is addressed.

Table 2.2 Bushfire-Related Conditional Requirements of Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 – Schedule 1

No.	Condition	Section
Clause 6 - Fire or Explosion		
1	The following matters must be considered in developing the control measures to manage the risks of fire or explosion:	Noted
	(a) the potential sources of flammable, combustible and explosive substances and materials, both natural and introduced, including gas, dust, ores, fuels, solvents and timber	1.4
	(b) the potential sources of ignition, fire or explosion, including plant, electricity, static electricity, spontaneous combustion, lightning, light metal alloys, hot work and other work practices	4.1
	(c) the potential for propagation of fire or explosion to other parts of the mine or petroleum site	4.1
	(d) the potential sources of flammable material with a flash point of less than 61° Celsius, including materials on the top of any shaft, outlet or well at the mine or petroleum site	N/A

No.	Condition	Section
	(e) arrangements for the management and control of the transport and storage of combustible liquids	External Contractor (Lowe's Petroleum)
	(f) arrangements for the prevention of fires, including the types and location of systems for the early detection and suppression of fires	4.1
	(g) the equipment for fighting fire at the mine or petroleum site	4.1
	(h) in the case of an underground mine—the arrangements for the management and control of volatile or hazardous materials.	N/A
2	A principal hazard management plan that addresses fire or explosion is to include details of any procedures to be used for carrying out hot work at the mine or petroleum site.	4.1 Welding/ Hot Work Operations

2.2 Fire Officer

A Fire Officer will be appointed by the Quarry Manager or the Quarry Manager may appoint himself/herself to the Fire Officer's role. The Fire Officer's responsibilities will include:

- compliance with the BFMP
- ensuring maintenance and inspection of fire fighting equipment is carried out
- reporting and replacing of damaged fire equipment.

The Fire Officer will report directly to the Quarry Manager and will be required to complete periodic reports of his/her inspections.

3.0 Objectives and Outcomes

Table 3.1 presents the objectives and key performance outcomes relating to bushfire management of the Quarry.

Table 3.1 Bushfire Management Objectives and Key Performance Outcomes

Objectives	Key Performance Outcomes
To ensure compliance with all relevant Quarry approval conditions, statements of commitment and reasonable community expectations.	Compliance with all relevant criteria and reasonable community expectations, as determined in consultation with the relevant government agencies.
To identify, manage and control all fire hazards of the Quarry.	No avoidable ignition of fire as a result of Quarry operations.
To implement appropriate bushfire management and mitigation measures during all stages of the Quarry.	All identified management and mitigation measures implemented.
To contain any outbreak of fire as a result of Quarry operations.	No spread of fire initiated on the Quarry Site beyond the Quarry Site.
To provide assistance as required to RFS in the event of a local bushfire event.	All identified management and mitigation measures implemented.
To implement appropriate corrective and preventative actions, if required.	Corrective and preventative actions implemented, if required.
To implement an appropriate incident reporting program, if required.	Incidents (if any) reported in an appropriate manner.

4.0 Operational Controls, Safeguards and Management Measures

4.1 Prevention and Management of On-Site Fire

Walker Quarries is conscious of the need to ensure adequate bushfire controls are maintained so that its activities do not increase the potential for fires on or surrounding the Quarry.

Operational controls and safeguards to be implemented to minimise the risk of fire on at the Quarry are as follows.

Earthmoving Machinery

- All earthmoving machinery will be maintained in good working order with efficient exhaust systems and spark arrestors. Regular inspections will be carried out.
- All earthmoving machinery and mobile equipment will be fitted with appropriate sized and approved fire extinguishers suitable for the control of flammable liquid and electrical fires. Some of the heavy machinery will be fitted with independent fire suppression systems in addition to two 80:BE rated fire extinguishers while all light vehicles will be fitted with one fire extinguisher.

Workshops and Offices

- All workshops and offices will be installed with an approved 80:BE rated fire extinguisher. Their location will be indicated by an appropriate sign.

Fuel and Oil Management

- All fuel and oil storage will be located and constructed in accordance with the requirements of the *Dangerous Goods Act*.
- Fuel and oil storage areas will be signposted as to the contents of the storages and will be fitted with approved 80:BE rated fire extinguishers.
- All fuel tanks on-site will be fully or self-bunded to ensure that in the event of a leak or rupture, no fuel escapes from the bunded area. Each bunded area will have the capacity of at least 110% of the largest tank. Bunds may be integrated, i.e. form part of the tank structure, or be external.

No Smoking Areas

Designated “No Smoking” areas will be clearly marked on-site. These will include:

- fuel and oil storage areas
- within areas flagged or barricaded areas in preparation for blasting
- when transporting explosives or within 20 m of a vehicle transporting explosives
- within workshops
- all buildings and offices
- any gas cylinder storage areas.

No smoking will be permitted in any forested areas during the Bushfire Danger Period of October to March.

Fire Equipment

- Provision of fire equipment on-site will be in accordance with the requirements of legislation.
- All fire extinguishers will comply with AS/NZS 1841.11:1997 will be compatible with those of the Rural Fire Service.
- All fire equipment will be kept in a serviceable condition and be inspected at Pre-start and inspected every 6 months.
- The water truck (see below) will be maintained on-site to provide immediate response to a bushfire.

Water Truck

- A water truck will be:
 - available for use when the open cut quarry is in operation
 - tested at least monthly for mobility and operation of the water pump
 - properly maintained, with operators trained in the use of all equipment
 - able to be supplied with water from operating mobile water trucks should the need arise, and
 - equipped with:
 - 2 x 80:BE fire extinguishers
 - Hose and fittings to fill Rural Fire Service Truck.
- Most fire equipment will be compatible with that of the RFS.

Fixed Plant

Approved 80:BE rated extinguishers shall be installed and maintained at the following locations.

- Fuel and Lube Bay: 2 x Extinguishers.
- Offices: 2 x Extinguishers.
- Workshops: 2 x Extinguishers.

Equipment Storage

- Equipment will not be stored on uncleared ground.

Water Supply

- Water will be retained within the Main Storage Dam ([SD1](#)) and Top Storage Dam ([SD2](#)) at all times.

Clearing Operations

- Walker Quarries will enforce clearing restrictions. If clearing is required during the Bushfire Danger Period ([October to March](#)), specific protocols will be followed.
- Immediately prior to and during clearing campaigns during the fire season, Walker Quarries will refer to the FCNSW daily Colour Code and observe all requirements and restrictions as per FC NSW's regulations in **Appendix 3**.

- Stockpiling of cleared vegetation will be avoided. This will be mulched or chipped when safe to do so and used in rehabilitation of the Quarry. If stockpiling of cleared vegetation is unavoidable, it will be stockpiled away from potential ignition sources and will not be burned.
- All vehicle movements will be confined to defined roads or tracks.
- Where appropriate, controlled high intensity short term grazing will be employed on privately owned lands to assist in the reduction of vegetative fuel loads.

Fire Breaks

- To prevent the potential for ignition of vegetation as a result of operations on the Quarry Site, an effective fire break will be established and maintained (in accordance with relevant legislation and RFS Guidelines) beyond these activities to ensure that equipment does not operate within 6 m of the surrounding vegetation.

Blasting Operations

- All blasting operations will be carried out and confined to the open cut.
- All flammable material will be removed by pre-stripping the topsoil prior to any drilling and blasting operations taking place.
- All blasting will be carried out in accordance with the Guideline as set out by Wallerawang Quarry Blast Management [and Explosives Control Plan](#).

Welding/Hot Work Operations

- All welding activities will, as far as practicable, be conducted and confined to the workshop. If welding or cutting is to be carried out outside the workshop area, equipment and restrictions as per **Appendix 3** will be observed, as well as the following.
- The area within a 20 m radius will be cleared of all flammable material.
- All oils and greases will be cleared from the work area.
- Fire extinguishers of an 80:BE rating will be positioned within 10 m of the work area.
- A water truck will be put on stand-by during the welding or cutting operations.
- During welding, a second person will be present to observe the welding area.

Rehabilitated Area

- Fire prevention and fuel load reduction (if required) in rehabilitated quarry areas will be undertaken in accordance with the Quarry Biodiversity Management Plan. This could include:
 - Installation of fire breaks
 - short periods of high intensity grazing on privately owned lands and/or
 - controlled burns (in consultation with the RFS and FCNSW).
- Fuel load/fire security in rehabilitated areas will be inspected bi-annually.

4.2 Active Bushfire Response and Management

4.2.1 Preparation for Bushfire Event

The following measures will be implemented to enable appropriate management of active or bushfires identified in the local area and with the potential to impact on the Quarry.

- Incorporate the BFMP into the overarching Emergency Response Plan for the Quarry.
- Provide for equipment noted in **Section 4.1** for management of ember attack on Quarry buildings and other structures.
- All mobile equipment will be equipped with appropriate communication equipment, including two-way radios and/or mobile telephones.
- Establish compatible connection points from the Quarry's water infrastructure to permit the accessibility of this water to firefighting equipment.
- Maintain all internal access roads and tracks to ensure safe access and egress from the Quarry Site in the event evacuation is called.
- All tracks will be regularly checked and kept clear of all obstructions and debris to permit the safe ingress and egress of personnel from the Quarry Site.
- The RFS Fires Near Me App/Webpage will be checked regularly.
- Appropriate fire breaks will be maintained within and around the perimeter of the Quarry Site.
- Training will be provided by the Quarry Fire Officer to site personnel in relation to the use of the fire equipment nominated in **Section 4.1** and specific fire fighting tasks and procedures.

4.2.2 Managing Active Bushfire

Following identification of an imminent bush fire threat, the following management measures will be implemented.

