

Appendix 3

Environmental Assessment Requirements of the DPE and Consulted Government Agencies

(Total No. of pages including blank pages = 44)

Note: A colour version of this Appendix is available on the digital version of this document



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ENVIRONMENTAL ASSESSMENT*DA 344-11-2001 Modification 1**Report No. 949/05***WALKER QUARRIES PTY LTD***Wallerawang Quarry*

From: Colin.Phillips@planning.nsw.gov.au
Sent: Wednesday, 1 February 2017 3:09 PM
To: Alex Irwin
Cc: Howard.Reed@planning.nsw.gov.au; Chris.Schultz@planning.nsw.gov.au
Subject: RE: 949 - Wallerawang Quarry - Application to Modify DA 344-11-2001

Good Afternoon Alex,

The Department will not be issuing formal SEARs for this proposed modification.

The matters that you have set out to be addressed in the supplied Project Overview are a good starting point for the content of an Environmental Assessment (EA) to accompany the proposed modification application for the Wallerawang Quarry.

The first matter to establish is the ownership of the land to which the application applies and the provision of evidence that the relevant landowners have given permission for the application to be lodged. Details may have changed in the meantime, but when assessed in 2004, the quarry was described as being part freehold land (Lot 6 DP872230); part Crown land under leasehold Licence 200880 (Lot194 DP751651); and part Lidsdale State Forest No 707.

The Applicant must consult with relevant Government agencies about the matters to be addressed in the EA. You should provide evidence of this consultation, and address the matters raised in the EA. Agencies that must be consulted include:

- Lithgow City Council;
- NSW Water;
- Division of Resources and Energy; and
- OEH.

The site of the quarry is in a sensitive area. It is in the catchment of Coxs River, which is part of Sydney Water supply catchment.

Threatened species are known to have been present on the site Bathurst Copper Butterfly and feed species, and Yellow Sheath-tail Bat. Any consideration of threatened species should be mindful of any new species listings and not simply rely on dated field work.

The proposal involves the clearing of about 2.5 ha of native vegetation (cleared illegally) and it is the Department's expectation that a mechanism be included in the EA to assess this vegetation loss and a means to compensate for this loss. Reference should be made to the Framework for Biodiversity Assessment of 2014 to see how its principles can be applied to this situation (given that the vegetation has been cleared and cannot be directly assessed by the biometric tools).

I suggest that you liaise closely with OEH about how you will assess and then compensate for this loss of vegetation. I would be available to assist with any discussions with OEH, as this is not a straightforward application of the FBA.

The formal point of contact with the Department is Howard Reed, Director, Resource Assessments.

Regards

Colin Phillips
Team Leader
Planning Services, Resources Assessments
Planning & Environment

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Level 22, 320 Pitt Street
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**Planning &
Environment**



Please consider the environment before deciding to print this e-mail.

From: Alex Irwin [mailto:alex@rwcorkery.com]
Sent: Wednesday, 1 February 2017 12:42 PM
To: Colin Phillips <Colin.Phillips@planning.nsw.gov.au>
Subject: RE: 949 - Wallerawang Quarry - Application to Modify DA 344-11-2001

Thanks Colin,

Based on the EP&A Regs, as the Wallerawang Quarry was approved under Part 4 (as State significant development) in October 2004, it is therefore a Part 3A Project. On this basis, the Applicant will be making application to modify the approval under Section 75W of the Act in accordance with the transitional provisions.

I'm in the office all afternoon so I look forward to your call to discuss and confirm (or otherwise).

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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From: Colin.Phillips@planning.nsw.gov.au [mailto:Colin.Phillips@planning.nsw.gov.au]
Sent: 1 February 2017 12:31 PM
To: Alex Irwin
Subject: FW: 949 - Wallerawang Quarry - Application to Modify DA 344-11-2001

Good Afternoon Alex,

To get you started I provide Clause 8J (8) (c) of the EP&A Regulation on transitional provisions.

For the purposes only of modification, the following development consents are taken to be approvals under Part 3A of the Act and section 75W of the Act applies to any modification of such a consent:

- (a) a development consent granted by the Minister under section 100A or 101 of the Act,
- (b) a development consent granted by the Minister under *State Environmental Planning Policy No 34—Major Employment-Generating Industrial Development*,
- (c) a development consent granted by the Minister under Part 4 of the Act (relating to State significant development) before 1 August 2005 or under clause 89 of Schedule 6 to the Act,
- (d) a development consent granted by the Land and Environment Court, if the original consent authority was the Minister and the consent was of a kind referred to in paragraph (c).

The development consent, if so modified, does not become an approval under Part 3A of the Act.

I think that Wallerawang Quarry is a development consent that falls under the category of clause 89 to Schedule 6 of the Act. We had similar situation brought to our attention last week with Cudgen Lakes Quarry in the Tweed valley.

I will call you later this afternoon.

Regards

Colin Phillips
Team Leader
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Environment



Please consider the environment before deciding to print this e-mail.

From: Howard Reed
Sent: Tuesday, 31 January 2017 1:57 PM
To: Colin Phillips <Colin.Phillips@planning.nsw.gov.au>; Chris Schultz <Chris.Schultz@planning.nsw.gov.au>
Cc: Benjamin Harrison <Benjamin.Harrison@planning.nsw.gov.au>; Kirsty Ruddock <Kirsty.Ruddock@planning.nsw.gov.au>
Subject: FW: 949 - Wallerawang Quarry - Application to Modify DA 344-11-2001

Hi Col,

can you please get back to Alex and discuss the proposed Mod.

Howard

From: Alex Irwin [<mailto:alex@rwcorkery.com>]
Sent: Tuesday, 31 January 2017 11:40 AM
To: Howard Reed <Howard.Reed@planning.nsw.gov.au>

Cc: davidm@walkerquarries.com.au; John McAuley <pmcauley@ozemail.com.au>
Subject: 949 - Wallerawang Quarry - Application to Modify DA 344-11-2001

Howard,

Walker Quarries Pty Ltd operates the Wallerawang Quarry under DA 344-11-2001, issued by the Minister for Infrastructure and Planning on 19 October 2004, on Lot 6 DP872230 and Lot 194 DP751651 south of the Great Western Highway near Wallerawang.

As a result of recent inspections by DPE compliance personnel, a non-compliance relating to unauthorised clearing of areas for additional stockpile management has been identified. A Penalty Infringement Notice and an Order (only a draft has been received by Walker Quarries to date) to rectify the non-compliance by 28 February 2017 has been issued to Walker Quarries. Discussions held with the compliance officer, Chris Schultz, have identified modification to the development consent to include the unauthorised clearing into the approved development footprint as a method to rectify the non-compliance.

The purpose of this email is as follows.

1. To provide the DPE with confirmation as to the proposed approach to rectifying the non-compliance (as required by the draft Order).
2. To confirm the appropriate personnel within the DPE with whom to correspond on this matter.
3. To confirm the assessment pathway to be followed in seeking a modification, i.e. Section 96 or (repealed) Section 75W (under transitional arrangements) of the EP&A Act (noting DA 344-11-2001 was issued in 2004 which pre-dates the now repealed Part 3A of the EP&A Act).
4. To provide the DPE with an overview of current operations, the proposed modification and preliminary assessment of the key environmental issues (refer to the attached Project Overview).
5. To obtain from DPE (and other government agencies as relevant) environmental assessment requirements (in the form of Secretary's Environmental Assessment Requirements or otherwise).

I look forward to receiving feedback from the DPE in relation to points 2 and 3 above, however, should you require further information to assist you, please do not hesitate to contact me.

