

August 2017

Independent Environmental Audit New Berrima Quarry Project



Trevor
APPLIED ENVIRONMENTAL MANAGEMENT CONSULTANTS

REPORT: NBQ/AUSTRAL BRICKS/AUG 2017/REV 1

Independent Audit Certification Form	
Development Name	New Berrima Clay/Shale Quarry
Development Consent No.	Project Approval 08_0212
Description of Development	Clay/Shale Quarry
Development Address	524 Berrima Road, New Berrima NSW
Operator	The Austral Brick Company Pty Ltd
Operator Address	2010 Old Wallgrove Road, Horsley Park NSW 2175
Independent Audit	
Title of Audit	New Berrima Clay/Shale Quarry – Independent Environmental Audit – August 2017
<p><i>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</i></p> <ul style="list-style-type: none"> <i>• The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits</i> <i>• The findings of the audit are reported truthfully, accurately and completely;</i> <i>• I have exercised due diligence and professional judgement in conducting the audit;</i> <i>• I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;</i> <i>• I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</i> <i>• I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</i> <i>• Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</i> <i>• I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so. Note. a) The Independent Audit is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000. b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2years imprisonment or \$22,000, or both).</i> 	
Signature	
Name of Lead/Principal Auditor	Trevor Brown
Address	136 Sanctuary Point Road, Sanctuary Point, NSW 2540
Email Address	tebrown@bigpond.com
Auditor Certification (if relevant)	Approved by the Secretary of Department of Planning and Environment, 20 July 2017 Royal Australian Chemical Institute Chartered Member 2428
Date:	August 2017

**Independent Environmental Audit
New Berrima Clay/Shale Quarry**

August 2017

**trevor brown & associates
applied environmental management consultants**

Report ID: NBQ/Austral Bricks/October 2017/Rev 1

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Principal Environmental Management Consultant
Trevor Brown & Associates
ABN: 65 850 181 279

136 Sanctuary Point Road,
SANCTUARY POINT NSW 2540

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Executive Summary

The Austral Brick Company Pty Ltd (Austral Bricks) was granted Project Approval 08_0212 for the New Berrima Clay/Shale Quarry on 6 July 2012, with modifications approved 15 December 2015 (MOD1) and 6 July 2017 (MOD2). Commencement of development on the New Berrima Clay/Shale Quarry site commence in September 2016. This Independent Environmental Audit was conducted in August 2017 within a year of commencement of on-site works to satisfy Project Approval 08_0212 Schedule 5 condition 9. The audit was conducted generally in accordance with the AS/NZS ISO 19011:2014 – *Guidelines for Auditing of Management Systems* and the *Independent Audit Guideline* (Department of Planning and Environment, October 2015).

The site preparation works for the New Berrima Clay/Shale Quarry that commenced in September 2016, involved preliminary topsoil stripping within the footprint of the Central Visibility Barrier. Prior to commencement of the site works, an inspection of the bridge across Stony Creek on the internal access road determined that the load bearing capacity, in its current condition, was inadequate for the movement of large items of earthmoving equipment. As a result, smaller equipment was used for the initial site preparation works, which were of a short duration, occurring between 19 September and 6 October 2016. The subsequent modification (MOD2) on 6 July 2017 provides for the replacement of the bridge. Site preparation works had not progressed between 6 October 2016 and August 2017.

All management plans required under the Project Approval have been approved by the Secretary of Department of Planning and Environment. Full implementation of the environmental management plans will occur when the replacement of Stony Creek bridge is completed and the equipment required for the site establishment can be transported to the site and site preparation begins.

The findings of the Independent Environmental Audit indicate that implementation of components of the Management Plans for the project had not been occurred, in most cases because there was no site preparation activity between October 2016 and August 2017. A summary of the audit findings is presented below.

Non-Compliances identified between September 2016 and August 2017 are summarised in Table ES1 with the risk ranking provided in accordance with the Independent Audit Guideline (DP&E 2015 section 4.2).

Table ES1: Non-Compliances identified between September 2016 and August 2017

Project Approval 08_0212 Condition	Non-Compliance	Current Status/Action
Schedule 3 condition 8 – Noise Management Plan – DP&E (19 May 2017)		
The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must: (d) include a monitoring program	Non-compliant (Low Risk) Noise monitoring was not conducted in accordance with the approved Noise Management Plan section 10.3.4 that states: <i>“attended noise monitoring will be undertaken quarterly during the construction period.....”</i> .	Administrative Non-compliance Noise monitoring is planned to be conducted within the first three months of construction activities for the Central Visibility Barrier, when these activities re-commence (pers. comm. Peter Young-Whitford).
Schedule 3 condition 11 – Air Quality Management Plan – Independent Audit Finding (August 2017)		
The Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must: (d) includes an air quality monitoring program that: • is capable of evaluating the performance of the project;	Non-Compliant (Low Risk) The Air Quality Management Plan section 11.6 states that: <i>“Dust deposition gauges will be sampled monthly in accordance with AS/NZS 3580.10.1:2003, i.e. samples will be collected/changed over within 2 days of the first day of each month.”</i>	Compliant Ongoing Monthly collection of the dust deposition bottles commenced in June 2017. Dust deposition average monthly results for ash and insoluble solids between September 2016 to July 2017, demonstrated

Project Approval 08_0212 Condition	Non-Compliance	Current Status/Action
	Between September 2016 and May 2017 the dust deposition bottles were not collected monthly.	compliance with the 2g/m ² /mth criteria.
Schedule 3 condition 18 - Water Management Plan - 2016 Annual Review (March 2017)		
The Proponent must prepare a Water Management Plan for the project to the satisfaction of the Secretary. The plan must include:..... <ul style="list-style-type: none"> a program to monitor: <ul style="list-style-type: none"> the effectiveness of the water management system; surface water flows and quality in local water ways;.... 	Non-Compliance (Low Risk) Water monitoring not conducted in accordance with the approved Water Management Plan section 11.3.1.1 which states that <i>“subject to flowing water being present, water sampling will be undertaken at monthly intervals from sites WS1, WS2, W3, W4, W5 and W8 from July 2016 until site establishment activities commence”</i> .	Compliant Ongoing Monthly sampling of surface water commenced on 31 May 2017 with follow-up sampling on 30 June and 31 July 2017 (see section 6.4.7.3).
Schedule 3 condition 32 - Aboriginal Heritage Management Plan - 2016 Annual Review (March 2017)		
The Proponent must prepare an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must: (c) include a: <ul style="list-style-type: none"> protocol for the engagement of an Aboriginal Site Officer for any necessary ground disturbance monitoring; 	Non-Compliant (Low Risk) Representative of the Illawarra Local Aboriginal Land Council not invited/present to monitor soil stripping activities on the Central Visibility Barrier in September 2016, as specified in the approved Aboriginal Heritage Management Plan section 9.3.	Administrative Non-Compliance Subsequent inspection was conducted by ILALC and one artefact was identified and salvaged. No further works had occurred on the Quarry site between June and August 2017. Further monitoring of soil stripping activities was not recommended by ILALC.
Schedule 3 condition 34 and 35/Statement of Commitment 9.4 – Independent Audit Finding (August 2017)		
34. The Proponent must progressively rehabilitate the site, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time.... 35. The Proponent must prepare a Landscape Management Plan for the project to the satisfaction of the Secretary. This plan must: <ul style="list-style-type: none"> ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; 	Non-Compliant (Low Risk) The topsoil stockpiles in the area of the Central Visibility Barrier have not been revegetated in accordance with Project Approval 08_0212 Schedule 3 condition 34, Statement of Commitment 9.4 (<i>“Broadcast a pasture seed mix to assist temporary stabilisation if topsoil stockpiles are likely to remain for extended periods”</i>) and the Landscape Management Plan section 9.1.	Non-Compliant (Low Risk) Progressive rehabilitation had not been implemented on the topsoil stockpiles in the area of the Central Visibility Barrier at the date of this audit and it is recommended that the implementation of Statement of Commitment occur to address the requirements of Project Approval 08_0212 Schedule 3 condition 34 and 35.

The general findings of the Independent Environmental Audit are summarised below:

Environmental Management Strategy

The Environmental Management Strategy prepared to satisfy Project Approval 08_0212 Schedule 5 condition 1, was submitted to the DP&E on 18 March 2016 and approved on 13 May 2016, prior to the commencement of any activities on the quarry site. The Environmental Management Strategy forms part of the integrated Environmental Management System that Austral Bricks adopts to manage all of its quarries, and describes the overall framework for environmental management for the development and operation of the New Berrima Clay/Shale Quarry.

Management Plans

Environmental management plans required under Project Approval 08_0212 for the New Berrima Clay/Shale Quarry were prepared in accordance with the relevant Project Approval conditions and approved by the DP&E, prior to the commencement of any activities associated with site preparation.

Full implementation of the environmental management plans will take place when the replacement of Stoney Creek bridge is completed and the equipment required for the site works can be transported to the site and site preparation recommences.

Recommendation ES1: The environmental management plans be reviewed and the management measures and monitoring programs revised if necessary to address implementation matters and accommodate the delayed commencement of works on the Quarry site.

Environmental Monitoring

All environmental monitoring programs outlined in the Noise Management Plan, Air Quality Management Plan Water Management Plan, Aboriginal Heritage Management Plan and Landscape Management did not occur in accordance with the approved Plans between September 2016 and May 2017.

Recommendation ES2: The environmental monitoring programs be reviewed and time for commencement and the frequency of monitoring be revised if necessary to meet the delayed commencement of works on the Quarry site, resulting from the time frame change resulting from the requirement for the bridge works over Stony Creek (Project Approval 08_0212 MOD 2).

Noise

The Noise Management Plan was approved by DP&E on 13 May 2016. The implementation of the Noise Management Plan mitigation measures will occur when site preparation activities commence again on Quarry site. No physical activities were undertaken on the New Berrima Clay/Shale Quarry site between October 2016 and August 2017 following the initial site preparation works in September 2016. Implementation of the noise monitoring program had not occurred under the approved Noise Management Plan at the date of this audit (August 2017). No attended noise monitoring was conducted during the initial site preparation during September and October 2016.

Recommendation ES3: Noise monitoring must occur in accordance with the Noise Management Plan monitoring program, when physical works on the site preparation re-commence on the New Berrima Clay/Shale Quarry site.

Air Quality

The Air Quality Management Plan was approved by DP&E on 13 May 2016. Dust deposition monitoring commenced in September 2016, and the average monthly results for ash and insoluble solids during the September 2016 to June 2017 period, demonstrated compliance with the 2g/m²/month criteria (Project Approval 08_0212 Schedule 3 condition 9 Table 5). The AS 3580.10.1-2003 procedure for dust deposition and monitoring regime in the Air Quality Management Plan section 11.6 was not followed between October 2016 and May 2017 with the dust deposition bottles not collected monthly. The monthly collection and analysis of the dust deposition bottles occurred from May to August 2017.

Recommendation ES4: Ensure dust deposition gauge bottle collection and analysis conforms with the monthly monitoring regime in the Air Quality Management Plan section 11.6 and AS 3580.10.1-2003.

Water Management

The Water Management Plan was submitted to the DP&E on 18 March 2016 and approved on 9 June 2016 and includes the Site Water Balance, Erosion and Sediment Control, Surface Water Monitoring Program and Groundwater Management.

Surface Water Monitoring

The surface water monitoring program included in the Water Management Plan section 11.3 was approved by DP&E in June 2016. The baseline water monitoring proposed in the Water Management Plan did not occur prior to physical commencement of site preparation works in September 2016, and no samples were collected between September 2016 and May 2017. Water monitoring commenced in accordance with Water Management Plan section 11, where water was available, on 31 May, 30 June and 31 July 2017. As no site works were occurring the water quality results for 31 May and 30 June 2017 only represent the water quality when the site use was cattle grazing.

Erosion and Sediment Control

Erosion and Sediment Control Plans were developed in accordance with the requirements of *Management of Urban Stormwater, Soils and Construction Volume 1* (Landcom 2004) and *Management of Urban Stormwater, Soils and Construction Volume 2E – Mines and Quarries* (DECC 2008), as section 10 and Appendix A of the Water Management Plan and approved by DP&E on 9 June 2016. It is considered that the proposed Erosion and Sediment Control Plans that will be implemented progressively and the quarry development will meet the requirements of the *Management of Urban Stormwater, Soils and Construction Volume 1* (Landcom 2004) and *Management of Urban Stormwater, Soils and Construction Volume 2E – Mines and Quarries* (DECC 2008).

Transport Management

The Transport Management Plan prepared in consultation with the RMS and Wingecarribee Shire Council was approved on 13 May 2016. Implementation of the Transport Management Plan will occur when the quarry operations commence. There was no quarry traffic or transport of material from the Quarry site during the period of this audit (i.e. September 2016 to August 2017).

Aboriginal Heritage Management

The Aboriginal Heritage Management Plan prepared in consultation with the OEH and relevant Aboriginal stakeholders (Illawarra Local Aboriginal Land Council, Wodi Wodi Elders Corporation and Korewal Elouera Jerrungarugh) was submitted to the DP&E and approved on 13 May 2016. The Aboriginal Heritage Management Plan will be implemented as necessary to ensure any artefacts/objects/sites are managed in accordance with the *National Parks and Wildlife Act* Part 6. A non-compliance with the requirement of Project Approval 08_0212 Schedule 3 condition 32(c) occurred in 2017 - Monitoring of site disturbance in September 2016 did not occur in accordance with approved Aboriginal Heritage Management Plan. A subsequent inspection was conducted by a representative of the Illawarra Local Aboriginal Land Council (ILALC) on 6 June 2017 and a report provided.

Landscape Management

The Landscape Management Plan was approved by DP&E on 13 May 2016 and addresses soil and vegetation management measures, management of visual amenity and rehabilitation. The preliminary site preparation works on the area of the Central Visibility Barrier that occurred in September and October 2016, involved stockpiling of topsoil to the northern side of the Central Visibility Barrier footprint. The topsoil had not been stabilised to reduce the potential of dust generation and the visual impact of the clearance area at the date of this audit.

Recommendation:

Progressive rehabilitation had not been implemented on the topsoil stockpiles in the area of the Central Visibility Barrier at the date of this audit and it is recommended that the implementation of Statement of Commitment occur to address the requirements of Project Approval 08_0212 Schedule 3 condition 34 and 35.

Visual Amenity

The site preparation works for the New Berrima Clay/Shale Quarry commenced in 2016, following approval of the management plans required under Project Approval 08_0212. Initial site preparation works were of short duration in September and October 2016, with preliminary topsoil stripping of approximately 30% of the

footprint of the Central Visibility Barrier. No 'barrier construction' occurred during these works. Establishment of the Visibility Barriers will recommence when the replacement of the bridge over Stony Creek is completed.

1. Introduction

1.1 Background

Project Approval 08_0212 granted for the New Berrima Clay/Shale Quarry requires an Independent Environmental Audit of the project in accordance with the Project Approval Schedule 5 Condition 9:

“Within a year of the commencement of development on site under this approval, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission, commence and pay the full cost of an Independent Environmental Audit of the project. This audit must:

- (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
- (b) include consultation with the relevant agencies;*
- (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals);*
- (d) review the adequacy of any approved strategy, plan or program required under these approvals;*
- (e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and*
- (f) be conducted and reported to the satisfaction of the Secretary.”*

This current Independent Environmental Audit required to be conducted within a year of commencement of development on site was commissioned by Austral Bricks Pty Ltd (Austral) for the New Berrima Clay/Shale Quarry was conducted by Trevor Brown of Trevor Brown & Associates. The period of the Independent Environmental Audit was September 2016 to August 2017 and was conducted generally in accordance with the AS/NZS ISO 19011:2014 – *Guidelines for Auditing of Management Systems* and the *Independent Audit Guideline* (Department of Planning and Environment, October 2015).

1.2 Scope of Work

The scope of work for the Independent Environmental Audit of the New Berrima Clay/Shale Quarry included the following components:

- review of implementation of the requirements of the Project Approval 08_0212 conditions, and other environmental licences and approvals for the New Berrima Clay/Shale Quarry project;
- conduct of a site inspection and review of documentation relevant to the Independent Environmental Audit;
- discussions with New Berrima Clay/Shale Quarry staff in relation to the Project Approval conditions;
- assessment of compliance with the Project Approval 08_0212 conditions, Statements of Commitment, and Environment Protection Licence 20377 conditions; and
- preparation of an Independent Environmental Audit Report.