- Human life is the most important asset to be protected. If it is safe to do so, then property is the second asset to consider preserving.
- The fire will be reported to Emergency Services using the **000** telephone number. Once emergency services have been notified, contact the FC NSW 24 hr fire duty officer on 02 6332 4812.
- If a fire has started in close proximity to a work area and the facilities are on hand to put it out and it is safe to do so then it should be contained and extinguished as quickly as possible, possibly in conjunction with Rural Fire Service operations.
- If the fire is not in close proximity and it is determined to be safe to do so, work will continue with the following provisions.
 - Fire fighting equipment, including the water truck and extinguishers will be brought close to hand.
 - UHF radio, local AM radio and RFS Fires Near Me App/Website monitored for fire updates.
 - Check regularly to determine if the fire front is moving closer.

- In the event of a local bushfire which threatens the Quarry boundary, all personnel on the Quarry Site would be directed to assemble at the designated Emergency Assembly Area. A head count would be undertaken to confirm all site personnel and visitors are accounted for. At this time, instructions as to specific procedures to be followed, i.e. site protection or evacuation, would be provided in accordance with the Emergency Management Plan and any advice provided by the RFS.

4.3 Managing Bushfire Risks – Agency Cooperation

As bushfires typically impact on more than one property, Walker Quarries is committed to ensuring that the RFS and other Emergency Services, as well as other agencies responsible for emergency response such as Mines Rescue, are adequately informed of activities within the Quarry Site.

Walker Quarries representatives will, at the request of relevant officers of FC NSW, the RFS or LCC, provide for an inspection of the Quarry Site to identify potential fire hazards, identify areas where fuel load reduction may be required and discuss any other relevant matters.

Walker Quarries will assist emergency services to the extent practicable if there is a fire in the vicinity of the Quarry Site.

5.0 Monitoring and Notifications

An inspection of the Quarry Site and land boundaries owned and controlled by Walker Quarries will be carried out by the Fire Officer at least every 6-months. The following will be noted during these inspections.

- Maintenance of safe access and egress routes from the Quarry Site in the event evacuation is called.
- Maintenance of access to water storage dams and operation of water pumping equipment.
- Adequacy of fire breaks and access tracks to ensure that they remain free of vegetation and are accessible.
- Assessment of vegetation fuel loads to ensure that they remain at safe levels.

In addition, the following monitoring will also be undertaken.

- Quarterly inspections of fire fighting equipment.

6.0 Incident Management

In the event of a bushfire incident or reported near miss, Walker Quarries will initiate an investigation. The investigation will seek to determine:

- what occurred at the time of the incident,
- the root cause of the incident,
- any contributing factors which led to the incident, and
- whether appropriate controls were implemented to prevent the incident.

Corrective and/or preventative actions will be assigned to relevant responsibilities as a result of the investigation. Actions will be communicated through planning meetings and toolbox talks. If required, this BFMP will be amended and all personnel with responsibilities under the updated plan review the amended code. Outstanding actions will be monitored for their effectiveness upon completion.

All reports associated with the incident(s) will be retained on site for 5 years.

A brief summary of any bushfire prevention works, bushfires occurring or any other reportable bushfire-related activities will be collated into the Annual Review for the Quarry which would also be made publicly available on Walker Quarries website, once accepted.

7.0 Plan Implementation

7.1 Roles and Responsibilities

Table 7.1 presents the roles and responsibilities of the personnel at the Quarry for the implementation of BFMP.

Table 7.1 Roles and Responsibilities

Roles	Responsibilities
Managing Director	<ul style="list-style-type: none"> Ensuring that sufficient resources are allocated to allow for the complete implementation of the BFMP.
Quarry Manager	<ul style="list-style-type: none"> Overall responsibility for the implementation of the BFMP. Ensuring a Fire Officer is established at the Quarry. Ensuring the Fire Officer has sufficient resources to undertake his/her responsibilities. Ensuring Quarry personnel are aware of fire management obligations and responsibilities. Training of personnel in bushfire management (as required). Communication with FC NSW, RFS and LCC personnel (as required). Implement inspections and training of Quarry personnel as required.
Fire Officer	<ul style="list-style-type: none"> Ensuring the implementation of the operational controls, safeguards and management measures described in the BFMP. Completing daily, monthly and 6-monthly inspections. Ensuring maintenance and inspection of fire fighting equipment is carried out. Reporting and replacing of damaged fire equipment.
All personnel	<ul style="list-style-type: none"> Comply with all relevant Bushfire Control Measures.

7.2 Competence training and awareness

All personnel undergo bushfire management awareness training as a component of the site induction program. The following areas are covered in the induction for all employees, contractors and visitors.

- Safety first.
- Obligations toward prevention and notification.
- Emergency response procedures.
- Locations of fire fighting equipment.

To reinforce this training and instruction, regular reminders of responsibilities and obligations regarding bushfire prevention will be provided at toolbox talks.

All quarry personnel, visitors and sub-contractors will be advised of the nominated muster area in the case of an emergency.

7.3 Plan Review and Continual Improvement Protocol

In accordance with the *Environmental Management Strategy*, and *Condition 5(5)* of DA 344-11-2001, the BFMP will be reviewed within three months of the submission of an:

- a) incident as defined by **Section 6.0**
- b) Annual Review
- c) an Independent Environmental Audit completed in accordance with *Condition 5(14)* of DA 344-11-2001
- d) any modifications to this consent.

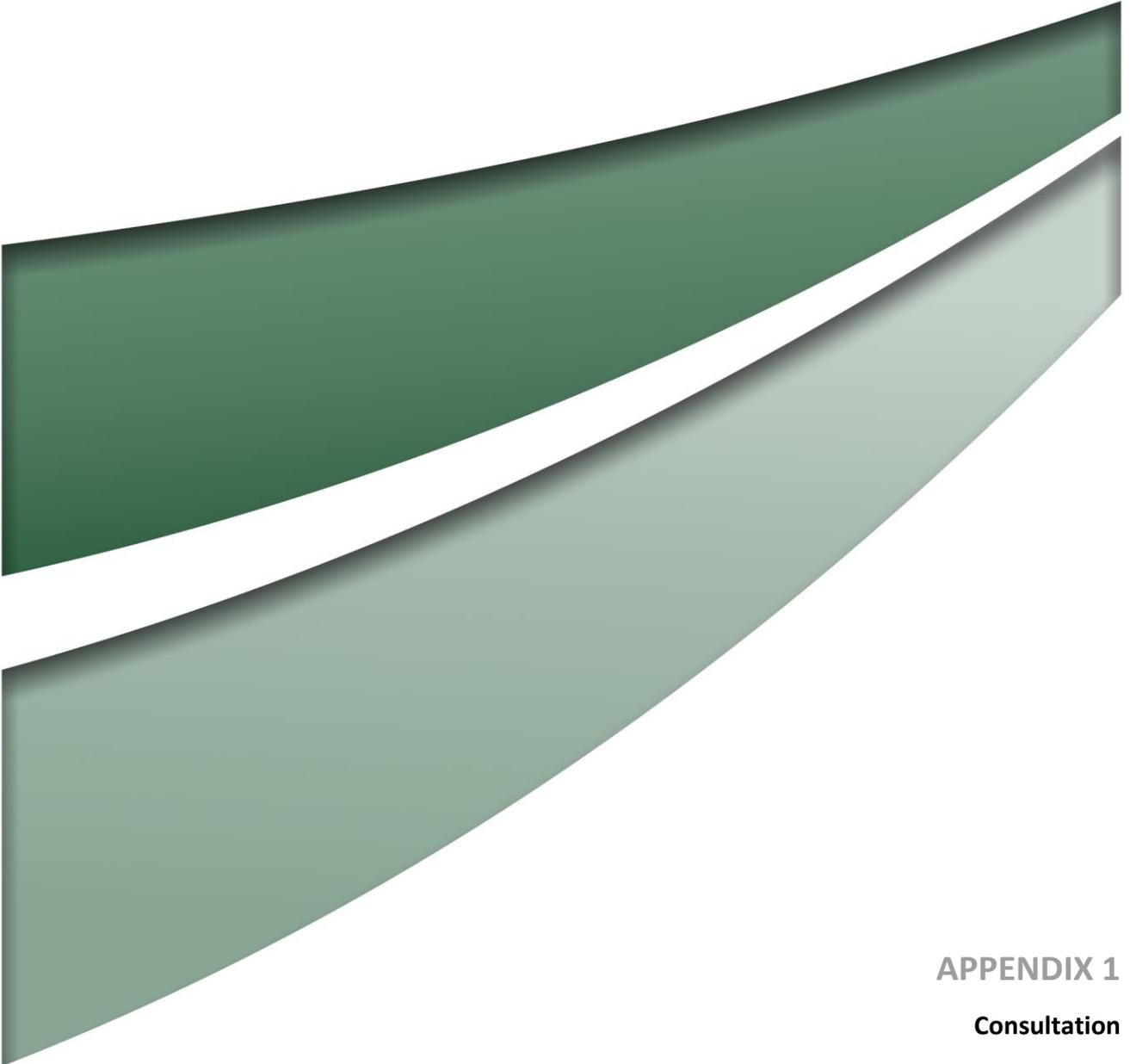
Walker Quarries will notify the DPIE in writing of any review being undertaken and if this review results in any revisions to the BFMP, submit a copy to the Secretary of the DPIE for approval (within 6 weeks of the review). The reviews will ensure the adequacy of the BFMP and allow for opportunities of adaptive management and continual improvement.

8.0 References

Pacrim Environmental (Pacrim) (2001). Environmental Impact Statement Proposed Wallerawang Quarry. Prepared for Sitegoal Pty. Limited, November 2001 (report 01/206.1).

RW Corkery & Co. Pty Limited (RWC) (2017). Environmental Assessment for Modification to Operations at the Wallerawang Quarry (DA 344-11-2001). Prepared on behalf of Walker Quarries Pty Ltd (Report No. 949/05).