Regards

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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ENVIRONMENTAL ASSESSMENT

DA 344-11-2001 Modification 1

Report No. 949/05

WALKER QUARRIES PTY LTD

Wallerawang Quarry

From: Colin.Phillips@planning.nsw.gov.au
Sent: Monday, 20 February 2017 1:31 PM
To: Alex Irwin
Cc: Howard.Reed@planning.nsw.gov.au; Chris.Schultz@planning.nsw.gov.au
Subject: RE: 949 - Wallerawang Quarry - Notice of Intention to Modify DA 344-11-2001

Good afternoon Alex,

I forwarded your most recent email to both Howard Reed and Chris Schultz and their replies are provided below.

The Department does not see any compelling reason to accept two modification proposals for the Wallerawang Quarry instead of one.

In the interests of efficiency for all parties, please prepare one modification application to regularise the matters identified by our Compliance Branch.

In terms of the requirements for the EA for this modification, the Department's earlier advice stands with the addition that you must also consult with the EPA and DPI-Water.

Regards

Colin Phillips

Team Leader

Resource Assessments

NSW Department of Planning & Environment

Level 22, 320 Pitt Street

Sydney NSW 2000 Australia

I am in the office Mon Tue Wed and Fri

T +61 2 9274 6483

E colin.phillips@planning.nsw.gov.au



So far, I cannot see any sufficient reason to separate the 2 proposals.

Howard

Hi Colin,

Compliance do not have an issue with combining the two modifications into one application. We can see that they are actively progressing rectification of the non-compliances. If this results in the later submission of the sand processing modification this would not be an issue to compliance.

*Cheers,
Chris*

Chris Schultz

Senior Compliance Officer

Department of Planning & Environment | Resource Assessments & Compliance
P +61 2 4224 9478 | M +61 417 177 749 | E Chris.Schultz@planning.nsw.gov.au

From: Alex Irwin [mailto:alex@rwcorkery.com]
Sent: Monday, 20 February 2017 11:57 AM
To: Colin Phillips <Colin.Phillips@planning.nsw.gov.au>
Cc: Howard Reed <Howard.Reed@planning.nsw.gov.au>
Subject: RE: 949 - Wallerawang Quarry - Notice of Intention to Modify DA 344-11-2001

Hi Colin,

The decision to make separate application is based on a couple of reasons.

The first of which is that the catalyst for the modifications stem from separate notices issued by the Compliance division of DPE. The decision to modify the development consent to address the noted non-compliances was taken separately. Advice to the compliance division of the DPE (Chris Schultz) was provided separately regarding the intention to modify DA 344-11-2001 to rectify the identified non-compliances.

I note that in most circumstances we would combine the requested modifications as I agree there are a number of efficiencies that this would create. However, in this case, we believe there is justification for the approach proposed.

- I believe that the complexity of one of the issues, namely the retrospective assessment of impact associated with the stockpile extension areas and offsetting requirements, is far greater than the processing operations modification (where the impacts have largely been assessed by the previous EIS for the Quarry – impact area, and Water Management Plan – water use). *In recognition of the added complexity associated with the stockpile area extensions, these areas have been stabilized with no further development until determination is received.*
- I also note that the DPE compliance division has at this stage only sought confirmation as to how the processing operations non-compliance will be rectified. As of 13 February 2017, Walker Quarries confirmed modification to DA 344-11-2001 would be sought. On this basis, activities remain ongoing in accordance with the Quarry Water Management Plan (and other approved Management Plans) until such time as the non-compliance is rectified by way of modification.
- As a stop work order in relation to the processing operations, presumably taking into account the commitment of Walker Quarries to modify DA 344-11-2001 as quickly as possible and the fact that operations are being undertaken in accordance with a Water Management Plan, quick resolution of this matter seems appropriate. No formal information has been supplied to the compliance division regarding a timetable for compliance, however, in discussions held with Chris Schultz, we have indicated an EA could be completed and submitted by mid-March.

Ultimately, Walker Quarries would like to formalize the sand processing operations permitted by DA 344-11-2001 as quickly as possible. There is some concern that extended delays in achieving this may result in further action being taken by the DPE compliance division. There is also the concern that by combining the two modifications, the potential for one to be deemed acceptable but rejected as it forms part of a larger modification is also raised. As noted above, we believe that assessment and determination of the stockpile extension is likely to be more complex and therefore poses greater risk in relation to assessment / determination time and outcome.

I hope this clarifies the rationale behind our approach and that the DPE can consider the specific circumstances of Walker Quarries in this case. I'm sure we'll discuss in order to establish what is reasonable.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

ENVIRONMENTAL ASSESSMENT

DA 344-11-2001 Modification 1

Report No. 949/05

WALKER QUARRIES PTY LTD

Wallerawang Quarry

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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From: Colin.Phillips@planning.nsw.gov.au [<mailto:Colin.Phillips@planning.nsw.gov.au>]

Sent: 17 February 2017 4:55 PM

To: Alex Irwin

Cc: Howard.Reed@planning.nsw.gov.au

Subject: RE: 949 - Wallerawang Quarry - Notice of Intention to Modify DA 344-11-2001

Alex,

I do not want to deal with two modification applications within a fortnight of each other for Wallerawang Quarry.

It makes no sense to me and would seem to be an inefficient use of DPE's, other agencies' and your client's resources.

Please explore how to combine these two actions into the single modification application.

I am available to discuss this with you.

Regards

Colin Phillips
Team Leader
Planning Services, Resources Assessments
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Please consider the environment before deciding to print this e-mail.

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

Sent: Wednesday, 15 February 2017 12:07 PM

To: Colin Phillips <Colin.Phillips@planning.nsw.gov.au>

Subject: RE: 949 - Wallerawang Quarry - Notice of Intention to Modify DA 344-11-2001

Thanks Colin,

I note this is a separate modification (MOD 2) to that to which you provided the response below.

I note separate applications are to be made on the basis of the different schedules to which we can address what are the relevant issues, i.e.:

- Stockpile Extension – Vegetation Clearing issues.
- Washing activities – Water Management Issues.

Noting the above, I agree that the points raised with respect to land ownership, Cops River catchment are common. I do not believe Purple Copper Butterfly or native vegetation issues are relevant to the washing activities modification on the basis that these are to be undertaken within the approved impact footprint of the Quarry.

Do we need to consult with OEH for this proposed modification?

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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From: Colin.Phillips@planning.nsw.gov.au [<mailto:Colin.Phillips@planning.nsw.gov.au>]

Sent: 15 February 2017 11:35 AM

To: Alex Irwin

Cc: Howard.Reed@planning.nsw.gov.au; Chris.Schultz@planning.nsw.gov.au; davidm@walkerquarries.com.au; John McAuley

Subject: RE: 949 - Wallerawang Quarry - Notice of Intention to Modify DA 344-11-2001

Good Morning Alex,

I think the matters you have raised in today's email were addressed in my email to you of 1 February 2017.

Regards

Colin Phillips
Team Leader
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**Planning &
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Please consider the environment before deciding to print this e-mail.

Good Afternoon Alex,

The Department will not be issuing formal SEARs for this proposed modification.

The matters that you have set out to be addressed in the supplied Project Overview are a good starting point for the content of an Environmental Assessment (EA) to accompany the proposed modification application for the Wallerawang Quarry.

The first matter to establish is the ownership of the land to which the application applies and the provision of evidence that the relevant landowners have given permission for the application to be lodged. Details may have changed in the meantime, but when assessed in 2004, the quarry was described as being part freehold land (Lot 6 DP872230); part Crown land under leasehold Licence 200880 (Lot194 DP751651); and part Lidsdale State Forest No 707.