1.3 Structure of the Independent Environmental Audit Report

The report has been prepared to provide comment on each condition of approval in a tabulated form, with additional discussion where required on specific matters. Tabulated comments on compliance are attached for the Project Approval 08_0212, Statements of Commitment and Environmental Protection Licence 20377:

Executive Summary

Section 1 Introduction

Section 2 New Berrima Clay/Shale Quarry Description

Section 3	Environmental Approvals and Licenses
Section 4	New Berrima Clay/Shale Quarry Site Status
Section 5	Compliance Status and Agency Consultation
Section 6	Review of Environmental Management
Section 7	Conclusions
Attachment 1	Project Approval 08_0212
Attachment 2	Statements of Commitment
Attachment 3	Environment Protection License No. 20377
Appendix A	Consultation with Agencies

1.4 Compliance Tables

This Independent Environmental Audit assessed the activities of the New Berrima Clay/Shale Quarry for compliance with the intent of the conditions of the Consolidated Project Approval 08_0212 and Environment Protection Licence 20377 during the site inspection, document review, and verification of relevant documentation related to the conditions of approval. The compliance status of each condition is expressed in the Attachments to this report as:

Assessment Status	Criteria Description
Compliant	Where verifiable evidence collected demonstrated that the intent of the elements of the conditions of the regulatory approval and appropriateness of implementation against the Consolidated Project Approval 08_0212 conditions had occurred.
Compliant Ongoing	The intent and specific requirements of the condition had been met and the requirements are ongoing for the operation of New Berrima Clay/Shale Quarry project.
Administrative Non-compliance	A non-compliance with a regulatory approval that would not impact on performance of the project and is considered minor in nature (e.g. failure to monitor or late monitoring session) or A technical non-conformance with a condition of approval that would not result in any risk or material harm to the environment (e.g. the submission of a report to government later than required under the approval conditions).
Non-Compliant – (Low Risk)	Non-compliance with a condition of approval with the potential for moderate environmental consequences, but is unlikely to occur, or, potential for low environmental consequence but is likely to occur.
Non-Compliant – (Moderate Risk)	Non-compliance with a condition of approval with the potential for serious environmental consequences but unlikely to occur, or, potential for moderate environmental consequence but likely to occur.
Non-Compliant – (High Risk)	Non-compliance of a condition of approval with the potential for significant environmental consequences, regardless of the likelihood of occurrence.
Not verified	Where the auditor has not been able to collect sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit.
Not active / Not triggered	A regulatory approval requirement / condition has an activation or timing that had not been triggered at the date of the audit, therefore a determination of compliance could not be made.
Noted	A statement or fact where no assessment of compliance is required.

Any Non-compliance (if identified) will be subject to a risk assessment in accordance with the *Independent Audit Guideline* (DP&E October 2015) section 4.1 and reported in the Conclusions of this Independent Environmental Audit Report.

1.5 Limitations of the Audit

The auditor received complete cooperation from Austral Bricks personnel during the New Berrima Clay/Shale Quarry Independent Environmental Audit. Documentation that was not immediately available during the audit site visit / inspection and document review, was provided to the auditor subsequent to the site visit conducted on 1 August 2017.

The findings of the audit are based on visual observations on the site, interviews with site personnel and review of documentation and records provided by Austral Bricks. Opinions presented within the audit apply to the site and documentation as observed at the date of the audit inspection and from information provided by Austral Bricks personnel. Any additions to the information available at the date of this audit (1 August 2017) or changes to this information of which the Trevor Brown & Associates is not aware and has not had the opportunity to evaluate, has not therefore been considered in this report. The auditor has taken due care to consider all reasonably available information provided during the audit and has taken this information to represent a fair and reasonable characterisation of the environmental status of the site.

2. New Berrima Clay/Shale Quarry Description

2.1 Quarry Location

The New Berrima Clay/Shale Quarry site is approximately 51ha in area and located within the “Mandurama” property (Lot 1 DP 414246 - owned by The Austral Brick Company Pty Ltd), 524 Berrima Road, New Berrima. The entrance to the “Mandurama” property is located on Berrima Road approximately 300m north of the intersection of Taylor Avenue and Berrima Road, New Berrima.

The Quarry project site incorporates the optimum clay/shale resource on the “Mandurama” property with the site access road between the property entrance and the extraction area.

2.2 Local Geology

The Quarry site is located close to the southwestern margin of the Sydney Basin where one of the main geological units are the Wiannamatta Group with the Ashfield Shale overlying the widespread Hawkesbury Sandstone.

The topsoil/subsoil thickness of at least 1m is underlain by variable thicknesses of clay /weathered shale (1m to 8m) and shale (7m to 23m).

2.3 Topography

The local topography in the area of the New Berrima Clay/Shale Quarry site is dominated by the valley through which the Wingecarribee River flows. In the vicinity of New Berrima, the topography of the land on the southern side of the river is undulating to flat, and the northern side of the river is steeper with a ridge orientated east-west to an elevation of 788m AHD. The quarry project is located on a low topographic rise overlooking the Wingecarribee River valley to the north.

2.4 Hydrology

The local topography is dominated by the valley through which the Wingecarribee River flows, i.e. westward from Wingecarribee Reservoir, between Bowral and Robertson, through the township of Berrima and into the Wollondilly River which feeds into the Hawkesbury / Nepean River system. In the vicinity of New Berrima, the topography of the land on the southern side of the river is undulating to flat and on the northern side of the river is steeper with a ridge orientated east / west and featuring Cockatoo Hill with an elevation of 788m AHD.

The quarry site occupies a hillcrest position with radial drainage primarily to the north and east. Crossing the site access road and within the New Berrima Clay/Shale Quarry site, approximately 800m to the west of the extraction area, Stony Creek flows northward into the Wingecarribee River. Approximately 500m east of the Quarry site is an unnamed creek which flows northward to the Wingecarribee River and a small unnamed ephemeral creek bisects the project site, also flowing into the Wingecarribee River after periods of heavy rain.

2.5 Overview of the Proposed Project

The operation of the quarry is proposed to extract and transport up to 150 000 tonnes of shale, weathered shale, brick clay and some friable sandstone per annum.

The extraction of the resource will occur in seven stages principally to reduce the area of disturbance at any one time and to facilitate progressive rehabilitation of disturbed areas.

The development of the New Berrima Clay/Shale Quarry will include the following principal components:

- The site access road from Berrima Road to the extraction area;
- An extraction area covering approximately 10.5ha;
- A range of clean and dirty water management structures including sediment ponds and water diversions;
- A transportable lunchroom/amenities building;
- A storage and workshop area located within a shipping container;
- Northern, Central and Southern Visibility Barriers to minimise visual, noise and dust impacts; and
- A surplus overburden stockpile area.

3. Environmental Approvals and Licenses

3.1 Project Approval

The Austral Brick Company Pty Ltd (Austral Bricks) was granted Project Approval 08_0212 for the New Berrima Clay/Shale Quarry on 6 July 2012.

Two Modifications to Project Approval 08_0212 have been granted:

Date Lodged	Modification to Consent	Date Determined
MOD 1 16 April 2015	<p>The proposed modification involves:</p> <ul style="list-style-type: none"> relocating and expanding the extraction area to better align with the resource; new extraction area within the known resource boundary within the site to allow extraction of the shale resource more efficiently. relocating site infrastructure (i.e. amenity bunds, water management structures and internal roads); and amending the final landform. relocation of other site infrastructure such as visibility barrier, water management dams and diversions and internal roads. 	15 December 2015
MOD 2 19 January 2017	<p>Austral proposed to modify the approved site layout as follows:</p> <ol style="list-style-type: none"> Construction of a new bridge over Stony Creek. Realignment of the western access road. Repositioning of the site office, amenities, and storage container. Installation of underground power and removal of a section of overhead power line. 	6 July 2017

3.2 Environment Protection Licence 20377

Environment Protection Licence 20377 was granted to Austral Brick Company Pty Ltd on 1 August 2016 for land based extractive activities (>50,000 – 100,000 tonnes annual capacity to extract, process or store product from the New Berrima Clay/Shale Quarry Lot 1 DP 414246 “Mandurama”, 1 Berrima Street, New Berrima NSW 2577, prior to the commencement of site works. No Variations to the EPL had occurred at the date of this audit (August 2017).

3.3 Section 138 Road Permit – Wingecarribee Shire Council

Road works under Project Approval 08_0212 Schedule 3 condition 23 and 24, will require approvals under the *Roads Act 1993*, in relation to the local road and main roads intersections, site access road junction with Berrima Road and signage. These permits had not been applied for/issued at the date of the audit as the road works had not been commenced.

3.4 Water Licences

A licence may be required under Section 10 of the *Water Act 1912* to enable the Proponent to construct dams for the collection of surface water for dust suppression purposes (i.e. within the Harvestable Right Dam Capacity for the property). No water licences were required at the date of this audit as the construction of dams for the

quarry had not commenced. No water use for the quarry site establishment had occurred at the date of this audit (August 2017).

3.5 Mining Lease

A Mining (Mineral Owner) Lease No.6, in satisfaction of Mining (Mineral Owner) Lease Application 26 (Act 1992), was granted 27 June 2017 to The Austral Brick Company Pty Ltd in respect of clay/shale/kaolin and structural clay minerals on 54.85 hectares of the Lease Area Lot 1 DP 414246. The lease expiry date is 27 June 2038.

4. New Berrima Clay/Shale Quarry Site Status – September 2016 to August 2017

Site preparation works for the New Berrima Clay/Shale Quarry commenced in September 2016, following approval of the management plans required under Project Approval 08_0212. The initial site preparation works were of short duration between 19 September and 6 October 20172016, with preliminary topsoil stripping undertaken within approximately 30% of the footprint of the Central Visibility Barrier. The topsoil was pushed to the northern side of the Central Visibility Barrier footprint using a D6 bulldozer. No 'barrier construction' occurred during these works.

Heavy equipment as proposed in the Environmental Assessment 2015 was not able to be utilised on the site as the bridge across Stony Creek on the internal access road was assessed and determined not to be appropriate for the movement of large items of earthmoving equipment to the Quarry site. A smaller D6 dozer was used for the limited physical commencement of site preparation activities.

The site preparation preliminary activities during September and October 2016 included:

- New fencing and gates at the entry to the access road to the site from Berrima Road.
- Erection of Austral Bricks signage at the entry to the site access road;
- Detailed site survey conducted and marking of the boundaries of the Quarry Site, extraction area boundary and footprints of the southern, central and northern visibility barriers was undertaken to satisfy Project Approval 08_0212 Schedule 2 condition 1;
- Preliminary topsoil stripping and stockpiling was undertaken within sections of the footprint of the Central Visibility Barrier;
- Initial soil stripping and stockpiling was undertaken at the entry to the Quarry site from the access road, for repositioning of the site office, amenities, and storage container and vehicle parking area;
- Installation of the meteorological station (completed by Carbon Based Environmental Pty Ltd on 19 September 2016), protected by a cattle proof fence to satisfy Project Approval 08_0212 Schedule 3 condition 12.
- Installation of three (3) dust deposition gauges (sites A1, A2 and A3) in accordance with Project Approval 08_0212 Schedule 3 condition 9, and EPL 20377 condition P1.1.
- Installation of approximately 975m of sediment fencing on the downslope side of the proposed areas of disturbance by Greenaway Pty Limited, in accordance with the approved Water Management Plan (SEEC, 2016); and
- Community Consultation Committee established with an inaugural meeting held on 7 September 2016 to satisfy Project Approval 08_0212 Schedule 5 condition 9. A subsequent meeting was held on 30 November 2016.

Following these site preparation preliminary activities, the fenced quarry site has been used for grazing cattle, with no further quarry establishment works undertaken.

The approval was granted for replacement of the existing bridge over Stony Creek on the site access road with the installation of a pre-fabricated bridge and installation of concrete aprons on the approaches to the new bridge within the footprint of the existing access roadway under Project Approval 08_0212 Modification 2, on 6 July 2017. When constructed, the bridge replacement will enable the transport of the larger earthmoving equipment onto the Quarry site to complete the site establishment activities required for commencement of the Stage 1 excavation of the Quarry.

5. Compliance Status and Agency Consultation

Consultation with government agencies in relation the Independent Environmental Audit was conducted to satisfy Project Approval 08_0212 Schedule 5 condition 9(b). Responses from the agencies in relation to specific matters raised during consultation are provided below.

5.1. Department of Planning and Environment (DP&E)

5.1.1 DP&E Consultation

The DP&E identified the following matters for consideration during the New Berrima Clay/Shale Quarry Independent Environmental Audit:

Table 4.3.1: Department of Planning and Environment

DP&E Matter Raised
Compliance with management plans, particularly the Noise Management Plan, Water Management Plan; and Aboriginal Heritage Management Plan.
Audit Finding(s)
<p>Administrative Non-Compliances occurred between September 2016 and August 2017 related to:</p> <p>Noise Management Plan - noise monitoring was not conducted in accordance with the approved Noise Management Plan section 10.3.4 states that <i>“attended noise monitoring will be undertaken quarterly during the construction period.....”</i>, as Austral Bricks explained the earth moving activities that have occurred on the Quarry site were only for a period of 3 days and involved limited soil stripping and use of the smaller D6 dozer which would have resulted in noise emissions from the site to the nearest receivers of up to 8dB() lower than the predictions in the Environmental Assessment 2010 and would have been less than the 38dB(A) noise criteria in Project Approval 08_0212 Schedule 3 conditions 4 and 5, at the nearest receivers. Noise monitoring is planned to be conducted within the first three (3) months of construction activities for the Central Visibility Barrier, when these activities commence (pers. comm. Peter Young-Whitford).</p> <p>Air Quality Management Plan – dust deposition monitoring was not conducted in accordance with the approved Air Quality Management Plan and AS/NZS 3580.10.1:2003, i.e. samples will be collected/changed over within 2 days of the first day of each month. Between September 2016 and May 2017 the dust deposition bottles were not collected monthly.</p> <p>Water Management Plan – water monitoring was not conducted in accordance with the Water Management Plan section 11.3.1.1, which states that <i>“subject to flowing water being present, water sampling will be undertaken at monthly intervals from sites WS1, WS2, W3, W4, W5 and W8 from July 2016 until site establishment activities commence”</i>. Monthly sampling of surface water commenced on 31 May 2017 with follow-up sampling on 30 June and 31 July 2017 (see section 6.4.7.3).</p> <p>Aboriginal Heritage Management Plan – An Aboriginal representative was not present during soil stripping in the area of the Central Visibility Barrier, conducted in September 2016. Subsequent inspection was conducted by ILALC and one artefact was identified and salvaged. Correspondence from Nathaniel Kennedy, Cultural Heritage and Environment Officer, ILALC (dated 6 June 2017) stated <i>“I am happy for future quarry works moving topsoil to go ahead as per the current process without any Indigenous representative present, however if there is anything of Aboriginal significance found during these works I would ask that work be ceased and I be contacted to determine moving forward what should occur.”</i> No further works had occurred on the Quarry site between June and August 2017.</p>

DP&E Matter Raised

Landscape Management Plan –implementation of Landscape Management Plan section 9.1 and Statement of Commitment 9.4 (“Broadcast a pasture seed mix to assist temporary stabilisation if topsoil stockpiles are likely to remain for extended periods”) had not occurred at the date of this audit.

Compliance with the Statement of Commitments (Refer to Attachment 2 of this audit report)

The majority of the Statements of Commitment (SoC) are addressed under the Project Approval 08_0212 conditions and the status of compliance is covered under those conditions (referenced in the Attachment B - Statement of Commitment Compliance Table). A non-compliance with the SoC 9.4 is noted in the audit report.

Statement of Commitment 9.4 – “Broadcast a pasture seed mix to assist with temporary stabilisation if topsoil stockpiles are likely to remain for extended periods”. This has not occurred on the disturbed areas of the material stripped from the Central Visibility Barrier and stockpiled soil, to reduce the potential for dust generation or erosion and sediment runoff.

5.1.2 Compliance Audit – DP&E

A Department of Planning and Environment (DP&E) compliance audit was conducted on 20 October 2016. The compliance audit concluded that:

“the site was operating generally in compliance with the conditions of the Project Approval. All management plans required under the Project Approval were prepared and approved by the Secretary, in accordance with the approval.”

One (1) observation was made during the site inspection:

“Project Approval 08_0212 Schedule 3 condition 18 - At the time of the audit, whilst erosion and sediment controls were observed to be appropriately installed, it was observed that wooden pickets were used to secure the silt fence as opposed to steel star pickets as recommended by the Blue Book, Managing Urban Stormwater: Soils and Construction, March 2004.”

The sediment fences installed when the topsoil was stripped from the three areas of the Central Visibility Barrier will be reinstated in accordance with the *Managing Urban Stormwater: Soils and Construction*, March 2004, when site works involving surface disturbance resume (after replacement of the bridge over Stony Creek). The site has been subject to agricultural use (grazing by cattle) since September 2016 and no further site preparation or operations works have occurred. Any surface runoff that may have occurred since September 2016 would be as a result of any disturbance on the site from cattle grazing across the property, and no specific erosion and sediment control measures have been implemented under the Erosion and Sediment Control Plans between October 2016 and August 2017.

5.2 Department of Primary Industries – Water

The Department of Primary Industries – Water (previously NSW Office of Water) specifically requested that the audit considers compliance with the relevant water licensing requirements for the New Berrima Clay/Shale Quarry project operation, specifically:

DPI-Water	Audit Response
Assessment as to whether the project holds the required water entitlements and licences under the <i>Water Management Act 2000</i> or <i>Water Act 1912</i> (as applicable);	The Environmental Assessments of the New Berrima Clay/Shale Quarry project concluded the quarry operations will not require to draw water from the Wingecarribee River or any other watercourse. The annual water requirement for the operation of the quarry would be approximately 8.05ML. Water supply modelling

	<p>undertaken as part of the Surface Water Assessment predicted that the anticipated total demand of 8.05ML/year would be met 100% of the time from the dams/basins constructed on the site and there would be no requirement for make-up water.</p> <p>Water for dust suppression will be sourced primarily from harvested surface water runoff, either from Sedimentation Basins 1 and 3 or from alternative storages. Basins 1 and 3 would collect sediment-laden water pumped out of the extraction area sump and 'clean' runoff from upslope catchments.</p>
Compliance with the conditions of any water licences / approvals held.	No Water Licences / Approvals were active during the September 2016 to August 2017.
Identification of all water storages for the mine and identification of their licensing status being either exempt, subject to harvestable rights or regulated via a Water Access Licence.	Water storages proposed for the Quarry operation are identified in the Environmental Assessments. No establishment or construction of the storages had occurred at the date of this audit (August 2017) and no Water Access Licences were required at this time.
Compliance with the conditions of any water licences / approvals held.	No Water Licences / Approvals were active during the September 2016 to August 2017.
Quantification of both active and passive take by the project from each relevant water source and a comparison against previous predictions.	Not applicable at the date of this audit. As there were no site activities between October 2016 and August 2017, no active or passive take of water for the quarry development had occurred.
Does the proponent have enough licensed water entitlement to cater for active and passive take of water?	Not applicable at the date of this audit. As there were no site activities between October 2016 and August 2017 no active or passive take of water for the quarry development had occurred.
Are adequate records kept to enable determination of the volume and source of surface and groundwater taken?	Not applicable for the period September 2016 to August 2017.
Do any exemptions under the <i>Water Management (General) Regulation 2011</i> or Harvestable Rights Order (gazetted 31 March 2006) apply to the capture of water?	A total harvestable right of 4.59ML dam/basin capacity was calculated for the 51ha project site in the Environmental Assessment 2010, using the harvestable right dam calculator.