Umwelt (Australia) Pty Limited (Umwelt) (2019). Statement of Environmental Effects Wallerawang Quarry Modification 3 (DA 344-11-2001)



APPENDIX 1

Consultation

Consultation – 2017

Forestry Corporation / NSW Rural Fire Service

Forestry Corporation NSW

From: Alex Irwin
Sent: Friday, 3 November, 2017 11:54 AM
To: 'dan.kirby@fcnsw.com.au'
Subject: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW
Attachments: Notice of Modification_25 August 2017.pdf

Good afternoon Dan,

Walker Quarries Pty Ltd received approval for a modification to the project approval for the Wallerawang Quarry (DA 344-11-2001) on 25 August 2017 (attached).

Previously I noted Condition 3(31) of DA 344-11-2001 requires Walker Quarries to consult with FC NSW in the preparation of a Rehabilitation Management Plan. I have also identified that Condition 3(40) requires Walker Quarries to consult with FC NSW in the preparation of a Bushfire Management Plan.

With respect to the nominated condition, can you provide any specific requirements of FC NSW for the preparation and/or update of this plan.

I note DA 344-11-2001 requires these plans to be submitted to the Secretary for approval by 25 November 2017 and so we would appreciate any advice as soon as possible.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange
62 Hill Street
ORANGE NSW 2800

Brisbane
Suite 5, Building 3,
Pine Rivers Office Park
205 Leitchs Road
BRENDALD QLD 4500

Phone: (02) 9985 8511
Fax: (02) 6361 3622
Email: brooklyn@rwcorkery.com
Website: www.rwcorkery.com

Phone: (02) 6362 5411
Fax: (02) 6361 3622
Email: orange@rwcorkery.com

Phone: (07) 3205 5400
Fax: (02) 6361 3622
Email: brisbane@rwcorkery.com

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From: Alex Irwin
Sent: Friday, 10 November, 2017 12:23 PM
To: 'melanie.klootwijk@fcns.w.com.au'
Cc: Dan Kirby
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW
Attachments: 94902h_Bushfire MP_November 2017.docx

Melanie,

I've attached a draft Bushfire Management Plan for Wallerawang Quarry.

You may find it easier to provide any comments / feedback once you've read through the commitments of Walker Quarries to bushfire management. Please note the green text represents modifications from the previous Bushfire MP.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange
62 Hill Street
ORANGE NSW 2800

Brisbane
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From: Dan Kirby [mailto:Dan.Kirby@fcns.w.com.au]
Sent: 3 November 2017 2:51 PM
To: Alex Irwin <alex@rwcorkery.com>
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW

Hi Alex,

Thanks for this. I will pass it on to Mel Klootwijk for her comment. If I recall correctly we may have been asked for this information directly from Dept of Planning, and Mel was handling that, so I'd like to check with her. If we have already done so I'll get her to supply you a copy. If we have not already done so I'll ask her to prepare a comment for you.

Regards,

From: Melanie Klootwijk <Melanie.Klootwijk@fcnsw.com.au>
Sent: Wednesday, 15 November, 2017 11:44 AM
To: Alex Irwin
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW
Attachments: 94902h_Bushfire MP_November 2017.docx

Hi Alex,

Attached are some initial comments on the plan. Please let me know if you want to discuss any of the comments. What is your process? Will you note the comments in the appendix or will you address them and incorporate them into the Plan as appropriate?

Regards,
Melanie

From: Alex Irwin [mailto:alex@rwcorkery.com]
Sent: Friday, 10 November 2017 12:23 PM
To: Melanie Klootwijk <Melanie.Klootwijk@fcnsw.com.au>
Cc: Dan Kirby <Dan.Kirby@fcnsw.com.au>
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW

Melanie,

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You may find it easier to provide any comments / feedback once you've read through the commitments of Walker Quarries to bushfire management. Please note the green text represents modifications from the previous Bushfire MP.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange
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Phone: (02) 9985 8511
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From: Dan Kirby [mailto:Dan.Kirby@fcnsw.com.au]
Sent: 3 November 2017 2:51 PM

To: Alex Irwin <alex@rwcorkery.com>

Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW

Hi Alex,

Thanks for this. I will pass it on to Mel Klootwijk for her comment. If I recall correctly we may have been asked for this information directly from Dept of Planning, and Mel was handling that, so I'd like to check with her. If we have already done so I'll get her to supply you a copy. If we have not already done so I'll ask her to prepare a comment for you.

Regards,

Dan Kirby | Fire & Stewardship Manager
Forestry Corporation of NSW | Northern Softwoods

Cnr Browning St & Panorama Ave | Bathurst NSW 2795
PO Box 143 | Bathurst NSW 2795
M: 0448 033 325 | E: dan.kirby@fcnsw.com.au | W: www.forestrycorporation.com.au

From: Alex Irwin [<mailto:alex@rwcorkery.com>]

Sent: Friday, 3 November 2017 11:54 AM

To: Dan Kirby <Dan.Kirby@fcnsw.com.au>

Subject: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW

Good afternoon Dan,

Walker Quarries Pty Ltd received approval for a modification to the project approval for the Wallerawang Quarry (DA 344-11-2001) on 25 August 2017 (attached).

Previously I noted Condition 3(31) of DA 344-11-2001 requires Walker Quarries to consult with FC NSW in the preparation of a Rehabilitation Management Plan. I have also identified that Condition 3(40) requires Walker Quarries to consult with FC NSW in the preparation of a Bushfire Management Plan.

With respect to the nominated condition, can you provide any specific requirements of FC NSW for the preparation and/or update of this plan.

I note DA 344-11-2001 requires these plans to be submitted to the Secretary for approval by 25 November 2017 and so we would appreciate any advice as soon as possible.

Regards,

Alex Irwin

Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants

Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Phone: (02) 9985 8511
Fax: (02) 6361 3622

Orange
62 Hill Street
ORANGE NSW 2800

Phone: (02) 6362 5411



Brisbane
Suite 5, Building 3,
Pine Rivers Office Park
205 Leitchs Road
BRENDALE QLD 4500

Phone: (07) 3205 5400
Fax: (02) 6361 3622

From: Melanie Klootwijk <Melanie.Klootwijk@fcnsw.com.au>
Sent: Thursday, 23 November, 2017 2:16 PM
To: Alex Irwin
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW
Attachments: 94902h_Bushfire MP_November 2017_v2_MK edits.docx

Hi Alex,

Thanks for including those suggestions, I've added a few more comments after reviewing the doc with Dan.

The main one is in relation to clearing and other high risk activities. You included your requirements in relation to the RFS information, which I wanted to read before making the following comments. The below information is required for anyone and everyone working within a State forest, I send out this information every year as a reminder to all organisations/contractors etc before the fire season starts. Ray Sharwood (the quarry manager) is aware of the colour code system, and receives the daily SMS with that info.

I suggest you insert the below information in an appendix and just refer to it under the relevant sections.

We usually require the below for **all** activities, however as the quarry site has a relatively low fire risk due to the work not being close to vegetation or other flammable material, we would require the below for clearing operations and any other activities close to high risk vegetation, eg welding.

I am not back in the office until next Tuesday. If you require further discussion or clarification, please contact Dan.

FCNSW refers to the Bushfire Danger Period, generally Oct-March, depending on conditions. During this time FCNSW calculates the FDI for specific forest areas and each day is categorised into a colour code: yellow, orange or red. Depending on the colour code there are requirements to carry certain types of equipment/water as classified as category 1, 2 or 3 fire preparedness (as a minimum). During the Bushfire Danger Period everyone working within a State forest is required to always follow category 1 requirements and when the colour code is Orange or Red, carry the additional equipment.

- Yellow (category 1) a knapsack (or fire extinguisher) minimum capacity of 15L water
 a dry chemical fire extinguisher
 a rakehoe
 chainsaws can only be used after 1pm on approved cleared areas provided Category 2 requirements are met
- Orange (category 2) all category 1 requirements, plus
 400L of water with a pump unit of 2.2kw minimum capacity
 60m of hose
 Nozzle capable of delivering a fog spray and jet stream
 Fully fuelled pump motor
 Trenching/ripping or other earthworks in rock to cease at 1pm
 Vegetation clearing/mulching with exposed rock to cease at 1pm
- Red (category 3) all category 2 requirements, plus
 operations are located in low fire-risk areas
 operations are prohibited where significant amounts of slash have been cured for more than one week
 No grinding, welding or other activities involving a naked flame, sparks or with the potential to cause ignition (including dozer work)
 all work must cease by 1pm

The colour codes are calculated each afternoon for the following day. To find out the colour code for each day you are working in the forest please call the Fire Duty officer on 6332 4812 that morning, or if you will be working on State Forest for a prolonged period of time you can receive an automated SMS advising the colour code.

Regards,

Melanie Klootwijk | Stewardship Supervisor (NOTE: I work Tues - Thurs)
Forestry Corporation of NSW | Northern Softwoods Region

Cnr Panorama Ave and Browning Street | Bathurst NSW 2795
PO Box 143 | Bathurst NSW 2795
T: 06 6330 1002 | M: 0427 259 503 | F: 02 6331 5528
E: melanie.klootwijk@fcnsw.com.au | W: www.forestrycorporation.com.au

From: Alex Irwin [<mailto:alex@rwcorkery.com>]
Sent: Friday, 17 November 2017 4:06 PM
To: Melanie Klootwijk <Melanie.Klootwijk@fcnsw.com.au>
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW

Melanie,

An updated Bushfire MP is attached.

Further detail on the review of FDI is included.

Also, on reflection specific firebreaks are unlikely to be implemented on the Mine Site. However, the Company will ensure that once clearing has been completed equipment does not operate within 6m of the surrounding vegetation.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange
62 Hill Street
ORANGE NSW 2800

Brisbane
Suite 5, Building 3,
Pine Rivers Office Park
205 Leitchs Road
BRENDALE QLD 4500

Phone: (02) 9985 8511
Fax: (02) 6361 3622
Email: brooklyn@rwcorkery.com
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Email: brisbane@rwcorkery.com

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From: Melanie Klootwijk [<mailto:Melanie.Klootwijk@fcnsw.com.au>]
Sent: 15 November 2017 11:44 AM
To: Alex Irwin <alex@rwcorkery.com>
Subject: RE: 949 - Wallerawang Quarry - Requirement to Consult with FC NSW

NSW Rural Fire Service

From: Jason Maslen <Jason.Maslen@rfs.nsw.gov.au>
Sent: Wednesday, 29 November, 2017 2:24 PM
To: Alex Irwin
Subject: FW: 949 - Wallerawang Quarry - Bushfire Management Plan
Attachments: 94902h_Bushfire MP_November 2017.pdf

Afternoon Alex,

Thanks for your email.