The Applicant must consult with relevant Government agencies about the matters to be addressed in the EA. You should provide evidence of this consultation, and address the matters raised in the EA. Agencies that must be consulted include:

- Lithgow City Council;
- NSW Water;
- Division of Resources and Energy; and
- OEH.

The site of the quarry is in a sensitive area. It is in the catchment of Coxs River, which is part of Sydney Water supply catchment.

Threatened species are known to have been present on the site Bathurst Copper Butterfly and feed species, and Yellow Sheath-tail Bat. Any consideration of threatened species should be mindful of any new species listings and not simply rely on dated field work.

The proposal involves the clearing of about 2.5 ha of native vegetation (cleared illegally) and it is the Department's expectation that a mechanism be included in the EA to assess this vegetation loss and a means to compensate for this loss. Reference should be made to the Framework for Biodiversity Assessment of 2014 to see how its principles can be applied to this situation (given that the vegetation has been cleared and cannot be directly assessed by the biometric tools).

I suggest that you liaise closely with OEH about how you will assess and then compensate for this loss of vegetation. I would be available to assist with any discussions with OEH, as this is not a straightforward application of the FBA.

The formal point of contact with the Department is Howard Reed, Director, Resource Assessments.

Regards

Colin Phillips

From: Alex Irwin [<mailto:alex@rwcorkery.com>]
Sent: Wednesday, 15 February 2017 10:42 AM
To: Colin Phillips <Colin.Phillips@planning.nsw.gov.au>
Cc: Howard Reed <Howard.Reed@planning.nsw.gov.au>; Chris Schultz <Chris.Schultz@planning.nsw.gov.au>; davidm@walkerquarries.com.au; John McAuley <pmcauley@ozemail.com.au>
Subject: 949 - Wallerawang Quarry - Notice of Intention to Modify DA 344-11-2001

Colin,

As you are aware, Walker Quarries Pty Ltd operates the Wallerawang Quarry ("the Quarry") under DA 344-11-2001, issued by the Minister for Infrastructure and Planning on 19 October 2004, on Lot 6 DP872230 and Lot 194 DP751651 south of the Great Western Highway near Wallerawang.

As a result of recent inspections by DPE compliance personnel, Walker Quarries were advised that DPE considered the operation of a sand washing plant to be non-compliant with DA 344-11-2001 and requested confirmation as to how this would be rectified. While Walker Quarries maintains that the processing of quartzite into sand, using water to wash finer slits and clays from the material, is in accordance with the intent of the development for which application was made (in 2001) and issued (in 2004), Walker Quarries now seeks to modify DA 344-11-2001 to formally include sand washing activities as part of compliant Quarry operations.

The purpose of this email is as follows.

1. To provide the DPE with confirmation as to the proposed approach to rectifying the non-compliance.
2. To confirm the appropriate you as the appropriate personnel within the DPE with whom to correspond on this matter.
3. To confirm the assessment pathway to be followed in seeking a modification. We understand this to be Section 75W (under transitional arrangements) of the EP&A Act.
4. To provide the DPE with an overview of current operations, the proposed modification and preliminary assessment of the key environmental issues (refer to the attached Project Overview).
5. To obtain from DPE (and other government agencies as relevant) environmental assessment requirements (in the form of Secretary's Environmental Assessment Requirements or otherwise).

We believe the preparation of an Environmental Assessment to support an application for modification can be produced by 17 March 2017 (if not sooner) and will be working to this timetable for application.

I look forward to receiving feedback from the DPE, however, should you require further information to assist you, please do not hesitate to contact me.

Regards

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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From: Lauren Stevens <Lauren.Stevens@lithgow.nsw.gov.au>
Sent: Wednesday, 15 February 2017 12:04 PM
To: Alex Irwin
Subject: 949 - Wallerawang Quarry - DA 344-11-2001 Modification: Request for Assessment Requirements

Dear Alex

I refer to the abovementioned project and your request for submissions for the development.

Council considers the Environmental Assessment adequately highlights the relevant issues, and has no objection to the project subject to you including any potentially visual impacts that may occur.

Yours Sincerely

Lauren Stevens | Development Planner

Environment & Development | [Lithgow City Council](#)
Phone: (02) 6354 9999 | Fax: (02) 6351 4259

From: Alex Irwin [alex@rwcorkery.com]
Sent: Wednesday, 1 February 2017 5:34 PM
To: Paul Cashel
Cc: 'davidm@walkerquarries.com.au'; 'John McAuley'
Subject: 949 - Wallerawang Quarry - DA 344-11-2001 Modification: Request for Assessment Requirements

Paul,

The purpose of this email is to inform Lithgow City Council (LCC) of the intention of Walker Quarries Pty Ltd to lodge an application to modify DA 344-11-2001 for the Wallerawang Quarry ("the Quarry"), and seek any assessment requirements that the LCC may have for the modification.

The modification is being proposed to rectify a non-compliance identified by the Department of Planning & Environment (DPE) at the Quarry related to unauthorised clearing of two stockpile areas. The DPE has confirmed that the proposed modification is to be assessed under the transitional arrangements of the EP&A Act for Part 3A approved projects. An overview of the proposed modification and identification of important environmental factors to be assessed is provide in the attached Project Overview.

We are hopeful of finalizing an Environmental Assessment to accompany an application to modify DA 344-11-2001 in mid to late March and therefore would appreciate any advice on assessment requirements as soon as possible (preferably by Friday 10 February).

Should you have any questions, please do not hesitate to ask. In the event this email should be directed to another officer within the LCC, could you kindly forward this to them (and cc me in to this email) or let me know who to refer to this to.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

ENVIRONMENTAL ASSESSMENT

DA 344-11-2001 Modification 1

Report No. 949/05

WALKER QUARRIES PTY LTD

Wallerawang Quarry

RW Corkery & Co Pty Limited

Geological and Environmental Consultants

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PO Box 323, Penrith NSW 2751
Level 4, 2-6 Station Street
Penrith NSW 2750
1300 722 468
www.watarnsw.com.au
ABN 21 147 934 787

Ref: D2017/016496

Alex Irwin
Senior Environmental Consultant
RW Corkery & Co Pty Ltd
GPO Box 239
Brooklyn NSW 2083

Dear Mr Irwin

**Wallerawang Quarry Project_ Stockpile Extension (DA 344-11-2001)
Request for Input into Environmental Assessment Requirements**

I refer to your email received 1 February 2017 providing a project overview and seeking WaterNSW's inputs into the Environmental Assessment requirements for the Wallerawang Quarry - Stockpile Extension. WaterNSW appreciates the opportunity.

A principal objective of WaterNSW is to ensure that the Sydney drinking water catchment is managed and protected so as to promote water quality, the protection of public health and public safety, and the protection of the environment.

WaterNSW notes that the proposed quarry extension is in the Coxes River catchment which flows to Warragamba Dam. WaterNSW has adopted a set of principles for managing mining and coal seam gas impacts in Declared catchment areas which can be found at:

http://www.watarnsw.com.au/data/assets/pdf_file/0010/119890/Mining-principles.pdf.

The principles establish the outcomes WaterNSW considers essential to protect the drinking water supplies to the Greater Sydney region. WaterNSW requests that the Environmental Assessment:

- Detail how the project would be consistent with WaterNSW's mining principles, in particular to ensure water quantity, water quality and sound and robust evidence regarding environmental impacts.
- Demonstrate how the carrying out of the project would have a neutral or beneficial effect on receiving water quality pursuant to clause 10 of State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011.
- Propose the existing Water Management Plan be updated including details of adequacy of the existing soil and water management measures for the proposed modification.