5.3. Environment Protection Authority

The response from the EPA in relation to specific matters to be addressed during the Independent Environmental Audit indicated that:

"The EPA is not currently aware of any particular issues of environmental concern in relation to the operation of the site. Stormwater management and air quality (particularly dust generation, monitoring and management) are however aspects of environmental performance that are of interest to the EPA".

5.4 Wingecarribee Shire Council

No response was received from the Wingecarribee Shire Council in relation to specific matters to be addressed during the Independent Environmental Audit.

6. Review of Environmental Management

6.1 Environmental Management

6.1.1 Environmental Management Strategy

[Project Approval 08_0212 Schedule 5 condition 1]

The Environmental Management Strategy prepared to satisfy Project Approval 08_0212 Schedule 5 condition 1, was submitted to the DP&E on 18 March 2016 and approved on 13 May 2016, prior to the commencement of activities at the New Berrima Clay/Shale Quarry site.

The Environmental Management Strategy forms part of the integrated Environmental Management System that Austral Bricks adopts to manage all of its quarries, and describes the overall framework for environmental management for the development and operation of the New Berrima Clay/Shale Quarry.

The Environmental Management Strategy also generally addresses each of the major elements of ISO14001.

Table 6.1.1: Environmental Management Strategy vs AS/NZS ISO14001 Elements

ISO 14001 Element	Environmental Management Strategy
4.3.1 - Environmental Aspects	Section 2 – Approved Activities and Staged Operations
4.3.2 - Legal and Other Requirements	Section 4 – Legal and Other Requirements
4.3.3 - Objectives and Targets	Section 5 - Objectives and Outcomes
4.3.4 - Environmental Management Programs	Section 4.4 - Environmental Management Plans
4.4.1 - Structure and Responsibility	Section 15 – Roles and Responsibilities
4.4.2 - Training Awareness and Competence	Section 13 – Competence Training and Awareness
4.4.3 - Communication	Section 12 – Stakeholder and Community Consultation
4.4.7 - Emergency Preparedness and Response	Section 11 - Emergency Response
4.5.1 - Monitoring and Measurement	Section 6 - Monitoring
4.5.2 - Non-conformance, Corrective Action	Section 7 – Evaluation of Compliance and Section 8 – Corrective and Preventative Actions

6.1.2 Environmental Management Plans

Environmental management plans required under Project Approval 08_0212 for the New Berrima Clay/Shale Quarry were prepared in accordance with the relevant Project Approval conditions and approved by the DP&E, prior to the commencement of any activities associated with site preparation.

Table 6.1.2: Approved Environmental Management Plans

Project Approval 08_0212 Condition	Document Title	Date of Submission to DP&E	Date of Approval by DP&E
Schedule 3 condition 8	Noise Management Plan	18 March 2016	13 May 2016
Schedule 3 condition 11	Air Quality Management Plan	18 March 2016	13 May 2016
Schedule 3 condition 18	Water Management Plan	18 March 2016	9 June 2016
Schedule 3 condition 29	Transport Management Plan	18 March 2016	13 May 2016
Schedule 3 condition 32	Aboriginal Heritage Management Plan	18 March 2016	13 May 2016
Schedule 3 condition 35	Landscape Management Plan	18 March 2016	13 May 2016
Schedule 5 condition 1	Environmental Management Strategy	18 March 2016	13 May 2016

Full implementation of the environmental management plans will take place when the replacement of Stony Creek bridge is completed and the equipment required for the site establishment works and commencement of operations can be transported to the site and site preparation begins.

[It should be noted that the only physical activities undertaken on the New Berrima Clay/Shale Quarry site between September 2016 and August 2017 were three (3) days of minor site preparation works associated with the commencement of physical activities during September and October 2016. The site preparation and establishment of the surface physical components for the commencement of quarrying operations has been delayed since that time because of that status of the bridge across Stony Creek on the internal access road. The Stony Creek bridge was inspected and determined to be inappropriate for the large items of equipment to be transported across the bridge to the quarry extraction area. A Modification to the Project Approval 08_0212 was granted on 6 July 2017 for the replacement of the bridge over Stony Creek (these works had not commenced at the date of this audit – 1 August 2017)].

6.1.3 Management Plans - Compliance Status

Non-compliance matters related to the environmental management plan implementation identified in the 2016 Annual Review, the subject of correspondence from the DP&E on 19 May 2017, and assessed as part of this audit are presented in Table 6.1.3.

Table 6.1.3: Management Plans - Compliance Status August 2017

Project Approval 08_0212 Condition	Non-Compliance	Current Status/Action
Schedule 3 condition 8 – Noise Management Plan – DP&E (19 May 2017)		
The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must: (d) include a monitoring program	Non-compliant (Low Risk) Noise monitoring was not conducted in accordance with the approved Noise Management Plan section 10.3.4 that states: <i>“attended noise monitoring will be undertaken quarterly during the construction period.....”</i> .	Administrative Non-compliance Noise monitoring is planned to be conducted within the first three months of construction activities for the Central Visibility Barrier, when these activities commence (pers. comm. Peter Young-Whitford).
Schedule 3 condition 11 – Air Quality Management Plan – Independent Audit Finding (August 2017)		
The Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must: (d) includes an air quality monitoring program that: • is capable of evaluating the performance of the project;	Non-Compliant (Low Risk) The Air Quality Management Plan section 11.6 states that: <i>“Dust deposition gauges will be sampled monthly in accordance with AS/NZS 3580.10.1:2003, i.e. samples will be collected/changed over within 2 days of the first day of each month.”</i> Between September 2016 and May 2017 the dust deposition bottles were not collected monthly.	Compliant Ongoing Monthly collection of the dust deposition bottles commenced in June 2017. Dust deposition average monthly results for ash and insoluble solids between September 2016 to July 2017, demonstrated compliance with the 2g/m ² /month criteria.
Schedule 3 condition 18 - Water Management Plan - 2016 Annual Review (March 2017)		
The Proponent must prepare a Water Management Plan for the project to the satisfaction of the Secretary. The plan must include:..... • a program to monitor: o the effectiveness of the water management system; o surface water flows and quality in local water ways;....	Non-Compliance (Low Risk) Water monitoring not conducted in accordance with the approved Water Management Plan section 11.3.1.1 that states <i>“subject to flowing water being present, water sampling will be undertaken at monthly intervals from sites WS1, WS2, W3, W4, W5 and W8 from July 2016 until site establishment activities commence”</i> .	Compliant Ongoing Monthly sampling of surface water commenced on 31 May 2017 with follow-up sampling on 30 June and 31 July 2017 (see section 6.4.7.3).

Schedule 3 condition 32 - Aboriginal Heritage Management Plan - 2016 Annual Review (March 2017)		
<p>The Proponent must prepare an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(c) include a:</p> <ul style="list-style-type: none"> • protocol for the engagement of an Aboriginal Site Officer for any necessary ground disturbance monitoring; 	<p>Non-Compliant (Low Risk)</p> <p>Representative of the Illawarra Local Aboriginal Land Council not invited/present to monitor soil stripping activities on the Central Visibility Barrier in September 2016, as specified in the approved Aboriginal Heritage Management Plan section 9.3.</p>	<p>Administrative Non-Compliance</p> <p>Subsequent inspection was conducted by ILALC and one artefact was identified and salvaged. No further works had occurred on the New Berrima Clay/Shale Quarry site between June and August 2017. Further monitoring of soil stripping activities was not recommended by ILALC (correspondence from ILALC dated 6 June 2017).</p>
Schedule 3 condition 34 and 35/Statement of Commitment 9.4 – Independent Audit Finding (August 2017)		
<p>34. The Proponent must progressively rehabilitate the site, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time....</p> <p>35. The Proponent must prepare a Landscape Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> • ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; 	<p>Non-Compliant (Low Risk)</p> <p>The topsoil stockpiles in the area of the Central Visibility Barrier have not been revegetated in accordance with Project Approval 08_0212 Schedule 3 condition 34, Statement of Commitment 9.4 (<i>"Broadcast a pasture seed mix to assist temporary stabilisation if topsoil stockpiles are likely to remain for extended periods"</i>) and the Landscape Management Plan section 9.1.</p>	<p>Non-Compliant (Low Risk)</p> <p>Progressive rehabilitation had not been implemented on the topsoil stockpiles in the area of the Central Visibility Barrier at the date of this audit and it is recommended that the implementation of Statement of Commitment occur to address the requirements of Project Approval 08_0212 Schedule 3 condition 34 and 35.</p>

It is recommended that the environmental management plans be reviewed and the management measures and monitoring programs revised if necessary to address the implementation matters and accommodate the delayed commencement of works on the Quarry site, resulting from the requirement for the bridge works over Stony Creek (Project Approval 08_0212 MOD 2).

6.1.4 Environmental Monitoring

[Project Approval 08_0212 Schedule 5 condition 1(f)]

Environmental monitoring programs are outlined in the approved management plans.

The quarry environmental monitoring programs outline the monitoring locations, timing and criteria for each parameter and the Environmental Monitoring Locations are collated into the Environmental Management Strategy section 6 and Figure 4 (refer to Figure 5.1.2 below).

Implementation of the monitoring programs did not occur in accordance with the approved Noise Management Plan section 10 between September 2016 and August 2017, or the Water Management Plan sections 11 and 12.2 between September 2016 and May 2017. Non-compliance with the noise and water monitoring program implementation, were the subject of correspondence from the DP&E on 19 May 2017. Austral Bricks formally responded to the DP&E Show Cause correspondence on 14 June 2017.

It is recommended that the environmental monitoring programs be reviewed and time for commencement of monitoring and the frequency be revised if necessary to meet the delayed commencement of works on the Quarry site, resulting from the time frame change resulting from the requirement for the bridge works over Stony Creek (Project Approval 08_0212 MOD 2).

6.1.5 Conclusion

The Environmental Management Strategy was approved on 13 May 2016 and forms the overall framework for environmental management for the development and operation of the New Berrima Clay/Shale Quarry. Implementation of the approved environmental management strategy and environmental management plans prepared for the New Berrima Clay/Shale Quarry will provide a sound basis for the operation of the quarry and protection the surrounding environment and community.

Review of the approved Environmental Management Plans to address the Project Approval 08_0212 MOD 1 and MOD 2 conditions should occur and include the status of the project and the timing and implementation of monitoring programs for air, water and noise.

6.2 Noise

[Project Approval 08_0212 Schedule 3 conditions 3 to 8]

6.2.1 Environmental Assessments

6.2.1.1 Environmental Assessment (December 2010)

The noise assessment for the Environmental Assessment (2010) was undertaken by Spectrum Acoustics (2010) as Part 3 of the Specialist Consultant Studies Compendium. The noise assessment addresses the ambient noise at various locations around and within the Quarry site. The noise assessment determined that the area of the New Berrima Clay/Shale Quarry experiences very low background noise levels. Assessment of potential impacts from the New Berrima Clay/Shale Quarry activities through modelling based on the proposed site layout and operations, including the mitigating features of amenity bunds and use of local topography, determined that noise impacts would be minimal on the surrounding receivers.

Most of the noise data was found to be wind-affected, with noise from nearby trees contributing strongly to the background noise levels. A daytime RBL of 33dB(A)_{L90} was adopted for all assessed receivers.

Table 6.2.1: Ambient Noise Levels (Spectrum Acoustics, 2010)

Location	dB(A)Leq			dB(A)L90		
	Day	Evening	Night	Day	Evening	Night
N1 -Mandurama	57	57	54	48	47	46
N2 – Chesley Park	46	44	43	39	36	38
N3 – Carribee Farm	55	46	46	33	32	44

6.2.1.2 Environmental Assessment (April 2015) – Modification 1

Noise assessment conducted by Spectrum Acoustics (dated 16 March 2015) was based on the proposed modified extraction area that was generally shifted to the north (compared with the original proposal Environmental Assessment 2010). The predicted daytime construction noise levels were less than the 43dB(A) criterion (i.e. Project Approval 08_0212 Schedule 3 condition 4 (except for R2 under NE wind conditions) and operational noise levels from the northern end of the modified extraction area were assessed as being below the daytime operational noise criterion of 38 dB(A)_{Leq(15 minute)} applicable at all residential receivers on privately owned land.

6.2.1.3 Environmental Assessment (December 2016) -Modification 2

No significant changes to noise impacts are expected as the proposed modification would not result in an increase in the intensity and location of noise generating activities compared with the existing approved activities under Project Approval 08_0212.

6.2.2 Noise Management Plan

[Project Approval 08_0212 Schedule 3 condition 8]

The Noise Management Plan prepared to satisfy Project Approval 08_0212 Schedule 3 condition 8 was submitted to the DP&E on 18 March 2017 and approved on the 13 May 2016. The Noise Management Plan should be reviewed to ensure that all the Project Approval 08_0212 Mod 1 and Mod 2 conditions are addressed.

The Noise Management Plan section 9.2 outlines the design features and construction safeguards that will be implemented during the Stage 1 development on the site to minimise noise impact and the noise management controls to be adopted during operations at the quarry:

- Construction of a Central Visibility Barrier during Stage 1 to provide noise screening to residences on the northern side of Wingecarribee River.
- The construction of a Southern Visibility Barrier from surplus material available after construction of the central visibility barrier.
- Retention of existing tree screens at the north-western and north-eastern corners of the extraction area, and retain the existing tree screen on the eastern side of the extraction area
- No processing of materials will be conducted at the Quarry.
- The transport route from the quarry avoids wherever possible residential, school and other sensitive receiver areas.
- Operating hours and conditions in Project Approval 08_0212 Schedule 3 conditions 6 will be strictly complied with.
- Mobile plant will be fitted with standard mufflers maintained to manufacturer's specifications with regular maintenance of all earthmoving equipment.
- All Company personnel and contractors and their employees will be made aware of their obligations and responsibilities with regard to minimising noise emissions.

6.2.3 Noise Assessment Criteria

[Project Approval 08_0212 Schedule 3 conditions 4 and 5]

As outlined within the Environmental Assessment construction of the Central Visibility Barrier will occur over a period of approximately 3 to 6 months and involve the extraction and haulage of approximately 90,000m³ of overburden material using a scraper (e.g. Cat 637 – Sound Power Level (SWL) 118dB(A)) and formation of the barrier using a bulldozer (e.g. Cat D10 - SWL 116dB(A)) to a height of approximately 12m above ground level.

During the construction of the visibility barriers on the Quarry site, the noise generated by these activities must not exceed the criteria in Table 6.2.3 (Project Approval 08_0212 Schedule 3 conditions 4).

(Note: property R2 was purchased by Austral Bricks in 2015).

Table 6.2.3 – Noise Criteria – Bund Construction

Receiver	LAeq (15 min) dB(A)
R2 (property purchased by Austral Bricks in 2015)	43
All other receivers	38

The Project Approval Schedule 3 condition 5 requires that except for the period when the Visibility Barriers are being constructed on the Quarry site, the noise generated by the Quarry activities must not exceed 38dB(a) LAeq (15min) at any residence on privately-owned land.

Environment Protection Licence 20377 condition L2 noise limit criteria have been set for the three identified monitoring locations (N1, N2 and N3) as levels that must not be exceeded. These monitoring locations are on the boundaries of the Quarry site and not at other receivers (i.e. nearby residences).