A review of NSW RFS files and Department of Planning and Environment Major Projects website indicates that the development application was not referred to the NSW RFS and did not impose the condition requiring the plan to be to its satisfaction. In addition, the NSW RFS does not endorse bushfire management plans and therefore does not have any comments to make.

Instead, I recommend that you contact the local NSW RFS District Office to seek advice of any particular operational requirements to be considered. The District office can be contacted on 1300 258 737.

Regards,

Jason Maslen



Jason Maslen | Team Leader, Development Assessment and Planning | Planning and Environment Services
NSW RURAL FIRE SERVICE
42 Lamb Street, Glendenning 2761 | Locked Bag 17 Granville NSW 2142
P 1300 NSW RFS E jason.maslen@rfs.nsw.gov.au
www.rfs.nsw.gov.au | www.facebook.com/nswrfs | www.twitter.com/nswrfs
PREPARE. ACT. SURVIVE.

From: Planning & Environment Services
Sent: Wednesday, 29 November 2017 9:41 AM
To: Records <Records@rfs.nsw.gov.au>
Subject: FW: 949 - Wallerawang Quarry - Bushfire Management Plan

From: Alex Irwin [<mailto:alex@rwcorkery.com>]
Sent: Tuesday, 28 November 2017 12:35 PM
To: Planning & Environment Services
Cc: 'Gen Seed'; 'Paul Hensley (pfhensley@gmail.com)'; 'davidm@walkerquarries.com.au'
Subject: 949 - Wallerawang Quarry - Bushfire Management Plan

Good morning,

Condition 3(40) of development consent DA 344-11-2001 for the Wallerawang Quarry requires a Bushfire Management Plan to be prepared to the satisfaction of the NSW Rural Fire Service.

BUSHFIRE

39. The Applicant must:
 - (a) ensure that the development is suitably equipped to respond to any fires on site; and
 - (b) assist the Rural Fire Service and emergency services to the extent practicable if there is a fire in the vicinity of the site.
40. The Applicant must prepare a Bushfire Management Plan for the site, in consultation with FCNSW to the satisfaction of the Rural Fire Service.

On behalf of Walker Quarries, RWC has consulted with FC NSW and updated the Bushfire Management Plan for your consideration. Changes from the previous Bushfire Management Plan which was supplied to the RFS are provided in green.

Could you please advise as to whether the attached Bushfire Management Plan is to the satisfaction of the NSW RFS.

Regards,

Alex Irwin

Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange
62 Hill Street
ORANGE NSW 2800

Brisbane
Suite 5, Building 3,
Pine Rivers Office Park
205 Leitchs Road
BRENDALE QLD 4500

Phone: (02) 9985 8511
Fax: (02) 6361 3622
Email: brooklyn@rwcorkery.com
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RFS Disclaimer:

This email message, and any files/links transmitted with it, is intended only for the addressee(s) and contains information which may be confidential. If you are not the intended recipient, please notify the sender and delete this email and any copies or links to this email completely and immediately from your system. Views expressed in this message are those of the individual sender, and are not necessarily the views of the NSW Rural Fire Service.

From: Gen Seed <genevieve.seed@planning.nsw.gov.au>
Sent: Monday, 18 December, 2017 9:20 AM
To: Alex Irwin
Cc: Georgia Dragicevic
Subject: RE: 949 - Wallerawang Quarry - Bushfire Management Plan

Good Morning Alex

Sorry for the delay on this one. The Department acknowledges that the RFS will not be commenting on the bushfire management plan.

The Department notes that the management plan has been prepared in consultation with FCNSW and although endorsement cannot be obtained from RFS, the condition has been satisfied to the best of the applicant's ability.

I will make note of this on our file for compliance purposes.

Kind regards,

Gen

From: Alex Irwin [mailto:alex@rwcorkery.com]
Sent: Wednesday, 29 November 2017 2:30 PM
To: Gen Seed <genevieve.seed@planning.nsw.gov.au>
Cc: 'davidm@walkerquarries.com.au' <davidm@walkerquarries.com.au>; 'Paul Hensley (pfhensley@gmail.com)' <pfhensley@gmail.com>; 'John McAuley' <pmcauley@ozemail.com.au>
Subject: FW: 949 - Wallerawang Quarry - Bushfire Management Plan

Gen,

Please refer to the email from NSW RFS below.

Based on the comment, it would not appear possible for the Proponent to comply with the condition. Is it possible for the DPE to provide an acknowledgement that obtaining the satisfaction of the NSW RFS is not possible, or provide an alternative approach that the DPE would consider to satisfy the condition.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants

Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange
62 Hill Street
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Brisbane
Suite 5, Building 3,
Pine Rivers Office Park
205 Leitchs Road
BRENDALD QLD 4500

Phone: (02) 9985 8511



Forestry Corporation of NSW ABN 43 141 857 613

Northern Softwood Region

Cnr Browning St & Panorama Ave Bathurst NSW 2795
(PO Box 143 Bathurst NSW 2795)

T 02 6331 2044

F 02 6331 5528

www.forestrycorporation.com.au

8/04/2020

Ref No.: F2010/01613

Alex Irwin
Umwelt Australia
Office 1, 3 Hampden Avenue
Orange NSW 2800

Sent via email: airwin@umwelt.com.au

Dear Alex,

Wallerawang Quarry Review of Management plans – FCNSW response

Thank you for the opportunity to comment on the review of the following management plans for Wallerawang Quarry:

- Bush Fire Management Plan
- Rehabilitation Management Plan (incorporated into the MOP)

Bushfire Management Plan

FCNSW is satisfied with the current contents of the plan and has no further recommendations for incorporation.

Rehabilitation Management Plan

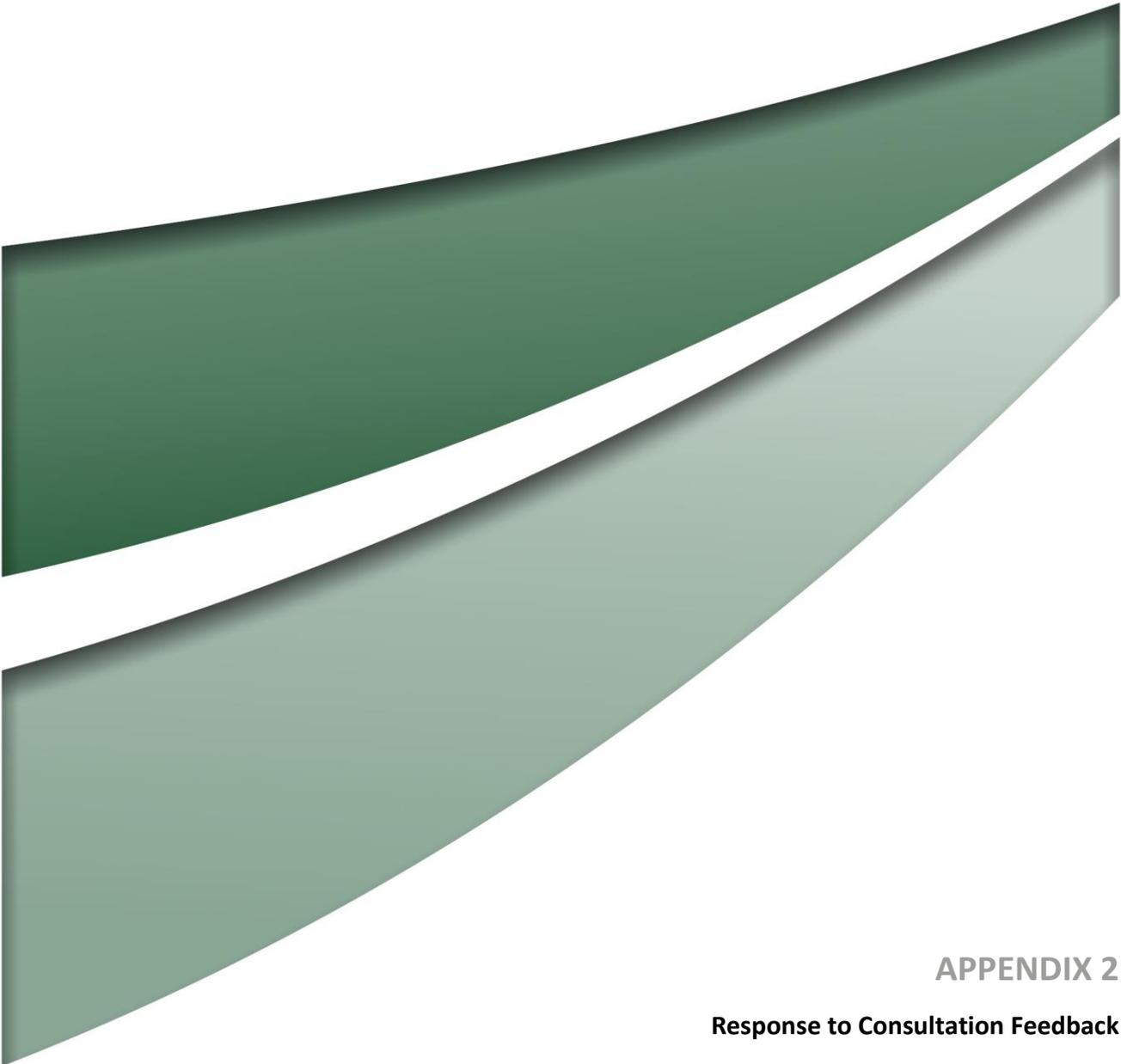
FCNSW and Walker Quarries have had several discussions and correspondence in relation to the Rehabilitation Management Plan since the current one was written. FCNSW requests updated information in relation to rehabilitation is incorporated into the plan, as outlined in the recent MOD3 documentation.