If you wish to discuss this letter or the project more generally please do not hesitate to contact Girja Sharma on 47242459.

A handwritten signature in black ink, appearing to read "Malcolm Hughes".

MALCOLM HUGHES
Manager Catchment Protection

8/2/17



Department
of Industry

OUT17/7074

Mr Alex Irwin
Senior Environmental Consultant
R.W. Corkery & Co Pty Limited
PO Box 239
BROOKLYN NSW 2083

alex@rwcorkery.com

Dear Alex

Wallerawang Quarry - DA 344-11-2001 Modification: Request for Assessment Requirements

I refer to your email dated 1 February 2017 inviting the Division of Resources & Energy (DRE) to provide comments on the Wallerawang Quarry - DA 344-11-2001 Modification: Request for Assessment Requirements.

Quartzite is a prescribed mineral under the *Mining Act 1992* with the conditions of Mining Lease 1633 permitting extraction from the site.

DRE has reviewed and assessed the adequacy of information in relation to Wallerawang Quarry - DA 344-11-2001 Modification: Request for Assessment Requirements and provides the following advice.

The standard mining development rehabilitation SEARs provided below, be applied to this project, where relevant (noting this is a relatively minor modification to an existing consent). DRE requires that the proponent provide annual production data for the subject site as a condition of the modified development consent.

The applicant is advised that the Mining Operations Plan/Rehabilitation Management Plan for Wallerawang Quarry will need to be updated for consistency with the modified Development Consent.

DRE does not have any resource sterilisation concerns regarding the modification.

Should you have any enquires regarding this matter please contact Steve Cozens, Senior Project Officer, Royalty & Advisory Services on 9842 8573.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Zane West', written over a horizontal line.

Zane West
Manager Royalties & Advisory Services
15-Feb-16

Division of Resources and Energy
PO Box 344 Hunter Region Mail Centre NSW 2310
516 High St Maitland NSW 2323
Tel: 02 4931 6666 Fax: 02 4931 6776 www.industry.nsw.gov.au
ABN 72 189 919 072

ADVICE RESPONSE

Mining Development Rehabilitation Standard SEARs

Post-mining land use

- (a) Identification and assessment of post-mining land use options;
- (b) Identification and justification of the preferred post-mining land use outcome(s), including a discussion of how the final land use(s) are aligned with relevant local and regional strategic land use objectives;
- (c) Identification of how the rehabilitation of the project will relate to the rehabilitation strategies of neighbouring mines within the region, with a particular emphasis on the coordination of rehabilitation activities along common boundary areas;

Rehabilitation objectives and domains

- (d) Inclusion of a set of project rehabilitation objectives and completion criteria that clearly define the outcomes required to achieve the post-mining land use for each domain. Completion criteria should be specific, measurable, achievable, realistic and time-bound. If necessary, objective criteria may be presented as ranges;

Rehabilitation Methodology

- (e) Details regarding the rehabilitation methods for disturbed areas and expected time frames for each stage of the rehabilitation process;
- (f) Mine layout and scheduling, including maximising opportunities for progressive final rehabilitation. The final rehabilitation schedule should be mapped against key production milestones (i.e. ROM tonnes) of the mine layout sequence before being translated to indicative timeframes throughout the mine life. The mine plan should maximise opportunities for progressive rehabilitation;

Conceptual Final Landform Design

- (g) Inclusion of a drawing at an appropriate scale identifying key attributes of the final landform, including final landform contours and the location of the proposed final land use(s);

Monitoring and Research

- (h) Outlining the monitoring programs that will be implemented to assess how rehabilitation is trending towards the nominated land use objectives and completion criteria;
- (i) Details of the process for triggering intervention and adaptive management measures to address potential adverse results as well as continuously improve rehabilitation practices;
- (j) Outlining any proposed rehabilitation research programs and trials, including their objectives. This should include details of how the outcomes of research are considered as part of the ongoing review and improvement of rehabilitation practices;

Post-closure maintenance

- (k) Description of how post-rehabilitation areas will be actively managed and maintained in accordance with the intended land use(s) in order to demonstrate progress towards meeting the rehabilitation objectives and completion criteria in a timely manner;

Barriers or limitations to effective rehabilitation

- (l) Identification and description of those aspects of the site or operations that may present barriers or limitations to effective rehabilitation, including:
 - (i) evaluation of the likely effectiveness of the proposed rehabilitation techniques against the rehabilitation objectives and completion criteria;
 - (ii) an assessment and life of mine management strategy of the potential for geochemical constraints to rehabilitation (e.g. acid rock drainage, spontaneous combustion etc.), particularly associated with the management of overburden/interburden and reject material;

- (iii) the processes that will be implemented throughout the mine life to identify and appropriately manage geochemical risks that may affect the ability to achieve sustainable rehabilitation outcomes;
 - (iv) a life of mine tailings management strategy, which details measures to be implemented to avoid the exposure of tailings material that may cause environmental risk, as well as promote geotechnical stability of the rehabilitated landform; and
 - (v) existing and surrounding landforms (showing contours and slopes) and how similar characteristics can be incorporated into the post-mining final landform design. This should include an evaluation of how key geomorphological characteristics evident in stable landforms within the natural landscape can be adapted to the materials and other constraints associated with the site.
- (m) Where a void is proposed to remain as part of the final landform, include:
- (i) a constraints and opportunities analysis of final void options, including backfilling, to justify that the proposed design is the most feasible and environmentally sustainable option to minimise the sterilisation of land post-mining;
 - (ii) a preliminary geotechnical assessment to identify the likely long term stability risks associated with the proposed remaining high wall(s) and low wall(s) along with associated measures that will be required to minimise potential risks to public safety; and
 - (iii) outcomes of the surface and groundwater assessments in relation to the likely final water level in the void. This should include an assessment of the potential for fill and spill along with measures required be implemented to minimise associated impacts to the environment and downstream water users.
- (n) Where the mine includes underground workings:
- (i) determine (with reference to the groundwater assessment) the likelihood and associated impacts of groundwater accumulating and subsequently discharging (e.g. acid or neutral mine drainage) from the underground workings post cessation of mining; and
 - (ii) consideration of the likely controls required to either prevent or mitigate against these risks as part of the closure plan for the site.
- (o) Consideration of the controls likely to be required to either prevent or mitigate against rehabilitation risks as part of the closure plan for the site;
- (p) Where an ecological land use is proposed, demonstrate how the revegetation strategy (e.g. seed mix, habitat features, corridor width etc.) has been developed in consideration of the target vegetation community(s);
- (q) Where the intended land use is agriculture, demonstrate that the landscape, vegetation and soil will be returned to a condition capable of supporting this; and
- (r) Consider any relevant government policies¹.

¹ The following government policies should be considered when addressing rehabilitation issues:

- Mine Rehabilitation (Leading Practice Sustainable Development Program for the Mining Industry, 2006)
- Mine Closure and Completion (Leading Practice Sustainable Development Program for the Mining Industry, 2006)
- Strategic Framework for Mine Closure (ANZMEC-MCA, 2000)



OUT17/4170
MCV16/408 & MCV16/319

24 February 2017

Mr David Murray
Managing Director
Walker Quarries Pty Ltd
PO Box 307
LITHGOW NSW 2790

Dear David

Wallerawang Quarry, Mining Lease 1633 (Mining Act, 1992), Walker Quarries Pty Ltd – Response to Request for Information dated 18 October 2016

I refer to the letter dated 18 October 2016 received from Alex Irwin, Senior Environmental Consultant of R.W. Corkery & Co, on behalf of Walker Quarries Pty Ltd, titled "Wallerawang Quarry – ML 1633 – Construction of 'New Stockpile Area' – Response to Request for Information" (DRE Reference INW16/55376).