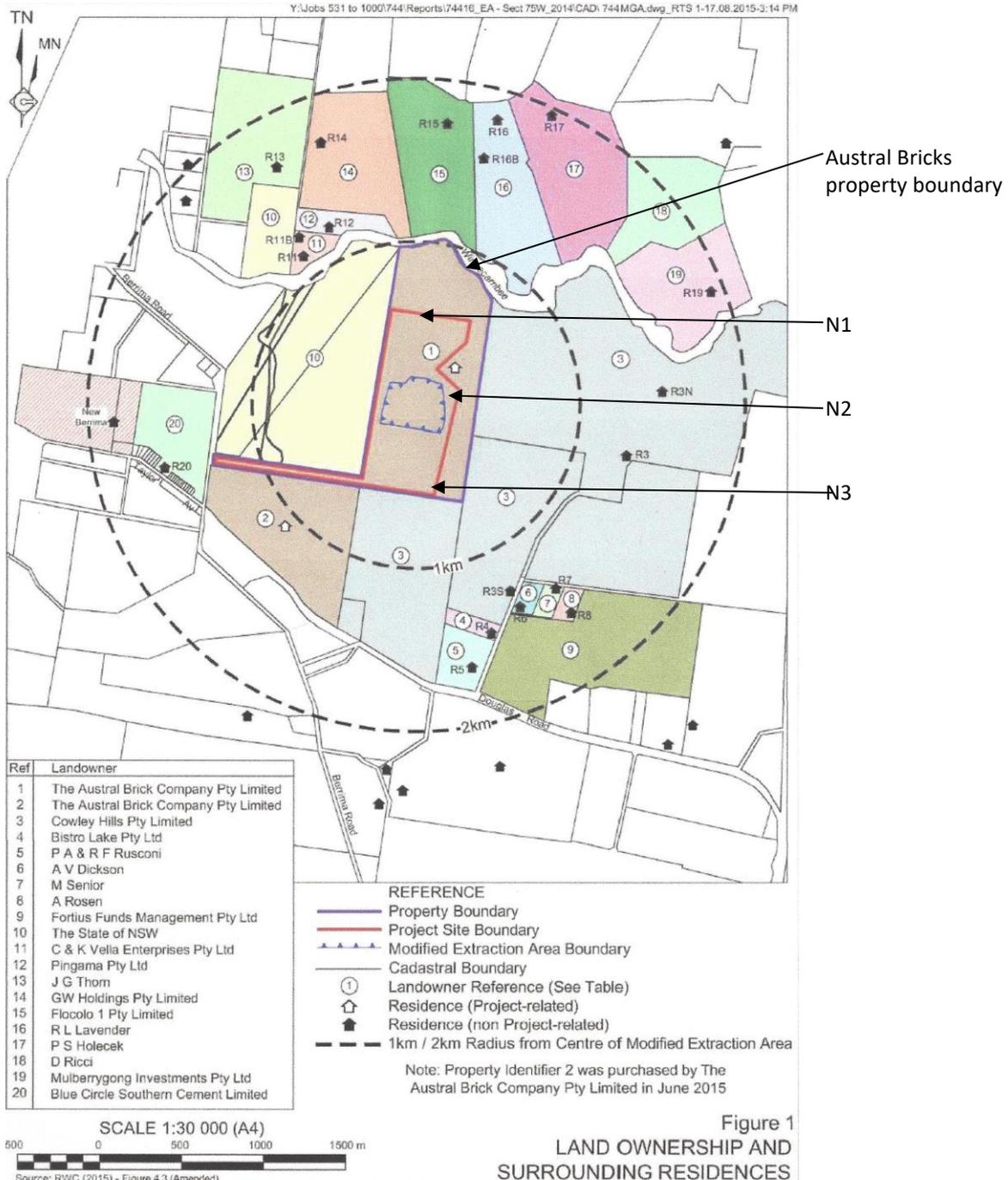


Figure 6.2.3: Noise Monitoring Locations (EPL 20377 condition L2)

Table 6.2.3b: Noise Limits Environment Protection Licence 20377 condition L2

EPA ID Point	Noise Limit at any time dB(A) LA _{eq} (15 Minute)	Location
N1	42	North of the quarry void and labelled N1 on map titled "Environmental Monitoring Locations" dated 20 November 2015 (DOC16/206245).

N2	49	East of the quarry void and labelled N2 on map titled "Environmental Monitoring Locations" dated 20 November 2015 (DOC16/206245).
N2	44	Southeast of the quarry void, labelled N3 on map titled "Environmental Monitoring Locations" dated 20 November 2015 (DOC16/206245).

6.2.4 Noise Monitoring Program

[Project Approval 08_0212 Schedule 3 condition 8(d)]

The approved Noise Management Plan section 10.3.4 states that *“attended noise monitoring will be undertaken quarterly during the construction period.....”*

Attended noise monitoring will be conducted at three locations within the Quarry site between the proposed extraction area and the representative residences near the quarry property boundary (to the north, east and southeast) at locations approved by the EPA in Environment Protection Licence 20377 condition L2.

Noise monitoring may also be undertaken at surrounding residences in the event of a substantiated complaint, i.e. subject to access being granted to undertake the attended noise monitoring.

6.2.5 Noise Monitoring Results

The implementation of the noise monitoring program did not occur in accordance with the approved Noise Management Plan section 10, as no attended noise monitoring was conducted between the date of commencement of site preparation (September 2016) and the date of this audit (August 2017).

As the SWL 106 dB(A) for the D6 bulldozer used on site on the 19, 20 and 26 September 2016 was working at ground level was compared with the scraper (SWL 118dB(A)) assessed in the Environmental Assessment 2010, the noise levels at the nearest sensitive receivers during the preliminary topsoil stripping activities would have been less than the 38dB(A) criterion (i.e. Environmental Assessment 2015 – Appendix 4 (except under NE wind conditions for location R2, a property owned by Austral Bricks).

(It should be noted that the only physical activities undertaken on the Quarry site between September 2016 and August 2017 were the three (3) days of minor site preparation works associated with the commencement of physical activities in September and October 2016. The site preparation and establishment of the surface physical components for the commencement of quarrying operations had not progressed since that time because of the status of the bridge across Stony Creek on the internal access road. The Stony Creek bridge was inspected and determined to be inappropriate for the transport of large items of equipment across the bridge to the quarry extraction area. A Modification to the Project Approval 08_0212 was granted on 6 July 2017 for the replacement of the bridge over Stony Creek (these works had not commenced at the date of this audit – 1 August 2017).

The non-compliance with implementation of the noise monitoring program, was the subject of correspondence from the DP&E on 19 May 2017. Austral Bricks formally responded to the DP&E correspondence on 14 June 2017.

6.2.6 Conclusion

The Noise Management Plan prepared to satisfy Project Approval 08_0212 Schedule 3 condition 8 was approved by DP&E on 13 May 2016. The implementation of the Noise Management Plan noise mitigation measures will occur when site preparation activities commence again on site. Implementation of the noise monitoring program had not occurred in accordance with the approved Noise Management Plan section 10 at the date of this audit (August 2017) as no attended noise monitoring was conducted between the date of commencement of site preparation (September 2016) and August 2017. No physical activities were undertaken on the Quarry site between October 2016 and August 2017 following the initial site preparation works in September and October 2016.

6.3 Air Quality

[Project Approval 08_0212 Schedule 3 conditions 9 to 12]

6.3.1 Environmental Assessment

6.3.1.1 Environmental Assessment (December 2010)

The air quality assessment for the Environmental Assessment 2010 Part 6 of the Specialist Consultant Studies Compendium was undertaken by Heggies Pty Ltd. (2010).

The Quarry site is situated in a semi-rural area dominated by agriculture and livestock operations. Two industrial operations, with potential to influence air quality in the vicinity of the Project Site are Ingham's Stock Feed Processing Plant (approximately 1.8km south of the Project Site) and the Boral Cement Plant is (approximately 2.3km west-southwest of the Quarry site).

The level of pollutants generated by agricultural and livestock operations is considered low. In the absence of deposited dust records for the Quarry site, dust deposition was assessed based on the incremental guideline of 2g/m²/month. Atmospheric dispersion modelling was undertaken to assess the potential for dust and particulate generation from activities at the New Berrima Clay/Shale Quarry extraction site.

Dust Deposition - Dust deposition predictions indicated that the incremental increase in monthly average dust deposition would be less than 1.9µg/m³ at all sensitive receptor locations across the modelled scenario. Based on dust deposition assessment criteria of a maximum incremental increase of 2g/m²/month, emissions of dust from the New Berrima Clay/Shale Quarry operations were not predicted to adversely impact the surrounding environment.

PM₁₀ - The potential for adverse impacts from proposed quarry operational emissions on the surrounding environment in relation to 24-hour average PM₁₀ concentrations were low. The total incremental increase in annual average PM₁₀ attributable to the project at all identified sensitive receptors was predicted to be less than 2.3µg/m³ at all locations for the scenario modelled. Based on the annual average PM₁₀ criteria of 30µg/m³, emissions of PM₁₀ from the Quarry site were not predicted to adversely impact on the surrounding environment.

Total Suspended Particles (TSP) - Predicted incremental increases and total cumulative annual average TSP demonstrated that the incremental increase in annual average TSP was less than 7.2µg/m³ at all sensitive receptor locations. The total annual average TSP was predicted to be less than 26.4µg/m³ at all locations. Based on the annual average TSP criteria of 90µg/m³, emissions from the New Berrima Clay/Shale Quarry operations are not predicted to adversely impact the surrounding environment.

The conclusion of the air quality assessment indicated that the proposed project would have minimal dust emissions impact on the local and broader environment when mitigation measures such as amenity bunds, dust suppression by watering and the use of appropriately maintained machinery, are implemented.

6.3.1.2 Environmental Assessment (April 2015) – Modification 1

Air quality assessment conducted by SLR Consulting (2015) based on the original air quality assessment undertaken in 2010, predicted that air quality levels as a result of the proposed modification would not result in an increase in deposited dust and particulate matter levels during the construction or operational phases.

6.3.1.3 Environmental Assessment (December 2016) -Modification 2

No significant changes to air quality impacts are expected from the proposed modification as the activities would not result in an increase in the intensity or location of dust generating activities. The construction activities

would be of a low intensity and short duration compared with the existing approved activities under Project Approval 08_0212.

6.3.2 Air Quality Management Plan

[Project Approval 08_0212 Schedule 3 condition 11]

The Air Quality Management Plan prepared to satisfy Project Approval 08_0212 Schedule 3 condition 8 was submitted to the DP&E on 18 March 2017 and approved on the 13 May 2016.

The Air Quality Management Plan objectives and key performance outcomes for air quality management of the New Berrima Clay/Shale Quarry are summarised in Table 6.3.2.

Table 6.3.2: Air Quality Objectives and Key Performance Outcomes

Air Quality Objectives	Key Performance Outcomes
To ensure compliance with all relevant Project Approval and Environment Protection Licence criteria and reasonable community expectations.	Compliance is achieved with all relevant criteria nominated in the Project Approval 08_0212 and Environment Protection Licence 20377.
To implement appropriate management and mitigation measures during all stages of the Project.	All identified air quality management and mitigation measures are implemented to the extent required
To implement an appropriate monitoring program to establish compliance or otherwise with relevant criteria during all stages of the Project.	All identified monitoring is undertaken in accordance with the relevant procedures and at the relevant intervals.
To implement an appropriate complaints handling and response protocol.	Complaints (if any) are handled and responded to in an appropriate and timely manner.
To implement continual improvement for investigating, implementing and reporting on reasonable and feasible measures to reduce air quality impacts.	An appropriate continual improvement program has been implemented
To implement an appropriate incident reporting program, if required.	Incidents (if any) are reported in an appropriate and timely manner.

6.3.3 Air Quality Assessment Criteria

[Project Approval 08_0212 Schedule 3 conditions 9]

The operation of the New Berrima Clay/Shale Quarry must comply with the air quality impact assessment criteria (Project Approval 07_0069 Schedule 3 condition 9), and air quality management plan requirements (Project Approval 08_0212 Schedule 3 condition 11):

Project Approval Schedule 3 condition 9 - Table 3: Long Term Criteria for Particulate Matter

Pollutant	Averaging Period	Criterion
Total solid particulates (TSP)	Annual	90µg/m ³
Particulate matter <10µm PM ₁₀	Annual	30µg/m ³

Project Approval Schedule 3 condition 9 - Table 4: Short Term Criteria for Particulate Matter

Pollutant	Averaging Period	Criterion
Particulate matter <10µm PM ₁₀	24 hours	50µg/m ³

Project Approval Schedule 3 condition 9 - Table 5: Long Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum Project Contribution	Maximum Total Deposited Dust
Deposited dust	Annual	2g/m ² /month	4g/m ² /month

6.3.4 Air Quality Monitoring Program

[Project Approval 08_0212 Schedule 3 conditions 11(d)]

Three dust deposition gauges were installed within the boundaries of the New Berrima Clay/Shale Quarry site between the proposed extraction area and the respective representative residences, at locations consistent with the EPL 20377 condition P1.1 - EPA Identified Monitoring Points identified on the map titled "Environmental Monitoring Locations" dated 20 November 2015 (DOC16/206245) – refer to Figure 6.3.4:

- A1 – North of the quarry void;
- A2 - East of the quarry void;
- A3 - Southeast of the quarry void.

The Air Quality Management Plan section 11.6 states:

"Dust deposition gauges will be sampled monthly in accordance with AS/NZS 3580.10.1:2003, i.e. samples will be collected/changed over within 2 days of the first day of each month."

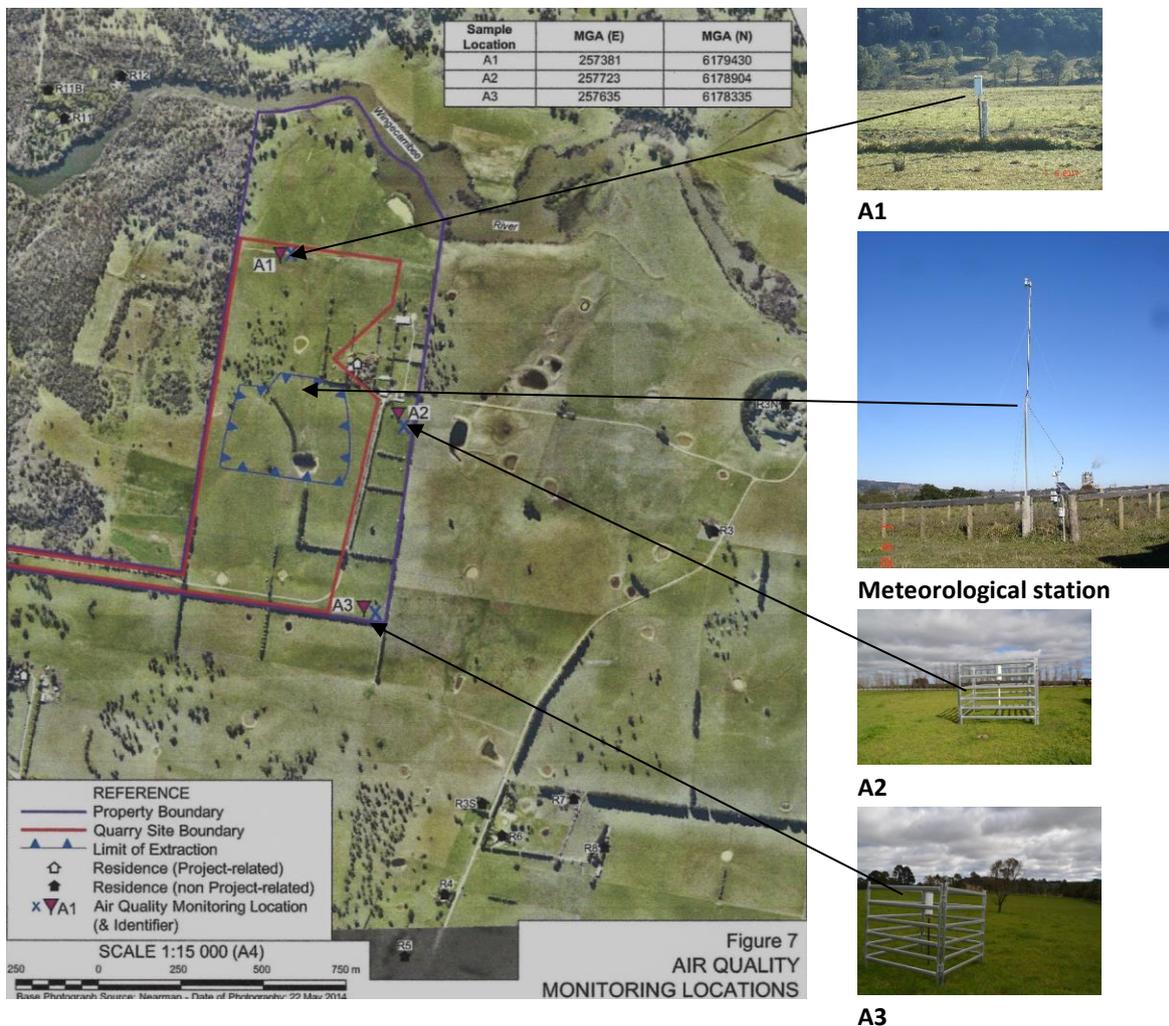


Figure 6.3.4: Dust Deposition Gauge Locations – New Berrima Clay/Shale Quarry

6.3.5 Meteorological Station

[Project Approval 08_0212 Schedule 3 conditions 12]

[Environment Protection Licence 20377 condition M4.1]

A meteorological station was installed on the Quarry site by Carbon Based Environmental Pty Ltd in September 2016. The meteorological station installation is protected by a substantial cattle proof fence. The meteorological station complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline and currently monitors the following parameters:

- Temperature (at 2m and 10m above ground level).
- Wind Speed and Direction (at 10m above ground level).
- Rainfall.
- Solar Radiation.
- Barometric Pressure.

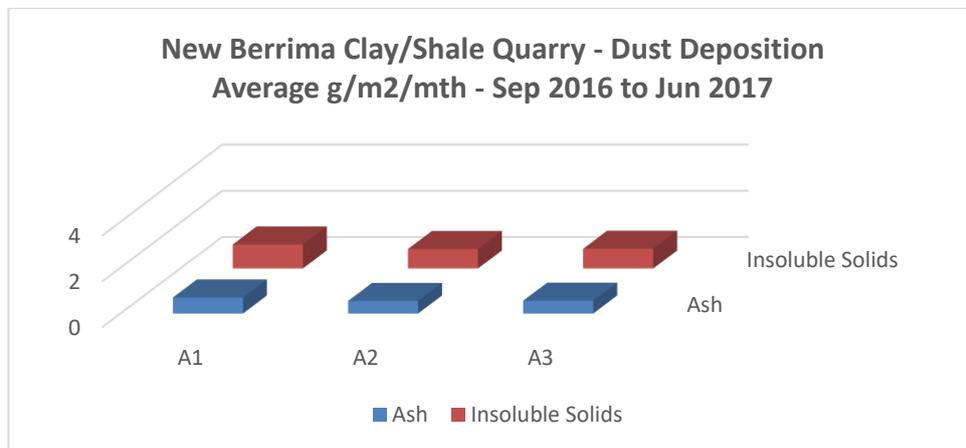
6.3.6 Air Quality Monitoring Results

[Environment Protection Licence 20377 condition M2.2]

Dust deposition monitoring commenced in September 2016. The Air Quality Management Plan section 11.6 states that: “Dust deposition gauges will be sampled monthly in accordance with AS/NZS 3580.10.1:2003, i.e. samples will be collected/changed over within 2 days of the first day of each month,” but between September 2016 and May 2017 the dust deposition bottles were not collected monthly (see Table 6.3.6 below). Monthly collection of the dust deposition bottles commenced in June 2017. (Note: The dust deposition monitoring results in Table 6.3.6 below are expressed as the analytical results from the identified sample periods and the average grams per square metre per month levels over the September 2016 to May 2017 period have been calculated).