FCNSW requests to review final drafts of both management plans prior to submission to ensure our interests are covered.

Kind Regards,

A handwritten signature in black ink, appearing to read "Melanie Klootwijk".

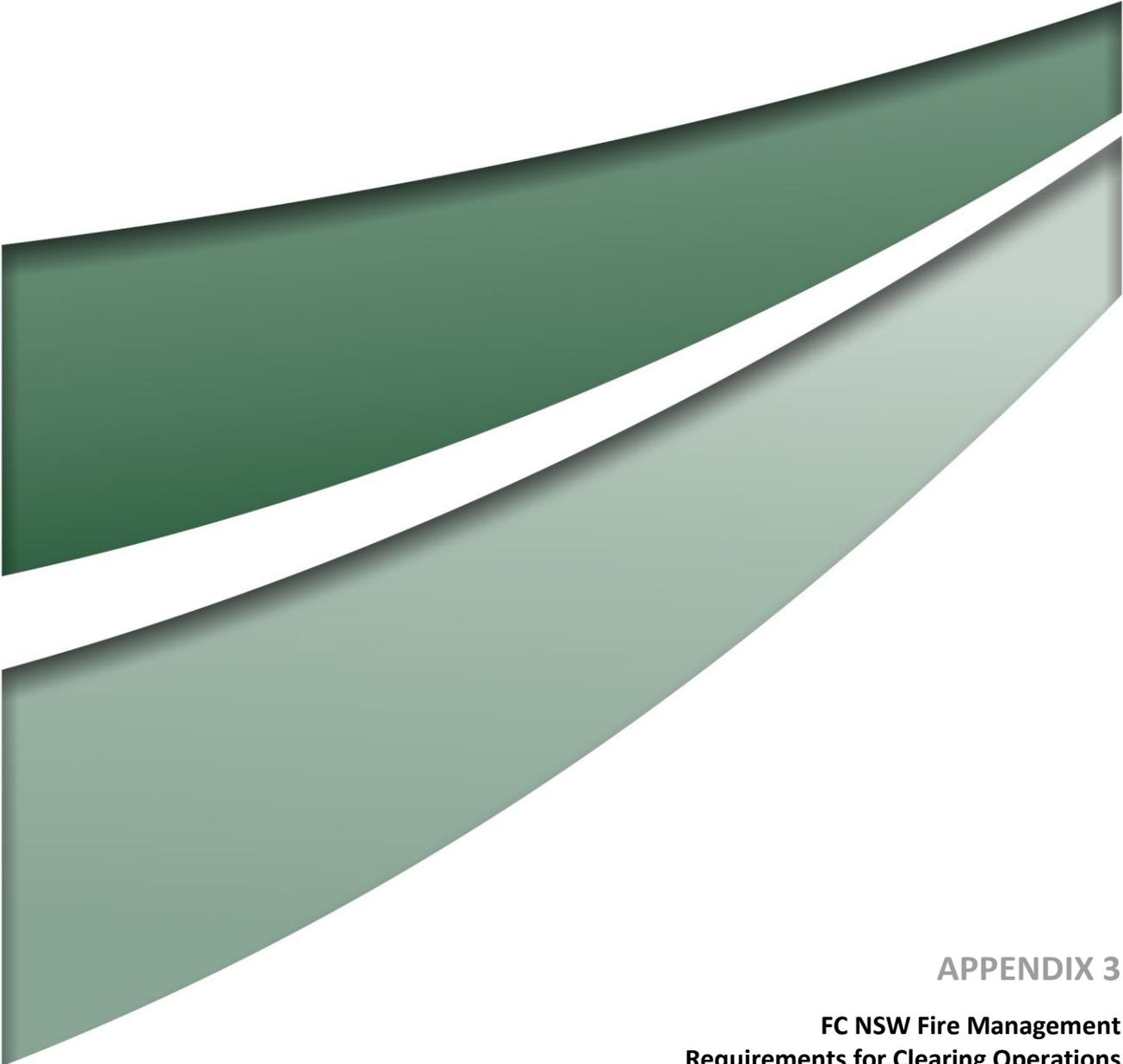
Melanie Klootwijk
Stewardship Coordinator
Northern Softwood Region



APPENDIX 2

Response to Consultation Feedback

Agency	Consulted on:	Replied on	Requests / Requirements	Addressed
FC NSW	20/10/2017	15/11/2017	Request for the plan to reference equipment requirements under the FC NSW Bushfire Danger colour coding system.	Complete (refer to Section 4.2)
RFS	28/11/2017	29/11/2017	None	



APPENDIX 3

FC NSW Fire Management Requirements for Clearing Operations

Appendix 2

FC NSW Fire Management Requirements for Clearing Operations

FCNSW refers to the Bushfire Danger Period, generally Oct-March, depending on conditions. During this time FCNSW calculates the FDI for specific forest areas and each day is categorised into a colour code: yellow, orange or red. Depending on the colour code there are requirements to carry certain types of equipment/water as classified as category 1, 2 or 3 fire preparedness (as a minimum). During the Bushfire Danger Period everyone working within a State forest is required to always follow category 1 requirements and when the colour code is Orange or Red, carry the additional equipment.

Yellow (category 1)

- a knapsack (or fire extinguisher) minimum capacity of 15L water
- a dry chemical fire extinguisher
- rakehoe
- chainsaws can only be used after 1pm on approved cleared areas provided Category 2 requirements are met

Orange (category 2)

All category 1 requirements, plus

- 400L of water with a pump unit of 2.2kw minimum capacity
- 60m of hose
- Nozzle capable of delivering a fog spray and jet stream
- Fully fuelled pump motor
- Trenching/ripping or other earthworks in rock to cease at 1pm
- Vegetation clearing/mulching with exposed rock to cease at 1pm

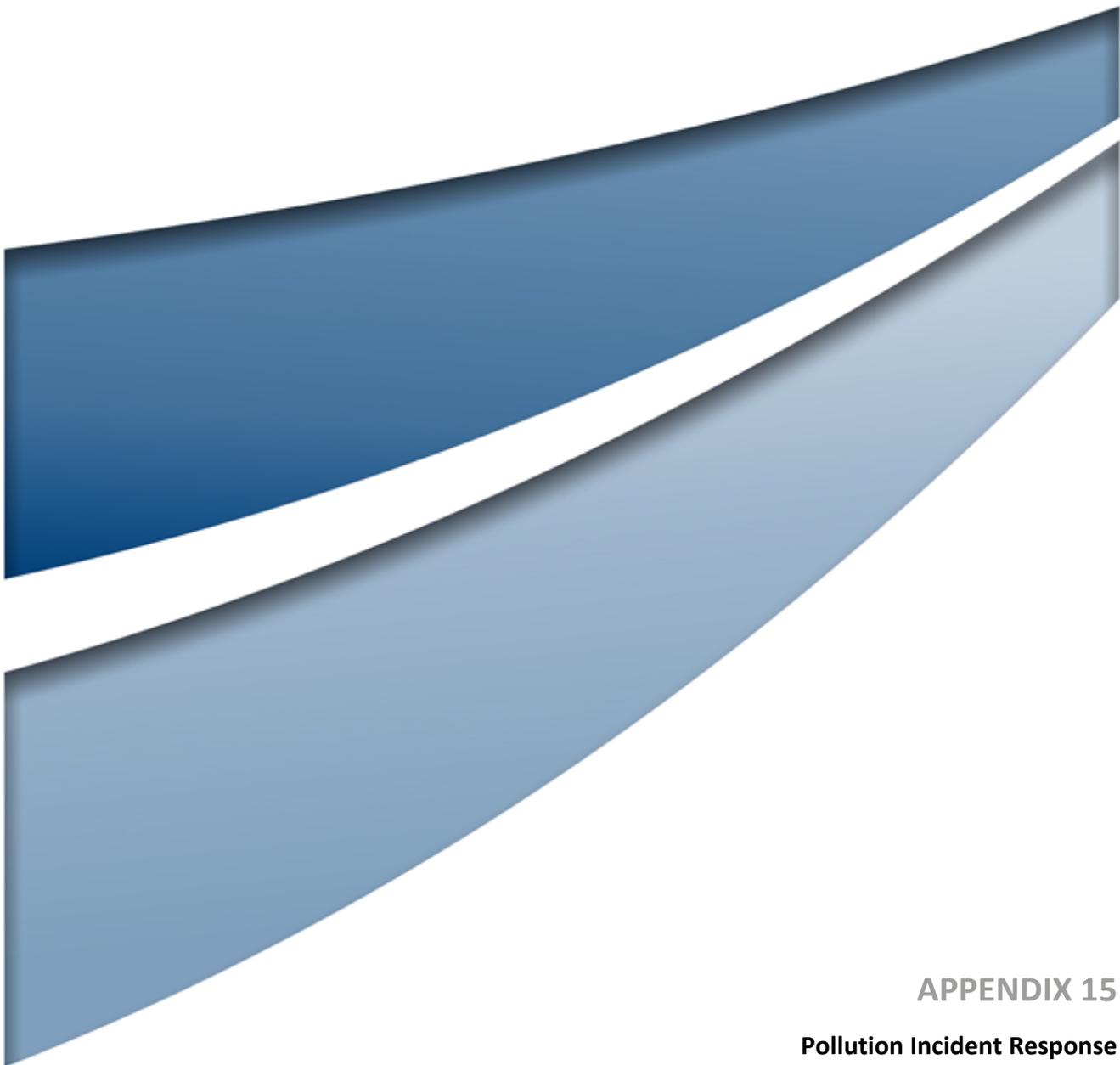
Red (category 3)

All category 2 requirements, plus

- operations are located in low fire-risk areas
- operations are prohibited where significant amounts of slash have been cured for more than one week
- No grinding, welding or other activities involving a naked flame, sparks or with the potential to cause ignition (including dozer work)
- all work must cease by 1pm

The colour codes are calculated each afternoon for the following day. To find out the colour code for each day you are working in the forest please call the Fire Duty officer on 6332 4812 that morning, or if you will be working on State Forest for a prolonged period of time you can receive an automated SMS advising the colour code.