The letter has been assessed and adequately addresses the information requested by DRE in our letter dated 4 October 2016 (DRE Reference OUT16/33890). DRE appreciates this timely and comprehensive response.

As the 'new stockpile area' has been identified by the Department of Planning and Environment (DP&E) as not being in accordance with the extent of clearing permitted in the Development Consent, and the Mining Operations Plan (MOP) must be consistent with the applicable Development Consent, DRE proposes to take no further action with regard to the 'new stockpile area' not being covered in the Wallerawang Quarry MOP.

DRE notes that DP&E has issued both a Penalty Infringement Notice and an Order to Sitegoal Pty Ltd requiring Compliance with Schedule 2, Condition 1.2 of Development Consent 344-11-2001 by no later than 28 February 2017. DRE also notes a proposal by Walker Quarries Pty Ltd to seek a modification to the Development Consent for Wallerawang Quarry to include both the 'New Stockpile Area' and 'Proposed Stockpile Area'.

Pursuant to Condition 3 of Mining Lease 1633, DRE requires that the MOP for Wallerawang Quarry, approved by DRE on 22 August 2016 (DRE Reference: OUT16/31141) be updated to ensure consistency with any revised DP&E approval.

The updated MOP will need to include appropriate coverage of the 'New Stockpile Area' and 'Proposed Stockpile Area', as well as any other changes in the revised Development Consent. You are reminded that Condition 3 of ML1633 requires the

Environmental Sustainability Unit
PO Box 344 Hunter Region Mail Centre NSW 2310
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ABN 72189919072

MOP to be approved prior to re-commencing mining operations (including stockpiling) in the area concerned.

The application for MOP approval is to be supported by an appropriate Rehabilitation Cost Estimate which includes any additional areas approved in the revised Development Consent.

If you require further information with regard to this letter please contact me directly on (02) 4222 8304.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Greg Kininmonth', written in a cursive style.

Greg Kininmonth

Manager and Principal Inspector Environment (Southern)

Division of Resources and Energy

Signed under delegation from the Secretary of the Department of Industry, Skills and Regional Development.

24 February 2017

Copy to – Alex Irwin, R.W. Corkery Pty Ltd



Our Ref: DOC17/114587
Your Ref: DA 344-11-2001

Mr Alex Irwin
Senior Environmental Consultant
RW Corkery & Co Pty Ltd
alex@rwcorkery.com

Dear Mr Irwin,

Wallerawang Hard Rock Quarry – DA 344-11-2001

I refer to your email dated 1 February 2017 seeking input into the Environmental Assessment Requirements (EARs) for the Wallerawang Hard Rock Quarry Modification (DA 344-11-2001). OEHL understands that the modification is to rectify a non-compliance identified by the Department of Planning & Environment (DPE) at the quarry related to unauthorised clearing of two stockpile areas. OEHL recommends that assessment of the habitat adjacent to the unauthorised clearing areas is undertaken to contribute to the assessment of the biodiversity values likely to have occurred prior to the unauthorised clearing.

OEHL has considered your request and provides the following requirements for the proposed development in **Attachments A, B and C** and guidance material in **Attachment D**.

OEHL recommends the EA needs to appropriately address the following:

1. Biodiversity and offsetting
2. Aboriginal cultural heritage
3. Historic heritage
4. Water and soils
5. Flooding

Please note that the NSW Biodiversity Offsets Policy for Major Projects <http://www.environment.nsw.gov.au/resources/biodiversity/140672biopolicy.pdf> is now being implemented. The policy provides a standard method for assessing impacts of major projects on biodiversity and determining offsetting arrangements.

The policy is underpinned by the Framework for Biodiversity Assessment (FBA) <http://www.environment.nsw.gov.au/resources/biodiversity/140675fba.pdf> which contains the assessment methodology that is adopted by the policy to quantify and describe the impact assessment requirements and offset guidance that applies to Major Projects. The FBA must be used by a proponent to assess all biodiversity values on the development site.

If you have any questions regarding this matter further please contact Steven Cox on 02 6883 5382 or email steven.cox@environment.nsw.gov.au.

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Tel: (02) 6883 5330 Fax: (02) 6884 8675
ABN 30 841 387 271
www.environment.nsw.gov.au

ENVIRONMENTAL ASSESSMENT

DA 344-11-2001 Modification 1
Report No. 949/05

WALKER QUARRIES PTY LTD

Wallerawang Quarry

Yours sincerely,



PETER CHRISTIE
A/ Director North West
Regional Operations Division

20 February 2017

Contact officer: STEVEN COX
6883 5382

Attachment A - Environmental Assessment Requirements

Attachment B – Species/Populations/Ecological Communities which Require Further Consideration

Attachment C - Critically Endangered Entities Specifically Excluded from Requiring Further Consideration

Attachment D - Guidance Material

Attachment A – Standard Environmental Assessment Requirements

Biodiversity
<ol style="list-style-type: none"> 1. Biodiversity impacts related to the Wallerawang Quarry Modification are to be assessed and documented in accordance with the Framework for Biodiversity Assessment, unless otherwise agreed by OEHL, by a person accredited in accordance with s142B(1)(c) of the <i>Threatened Species Conservation Act 1995</i>. 2. Impacts on the species and ecological communities listed in Attachment B will require further consideration and provision of the information specified in s9.2 of the Framework for Biodiversity Assessment.
Aboriginal Cultural Heritage
<ol style="list-style-type: none"> 3. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> (DECCW, 2011) and consultation with OEHL regional officers.
<ol style="list-style-type: none"> 4. Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.
<ol style="list-style-type: none"> 5. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEHL.
Historic Heritage
<ol style="list-style-type: none"> 6. The EIS must provide a heritage assessment including but not limited to an assessment of impacts to <i>State and local heritage</i> including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be assessed. Where impacts to State or locally significant heritage items are identified, the assessment shall: <ol style="list-style-type: none"> a. outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996), b. be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria), c. include a statement of heritage impact for all heritage items (including significance assessment), d. consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant), and e. where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.
Water and Soils
<ol style="list-style-type: none"> 7. The EIS must map the following features relevant to water and soils including: <ol style="list-style-type: none"> a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). b. Rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for Biodiversity Assessment). c. Groundwater. d. Groundwater dependent ecosystems. e. Proposed intake and discharge locations.

8.	The EIS must describe background conditions for any water resource likely to be affected by the development, including: <ul style="list-style-type: none"> a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
9.	The EIS must assess the impacts of the development on water quality, including: <ul style="list-style-type: none"> a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality.
10.	The EIS must assess the impact of the development on hydrology, including: <ul style="list-style-type: none"> a. Water balance including quantity, quality and source. b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas. c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches). e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.
Flooding	
11.	The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: <ul style="list-style-type: none"> a. Flood prone land. b. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas).
12.	The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.
13.	The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios: <ul style="list-style-type: none"> a. Current flood behaviour for a range of design events as identified in 11 above. This includes the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
14.	Modelling in the EIS must consider and document: <ul style="list-style-type: none"> a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood. b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories. c. Relevant provisions of the NSW Floodplain Development Manual 2005.