Table 6.3.6: Dust Deposition Results between September 2016 and 30 June 2017

Location A1	20/09/16 - 21/01/17	22/01/17- 08/03/17	09/03/17 - 05/05/17	01/06/17- 30/06/17	Average g/m ² /mth	
Ash	0.5	4.5	0.5	0.4	0.7	
Insoluble Solids	2.2	5.6	0.7	0.6	1.05	
Location A2		22/01/17- 08/03/17	09/03/17 - 05/05/17	01/06/17- 30/06/17	Average g/m ² /mth	
Ash	-	0.8	1.4	0.2	0.5	
Insoluble Solids	-	1.1	1.9	0.4	0.7	
Location A3	20/09/16 - 08/11/16	08/11/16 - 21/01/17	22/01/17- 08/03/17	09/03/17 - 05/05/17	01/06/17- 30/06/17	Average g/m ² /mth
Ash	0.3	1.1	1.3	1.8	0.2	0.52
Insoluble Solids	0.6	1.8	1.8	2.7	0.4	0.8



Average monthly results for ash and insoluble solids during September 2016 to June 2017, have demonstrated compliance with the 2g/m²/mth criteria (Project Approval 08_0212 Schedule 3 condition).

Recommendation:

Ensure dust deposition gauge bottle collection and analysis conforms with the monthly monitoring regime in the Air Quality Management Plan section 11.6 and AS 3580.10.1-2003.

6.3.7 Conclusion

The Air Quality Management Plan prepared to satisfy Project Approval 08_0212 Schedule 3 condition 11 was approved by DP&E on 13 May 2016. Dust deposition monitoring commenced in September 2016, and the average monthly results for ash and insoluble solids during the September 2016 to June 2017 period, demonstrated compliance with the 2g/m²/month criteria (Project Approval 08_0212 Schedule 3 condition 9 Table 5).

The dust deposition bottles were not collected monthly between September 2016 and May 2017 and it is recommended that collection and analysis of dust deposition gauge bottle occurs monthly in accordance with the monitoring regime in the Air Quality Management Plan section 11.6 and AS 3580.10.1-2003.

6.4 Water Management

[Project Approval 08_0212 Schedule 3 conditions 13 to 18]

6.4.1 Environmental Assessment

6.4.1.1 Environmental Assessment (December 2010)

The surface water assessment undertaken for the Environmental Assessment (2010) by Strategic Environmental and Engineering Consulting (SEEC, 2010), Part 2 of the Specialist Consultant Studies Compendium.

The local topography around the New Berrima Clay/Shale Quarry is dominated by the valley through which the Wingecarribee River flows, between Bowral and Robertson through the township of Berrima and into the Wollondilly River that feeds into the Hawkesbury Nepean River system. In the vicinity of New Berrima, the topography of the land on the southern side of the river is undulating to flat. The topography on the northern side of the river is steeper with a ridge orientated east - west and featuring Cockatoo Hill with an elevation of 788m AHD.

The Quarry site occupies a hillcrest position with radial drainage primarily to the north and east. Crossing the site access road and within the Quarry site, approximately 800m to the west of the extraction area, Stony Creek flows northward into the Wingecarribee River. Approximately 500m east of the Quarry site is an unnamed creek that flows northward to the Wingecarribee River and a small unnamed ephemeral creek bisects the site also flowing into the Wingecarribee River after periods of heavy rain.

The first three stages of development of the New Berrima Clay/Shale Quarry extraction will be undertaken on the southern slope of the hill that does not drain directly to the Wingecarribee River. The extraction area is set back approximately 730m from the bank of the Wingecarribee River and has been designed so runoff from disturbed areas would be captured within the void itself and would not flow to the Wingecarribee River.

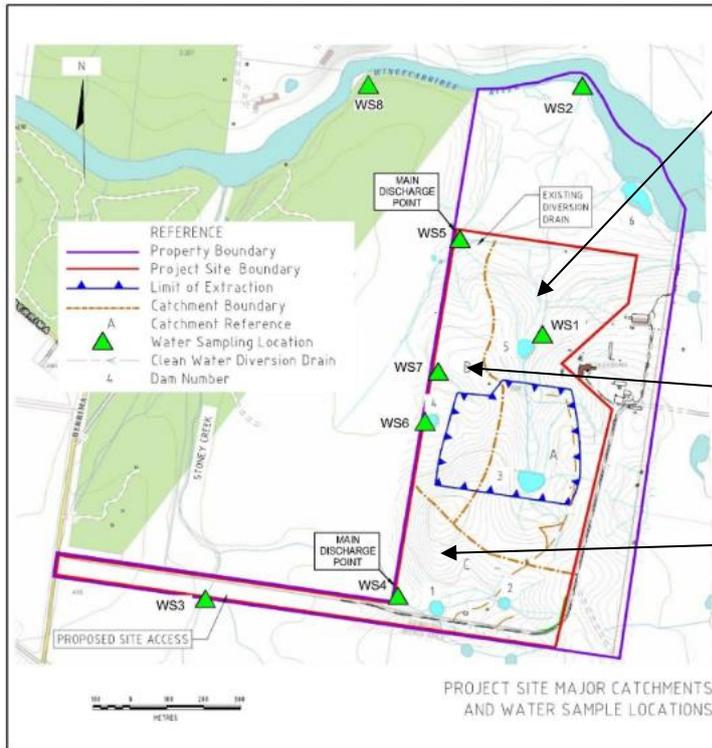
None of the drainage lines within the Quarry site have beds or banks, or permanent flows and all are classified as Category 3 watercourses.

Background water quality assessed in August 2008 at sites WS1, WS2 and WS3 demonstrated:

- Farm Dam 5 (WS1)- Water sampled exhibited water quality above the trigger values for electrical conductivity, total nitrogen, total phosphorus and suspended solids. This dam is in the middle of a

grazing paddock and serves as a water source for cattle. It is subject to the influence of grazing animals and application of fertilisers to the pasture.

- Wingecarribee River (WS2) adjacent to the “Mandurama” property, exhibited water quality below the ANZECC trigger values.
- Stony Creek (WS3) at the bridge crossing on the site access road exhibited electrical conductivity and total phosphorus values which exceed the ANZECC trigger values. This water would be primarily runoff from pastures south of the site access road and the application of fertilisers on the adjoining property may account for these high values.



- Catchment A drains approximately 27ha within the quarry site. There are no defined channels within Catchment A with all drainage occurring via open grassy depressions that drain into a man-made lateral drains that diverts flow into Catchment B at the quarry northern boundary.
- Catchment B drains approximately 11.4ha at the north-western boundary of the quarry site via a series of open grassy depressions.
- Catchment C drains approximately 12.7ha of the southern part of the quarry site via open grassy depressions that join Stony Creek before eventually entering the Wingecarribee River

Figure 6.4.1.1: Quarry site major Catchment Areas

The New Berrima Clay/Shale Quarry operation will not require to draw water from the Wingecarribee River or any other watercourse. The annual water requirement for the operation of the quarry would be approximately 2.53ML. Water supply modelling was undertaken as part of the Surface Water Assessment. The model predicted that the anticipated total demand of 2.53ML/year would be met 100% of the time and there would be no requirement for make-up water.

Water for dust suppression will be sourced primarily from harvested surface water runoff, either from Sedimentation Basins 1 and 3 or from alternative storages. Basins 1 and 3 will collect sediment-laden water pumped out of the extraction area sump and ‘clean’ runoff from upslope catchments.

6.4.1.2 Environmental Assessment (April 2015)

Proposed Modification 1 would not result in adverse impacts on the surface water environment within and surrounding the New Berrima Clay/Shale Quarry site, with all water required for the operation of the quarry to be sourced from on-site dams under the property’s maximum harvestable right capacity.

6.4.1.3 Environmental Assessment (December 2016)

A review of the potential flood effects of the proposed bridge works was undertaken by Land Team Australia Pty Limited and the review concluded that the proposed crossing and connecting access ramps would not result in the loss of any flood storage volume within the flood plain of Stony Creek or result in a significant increase in flood levels or velocities within the site or adversely affect adjoining properties.

General surface water and erosion / sediment control and management for the proposed activities would be undertaken in accordance with the objectives and processes included within the approved Water Management Plan. These measures are consistent with *Managing Urban Stormwater. Soils and Construction* Volume 1 (Landcom, 2004) and Volume 2E – Mines and Quarries (DECC, 2008).

Based on the implementation of these design features and management measures, it was assessed that no significant surface water or flooding impacts would result from proposed Modification 2.

6.4.2 Water Management Plan

[Project Approval 08_0212 Schedule 3 condition 18]

The Water Management Plan prepared by Strategic Environmental & Engineering Consulting (SEEC) Pty Ltd to satisfy Project Approval 08_0212 Schedule 3 condition, was submitted to the DP&E on 18 March 2016 and approved on 9 June 2016. The Water Management Plan was being updated at the time of this audit (August 2017).

The Water Management Plan includes the Site Water Balance (section 9), Erosion and Sediment Control (section 10), Surface Water Monitoring Program (section 11) and Groundwater Management (section 12).

6.4.3 Site Water Balance

[Project Approval 08_0212 Schedule 3 condition 18(b)]

Site Water Balance is addressed in the Water Management Plan section 9 to satisfy Project Approval 08_0212 Schedule 3 condition 18(b). The site water balance provides an overall description of all water sources, water use, and identifies proposed storages for dirty water (e.g. sediment basins, pumping dams, sumps) or for clean, useable, water (either as part of the works or for agricultural purposes) and their volumes.

The three (3) key demands for water on the site are for dust suppression, machinery wash-down and staff requirements (the site office will be provided with potable water by tanker and ablutions will be portable pump-out toilets).

Water for dust suppression and wash-down will be primarily sourced from Dam 7 that has adequate capacity (approximately 1.2ML storage volume) to supply water required for 99% of the time in most years. In very dry periods, water could also be supplied from one or more of the other water supply dams (e.g. Dam 1, Dam 4 or Dam 6). The Quarry will not require make-up water.

Internal roads will require approximately 17kL of water daily for dust suppression (used on dry days only) once quarry extraction activities commence. A water cart will be kept on site to enable watering of sections of the Site Access Road as required.

The requirement for machinery wash-down will be minimal with an additional 2,000L potentially required each day that the quarry is operational.

6.4.4 Surface Water Management Plan

[Project Approval 08_0212 Schedule 3 condition 18(b)]

Surface water management is addressed in the Water Management Plan section 9.4, approved on 9 June 2016. The combined capacity of the dams supplying water during the operational stages of the New Berrima Clay/Shale Quarry development or as part of the final landform will total 8.5ML, in accordance with the permissible harvestable right volume calculated for the 100.2ha property.

All the dams will be used as sediment basins depending on the stage of works, and may be supplemented by a number of other temporary sediment basins during the four primary stages of work

- Establishment of Stages 1 – 4 (Site access road, southern part of the Extraction Area and southern and central visibility barriers).

- Operation of Stages 1 – 4 (Year 1 – 15).
- Establishment of Stages 5 – 7 (northern part of the Extraction Area and northern visibility barrier).
- Operation of Stages 5 – 7 (Year 15 – 30).

Clean water derived from upslope of the extraction areas will be diverted by clean water Diversion Drain CD1, with an outlet just downstream of Dam 5 via a level spreader.

As disturbed lands are stabilised / rehabilitated, the associated sediment basins will be removed or converted to clean water storage

6.4.5 Surface Water Discharge Locations

[Environment Protection Licence 20377 condition P1.3]

Two (2) EPA approved discharge locations for runoff from disturbed areas within the Quarry site are described in Environment Protection Licence 20377 condition P1.3:

EPA ID No.	EPL Discharge Location and Water Monitoring Location	Water Management Plan – Water Discharge and Water Monitoring Location ID
4	North west of the quarry void labelled W1 on map titled "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).	WS5 - located in Catchment B in the north-western corner of the Quarry Site.
5	South west of the quarry void labelled W2 on map titled "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).	WS4 - located in Catchment C near the southwestern corner of the Quarry Site will discharge runoff from the internal access road and the surplus overburden storage area after on-site the runoff has passed through Dams 1 and 2.

Water collected in sediment basins will be flocculated if required, and settled prior to discharge. Before a conditional discharge occurs, the water will be tested to ensure it meets the water quality parameter criteria in Water Management Plan, section 11.2.

No conditional discharges occurred from WS4 or WS5 between September 2016 and August 2017.

6.4.6 Surface Water Quality Criteria

[Water Management Plan, June 2016 section 11.2]

The water quality of any discharge from the Quarry site is to meet the following water quality criteria:

Parameter	Discharge Criteria
pH	6.0 – 8.5
Total Suspended Solids (TSS)	Less than 50mg/L
Oil and Grease	Not visible

Surface water quality triggers determined from background results from WS1, WS4, WS5, WS6 and WS7 will be compared with those at WS2 and WS3 to determine if water quality is being adversely affected by the quarry activities. Any decline in water quality will be investigated, reported and, if required, appropriate remedial action will be taken. A management response will be instigated if either of the following occurs:

- If, at one or more of the site discharge monitoring locations WS1, WS4, WS5, WS6 and WS7 there is any exceedance of a rolling 80th percentile value for location WS2.
- If, at one or more of the site discharge monitoring locations WS1, WS4, WS5, WS6 and WS7 there is an exceedance of either of the rolling 80th percentile values for locations WS3 and WS4 on more than six monthly sampling events in any one year.

6.4.7 Surface Water Monitoring Program

[Project Approval 08_0212 Schedule 3 condition 18(b)]

The approved Water Management Plan section 11 addresses surface water monitoring:

6.4.7.1 Baseline Monitoring

Baseline water quality monitoring within the Quarry site has been limited because:

- the quarry extraction area is close to local catchment divides and runoff is often of short duration;
- the Quarry site has well established grass cover and consequently a low coefficient of runoff; and
- the dams on site that collect runoff do not regularly overflow/discharge and are disturbed by stock causing high levels of suspended solids.

The water monitoring program was to involve sampling subject to flowing water being present at the water sampling locations, water sampling will be undertaken at monthly intervals from sites WS1, WS2, WS3, WS4 (EPL 20377 Condition P1.3 EPA ID W5), WS5 (EPL 20377 Condition P1.3 EPA ID W4) and WS8 from July 2016 until site establishment activities commence. Samples would be analysed for pH, electrical conductivity, suspended solids, turbidity, cations/anions, Total Phosphorus (TP) and Total Nitrogen (TN).

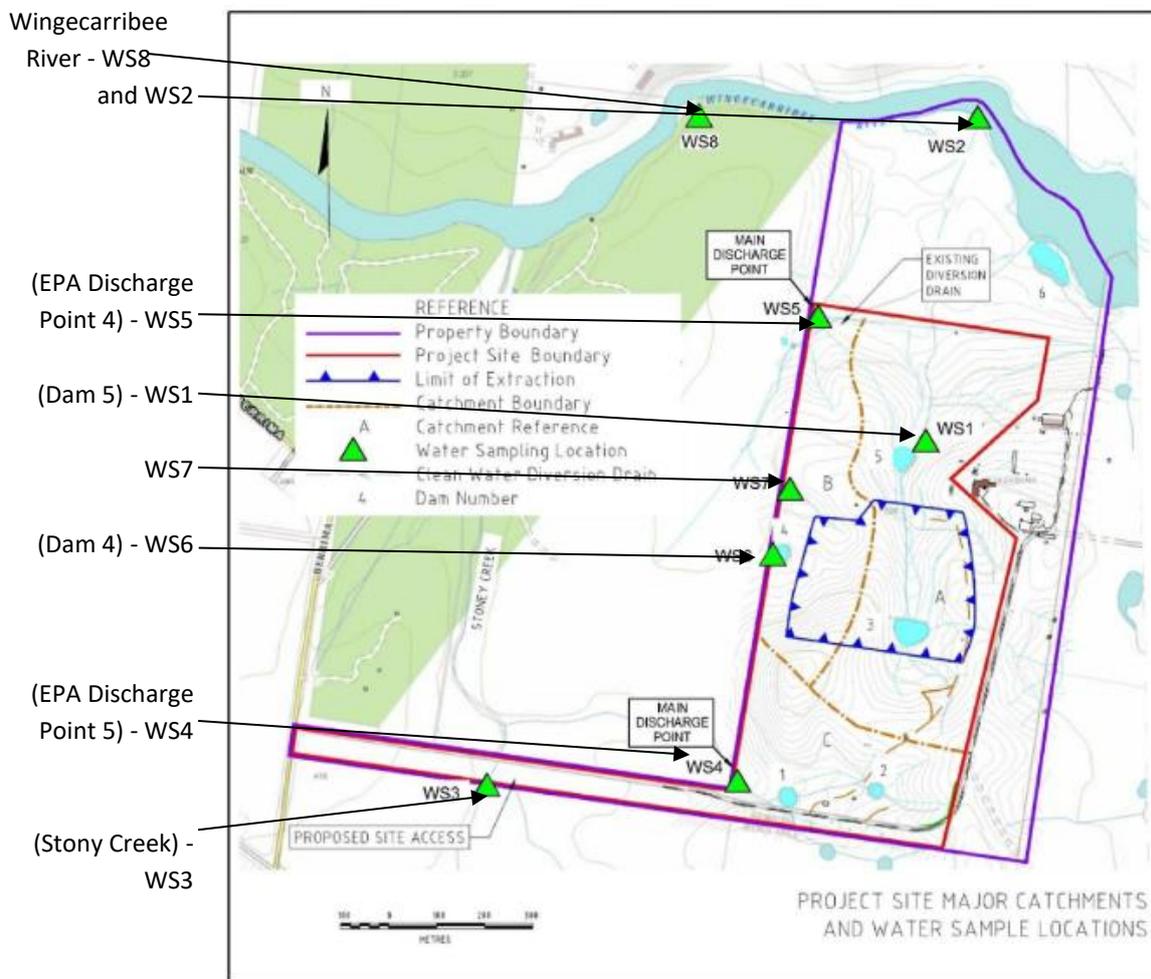


Figure 6.4.7.1: Water Monitoring Locations – New Berrima Clay/Shale Quarry

During site preparation of the New Berrima Clay/Shale Quarry, water quality will be monitored:

- at sediment basins prior to any required conditional discharge; and
- opportunistically at the site locations identified on Figure 4 at least 4 times a year and within 24 hours of any wet weather discharge.