APPENDIX 15
Pollution Incident Response
Management Plan

Walker Quarries Pty Ltd

Pollution Incident Response Management Plan

for the
Wallerawang Quarry
(EPL 13172)



Walker Quarries Pty Ltd

Head Office

191 Main Street
Lithgow NSW 2790
PO Box 307
LITHGOW NSW 2790
Phone: +61-2-63523377
Fax: +61-2-63523661

Site

Quarry Site Office
Lot 6 Great Western Hwy
Wallerawang NSW 2790
PO Box 307
LITHGOW NSW 2790
Mobile: 0413 784 420
Phone: 02 6324066

Distribution:

Department of Planning
Industry & Investment NSW – Mineral Resources
Industry & Investment NSW - Agriculture
Department of Environment, Climate Change and Water - EPA
NSW Sydney Water
Greater City of Lithgow Council
Wallerawang Quarry Community Consultative Committee
NSW Forests

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DOCUMENT REVIEW HISTORY

Issue	Date	Description
1	August 2012	Initial document prepared to meet the PIRMP guidelines.
2	13 November 2017	Site review
3	13 November 2017	Update / Site review
4	18 July 2019	Update/ Site Review
5	15 August 2019	Update/ Site Review

1.0 INTRODUCTION

1.1 Key Aspects of the PIRMP

This Pollution Incident Response Management Plan (PIRMP) covers the key actions to minimise occurrence of a pollution incident and manage a pollution incident if one occurs (during and after a pollution incident). The PIRMP does not have procedures for the treatment of injured persons or the remediation of the environment following a pollution incident.

The PIRMP has been prepared for managing the impact to human health (employees and nearby neighbours) and the environment (onsite and offsite).

1.2 Background to

Figures have been prepared as per the requirements of the PIRMP Guidelines. **Fig Figure 2** outlines the site in more detail, providing the location of licensed water sampling and dust points.

2.0 REQUIREMENT TO PREPARE THE PIRMP

2.1 Legislative Requirement

The specific requirements for Pollution Incident Response Management Plans (PIRMP) are set out in *Part 5.7A* of the *Protection of the Environment Operations Act 1997* (POEO Act) and the *Protection of the Environment Operations (General) Regulation 2009* (POEO(G) Regulation). In summary, this provision requires the following:

- All holders of environment protection licences must prepare a pollution incident response management plan (*section 153A, POEO Act*).
- The plan must include the information detailed in the *POEO Act* (*section 153C*) and be in the form required by the *POEO(G) Regulation* (*clause 98B*).
- Licensees must keep the plan at the premises to which the environment protection licence relates or, in the case of trackable waste transporters and mobile plant, where the relevant activity takes place (*section 153D, POEO Act*).
- Licensees must test the plan in accordance with the *POEO(G) Regulation* (*clause 98E*).
- If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, licensees must immediately implement the plan (*section 153F, POEO Act*).

Holders of an existing environment protection licence will need to prepare and be able to implement a PIRMP by 1 September 2012.

Wallerawang Quarry PIRMP	Approver: Signature:	Date: Review date:
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2.2 Structure of PIRMP

Table 1 outlines the structure of the PIRMP, as per the requirements of the POEO (G) Regulation.

Wallerawang Quarry PIRMP	Approver: Signature:	Date: Review date:
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Table 1: Requirement to Prepare PIRMP

Clause Number	Requirement	Section in Plan
98 C (1) (a)	A description of the hazards to human health or the environment associated with the activity to which the licence relates (the relevant activity),	Section 5 Appendix 1
98 C (1) (b)	The likelihood of any such hazards occurring, including details of any conditions or events that could, or would, increase that likelihood,	Section 5 Appendix 1
98 C (1) (c)	Details of the pre-emptive action to be taken to minimise or prevent any risk of harm to human health or the environment arising out of the relevant activity,	Section 9.2 Appendix 1
98 C (1) (d)	An inventory of potential pollutants on the premises or used in carrying out the relevant activity,	Section 6
98 C (1) (e)	The maximum quantity of any pollutant that is likely to be stored or held at particular locations (including underground tanks) at or on the premises to which the licence relates,	Section 6
98 C (1) (f)	A description of the safety equipment or other devices that are used to minimise the risks to human health or the environment and to contain or control a pollution incident,	Section 7
98 C (1) (g)	The names, positions and 24-hour contact details of those key individuals who: (i) are responsible for activating the plan, and (ii) are authorised to notify relevant authorities under section 148 of the Act, and (iii) are responsible for managing the response to a pollution incident,	Section 10.1
98 C (1) (h)	The contact details of each relevant authority referred to in section 148 of the Act,	Section 10.2
98 C (1) (i)	Details of the mechanisms for providing early warnings and regular updates to the owners and occupiers of premises in the vicinity of the premises to which the licence relates or where the scheduled activity is carried on,	9.1
98 C (1) (j)	The arrangements for minimising the risk of harm to any persons who are on the premises or who are present where the scheduled activity is being carried on,	Section 8
98 C (1) (k)	A detailed map (or set of maps) showing the location of the premises to which the licence relates, the surrounding area that is likely to be affected by a pollution incident, the location of potential pollutants on the premises and the location of any stormwater drains on the premises,	Figures 1 and 2
98 C (1) (l)	A detailed description of how any identified risk of harm to human health will be reduced, including (as a minimum) by means of early warnings, updates and the action to be taken during or immediately after a pollution incident to reduce that risk,	Section 9 Appendix 1
98 C (1) (m)	The nature and objectives of any staff training program in relation to the plan,	Section 12
98 C (1) (n)	The dates on which the plan has been tested and the name of the person who carried out the test,	Section 14
98 C (1) (o)	The dates on which the plan is updated,	After table of contents
98 C (1) (p)	The manner in which the plan is to be tested and maintained.	Section 14

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

3.0 DEFINITION OF A POLLUTION INCIDENT

The POEO Act 1997 defines a pollution incident as:

“pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise”.

A licensee is required to notify the relevant regulatory authorities of a pollution incident if there is a risk of ‘material harm to the environment’, which is defined in section 147 of the POEO Act as:

- (a) *harm to the environment is material if:*
 - (i) *it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or*
 - (ii) *it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and*
- (b) *loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.*

Harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution.

4.0 IMMEDIATE NOTIFICATION OF POLLUTION INCIDENT

Licensees will now be required to report pollution incidents “immediately” instead of “as soon as practicable” (section 148 POEO Act). This means that licensees need to report pollution incidents without delay.

Licensees must notify all of the Appropriate Regulatory Authorities about the incidents. These include:

- Environment Protection Authority (EPA);
- Ministry of Health;
- WorkCover Authority;
- Local council; and
- Fire and Rescue NSW.
- NSW Forests

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

5.0 DESCRIPTION AND LIKELIHOOD OF HAZARDS AND PRE-EMPTIVE ACTIONS

This section has been prepared to meet the requirements of clause 98C (1) (a), (b) and (c) of the *POEO(G) Regulation*.

A pollution incident risk assessment for Walker Quarries (**Appendix 2**) has been prepared to:

- Describe the hazards to human health and the environment;
- Describe the likelihood of any such hazards occurring;
- Outline existing controls to prevent pollution incidents occurring; and
- Outline key pollution response measures.

6.0 INVENTORY OF POTENTIAL POLLUTANTS

Table 2 outlines the potential pollutants (chemicals) stored onsite or transported to Walker Quarries

Table 2: Inventory of Chemicals at Walker Quarries

Product Name	Location/s of where product is stored	Quantities
Diesel Fuel	Self Bunded Fuel Pod	SFL 52 400 Litres
Machine Oils	Containerised in oil shed on palletted bunded facility	1000 Litres (200l drums and or 20 litre drums)

7.0 INVENTORY OF SAFETY EQUIPMENT

Table 3 outlines the safety equipment kept on site.

Table 3: Inventory of Safety Equipment

Product Name	Location/s of where equipment is stored	Calibration/Maintenance Requirement
Fire Extinguisher	In all Vehicles	Inspections and calibration as per manufacturer requirements.
Spill Kit	In Container	Every two Months
PPE	In all Vehicles	Quarterly
MSDS's	On Site	Quarterly
First AID Kit	In all Vehicles	Quarterly
Safety Signage	Across site	Quarterly
Mains Water tank	Top of quarry Pit	Annual
Water Pumps	Around dams and sand plant	Quarterly

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

8.0 MINIMISING HARM TO PERSONS ON THE PREMISES

All staff and contractors are to be inducted before completing any work on site. The induction covers procedures for minimising the chance of a pollution incident occurring, managing a pollution incident and actions following a pollution incident.

Minimising the impact to persons during a pollution incident must be the highest priority.

In the event that a pollution incident requires the evacuation of the site, actions will be completed in accordance with the site Emergency Management Plan.

All staff will be informed on the location of muster locations through site inductions, signage and ongoing training.

As part of the preparation of the PIRMP, the key aspects of the plan will be provided to staff and contractors.

Emergency reporting will be recorded on the Duty Card (**Appendix 3**).

9.0 ACTIONS TO BE TAKEN BEFORE, DURING OR IMMEDIATELY AFTER A POLLUTION INCIDENT

9.1 Actions to Minimise a Pollution Incident

The Pollution Risk Assessment (**Appendix 2**) outlines potential pollution incidents at Walker Quarry. For each potential pollution risk, there are a number of controls outlined. Some general controls which are in place to reduce the likelihood of a pollution incident occurring include:

- Site Environmental and Safety Management Plans;
- Regular inspections and maintenance;
- Environmental monitoring;
- Correct storage, transport and waste management; and
- Training and awareness.