15. The EIS must assess the impacts on the proposed development on flood behaviour, including:
 - a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
 - b. Consistency with Council floodplain risk management plans.
 - c. Compatibility with the flood hazard of the land.
 - d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
 - e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
 - f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
 - g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.
 - h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
 - i. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
 - j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Attachment B – Species/Populations/Ecological Communities which Require Further Consideration

Table 1

Class	Scientific Name	Common Name	NSW Status	Comm. Status
Flora	<i>Prostanthera cryptandroides</i> <i>subsp. cryptandroides</i>	Wollemi Mint-bush	Protected	Vulnerable

Attachment C – Critically Endangered Entities Specifically Excluded From Requiring Further Consideration*

Table 2

Class	Scientific Name	Common Name	NSW Status	Comm. Status
Aves	<i>Lathamus discolor</i>	Swift Parrot	Endangered	Critically Endangered
Aves	<i>Anthochaera phrygia</i>	Regent Honeyeater	Critically Endangered	Critically Endangered
Flora	<i>Callistemon megalongensis</i>	Megalong Valley Bottlebrush	Critically Endangered	Critically Endangered
Flora	<i>Prasophyllum fuscum</i>	Slaty Leek Orchid	Critically Endangered	Vulnerable
Community	<i>Blue Mountains Shale Cap Forest in the Sydney Basin Bioregion</i>	Blue Mountains Shale Cap Forest in the Sydney Basin Bioregion	Endangered Ecological Community	Critically Endangered Ecological Community
Community	<i>Shale Sandstone Transition Forest in the Sydney Basin Bioregion</i>	Shale Sandstone Transition Forest in the Sydney Basin Bioregion	Critically Endangered Ecological Community	Critically Endangered Ecological Community
Community	<i>Sun Valley Cabbage Gum Forest in the Sydney Basin Bioregion</i>	Sun Valley Cabbage Gum Forest in the Sydney Basin Bioregion	Critically Endangered Ecological Community	Not Listed
Community	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	White Box Yellow Box Blakely's Red Gum Woodland	Endangered Ecological Community	Critically Endangered Ecological Community

* Further information, as detailed in section 9.2.5.2 of the FBA, is not required for the excluded entities in Table 2. However, assessment of impacts and offset requirements must still be included in the biodiversity assessment report for these entities in accordance with the FBA.

Attachment D – Guidance Material

Title	Web address
<u>Relevant Legislation</u>	
<i>Coastal Protection Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+13+1979+cd+0+N
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	https://www.legislation.gov.au/Details/C2016C00777
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
<i>Marine Parks Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Threatened Species Conservation Act 1995</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<i>Wilderness Act 1987</i>	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
NSW Biodiversity Offsets Policy for Major Projects (OEH, 2013)	http://www.environment.nsw.gov.au/resources/biodiversity/140672biopolicy.pdf
Framework for Biodiversity Assessment (OEH, 2013)	http://www.environment.nsw.gov.au/resources/biodiversity/140675fba.pdf
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/parks/policyRevocations.pdf
Heritage	
The Burra Charter (The Australia ICOMOS charter)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf

Title	Web address
for places of cultural significance)	
Statements of Heritage Impact 2002 (HO & DUAP)	http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	http://www.environment.nsw.gov.au/Heritage/publications/index.htm#M-O
Aboriginal Cultural Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf
Aboriginal Site Recording Form	http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf
Water and Soils	
Acid Sulphate Soils	
Acid Sulfate Soils Planning Maps via 'The NSW Natural Resource Atlas'	www.nratlas.nsw.gov.au/
Acid Sulfate Soils Manual (Stone et al. 1998)	Manual available for purchase from: http://www.landcom.com.au/whats-new/the-blue-book.aspx DPI's Guidelines Register: Chapter 1 Acid Sulfate Soils Planning Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf Chapter 2 Acid Sulfate Soils Assessment Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.advancedenvironmentalmanagement.com/Reports/Savannah/Appendix%2015.pdf <i>This replaces Chapter 4 of the Acid Sulfate Soils Manual above.</i>

Title	Web address
Flooding	
Reforms to coastal erosion management	http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
Guidelines for Preparing Coastal Zone Management Plans	Guidelines for Preparing Coastal Zone Management Plans http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf
NSW Climate Impact Profile	NSW Climate Impact Profile
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf



Department of
Primary Industries
Water

Contact John Galea
Phone (02) 8838 7520
Email john.galea@dpi.nsw.gov.au

RW Corkery & Co Pty Ltd
62 Hill Street
ORANGE NSW 2800

Our ref OUT17/8955

24 February 2017

Attn: Alex Irwin via email (alex@rwcorkery.com)

Dear Mr Irwin

Wallerawang Quarry – Proposed Modifications to DA 344-11-2001 – SEARs

I refer to your email of 21 February 2017 inviting the Department of Primary Industries – Water (DPI Water) to comment on the Wallerawang Quarry – Proposed Modifications to DA 344-11-2001 SEARs.

DPI Water has reviewed the supporting documentation accompanying the request and provides the following comments below, and further detail in **Attachment A**.

It is recommended that any updated Environmental Assessment of the site be required to include the following.

- An update of the annual volumes of groundwater proposed to be taken by the activity (the whole quarry not just for the proposed modifications) (including through inflow and seepage) from the Sydney Basin Coxs River Fractured Rock Groundwater Source.
- A detailed assessment against the NSW Aquifer Interference Policy (2012) using DPI Water's assessment framework.
- Assessment of impacts on groundwater sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Full technical details and data of all groundwater modelling, and an independent peer review.
- Proposed groundwater monitoring activities and methodologies.
- Details of the final landform of the site, including final void management (where relevant) and rehabilitation measures.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.
- A statement of where each element of the SEARs is addressed in the EIS (i.e. in the form of a table).

The proponent is also encouraged to ensure that the requirements within the attached NSW Aquifer Interference Policy Fact Sheet 7 "Quarrying and Extractive Industries" are satisfied.

For further information please contact John Galea, Water Regulation Officer, Parramatta Officer, telephone 8838 7520 or email john.galea@dpi.nsw.gov.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Irene'.

Irene Zinger, Regional Manager - Metro
Water Regulation

Attachment A**DPI Water General Assessment Requirements for quarries and non-coal mines**

The following detailed assessment requirements are provided to assist in adequately addressing the assessment requirements for this proposal.

For further information visit the DPI Water website, www.water.nsw.gov.au

Key Relevant Legislative Instruments

This section provides a basic summary to aid proponents in the development of an Environmental Impact Statement (EIS), and should not be considered a complete list or comprehensive summary of relevant legislative instruments that may apply to the regulation of water resources for a project.

The EIS should take into account the objects and regulatory requirements of the *Water Act 1912* (WA 1912) and *Water Management Act 2000* (WMA 2000), and associated regulations and instruments, as applicable.

Water Management Act 2000 (WMA 2000)

Key points:

- Volumetric licensing in areas covered by water sharing plans
- Works within 40m of waterfront land
- SSD & SSI projects are exempt from requiring water supply work approvals and controlled activity approvals as a result of the *Environmental Planning & Assessment Act 1979* (EP&A Act).
- No exemptions for volumetric licensing apply as a result of the EP&A Act.
- Basic landholder rights, including harvestable rights dams
- Aquifer interference activity approval and flood management work approval provisions have not yet commenced and are regulated by the *Water Act 1912*
- Maximum penalties of \$2.2 million plus \$264,000 for each day an offence continues apply under the *WMA 2000*

Water Act 1912 (WA 1912)

Key points:

- Volumetric licensing in areas where no water sharing plan applies
- Monitoring bores
- Aquifer interference activities that are not regulated as a water supply work under the *WMA 2000*.
- Flood management works
- No exemptions apply to licences or permits under the *WA 1912* as a result of the EP&A Act.
- Regulation of water bore driller licensing.