Monitoring site WS2 represents an upstream sample location within the Wingecarribee River and location WS8 downstream of the Quarry Site (see Figure 6.7.1).

Estimates of discharge flow rates or volumes during discharge are to be recorded during the collection of samples.

6.4.7.2 Surface Water Monitoring Results

The baseline water monitoring proposed in the Water Management Plan section 11.3.1.1 did not occur prior to physical commencement of site preparation works in September 2016, and no samples were collected between September 2016 and May 2017.

Background (baseline) water quality results and water sample results for 31 May, 30 June and 31 July 2017 from sampling points WS2, WS3, WS5 and WS8 are presented in Table 6.4.7.2.

Table 6.4.7.2: Surface Water Quality Results – Background and 2017 Monitoring

Parameter	Water Sampling Points									
	Dam 3	Wingecarribee River					Stony Creek			WS5 (EPA ID Point 4)
	WS1	WS2		WS8		WS3				
	B/G	31/5/17	30/6/17	B/G	31/5/17	30/6/17	31/5/17	30/6/17	B/G	30/6/17
pH	7.7	6.9	6.9	7.5	7.3	7.1	7.0	7.1	7.8	6.4
Electrical Conductivity (EC)	393	255	185	102	225	150	970	810	396	120
Suspended Solids	32	14	14	11	5	11	20	280	4	290
Turbidity	-	35	17	-	18	16	28	130	-	180
Total Grease	-	-	4	-	-	<2	-	3	-	<0.1
Sodium (Na)	26.9	20	17	10	19	13	80	76	29.5	17
Potassium (K)	27.1	4.7	3.4	1.2	4.1	2.4	17	17	8.4	2.1
Calcium (Ca)	13.6	18	11	4.0	17	9.5	86	70	34.6	3.9
Magnesium (Mg)	7.9	8.1	6.7	2.9	7.6	6.2	28	24	6.8	2.3
Iron (Fe)	7.92			0.82					0.45	
Chloride (Cl)	60	35	30	15	32	27	190	195	55	37
Sulphate (SO ₄)	2	28	13	<2	18	10	43	24	26	<2
Bicarbonate (HCO ₃)	-	58	55	-	67	38	250	190	-	12
Phosphate (PO ₄)		<0.1	<0.1		<0.1	<0.1	<0.1	1.1		0.84
Total Phosphorus	0.2	<0.1		0.02	<0.1	<0.1	<0.1	-	0.03	
Fluoride (F)	-	0.14	<0.1	-	0.12	<0.1	0.17	0.17	-	<0.1
Nitrate (NO ₃ -N)		0.59	1.9		0.47	1.6	0.3	0.89		<0.1
Ammonia (NH ₄)		0.2	<0.1		0.1	<0.1	0.1	0.3		<0.1
Total Kjeldahl -N		1	-		0.8	-	1.5	-		-
Total Nitrogen	7.3	-	1.3	0.2	-	1.0	-	5.7	<0.1	1.7
Total Carbon		-	6		-	6	-	29		11

B/G – Background Results – Surface Water Assessment, SEEC, November 2010

Water samples collected on 31 May, 30 June and 31 July 2017 from sampling points WS2, WS3, WS5 and WS8 were analysed for the parameters nominated in the approved Water Management Plan section 11.3.1.1 by Sydney Analytical Laboratories. These samples were collected when no Quarry site preparation/establishment activities were occurring and the site was subject only to cattle grazing during these dates. The water quality

results for 31 May and 30 June 2017 therefore only represent the water quality when the site use was cattle grazing.

6.4.7.3 Conclusion

The surface water monitoring program included in the Water Management Plan section 11.3 was approved by DP&E in June 2016. The baseline water monitoring proposed in the Water Management Plan section 11.3.1.1 did not occur prior to physical commencement of site preparation works in September 2016, and no samples were collected between September 2016 and May 2017. Water monitoring was conducted where water was available on 31 May, 30 June and 31 July 2017, in accordance with Water Management Plan section 11. The water quality results for 31 May and 30 June 2017 therefore only represent the water quality when the site use was cattle grazing.

6.5 Erosion and Sediment Control Plans

[Project Approval 08_0212 Schedule 3 condition 18(b)]

Erosion and Sediment Control Plans were developed by SEEC in accordance with the requirements of *Management of Urban Stormwater, Soils and Construction Volume 1* (Landcom 2004) and *Management of Urban Stormwater, Soils and Construction Volume 2E – Mines and Quarries* (DECC 2008), as section 10 and Appendix A of the Water Management Plan.

Erosion and sediment loss will be mitigated by implementing a series of staged Erosion and Sediment Control Plans that address:

- Soil stripping will be undertaken in narrow strips to ensure that unnecessary clearing of vegetation is not carried out.
- Rehabilitation of disturbed areas using vegetation (e.g. grass) to achieve at least 60% cover within 20 days of final shaping and 70% cover within a further two months is the primary treatment to be applied.
- Disturbed operational land that will not be re-worked within 20 days will be stabilised using vegetation (e.g. grass) to achieve at least 60% cover.
- Stockpiles of waste material will be progressively stabilised using vegetative cover.
- Clay and shale material awaiting transport will be stockpiled on the floor of the extraction area to ensure any erosion of this material is confined within the extraction area.
- Amenity bunds will be stabilised using quick growing grass cover crops to achieve at least 60% cover within 20 days of final shaping and 70% cover within a further 2 months. Following establishment of the grass cover crop, shrubs and tree tube stock would be planted to provide more permanent stabilisation.
- Diversion drains will be stabilised to minimise scouring.
- Four sedimentation basins will be constructed during the site establishment construction phase of the project, involving the reshaping of the existing farm dams to achieve the required capacities. Sediment basins required during site preparation are short-term structures and sized according to the 5-day, 80th percentile rainfall depth criteria detailed in Landcom (2004) and DECC (2008). Sediment basins would have final operational capacities of approximately 8 000m³ (Basin 1), 7 000m³ (Basin 2) and 7 000m³ (Basin 3).
- The design of the sediment basins will include an emergency spillway designed to safely convey the 100-year ARI flow (DECC, 2008).
- A marker will be installed in each sediment basin showing the boundary between the Storage Zone (i.e. the lower zone) and the Settling Zone (i.e. the upper zone) in the basin.
- Any damaged components of the sediment basins will be repaired as soon as practicable.
- Other minor sediment control measures e.g. rock filter dams, sediment fence, mulch bunds etc. may be adopted throughout the site if required.

The amenity bunds around the perimeter of the extraction areas will act as diversion structures directing natural flows around the extraction area and sediment collection basins.

It is considered that the proposed Erosion and Sediment Control Plans that will be implemented progressively with the quarry development will meet the requirements of the *Management of Urban Stormwater, Soils and Construction Volume 1* (Landcom 2004) and *Management of Urban Stormwater, Soils and Construction Volume 2E – Mines and Quarries* (DECC 2008).

6.6 Groundwater

[Project Approval 08_0212 Schedule 3 condition 18(c)]

6.6.1 Environmental Assessment 2010

The existing groundwater environment was assessed during the exploratory drilling within the Quarry site in 2008, to depths of 35m below the ground surface did not intercept groundwater at elevations of approximately 630m AHD. Five groundwater bores are located within a 2km radius of the centre of the Quarry site. The closest of these is approximately 200m east of the “Mandurama” property near the Wingecarribee River at a depth of 96.30m below ground level (approximately 554m AHD). The primary water supply stratum for this bore and others in the surrounding area, is the Hawkesbury Sandstone (i.e. the geological unit below the Ashfield Shale).

No groundwater will be used for the activities associated with the Quarry operations. It is considered that there would be no impacts on groundwater. No mitigation measures are proposed since it is considered that groundwater would not be intercepted.

6.6.2 Groundwater Management and Monitoring

[Project Approval 08_0212 Schedule 3 condition 18(c) and 18A]

Groundwater management is addressed in the approved Water Management Plan section 12.

Routine monitoring of all groundwater inflows from the walls or floor of the extraction area will occur throughout the extraction area operations to satisfy Project Approval 08_0212 Schedule 3 condition 18(c).

Groundwater monitoring under Project Approval 08_0212 Schedule 3 condition 18A that requires “*the installation of 3 pairs of nested piezometers prior to the quarry pit floor reaching 660m AHD*”, will be implemented prior to commencement of extraction operations within Stage 3 (i.e. prior to the quarry pit floor reaching 660 m AHD).

A groundwater trigger action response plan will be developed following the commencement of groundwater monitoring and when there is sufficient data upon which to set site specific triggers. The groundwater management section of the Water Management Plan will be updated when the data becomes available.

6.7 Visual Amenity

[Project Approval 08_0212 Schedule 3 conditions 19 to 21]

6.7.1 Environmental Assessment 2010

The Environmental Assessment 2010 assessed the visual aspects of the New Berrima Clay/Shale Quarry and concluded that the visibility site was shielded from the south, east and west by the natural topography and the existing tree windrows.

The northern side of the proposed extraction area may be visible from a number of properties on the ridge along the northern side of the Wingecarribee River. Some residences that are located approximately 1.9km and 2.0km respectively from the closest edge of the extraction area and at an approximate elevation of 730m AHD will have views of the proposed extraction area. All other residences on the northern side of the river are screened from the proposed extraction area by forest or natural topography.

6.7.2 Management of Visual Amenity

[Project Approval 08_0212 Schedule 3 condition 3]

[Landscape Management Plan section 10, March 2017]

To minimise adverse visual amenity impacts associated with the New Berrima Clay/Shale Quarry, management and mitigation measures will be implemented in accordance with Landscape Management Plan section 10:

- A Central Visibility Barrier will be constructed during site preparation, prior to commencing extraction of product. This barrier will be approximately 8m to 12m high, 30m to 45m wide and 420m long (east to west). This barrier will ensure limited direct line of sight to active extraction areas from Stage 1 to Stage 4 of quarry operations;
- A Southern Visibility Barrier will be constructed after completion of the Central Visibility Barrier if surplus material is available. This barrier will be up to 4m high, up to 20m wide (north to south), and up to 350m long (east to west);
- All outside slopes and tops of the Visibility Barriers will be revegetated with a quick growing cover crop for rapid stabilisation and a seed mix of native grasses and indigenous shrubs and known to have high establishment success;
- A tree screen will be planted around the Surface Overburden Stockpile Area;
- The overall quarry design ensures that the extraction of Stages 2 to 7 will be topographically lower than the visibility barriers and shielded from direct line of sight from the north.
- No advertising signs or structures will be erected at the Quarry (excluding business identification, safety, environmental, and traffic management signs) as required under Project Approval 08_0212 Schedule 3 condition 20.

6.7.3 Visual Amenity Establishment

The site preparation works for the New Berrima Clay/Shale Quarry commenced in September 2016, following approval of the management plans required under Project Approval 08_0212. The initial site preparation works were of short duration during September and October 2016, with preliminary topsoil stripping undertaken within approximately 30% of the footprint of the Central Visibility Barrier. The topsoil was pushed to the northern side of the Central Visibility Barrier footprint using a D6 bulldozer. No 'barrier construction' occurred during these works.

Heavy equipment as proposed in the Environmental Assessment 2010 for the establishment of the Visibility Barriers was not able to be utilised on the site as the bridge across Stony Creek on the internal access road was assessed and determined not to be appropriate for the movement of large items of earthmoving equipment to the Quarry site preparation and extraction area.

Establishment of the Visibility Barriers will recommence when the replacement of the bridge over Stony Creek is completed.

6.8 Traffic

[Project Approval 08_0212 Schedule 3 conditions 23 to 30]

6.8.1 Environmental Assessment (2010)

The traffic assessment for the Environmental Assessment (2010) was undertaken by Traffic Solutions Pty Ltd (2010) and attached as Part 1 of the Specialist Consultant Studies Compendium.

The proposed transport route between the New Berrima Clay/Shale Quarry site and Bowral Brick Plant will follow a network of local, regional and State roads. All of the local roads are not approved for B-double vehicles and are limited to 19m articulated vehicles. All of the State and regional roads, with the exception of Mittagong Road, are approved for 23m, 25m and 26m B-double vehicles. Mittagong Road, between Old Bowral Road and Lyle Avenue is limited to 19m B-double vehicles. Berrima Road north of Taylor Avenue has a 10t load limit

restriction imposed by Wingecarribee Shire Council. This restriction is imposed for heavy vehicle traffic travelling through Berrima residential streets. Trucks over 10t would be permitted to use this section of road (from Taylor Avenue) for the specific purpose of accessing the Quarry site.

The traffic assessment estimated that with the implementation of mitigation measures, the proposed quarry would have minimal impacts relating to traffic. The conclusions of the traffic assessment were:

- The Quarry site will provide ample off-road parking for employee vehicles and contractors trucks.
- The location of the access driveway provides good sight distance in both directions along Berrima Road.
- Berrima Road and Taylor Avenue would continue to operate at a good level of service "A".
- The Berrima Road / Taylor Avenue intersection would continue to operate at a good level of service "A" with only minimal impacts on the degree of saturation and total average delays.
- The Berrima Road / access driveway intersection would operate at a good level of service "A".
- Impacts on traffic volumes and intersections at the Bowral end of the route would be insignificant due to the existing high traffic volumes (particularly heavy vehicles) on those roads.
- The proposed route between the Quarry site and Bowral Brick Plant is approved to take the proposed 19m articulated vehicles.

The truck haulage-route has sufficient capacity to accommodate the peak predicted additional 136 truck movements per day. The Traffic Assessment demonstrated that all intersections would operate satisfactorily and is unlikely to result in undue delays or queuing. To ensure any potential impacts on the safety or capacity of the surrounding road network are appropriately managed, the conditions of approval require:

- upgrade the site access to accommodate a 19 metre articulated vehicle;
- upgrade the Taylor Avenue/Berrima Road intersection in accordance with Council and RMS requirements; and
- preparation and implementation of a Traffic Management Plan including a Driver's Code of Conduct.

6.8.1.2 Environmental Assessment 2015 – MOD 1

The traffic and transportation assessment for Modification 1 concluded that the impacts would be negligible and effectively not change from those outlined in the Environmental Assessment 2010.

6.8.1.3 Environmental Assessment 2016 – MOD 2

The traffic assessment for proposed Modification 2 concluded that the modification would not change the impacts outlined in the Environmental Assessment 2010.

6.8.2 Transport Management Plan

[Project Approval 08_0212 Schedule 3 condition 29]

The Transport Management Plan prepared in consultation with the RMS and Wingecarribee Shire Council to satisfy Project Approval 08_0212 Schedule 3 condition 29, was approved on 13 May 2016.

The Transport Management Plan includes transport routes from the New Berrima Clay/Shale Quarry to the Bowral Brick Plant, traffic management measures (section 8) including intersection upgrades, road maintenance and transport management and the Drivers Code of Conduct (Appendix A).

Traffic management measures that will be implemented when the New Berrima Clay/Shale Quarry is operational will include:

- Maintenance of records of all heavy vehicles arriving and departing from the Quarry.
- Preparation a monthly and annual summary of product-related vehicle movements, including date, time and amount of material transported. A summary of these
- records will be provided to the DP&E and Wingecarribee Council on a quarterly basis.

- Ensure that all heavy vehicles associated with the Quarry use the prescribed route outlined in Project Approval 08_0212 Appendix a – Figure 3;
- Ensure no more than 150 000 tonnes of product is transported from the quarry in any calendar year, and no more than 68 laden trucks per day or 8 laden trucks per hour leave the New Berrima Clay/Shale Quarry.
- All laden trucks entering or leaving the Quarry are to have the loads covered.
- Vehicles to not track dirt and other materials onto public roads.
- Ensure that heavy vehicles only depart the Quarry between 7:00am to 4:00pm Monday to Friday and 8:00am to 1:00pm Saturdays.
- Ensure all drivers comply with the Drivers' Code of Conduct (Transport Management Plan, Appendix A)

Implementation of the Transport Management Plan will occur when the quarry operations commence. There was not quarry traffic or transport of material from the Quarry site during the period of this audit (i.e. September 2016 to August 2017).