The site will make all attempts to prevent pollution incidents; but in a situation where a pollution incident is imminent and may potentially cause detrimental impacts to human health or the environment, the site will contact the necessary stakeholders (employees, contractors, neighbours, Appropriate Regulatory Authorities) to provide as much early warning as possible.

9.2 Actions during a Pollution Incident (When Quarry is Operating)

If an evacuation is required, this shall be completed in accordance with **section 8**. In the event that a pollution incident requires the evacuation of the site, actions will be completed in accordance with the site Emergency Management Plan. All staff are informed on the location of muster locations through site inductions, signage and on-going training.

Licensees are required to report pollution incidents “immediately” (without delay) to the Appropriate Regulatory Authorities listed in **section 10.2**.

In the event of a pollution incident, the person who has identified the incident should immediately contact the Site Manager or the Environment & Community Coordinator. The person reporting the pollution incident should provide the following key details:

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

- Their name and contact details;
- Location of the pollution incident/emergency;
- Nature of the pollution incident/emergency; and
- Details of any assistance required.

The details of any emergency call or incident reporting will be recorded on the Duty Form (**Appendix 3**)

Some general controls for managing a pollution incident include:

- Visually assess the situation. Undertake emergency response if required;
- Contact the appropriate regulatory authorities in accordance with the PIRMP;
- If safe and possible to do so, undertake immediate measures that prevent further impacts from the pollution incident;
- Take direction from the Appropriate Regulatory Authorities as required; and
- If required seek assistance from specialist consultants/contractors.

9.3 Actions Following a Pollution Incident

If a pollution incident occurs, there will be a detailed incident investigation and a report will be sent to Walker Quarry Management and relevant Appropriate Regulatory Authorities.

The Incident Report Form (**Appendix 4**) will be completed.

If Walker Quarry Management were notified of the pollution incident by the public then the complaint will be logged as per the Complaint Form (**Appendix 5**) and the Incident Report Form will also be completed.

Within a month following a pollution incident, the PIRMP will be reviewed and tested. Walker Quarry Management will continue to liaise with the relevant Appropriate Regulatory Authorities to reduce the likelihood of the pollution incident occurring.

All staff and contractors will receive the necessary refresher training, and the key outcomes of the incident investigation will be reported to staff and contractors.

10.0 CONTACT DETAILS.

10.1 Details for those Managing the Response

The following personnel outlined in **Table 4** are responsible for reporting the environmental incidents.

Table 4: Contact Details

Key Contact	Position	Contact Details
Quarry Manager	Manager	0413 784 420
Production Manager	Production Manager	0409 442 040

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

* Whilst personal contact details for the following are available in the Controlled-on site Pollution Incident Response Management Plans they do not appear in this public document under provision of the Privacy and Personal Information Protection Act 1998.

10.2 Details for Appropriate Relevant Authorities

This section has been prepared to meet the requirements of clause 98C (1) h of the *POEO(G) Regulation*. The following table (**Table 5**) outlines the contact details for the appropriate regulatory authorities for reporting pollution incidents.

Table 5: Appropriate Regulatory Authorities Contact Details

Appropriate Regulatory Authority	Key Contact	Contact Details
NSW Office of Environment and Heritage Sub department: Environment Protection Authority	<i>This will result in the incident being recorded and the appropriate person being contacted</i>	131 555
NSW Ministry of Health Bathurst	Ministry of Health Bathurst	(02) 6339 5601
Safe Work NSW	Incident Notification Hotline (Response Management Team):	131 050 <i>Select Option 3 to report a 'Serious Incident or Fatality' - This will result in the incident being recorded and the appropriate person being contacted</i>
Local Authority (Council)	(Lithgow City Council - Environment Team Leader):	(02) 6354 9999
Fire and Rescue & Police	-	000

11.0 COMMUNICATION WITH NEIGHBOURS AND THE LOCAL COMMUNITY

When Walker Quarry is Operating the nearest residential properties are located in 2 kms away on the Northern side of the Great Western Highway.

In the event of a pollution incident, Walker Quarry has the following processes for contacting the community:

- When an incident occurs, Walker Quarry will **immediately** contact the five Appropriate Regulatory Authorities listed in **Table 5**.
- Walker Quarry will consult with these Appropriate Regulatory Authorities to determine if the community is to be notified of the pollution incident. Walker Quarry will discuss with the Appropriate Regulatory Authorities regarding the most relevant communication strategy (eg. Walker Quarry website, media release, direct contact with those potentially impacted).

Wallerawang Quarry PIRMP	Approver:	Date:
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- Contact with the community to be then completed as per the agreed communication strategy. An appropriate strategy will involve telephone calls, text messaging and include incident specific advice regarding safety precautions/ actions to be carried out by the community in response to a pollution incident.
- The results of the investigation of any pollution incident from Walker Quarry are put on the Walker Quarry website.

12.0 STAFF TRAINING

This section has been prepared to meet the requirements of clause 98C (1) (m) of the *POEO(G) Regulation*.

The requirements of the PIRMP will be outlined in the site induction for all new employees and contractors. A toolbox talk outlining the key components on the PIRMP will be presented to all Walker Quarry staff and contractors. The objective of training will be to ensure all staff and contractors are aware of the key steps to manage a pollution incident. If a pollution incident occurs, refresher training will be delivered to staff and contractors.

13.0 AVAILABILITY OF PIRMP

A copy of the PIRMP (electronic and hard copy) is to be kept at the premises. Walker Quarry will provide the NSW OEH (EPA) a copy upon request.

14.0 TESTING OF PIRMP

The PIRMP will be tested every twelve months as per the requirement of the *POEO(G) Regulation*. The testing of the PIRMP is to be carried out in such a manner as to ensure that the information included in the plan is accurate and up to date, and that each plan is capable of being implemented in a workable and effective manner.

Testing will involve undertaking desktop simulations of incidents and if necessary, completing exercises or drills. Testing will need to cover all the components of the PIRMP, including the effectiveness of training.

Plans must also be tested within one month of any pollution incident occurring in the course of an activity to which a licence relates to assess, in the light of that incident, whether the information included in the plan is accurate and up to date, and the plan is still capable of being implemented in a workable and effective manner.

15.0 REFERENCES

Environmental Protection Authority 2012, Guideline for the Preparation of Pollution Incident Response Management Plans

NSW Office of Environment and Heritage, Environmental Protection Licence (EPL) 3607

Protection of the Environment Operations (General) Amendment (Pollution Incident Response Management Plans) Regulation 2012.

APPENDICES

APPENDIX 1 – Site Map

APPENDIX 2 – Pollution Risk Assessment

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

- APPENDIX 3 – Duty Card
- APPENDIX 4 – Incident Report and Detail Form
- APPENDIX 5 – Complaints Form
- APPENDIX 6 – Location of sediment dams
- APPENDIX 7 – Location of Water discharge Points

APPENDIX 1

SITE MAP



Wallerawang Quarry PIRMP	Approver: Signature:	Date: Review date:
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APPENDIX 2

POLLUTION RISK ASSESSMENT

Pollution Identification and Risk Assessment Form																																						
<p>Definition for Severity: Insignificant – No injuries or emissions, low financial loss Minor – First aid treatment, on-site release immediately contained, medium financial loss. Moderate – Medical treatment required, on-site released contained with outside assistance, high financial loss. Major – Extensive injuries, loss of production capability, off-site release with no detrimental effects, major financial loss. Catastrophic – Death, Toxic release off-site with detrimental effect, huge financial loss.</p>	<p>Definition for Likelihood: Almost Certain – Is expected to occur in most circumstances. Likely – Will probably occur in most circumstances Possible – Might occur at some time. Unlikely – Could occur at some time. Rare – May occur only in exceptional circumstances</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Severity → Likelihood ↓</th> <th style="padding: 5px;">Catastrophic</th> <th style="padding: 5px;">Major</th> <th style="padding: 5px;">Moderate</th> <th style="padding: 5px;">Minor</th> <th style="padding: 5px;">Insignificant</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Almost Certain</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: yellow;">M</td> </tr> <tr> <td style="padding: 5px;">Likely</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: green;">L</td> </tr> <tr> <td style="padding: 5px;">Possible</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: green;">L</td> <td style="padding: 5px; background-color: green;">L</td> </tr> <tr> <td style="padding: 5px;">Unlikely</td> <td style="padding: 5px; background-color: red;">H</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: green;">L</td> <td style="padding: 5px; background-color: green;">L</td> </tr> <tr> <td style="padding: 5px;">Rare</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: yellow;">M</td> <td style="padding: 5px; background-color: green;">L</td> <td style="padding: 5px; background-color: green;">L</td> <td style="padding: 5px; background-color: green;">L</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;"><i>Severity x Likelihood = Risk Rating</i></p>	Severity → Likelihood ↓	Catastrophic	Major	Moderate	Minor	Insignificant	Almost Certain	H	H	H	M	M	Likely	H	H	M	M	L	Possible	H	H	M	L	L	Unlikely	H	M	M	L	L	Rare	M	M	L	L	L
Severity → Likelihood ↓	Catastrophic	Major	Moderate	Minor	Insignificant																																	
Almost Certain	H	H	H	M	M																																	
Likely	H	H	M	M	L																																	
Possible	H	H	M	L	L																																	
Unlikely	H	M	M	L	L																																	
Rare	M	M	L	L	L																																	
Project Name: Walker Quarry	Date: 14/1/16																																					
Person/s Involved: Ray Sharwood-Ross Brownlow	Signed:																																					
Person/s Involved:	Signed:																																					
Person/s Involved:	Signed:																																					

Ref. #	Hazard/Aspect/Design Change	Risk/Impact (Consequence)	Potential Severity	Potential Likelihood	Initial Risk Rating (without controls)	Proposed Risk Controls (In accordance with the Hierarchy of Controls)	By Who & When	Residual Risk Rating (With Controls)
	Oil /Fuel Spill	Contamination	H	H	H	Fuel Cart and Oil container are bunded & Spill Kits are available	Quarry personnel, contractors & visitors	L
	Dust	Environmental contamination	M	M	M	Water truck, water sprays on equipment, PPE, Sealed cabins on equipment, Wheel wash on site, vehicle tarping prior to leaving site	Quarry personnel, contractors & visitors	L