Water Management (General) Regulation 2011

Key points:

- Provides various exemptions for volumetric licensing and activity approvals
- Provides further detail on requirements for dealings and applications.

Water Sharing Plans – these are considered regulations under the *WMA 2000*

Access Licence Dealing Principles Order 2004

Harvestable Rights Orders

Water Sharing Plans

It is important that the proponent understands and describes the ground and surface water sharing plans, water sources, and management zones that apply to the project. The relevant water sharing plans can be determined spatially at www.ourwater.nsw.gov.au. Multiple water sharing plans may apply and these must all be described.

The *Water Act 1912* applies to all water sources not yet covered by a commenced water sharing plan.

The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the Water Sharing Plan including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection (including groundwater dependent ecosystems), water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water to be taken from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP, including:
 - Sufficient market depth to acquire the necessary entitlements for each water source.
 - Ability to carry out a “dealing” to transfer the water to relevant location under the rules of the WSP.
 - Daily and long-term access rules.
 - Account management and carryover provisions.
- Provide a detailed and consolidated site water balance.
- Further detail on licensing requirements is provided below.

Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012)
- NSW Aquifer Interference Policy (NOW, 2012)
- Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW, 2012)
- Australian Groundwater Modelling Guidelines (NWC, 2012)
- NSW State Rivers and Estuary Policy (1993)
- NSW Wetlands Policy (2010)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quality Protection Policy (1998)
- NSW State Groundwater Dependent Ecosystems Policy (2002)
- NSW Water Extraction Monitoring Policy (2007)

DPI Water policies can be accessed at the following links:

<http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx>
<http://www.water.nsw.gov.au/Water-licensing/Approvals/Controlled-activities/default.aspx>

An assessment framework for the NSW Aquifer Interference Policy can be found online at:
<http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/Aquifer-interference>.

Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.

- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages
- Details on the location, purpose, size and capacity of any new proposed dams/storages.
- Applicability of any exemptions under the *Water Management (General) Regulation 2011* to the project.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10 % of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

For more information on Harvestable Right dams, including a calculator, visit:

<http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff>

Dam Safety

Where new or modified dams are proposed, or where new development will occur below an existing dam, the NSW Dams Safety Committee should be consulted in relation to any safety issues that may arise. Conditions of approval may be recommended to ensure safety in relation to any new or existing dams.

See www.damsafety.nsw.gov.au for further information.

Surface Water Assessment

The predictive assessment of the impact of the proposed project on surface water sources should include the following:

- Identification of all surface water features including watercourses, wetlands and floodplains transected by or adjacent to the proposed project.
- Identification of all surface water sources as described by the relevant water sharing plan.
- Detailed description of dependent ecosystems and existing surface water users within the area, including basic landholder rights to water and adjacent/downstream licensed water users.
- Description of all works and surface infrastructure that will intercept, store, convey, or otherwise interact with surface water resources.
- Assessment of predicted impacts on the following:
 - flow of surface water, sediment movement, channel stability, and hydraulic regime,
 - water quality,
 - flood regime,

- dependent ecosystems,
- existing surface water users, and
- planned environmental water and water sharing arrangements prescribed in the relevant water sharing plans.

Groundwater Assessment

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- Works likely to intercept, connect with or infiltrate the groundwater sources.
- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- Bore construction information is to be supplied to DPI Water by submitting a "Form A" template. DPI Water will supply "GW" registration numbers (and licence/approval numbers if required) which must be used as consistent and unique bore identifiers for all future reporting.
- A description of the watertable and groundwater pressure configuration, flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of groundwater quality, its beneficial use classification and prediction of any impacts on groundwater quality.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.

- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

The EIS must consider the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
 - the effect of the proposal on the recharge to groundwater systems;
 - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
 - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

Watercourses, Wetlands and Riparian Land

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
 - wetlands/swamps, watercourses and top of bank;
 - riparian corridor widths to be established along the creeks;
 - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
 - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
 - proposed location of any asset protection zones.
- Photographs of the watercourses/wetlands and a map showing the point from which the photos were taken.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A detailed description of all potential impacts on the wetlands, including potential impacts to the wetlands hydrologic regime; groundwater recharge; habitat and any species that depend on the wetlands.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.

Drill Pad, Well and Access Road Construction

- Any construction activity within 40m of a watercourse, should be designed by a suitably qualified person, consistent with the NSW *Guidelines for Controlled Activities on Waterfront Land* (July 2012).
- Construction of all wells must be undertaken in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (3rd edition 2012) by a driller holding a bore drillers' licence valid in New South Wales.
- The length of time that a core hole is maintained as an open hole should be minimised.

Landform rehabilitation (including final void management)

Where significant modification to landform is proposed, the EIS must include:

- Justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;
- A detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- Outline of proposed construction and restoration of topography and surface drainage features if affected by the project;
- Detailed modelling of potential groundwater volume, flow and quality impacts of the presence of an inundated final void (where relevant) on identified receptors specifically considering those environmental systems that are likely to be groundwater dependent;
- An outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and
- The measures that would be established for the long-term protection of local and regional aquifer systems and for the ongoing management of the site following the cessation of the project.

Consultation and general enquiries

General licensing enquiries can be made to Advisory Services: water.enquiries@dpi.nsw.gov.au, 1800 353 104.

Assessment or state significant development enquiries, or requests for review or consultation should be directed to the Strategic Stakeholder Liaison Unit, water.referrals@dpi.nsw.gov.au.

A consultation guideline and further information is available online at:
www.water.nsw.gov.au/water-management/law-and-policy/planning-and-assessment

End Attachment A



Department of
Primary Industries
Office of Water

NSW AQUIFER INTERFERENCE POLICY | FACT SHEET 7

Quarrying and extractive industries

July 2014

This factsheet aims to assist extractive industries, such as quarrying, dredging and the extraction of sand and aggregate, to understand and comply with the NSW Aquifer Interference Policy.

The Policy was released in September 2012 and applies across NSW. It explains the water licensing, impact assessment and approval requirements for aquifer interference activities under the *Water Management Act 2000*, and other relevant legislation.

Water management in NSW

In New South Wales water is managed under the *Water Management Act 2000* and the *Water Act 1912*.

Water sharing plans are used to manage surface water and groundwater through associated water licences and approvals. Water sharing plans are in place for all inland water sources and are progressively being introduced for coastal water sources.

The purpose of water sharing plans is to protect water sources and their dependent ecosystems, whilst recognising the social and economic benefits of the sustainable and efficient use of water.

These plans set limits on the total volume of water that can be taken from each water source and specify rules for water access. Long term average annual extraction limits (LTAAELs) are set for each water source and aim to ensure that water is available for the environment and other water users, including domestic and stock users, irrigators, town water suppliers and other industries such as mining and agricultural processors.

Water licensing

Activities associated with extractive industries may take water from the groundwater sources in which they occur, and from other hydraulically connected water sources.

Aquifer interference activities taking water outside of water sharing plan areas require a licence under the *Water Act 1912*. In areas covered by water sharing plans, a water access licence is required under the *Water Management Act 2000* unless an exemption applies. The current exemptions from the requirement to hold a water access licence are specified in the *Water Management (General) Regulation 2011*.

A water licence is required regardless of whether the water is taken for consumptive use such as irrigation, or whether it is taken incidentally in the course of conducting the primary activity. For example, dewatering of groundwater to allow quarrying or sand mining to occur requires a water licence even where the extracted water is not being used consumptively as part of that industry's operation. Water licensing requirements also apply to activities that are State significant.