6.9 Aboriginal Cultural Heritage

6.9.1 Environmental Assessment (2010)

The Aboriginal cultural heritage assessment for the Environmental Assessment (2010) was undertaken by Archaeological Surveys and Reports Pty Ltd and formed Part 8 of the Specialist Consultant Studies Compendium to the Environmental Assessment.

A search of the AHIMS database covering the New Berrima Clay/Shale Quarry site and surrounding area resulted in a listing of 39 sites. Two of these were in the immediate vicinity of the Quarry site, namely axe grinding grooves in Stony Creek to the north of the site access road. The exact locations of these sites are uncertain due to inconsistencies in the map referencing of the sites, but were provenanced to locations at the confluence of Stony Creek with a tributary north of the proposed access corridor from the descriptions given on the Site Recording Forms.

No sites or items of archaeological or indigenous cultural significance or locations of Potential Archaeological Deposits (PADs) were identified on the Quarry site during the survey.

The Quarry operations are not expected to have any impacts on Aboriginal heritage as no items or sites of Aboriginal heritage significance were recorded at the site during the recent survey conducted for the Environmental Assessment. In the absence of any archaeological sites or places assessed to be of potential archaeological research (PADs), the survey area was assessed to be of no research potential.

6.9.2 Aboriginal Heritage Management Plan

[Project Approval 08_0212 Schedule 3 condition 32]

The Aboriginal Heritage Management Plan (AHMP) was prepared to satisfy Project Approval 08_0212 Schedule 3 condition 32 in consultation with the OEH and the Local Aboriginal Land Councils (Illawarra LALC, Wodi Wodi Elders Corporation and Korewal Elouera Jerrungarugh, and approved by DP&E on 13 May 2016.

The objectives and key performance outcomes for the Aboriginal Heritage Management Plan to be implemented in relation to Aboriginal heritage matters are:

Objectives	Key Performance Outcomes	AHMP Reference
(a) Ensure compliance with Part 6 of the NPW Act, (i.e. to avoid harm to Aboriginal objects or sites).	(i) Demonstrate due diligence in efforts to identify Aboriginal sites or objects.	section 4

Objectives	Key Performance Outcomes	AHMP Reference
(b) Ensure compliance with all relevant project approval conditions, commitments and reasonable community expectations.	(ii) Compliance with all relevant criteria and reasonable community expectations, as determined in consultation with the relevant government agencies	section 4
(c) Engage relevant local Aboriginal stakeholders in Aboriginal heritage management of the Quarry when Aboriginal objects and sites are located.	(iii) Identify Registered Aboriginal Parties in accordance with the OEH guideline document "Aboriginal Heritage Consultation Requirements for Proponents	section 3.2
(d) To implement appropriate management measures during all stages of the Quarry.	(iv) All nominated management measures, including limits on disturbance, monitoring and stop work procedures, are implemented. Record of competence training personnel.	section 9
(e) Implement competence training and awareness in relation to cultural heritage management.	(v) Record competence training undertaken for all personnel.	section 7
(f) Implement an appropriate complaints handling and response protocol	(vi) Complaints (if any) handled and responded to in an appropriate manner.	Section 11
(g) Implement appropriate corrective and preventative actions, if required.	(vii) Corrective and preventative actions implemented, if required	section 9
(h) Implement an appropriate incident reporting program, if required.	(viii) Incidents (if any) reported in an appropriate manner.	section 12

6.9.3 Implementation of the Aboriginal Heritage Management Plan

A representative of the Illawarra Local Aboriginal Land Council (ILALC) was not present during soil stripping in the area of the Central Visibility Barrier, conducted in September 2016, so monitoring/inspection of site disturbance did not occur in accordance with Aboriginal Heritage Management Plan section 9.3 prior to the commencement of the surface disturbance activities on the site in September 2016.

A subsequent inspection was conducted by a representative of the ILALC and a Principal Archaeologist from Biosis Pty Ltd. Reports were prepared by ILALC and Biosis. The ILALC report dated 6 June 2017 identified one artefact in the disturbed areas (see below).

Correspondence from Nathaniel Kennedy Cultural Heritage and Environment Officer, ILALC (dated 6 June 2017) stated *"I am happy for future quarry works moving topsoil to go ahead as per the current process without any Indigenous representative present, however if there is anything of Aboriginal significance found during these works I would ask that work be ceased and I be contacted to determine moving forward what should occur."* No further works had occurred on the Quarry site between June and August 2017.

6.9.4 Conclusion

The Aboriginal Heritage Management Plan prepared in consultation with the OEH and the Local Aboriginal Land Councils (Illawarra LALC, Wodi Wodi Elders Corporation and Korewal Elouera Jerrungarugh) was submitted to the DP&E and approved on 13 May 2016.

The Aboriginal Heritage Management Plan will be implemented as necessary to ensure any artefacts/objects/sites are managed in accordance with the *National Parks and Wildlife Act Part 6* (i.e. to avoid harm to Aboriginal objects or sites) and the to meet the objectives of the Plan.

A non-compliance with the requirement of Project Approval 08_0212 Schedule 3 condition 32(c) occurred in 2017 - Monitoring of site disturbance by a representative of the Illawarra Local Aboriginal Land Council (ILALC) did not occur in accordance with approved Aboriginal Heritage Management Plan section 9.3 prior to the physical commencement of site disturbance activities on the Quarry site. A subsequent inspection was conducted by a representative of the ILALC on 6 June 2017 and a report provided.

6.10 Landscape Management

[Project Approval 08_0212 Schedule 3 condition 33 to 35]

6.10.1 Environmental Assessment

A soils, land capability and agricultural suitability assessment was conducted for the Environmental Assessment 2010 and was attached as Part 7 of the Compendium to the Environmental Assessment.

The assessment found that impacts on the soil resources from the development of the New Berrima Clay/Shale Quarry would be moderate with much of the final landform approximating the pre-quarry environment. Approximately three hectares of the final landform would comprise extraction faces and benches that would not be suitable for agriculture.

The Quarry site would be progressively rehabilitated following the completion of each extraction stage with rehabilitation including:

- As areas of extraction are completed, benches would be progressively rehabilitated
- removal any site infrastructure following completion of Quarry operations;
- landform shaping to create stable landforms that blend with the surrounding topography; and
- the final void will be returned to agricultural uses (i.e. grazing land)
- constructed amenity bunds will remain in-situ; and
- implementing a program to monitor rehabilitation progress and outcomes.

The impact associated with topsoil/subsoil removal, storage and re-use is anticipated to be minimal.

6.10.2 Landscape Management Plan

[Project Approval 08_0212 Schedule 3 condition 35]

The Landscape Management Plan was prepared in consultation with the OEH, Wingecarribee Shire Council to satisfy Project Approval 08_0212 Schedule 3 condition 35 and approved by DP&E on 13 May 2016.

The Landscape Management Plan addresses soil and vegetation management measures (section 9), management of visual amenity (section 10) and rehabilitation (section 11).

6.10.3 Rehabilitation

No rehabilitation had occurred at the Quarry site at the date of this audit (August 2017) as the site preparation had not been completed and no quarrying operations had occurred between September 2016 and August 2017.

The preliminary site preparation works on the area of the Central Visibility Barrier at the New Berrima Clay/Shale Quarry site occurred during September 2016, with topsoil stripping of three areas undertaken (approximately 30% of the footprint of the Central Visibility Barrier). The topsoil was pushed to the northern side of the Central Visibility Barrier footprint. No 'barrier construction' occurred during these works. The stockpiled topsoil in the

area of the Central Visibility Barrier have not been revegetated in accordance with Statement of Commitment 9.4 (*"Broadcast a pasture seed mix to assist temporary stabilisation if topsoil stockpiles are likely to remain for extended periods"*) and the Landscape Management Plan section 9.1, to reduce the potential of dust generation and the visual impact of the clearance.

6.10.4 Conclusion

The Landscape Management Plan was prepared in consultation with the OEH, Wingecarribee Shire Council to satisfy Project Approval 08_0212 Schedule 3 condition 35 and approved by DP&E on 13 May 2016 and addresses soil and vegetation management measures, management of visual amenity and rehabilitation.

The preliminary site preparation works on the area of the Central Visibility Barrier that occurred in September 2016, involved stockpiling of topsoil to the northern side of the Central Visibility Barrier footprint. The topsoil had not been stabilised to reduce the potential of dust generation and the visual impact of the clearance area at the date of this audit.

Recommendation:

Progressive rehabilitation had not been implemented on the topsoil stockpiles in the area of the Central Visibility Barrier at the date of this audit and it is recommended that the implementation of Statement of Commitment occur to address the requirements of Project Approval 08_0212 Schedule 3 condition 34 and 35.

7. Conclusions

This Independent Environmental Audit was conducted in August 2017 to satisfy Project Approval 08_0212 Schedule 5 condition 9, generally in accordance with the AS/NZS ISO 19011:2014 – *Guidelines for Auditing of Management Systems* and the *Independent Audit Guideline* (Department of Planning and Environment, October 2015).

Site preparation works for the New Berrima Clay/Shale Quarry commenced in September 2016, with preliminary topsoil stripping undertaken within the footprint of the Central Visibility Barrier. The site preparation works for the New Berrima Clay/Shale Quarry were of short duration between 19 September and 6 October 2016, as inspection of the bridge across Stony Creek on the internal access road assessed the bridge as not appropriate for the movement of large items of earthmoving equipment to the quarry site. (A Modification of the Project Approval was granted on 6 July 2017 for the replacement of the Stony Creek bridge). The Quarry site preparation works had not progressed between October 2016 and August 2017.

All management plans required under the Project Approval have been approved by the Secretary of Department of Planning and Environment. Full implementation of the environmental management plans will occur when the replacement of Stony Creek bridge is completed and the equipment required for the site establishment can be transported to the site and site preparation begins.

The findings of the Independent Environmental Audit indicate that implementation of all components of the Management Plans for the Quarry had not occurred, in most cases because there was no site preparation activity between October 2016 and August 2017. A summary of the audit findings is presented below:

Management Plans

Environmental management plans required under Project Approval 08_0212 for the New Berrima Clay/Shale Quarry were prepared in accordance with the relevant Project Approval conditions and approved by the DP&E, prior to the commencement of any activities associated with site preparation. Full implementation of the environmental management plans will take place when the replacement of Stony Creek bridge is completed and the equipment required for the site works can be transported to the site and site preparation recommences.

It is recommended that the environmental management plans be reviewed and the management measures and monitoring programs revised if necessary to address implementation matters and accommodate the delayed commencement of works on the Quarry site.

Environmental Monitoring

All environmental monitoring programs outlined in the Noise Management Plan, Air Quality Management Plan Water Management Plan, Aboriginal Heritage Management Plan and Landscape Management did not occur in accordance with the approved Plans between September 2016 and May 2017.

It is recommended that the environmental monitoring programs be reviewed and time for commencement and the frequency of monitoring be revised if necessary to meet the delayed commencement of works on the Quarry site, resulting from the time frame change resulting from the requirement for the bridge works over Stony Creek (Project Approval 08_0212 MOD 2).

Noise

Implementation of the noise monitoring program had not occurred in accordance with the approved Noise Management Plan section 10 at the date of this audit (August 2017) as no attended noise monitoring was conducted between the date of commencement of site preparation (September 2016) and August 2017. No physical activities had been undertaken on the New Berrima Clay/Shale Quarry site between October 2016 and August 2017, following the initial site preparation works in September 2016.

Air Quality

Dust deposition monitoring commenced in September 2016, and the average monthly results for ash and insoluble solids during the September 2016 to June 2017 period, demonstrated compliance with the 2g/m²/month criteria (Project Approval 08_0212 Schedule 3 condition 9 Table 5). The AS 3580.10.1-2003 procedure for dust deposition and monitoring regime in the Air Quality Management Plan section 11.6 was not followed between September 2016 and May 2017 with the dust deposition bottles not collected monthly. The monthly collection and analysis of the dust deposition bottles occurred from May to August 2017.

Recommendation:

Ensure dust deposition gauge bottle collection and analysis conforms with the monthly monitoring regime in the Air Quality Management Plan section 11.6 and AS 3580.10.1-2003.

Surface Water Monitoring

The surface water monitoring program included in the approved Water Management Plan did not occur prior to physical commencement of site preparation works in September 2016. No samples were collected between September 2016 and May 2017. Water monitoring was conducted where water was available on 31 May, 30 June and 31 July 2017, in accordance with Water Management Plan. The water quality results for 31 May and 30 June 2017 therefore only represent the water quality when the site use was cattle grazing.

Aboriginal Heritage

The Aboriginal Heritage Management Plan prepared in consultation with the OEH and the Local Aboriginal Land Councils (Illawarra LALC, Wodi Wodi Elders Corporation and Korewal Elouera Jerrngarugh) was submitted to the DP&E and approved on 13 May 2016. A non-compliance with the requirement of Project Approval 08_0212 Schedule 3 condition 32(c) occurred in 2016 - A representative of the Illawarra Local Aboriginal Land Council (ILALC) was not present during soil stripping in the area of the Central Visibility Barrier, conducted in September 2016, so monitoring/inspection of site disturbance did not occur in accordance with Aboriginal Heritage Management Plan section 9.3. A subsequent inspection was conducted by a representative of the ILALC and a Principal Archaeologist from Biosis Pty Ltd. Reports were prepared by ILALC and Biosis. The ILALC report dated 6 June 2017 identified one artefact in the disturbed areas.

Correspondence from Nathaniel Kennedy Cultural Heritage and Environment Officer, ILALC (dated 6 June 2017) stated *"I am happy for future quarry works moving topsoil to go ahead as per the current process without any Indigenous representative present, however if there is anything of Aboriginal significance found during these works I would ask that work be ceased and I be contacted to determine moving forward what should occur."* No further works had occurred on the Quarry site between June and August 2017.

Landscape Management

The Landscape Management Plan was approved by DP&E on 13 May 2016 and addresses soil and vegetation management measures, management of visual amenity and rehabilitation. The preliminary site preparation works on the area of the Central Visibility Barrier that occurred in September 2016, involved stockpiling of topsoil to the northern side of the Central Visibility Barrier footprint. The topsoil had not been stabilised to reduce the potential of dust generation and the visual impact of the clearance area at the date of this audit.

Recommendation:

Progressive rehabilitation had not been implemented on the topsoil stockpiles in the area of the Central Visibility Barrier at the date of this audit and it is recommended that the implementation of Statement of Commitment occur to address the requirements of Project Approval 08_0212 Schedule 3 condition 34 and 35.

Attachments

Attachment A	Consolidated Project Approval 08_0212
Attachment B	Statements of Commitment
Attachment C	Environment Protection Licence 20377
Appendix 1	Consultation Correspondence with Agencies

Independent Environmental Audit - Date

Project

Assessment of compliance with the intent of the Consolidated Project Approval 08_0212, Statements of Commitment and Environment Protection Licence 20377 conditions are expressed in these Attachments to the Independent Environmental Audit as:

Status	Description
Compliant	Where verifiable evidence has been collected to demonstrate that the intent of the elements of the requirements of the regulatory approval and appropriateness of implementation against the Project Approval Condition has occurred.
Compliant Ongoing	The intent and specific requirements of the condition have been met and the requirements are ongoing for the operation of project.
Administrative Non-compliance	A technical non-conformance with a condition of the consent that would not result in any risk or material harm to the environment (e.g. the submission of a report to government later than required under the approval conditions).
Non-Compliance – Low Risk	Non-compliance with the potential for moderate environmental consequences, but is unlikely to occur, or, potential for low environmental consequence but is likely to occur.
Non-Compliance – Moderate Risk	Non-compliance with the potential for serious environmental consequences but unlikely to occur, or, potential for moderate environmental consequence but likely to occur.
Non-Compliant – High Risk	Non-compliance with the potential for significant environmental consequences, regardless of the likelihood of occurrence.
Not active / Not triggered	A regulatory approval requirement / condition has an activation or timing that had not been triggered at the time of the audit, therefore a determination of compliance could not be made.
Noted	A statement or fact where no assessment of compliance is required.