Wallerawang Quarry PIRMP	Approver: Signature:	Date: Review date:
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Ref. #	Hazard/Aspect/ Design Change	Risk/Impact (Consequence)	Potential Severity	Potential Likelihood	Initial Risk Rating (without controls)	Proposed Risk Controls (In accordance with the Hierarchy of Controls)	By Who & When	Residual Risk Rating (With Controls)
	Unplanned discharge of storm water from site	Contamination of waterways	H	H	H	Control of catchment dam levels by selective pumping from dam to dam, daily monitor of dam levels, activate plan to transfer water prior to storm weather arriving on site.	Authorised quarry Personnel as required	M

Wallerawang Quarry PIRMP	Approver:	Date:
	Signature:	Review date:

APPENDIX 3

Duty Card 1

WALKER QUARRY OPERATION

EMERGENCY CALL RESPONSE SHEET

Time:		
Date:		
Control Room Operator		
Person Calling		
Nature of Emergency		
Location		
Person/Persons involved		
Nature of Injuries		
Control methods in place		
Is further assistance required		
If an Environmental emergency, what equipment is required?		
Are Emergency Services Required?	Yes	No
<ul style="list-style-type: none"> • Ambulance • Police • Fire • SES • Mines Rescue Station Emergency phone number 63531124 	<p>If required Phone 000 (Zero, Zero, Zero.)</p> <p>Stating Your Name</p> <p> Operation Name and location for access</p> <p> Type of accident/incident</p> <p> Number of persons injured</p> <p> Type of injuries (if known)</p>	

Walker Quarry Front Gate GPS Coordinates in Universal Transverse Mercator Coordinate System	-33.433407, 150.072271
In the event of further responses Quarry Manager is to: <ul data-bbox="239 425 829 851" style="list-style-type: none">• Continually man telephone• Prevent unnecessary phone calls• Do not release statements to media if contacted• Log all phone calls and events Duty Card 2• Record times of arrival of notified persons to site Duty Card 3• Advise all persons on site of events	

Duty Card 4
WALKER QUARRY OPERATION
EMERGENCY RESPONSE CONTACT SHEET

Quarry Manager 0413 784 420 02 6324066	Operations Manager 0417 663 222 02 6324066
Weighbridge Officer 0418 592 322	Production Manager 0409 442 040
	Western Mines Rescue Station Office 0263501000 Emergency Number 0263531124
Inspector of Mines Office 0263507888 Desk 0263507892 Mobile 0407222475	Emergency Services 000 Fire Brigade 6351 3366 Fire Rural 6353 1862 Police 3652 8399 Ambulance 131233
Bathurst EPA 6332 7603 131 555 Ministry of Health Bathurst 6339 5601 Safe Work NSW 13 10 50	Lithgow Council 6354 9999

APPENDIX 4

INCIDENT REPORT AND DETAIL FORM

[WQ Non-conformance Report.doc](#)

[WQ Accident Incident Investigation Form.doc](#)

Accident / Incident Investigation Form

PROJECT: _____

DATE: _____

TYPE OF INCIDENT (TICK APPROPRIATE)

Person/LTI

Environmental

Near Miss

Property Damage/Failure of a Structure

Accident/Incident Report Number (if applicable): _____

Statutory Notification Reference Number (if applicable): _____

ADDRESS OF INCIDENT

Project Name _____

Address _____

Suburb _____

State _____

Postcode _____

LOCATION (PROVIDE THE EXACT LOCATION OF WHERE THE INCIDENT OCCURRED)

INJURED WORKER'S DETAILS (IF APPLICABLE)

First Name _____

Last Name _____

Phone Number _____

Address _____

Employed By _____

Position Title _____

PROVIDE A BRIEF OUTLINE OF INCIDENT

WITNESS DETAILS (IF APPLICABLE)

First Name

Last Name

Phone Number

Address

PROVIDE A SUMMARY OF THE EVENTS LEADING UP TO THE INCIDENT

PRELIMINARY INVESTIGATION FINDINGS / IDENTIFIED ROOT CAUSES

CORRECTIVE ACTIONS

INVESTIGATION FINDINGS TO BE COMMUNICATED (TICK ALL THAT APPLY)

- Develop and issue hazard alert to all sites
- Brief Site Safety Committee
- Toolbox relevant personnel

- Toolbox entire site
- Run training session in relation to the incident/investigation
- Review/amend relevant procedure
- Create new procedure

DETAILS OF PERSON CONDUCTING INVESTIGATION

<input type="checkbox"/> Other	
First Name	Last Name
Phone Number	
Position Title	
Date Investigation Commenced	Date Investigation Completed
Signature	

CONSTRUCTION / PROJECT MANAGER SIGN OFF ONCE COMPLETED

First Name	Last Name
Signature	Date

DISTRIBUTED TO

First Name	Last Name
Company	Position

PERSON RESPONSIBLE FOR IMPLEMENTING / EVALUATING CORRECTIVE ACTIONS

First Name		Last Name	
Company		Position	
Corrective Actions Implemented (Date)			Controls Effective : YES / NO

If no, what additional controls are required:

Non-conformance Report

Location:		Issue Date:		NCR No.:	
Issued By:		Due Date:			
DESCRIPTION OF NON-CONFORMANCE: / SEQUENCE OF EVENTS / WHS BREACH:					
NCR Issued To		Accepted: (Signature)			
Company:		Date:			
DETAILS OF REQUIRED CORRECTIVE ACTION:					
RESPONSIBILITY FOR CORRECTIVE ACTION:					
Name:			Position Title:		
ROOT CAUSE OF NON-CONFORMANCE					
DETAILS OF ACTION TO PREVENT RE-OCCURRENCE					

APPENDIX 6

LOCATION OF SEDIMENT DAMS

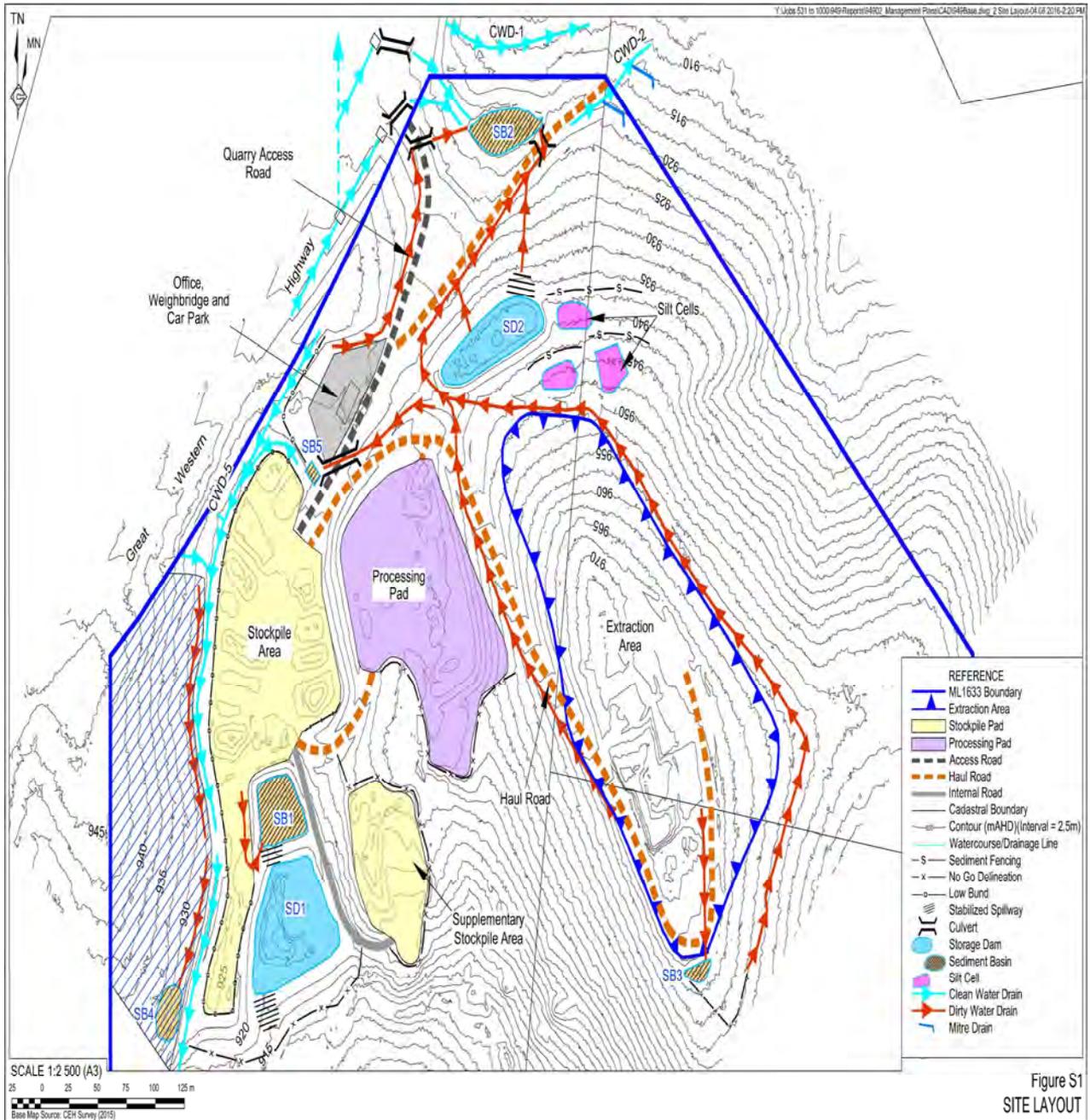


Figure S1
SITE LAYOUT

APPENDIX 7

LOCATION OF SAMPLE POINTS

(Refer Biodiversity Management Plan)