A licence is required for water that:

- Is extracted as entrained water within the resource
- Is dewatered to allow quarrying and resource extraction
- Flows into a void as a result of evaporation
- Is required for processing or washing
- Is required for dust suppression
- Is extracted for any other reason or purpose, whether passively or actively.

A water access licence specifies the holder's shares in the available water within the relevant water source. Separate water access licences are required to account for water taken from groundwater and surface water sources through aquifer interference activities, including quarrying and extractive industries. A licence with sufficient entitlement and water allocation must be held to account for all take of water, both during the life of the activity and for any ongoing take after the activity has ceased. Ongoing take includes the volume of groundwater inflow to voids that results due to evaporation where the void intersects the water table.

Where water is taken, a water access licence must be obtained for the correct category (eg aquifer), within the correct water source (as defined by the relevant water sharing plan), and that can be linked to the location that the water will be taken from.

These water licensing requirements are important for ensuring that the amount of water taken from a water source does not exceed the LTAAEL set in the water sharing plan.

Estimating the volumes of water that will be taken

Proponents are required to provide predictions of take during operations and after they have ceased, in order to ensure that appropriate entitlement is held to account for that take. The estimates of take should be made using modelling or analysis. The level of analysis required will depend on the nature and scale of the proposal.

Obtaining water entitlement

In areas still being managed under the *Water Act 1912* a water licence with entitlement can be obtained from the Office of Water for groundwater sources that have unassigned water. In areas being managed under the *Water Management Act 2000* water entitlement will need to be purchased on the open market. From time to time, the Office of Water will also make controlled allocation orders that allow a small portion of unassigned groundwater to be made available as new licences. Under a controlled allocation process the right to purchase water entitlement is obtained through a tender, bid or other competitive process.

Approvals

Where a water sharing plan has commenced, the water supply work approval, controlled activity approval and use approval requirements of the *Water Management Act 2000* apply. This means that all works taking water from a water source require an approval unless an exemption applies. The exception to this is where approval for a State significant development, State significant infrastructure or public priority infrastructure is given under the *Environmental Planning and Assessment Act 1979*. In this case, the approval requirements of the *Water Management Act 2000* do not apply however the NSW Office of Water will still assess the project against the provisions of the Aquifer Interference Policy and provide advice to the consent authority.

Applications for approvals will need to nominate the works from which the water will be taken. Works include bores, pumps, voids and excavations. Where an approval is given under other legislation the proponent must still nominate the works that will take water, even if no works approval is required under the *Water Management Act 2000*.

Further information in relation to approvals under the *Water Management Act 2000* can be obtained from <http://www.water.nsw.gov.au/Water-Licensing/Approvals/default.aspx>

Assessment of impacts

The Policy details how the NSW Office of Water will assess quarrying and extractive industry activities to determine their potential impacts on water resources. It also explains the information and modelling or analysis that proponents will need to provide to enable the impacts to be adequately assessed.

An assessment needs to be conducted before approval will be given to carry out an aquifer interference activity such as quarrying (where the water table is intersected), or to construct and use a water supply work. This involves assessment of the predicted impacts on the groundwater source, connected water sources, the users of these water sources and dependent ecosystems.

The assessment criteria for aquifer interference activities are set out in the Policy and are called 'minimal impact considerations'. These considerations include impacts on water table levels, water pressure levels and water quality in different types of groundwater systems. Impacts on connected alluvial groundwater

systems and surface water systems are also considered, as well as the impacts on other water-dependent assets including water supply bores, groundwater dependent ecosystems and culturally significant sites that are groundwater dependent. Rules in relevant water sharing plans also apply if an approval is being given under the *Water Management Act 2000*, for example distance conditions.

Thresholds are set in the Policy so that the impacts of both an individual activity and the cumulative impacts of more than one activity in a water source can be considered.

Monitoring and reporting

A water measurement and monitoring program should be developed to monitor and report on water levels, water quality and water take. The monitoring program should identify all users and water dependent features with the potential to be impacted by the activity. Water level and quality monitoring should be initiated prior to commencement of the activity to establish baseline conditions. The water monitoring program should include regular assessment and reporting of results to ensure that impacts are not greater than predicted. The program should also include threshold trigger levels and a response strategy in the event that trigger levels are exceeded.

New initiatives

The NSW Office of Water is developing return flow rules for groundwater that are proposed to be made under section 75 of the *Water Management Act 2000*. Under these rules, it is proposed that licence holders will receive a credit to their water allocation account for water returned to the same groundwater source from which it was taken, providing specific conditions are met.

An exemption from the requirement to hold a licence is also being developed where less than 3 ML per year is taken from a groundwater source. This will only apply where the take is not principally for the purposes of water supply or water use.

Both initiatives require amendments to be made to the Water Management (General) Regulation 2011.

This factsheet will be updated when any changes to the legislation are made.

More information

www.water.nsw.gov.au

Find more [factsheets](#) on the Aquifer Interference Policy.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (July 2014). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

Published by the Department of Primary Industries

Jobtrack 13024

From: John Galea <john.galea@dpi.nsw.gov.au>
Sent: Monday, 20 March 2017 9:16 AM
To: Alex Irwin
Cc: Water Referrals
Subject: Re: 949 - Wallerawang Quarry - Proposed Modification to DA 344-11-2001
Attachments: WALLERAWANG QUARRY - water management plan.pdf

Alex,

I have asked colleagues for some advice as I feel that the EIS etc for the original application is deficient. The AI Policy has come in since then.

In your email and application for the modification it is stated that the quarry will not go any deeper than what was approved. There seems to me no record available as to what depth this will be and what impacts this may have on groundwater. As outlined in the attached document - specifically at Page 22.

For these reasons I thought it best you improve the assessment of groundwater impacts.

I am open to being corrected.

Regards

John

J.G.

John Galea
Water Regulation Officer (Hunter- Sydney Metro) DPI Water
NSW Department of Primary Industries
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PARRAMATTA NSW 2150
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W: www.water.nsw.gov.au



On 17 March 2017 at 15:18, Alex Irwin <alex@rwcorkery.com> wrote:

John,

I am enquiring as to whether you have had a chance to review my email sent to you on 27 February where I noted that the proposed modification to operations at Wallerawang Quarry does not seek to modify any activities at the Quarry which could result in aquifer interference. That is, there will be no change to the depth or extent of the open cut. I previously enquired as to whether DPI-Water might review and revise recommendations to undertake groundwater modelling, monitoring, assessment of impact on groundwater sources and consideration of the NSW Aquifer Interference Policy for this proposal.

ENVIRONMENTAL ASSESSMENT

DA 344-11-2001 Modification 1

Report No. 949/05

WALKER QUARRIES PTY LTD

Wallerawang Quarry

Regards,

Alex Irwin

Senior Environmental Consultant

(Mobile 0429 635 975)

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From: John Galea [mailto:john.galea@dpi.nsw.gov.au]**Sent:** 24 February 2017 4:46 PM**To:** Alex Irwin**Cc:** Water Referrals**Subject:** 949 - Wallerawang Quarry - Proposed Modification to DA 344-11-2001

Hello Alex,

Please find DPI Water's response to your request for environmental assessment requirements for the above modification.

If you have any enquiries, please forward them to me as well as water.referrals@dpi.nsw.gov.au for this project.

Regards

John

J.G.

John Galea
Water Regulation Officer (Hunter- Sydney Metro) DPI Water
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