Attachment A

Project Approval 08_0212

Blue type represents November 2015 Modification 1

Green type represents July 2017 Modification 2

Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	SCHEDULE 2 ADMINISTRATIVE CONDITIONS			
	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT			
1	In addition to meeting the specific performance criteria established under this approval, the Proponent must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the project.			Noted
	TERMS OF APPROVAL			
2	The Proponent must carry out the project generally in accordance with the: (a) EA; (b) EA (MOD 1); and (c) EA (MOD 2).	<ul style="list-style-type: none"> Environmental Assessment - New Berrima Clay / Shale Quarry Project, and Specialist Consultant Studies Compendium, Dec 2010 Environmental Assessment - New Berrima Clay / Shale Quarry for s.75W Modification of PA08_0212, May 2015 Environmental Assessment Modification 2, Feb 2017 	The development of the New Berrima Quarry will be generally in accordance with the Consolidated Project Approval 08_0212, the Environmental Assessments, and approved management plans, when site preparation re-commences after replacement of the Stony Creek bridge (in accordance with Environmental Assessment MOD 2. Note: No site preparation works occurred between October 2016 and August 2017, following preliminary soil stripping in the area of the Central Visibility Barrier.	Ongoing
2A	The Proponent must carry out the project in accordance with the Project Plans, statement of commitments, and the conditions of this consent. Notes: <ul style="list-style-type: none"> The general layout of the project is shown in APPENDIX A; The statement of commitments is reproduced in APPENDIX B. 			Observation
3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.		Consolidated Project Approval for Modifications 1 and 2 includes all variations/additions to the condition of consent.	Noted
4	The Proponent must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: (a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this approval; and (b) the implementation of any actions or measures contained in these documents.			Noted

Independent Environmental Audit - Date

Project

Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	LIMITS ON APPROVAL			
	Quarrying Operations			
5	The Proponent may carry out quarrying operations on the site until 31 December 2045 . <i>Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary or DRG. Consequently, this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.</i>		Quarrying operations at the New Berrima Quarry may continue until 31 December 2045.	Noted
	Extractive Material Extraction			
6	The Proponent must not carry out any development in the extraction area below a level of 640 m AHD . <i>Note: This condition does not apply to the construction of any bores approved by DPI - Water or pollution and sediment control structures described in the EA or EA (MOD 1).</i>		Extraction of product from the New Berrima Clay/Shale Quarry had not commenced at the date of this audit (August 2017).	Not triggered
7	The Proponent must not extract more than 150,000 tonnes of extractive materials from the site in any calendar year.		Extraction of product from the New Berrima Clay/Shale Quarry had not commenced at the date of this audit (August 2017).	Not triggered
	Extractive Material Transport			
8	The Proponent must not transport more than: (a) 150,000 tonnes of product from the site in any calendar year; (b) 68 laden trucks from the site in a day; and (c) 8 laden trucks from the site in an hour.		Extraction of product from the New Berrima Clay/Shale Quarry had not commenced at the date of this audit (August 2017).	Not triggered
9	The Proponent must only transport extractive material on the haul route.		No transport of product from the New Berrima Clay/Shale Quarry had occurred at the date of this audit (August 2017).	Not triggered
	STRUCTURAL ADEQUACY			
10	The Proponent must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. <i>Notes:</i> <ul style="list-style-type: none"> • Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. • Part 8 of the EP&A Regulation sets out the requirements for the certification of the project. 		No new buildings or structures, or alterations or additions to existing buildings and structures occurred on the Quarry site between September 2016 and August 2017.	Not triggered

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Project

Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	DEMOLITION			
11	The Proponent must ensure that all demolition work on site is carried out in accordance with <i>AS 2601-2001: The Demolition of Structures</i> , or its latest version.		No demolition of buildings or structures had occurred on the Quarry site at the date of this audit (August 2017).	Not triggered
	PROTECTION OF PUBLIC INFRASTRUCTURE			
12	The Proponent must : (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.		No relocation or repairs to public infrastructure on the Quarry site had been required at the date of this audit (August 2017).	Not triggered
	OPERATION OF PLANT AND EQUIPMENT			
13	The Proponent must ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner		No plant and equipment was being operated on the New Berrima Clay/Shale Quarry site at the of this audit (August 2017). The equipment operated by the contractor for the site preparation works (September 2016) was only on site for a short duration and was managed and maintained by the contractor.	Compliant Ongoing
	STAGED SUBMISSION OF ANY STRATEGY, PLAN OR PROGRAM			
14	With the approval of the Secretary , the Proponent may submit any strategy, plan or program required by this approval on a progressive basis. <i>Notes:</i> <ul style="list-style-type: none"> • <i>While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and</i> • <i>If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.</i> 		The environmental management strategy, management plans and monitoring programs required under the Project Approval 08_0212 were prepared and approved by the DP&E prior to the commencement of site preparation works at the Quarry site in September 2016.	Compliant
	PRODUCTION DATA			
15	The Proponent must : (a) provide annual quarry production data to DRG using the standard form for that purpose; and (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).		Production from the New Berrima Clay/Shale Quarry had not commenced at the date of this audit (August 2017).	Not triggered

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance															
	SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS																		
	IDENTIFICATION OF BOUNDARIES																		
1	Prior to carrying out any development on site under this approval, the Proponent must : (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction; and (b) submit a survey plan of these boundaries to the Secretary .	<ul style="list-style-type: none"> Survey Plan New Berrima Quarry, 18 Mar 2016 	Registered surveyors "Land Team" conducted a detailed site survey, marking the boundaries of the Quarry Site, extraction area boundary and footprints of the southern, central and northern visibility barriers. Survey Plans were submitted to the DP&E on 18 March 2016.	Compliant															
2	During the project, the Proponent must ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify the limits of extraction.		The boundaries of the approved limits of extraction identified in the survey plans are marked with posts to clearly identify the limits of extraction.	Compliant															
	NOISE																		
	Bund Construction																		
3	The Proponent must construct the Visibility Barriers prior to carrying out any quarrying operations on site under this approval to the satisfaction of the Secretary . This condition does not prohibit the winning of extractive material on site to be used in the construction of the Visibility Barriers . <i>Note: Visibility Barriers are shown on the project layout plans in Figure 1 of APPENDIX A.</i>		Construction in the area of the central visibility barriers commenced on the 19 September 2016 with topsoil stripping and stockpiling undertaken on 19/20/23 September 2016. No 'barrier construction' occurred during these works. Site preparation and establishment of the surface physical components for the commencement of quarrying operations had not progressed since October 2016 because of the status of the bridge across Stony Creek on the internal access road.	Not active															
	Visibility Barrier and Stockpile Dimensions																		
3A	The Visibility Barriers and surplus overburden stockpile (refer Figure 1 Appendix A) must be constructed to meet the dimensions specified in Table 1A, unless the Secretary agrees otherwise. <i>Table 1A - Visibility Barriers and Surplus Overburden Stockpile Dimensions</i>		Construction in the area of the visibility barriers commenced on the 19 September 2016 with topsoil stripping and stockpiling undertaken on 19/20/23 September 2016. No 'barrier construction' occurred during these works. Site preparation and establishment of the surface physical components for the commencement of quarrying operations had not progressed since October 2016 because of the status of the bridge across Stony Creek on the internal access road.	Noted															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Structure</th> <th style="text-align: center;">Height (mAHD)</th> <th style="text-align: center;">Base Width (m)</th> <th style="text-align: center;">Length (m)</th> <th style="text-align: center;">Surface Area (ha)</th> </tr> </thead> <tbody> <tr> <td>Central Barrier (minimum)</td> <td style="text-align: center;">675</td> <td style="text-align: center;">30-45</td> <td style="text-align: center;">420</td> <td style="text-align: center;">1.5</td> </tr> <tr> <td>Northern Barrier (minimum)</td> <td style="text-align: center;">672</td> <td style="text-align: center;">35-50</td> <td style="text-align: center;">160</td> <td style="text-align: center;">0.7</td> </tr> </tbody> </table>	Structure	Height (mAHD)	Base Width (m)	Length (m)	Surface Area (ha)	Central Barrier (minimum)	675	30-45	420	1.5	Northern Barrier (minimum)	672	35-50	160	0.7			
Structure	Height (mAHD)	Base Width (m)	Length (m)	Surface Area (ha)															
Central Barrier (minimum)	675	30-45	420	1.5															
Northern Barrier (minimum)	672	35-50	160	0.7															

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	Southern Barrier (minimum)	4m above natural land surface	20	350	0.7											
	Overburden Stockpile (maximum)	683	-	-	-											
	Noise Criteria – Bund Construction															
4	<p>During the construction of the Visibility Barriers, the Proponent must ensure that the noise generated on site does not exceed the criteria in Table 1.</p> <p><i>Table 1- Noise Criteria - Bund Construction</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Receiver</th> <th style="text-align: center;">LAeq (15 min) dB(A)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">R2</td> <td style="text-align: center;">43</td> </tr> <tr> <td style="text-align: center;">All other receivers</td> <td style="text-align: center;">38</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <ul style="list-style-type: none"> Receiver locations are shown in Figure 4 of APPENDIX A. Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy. 					Receiver	LAeq (15 min) dB(A)	R2	43	All other receivers	38	<ul style="list-style-type: none"> NSW Industrial Noise Policy 	<p>Construction in the area of the central visibility barriers commenced on the 19 September 2016 with topsoil stripping and stockpiling undertaken on 19/20/23 September 2016. No 'barrier construction' occurred during these works.</p> <p>The construction activities only occurred for a period of 3 days and the limited soil stripping and use of the smaller D6 dozer would have resulted in noise emissions from the site to the nearest receivers of up to 8dB(A) lower than the predictions in the Environmental Assessment 2010 and would have been less than the 38dB(A) noise criteria in Project Approval 08_0212 Schedule 3 conditions 4 and 5, at the nearest receivers.</p> <p>No noise monitoring was conducted during the 3 days of site works in September 2016.</p>	Administrative Non-Compliance		
Receiver	LAeq (15 min) dB(A)															
R2	43															
All other receivers	38															
	Noise Criteria															
5	<p>Except for the period when the Visibility Barriers are being constructed, the Proponent must ensure that the noise generated by the project does not exceed 38dB(a) LAeq (15min) at any residence on privately-owned land. However, this criterion does not apply if the Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.</p>							Not triggered								
	Hours of Operation															
	<p>The Proponent must comply with the operating hours in Table 2.</p> <p><i>Table 2 - Operating Hours</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Day</th> <th style="text-align: center;">Transport</th> <th style="text-align: center;">Quarrying Operations</th> <th style="text-align: center;">Construction</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Mon-Fri</td> <td style="text-align: center;">7am-4pm</td> <td style="text-align: center;">7am-5pm</td> <td style="text-align: center;">7am-5pm</td> </tr> </tbody> </table>					Day	Transport	Quarrying Operations	Construction	Mon-Fri	7am-4pm	7am-5pm	7am-5pm		<p>The physical commencement of construction activities on 19-23 September 2016 occurred between 7am and 5pm Monday to Friday.</p> <p>No works have been conducted on Sundays or public holidays between October 2016 and August 2017.</p>	Compliant Ongoing
Day	Transport	Quarrying Operations	Construction													
Mon-Fri	7am-4pm	7am-5pm	7am-5pm													

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Condition No.	Consolidated Project Approval 08_0212 Condition				Verification	Comments	Compliance
	Saturday	8am-1pm	8am-1pm	8am-1pm			
	Sunday and Public Holidays	None	None	None			
	<i>Note: Maintenance activities may occur at any time provided they are inaudible at privately-owned residences</i>						
	Operating Conditions						
7	The Proponent must : (a) implement best practice noise management to minimise the construction, operational, low frequency and traffic noise of the project; (b) minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply; (c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; and (d) regularly assess noise monitoring data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval, to the satisfaction of the Secretary .					(a) construction low frequency and traffic noise from project activities have been managed and no complaints received; (b) Noted; (c) noise suppression equipment on the contractor's plant was maintained to ensure noise emissions were minimised; (d) noise monitoring data will be regularly assessed when collected to manage activities on site to ensure compliance with the relevant conditions of this approval. No noise monitoring had been conducted between September 2016 and August 2017.	Compliant Ongoing Not triggered Compliant Ongoing Administrative Non-Compliance
	Noise Management Plan						
8	The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary . This plan must: (a) be prepared in consultation with the EPA, and submitted to the Secretary for approval prior to the construction of the Visibility Barriers ; (b) describe the measures that would be implemented to ensure: <ul style="list-style-type: none"> • best management practice is being employed on site; • the noise impacts of the project are minimised during meteorological conditions when the noise limits in this approval do not apply; and • compliance with the relevant conditions of this approval; (c) describe the proposed noise management system in detail; and (d) include a monitoring program that: <ul style="list-style-type: none"> • that is capable of evaluating the performance of the project; • includes a protocol for determining exceedances of the relevant conditions in this approval; and 				<ul style="list-style-type: none"> • Noise Management Plan, Mar 2016 	The Noise Management Plan has been prepared to satisfy Project Approval 08_0212 Schedule 3 condition 8: (a) section 3 describes consultation with the EPA (section 3.1), and submission to the DP&E on 18 March 2016. DP&E approved the Plan on 13 May 2016 prior to the initial construction works on the Quarry site that commenced in September 2016; (b) section 9 describes noise mitigation measures to be implemented to ensure: <ul style="list-style-type: none"> • best management practice is employed on site; • the noise impacts of the project are minimised during meteorological conditions when the noise limits in this approval do not apply; and • compliance with the relevant conditions of this approval; 	Compliant

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	<ul style="list-style-type: none"> evaluates and reports on the effectiveness of the noise management system on site. 		(c) section 9 describes the noise management system; (d) section 10 describes the noise monitoring program to evaluate the performance of the project; <ul style="list-style-type: none"> section 11 outlines the protocol for evaluation of exceedance of relevant noise conditions and criteria; and sections 14 and 15 outline reporting and evaluation of the noise management system. 																
	The Proponent must implement the approved management plan as approved from time to time by the Secretary.	<ul style="list-style-type: none"> Noise Management Plan, section 10, Mar 2016 Letter from DP&E Show Cause re Noise Monitoring, 19 May 2017 Letter to DP&E re Show Cause Correspondence, 14 June 2017 Letter from DP&E re Official Caution, 30 June 2017 	The noise monitoring program (section 10) of the Noise Management Plan was not implemented between September 2016 and August 2017.	Non-compliant (Low Risk)															
	AIR QUALITY																		
	Air Quality Criteria																		
9	The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated on site do not exceed the criteria in Table 3, Table 4 and Table 5 at any residence on privately-owned land, or on more than 25% of any privately-owned land. <i>Table 3 - Long-Term Impact Assessment Criteria for Particulate Matter</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total solid particulates (TSP)</td> <td>Annual</td> <td>90µg/m³</td> </tr> <tr> <td>Particulate matter <10µm PM₁₀</td> <td>Annual</td> <td>30µg/m³</td> </tr> </tbody> </table> <i>Table 4: Short Term Criteria for Particulate Matter</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Pollutant	Averaging Period	Criterion	Total solid particulates (TSP)	Annual	90µg/m ³	Particulate matter <10µm PM ₁₀	Annual	30µg/m ³	Pollutant	Averaging Period	Criterion				<ul style="list-style-type: none"> Air Quality Management Plan, May 2016 	Dust deposition monitoring commenced in September 2016 at locations A1, A2 and A3. Dust deposition monitoring was not conducted in accordance with the approved Air Quality Management Plan and AS/NZS 3580.10.1:2003, (i.e. samples will be collected/changed over within 2 days of the first day of each month). Between September 2016 and May 2017 the dust deposition bottles were not collected monthly.	Compliant
Pollutant	Averaging Period	Criterion																	
Total solid particulates (TSP)	Annual	90µg/m ³																	
Particulate matter <10µm PM ₁₀	Annual	30µg/m ³																	
Pollutant	Averaging Period	Criterion																	
				Administrative Non-Compliance															
				Compliant															

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	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Particulate matter <10µm PM₁₀</td> <td style="width: 33%;">24 hours</td> <td style="width: 33%;">50µg/m³</td> </tr> </table> <p><i>Table 5: Long Term Criteria for Deposited Dust</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Pollutant</th> <th style="width: 25%;">Averaging Period</th> <th style="width: 25%;">Maximum Project Contribution</th> <th style="width: 25%;">Maximum Total Deposited Dust</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>2g/m²/mth</td> <td>4g/m²/mth</td> </tr> </tbody> </table> <p><i>Notes to Tables:</i></p> <ul style="list-style-type: none"> • a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to all other sources); • b Incremental impact (ie incremental increase in concentrations due to the project on its own); • c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method. • d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA. • e "Reasonable and feasible avoidance measures" includes, but is not limited to, the operational requirements in conditions 10, 11 and 12 to develop and implement an air quality management system that ensures operational responses to the risks of exceedance of the criteria. 	Particulate matter <10µm PM ₁₀	24 hours	50µg/m ³	Pollutant	Averaging Period	Maximum Project Contribution	Maximum Total Deposited Dust	Deposited dust	Annual	2g/m ² /mth	4g/m ² /mth		Dust deposition monitoring commenced in September 2016 and the average monthly results for ash and insoluble solids during the September 2016 to June 2017, demonstrated compliance with the 2g/m ² /month criteria.	Compliant Ongoing
Particulate matter <10µm PM ₁₀	24 hours	50µg/m ³													
Pollutant	Averaging Period	Maximum Project Contribution	Maximum Total Deposited Dust												
Deposited dust	Annual	2g/m ² /mth	4g/m ² /mth												
	Operating Conditions														
10	<p>The Proponent must:</p> <p>(a) implement best management practice to minimise the dust emissions of the project;</p> <p>(b) regularly assess air quality monitoring data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval,</p> <p>(c) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note d under Table 5 above);</p> <p>(d) minimise any visible off-site air pollution; and</p> <p>(e) minimise the surface disturbance of the site generated by the project</p>	<ul style="list-style-type: none"> • Air Quality Management Plan, May 2016 	The management of dust and implementation of mitigation measures described in the Air Quality Management Plan, will occur with the re-commencement of site preparation works following replacement of the bridge over Stony Creek.	Not triggered											
	Air Quality Management Plan														

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
11	<p>The Proponent must prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with the EPA, and submitted to the Secretary for approval prior to the construction of the Visibility Barriers;</p> <p>(b) describes the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> • best management practice is employed; • the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events; and • compliance with the relevant conditions of this approval; <p>(c) describes the proposed air quality management system; and</p> <p>(d) includes an air quality monitoring program that:</p> <ul style="list-style-type: none"> • is capable of evaluating the performance of the project; • includes a protocol for determining any exceedances of the relevant conditions of approval; • adequately supports the air quality management system; and • evaluates and reports of the adequacy of the air quality management system. <p>The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>	<ul style="list-style-type: none"> • Air Quality Management Plan, May 2016 	<p>The Air Quality Management Plan was prepared to satisfy Project Approval 08_0212 Schedule 3 condition 11:</p> <p>(a) in consultation with the EPA (section 3.1), and submitted to the Secretary 18 March 2016. DP&E approved the Plan on 13 May 2016 prior to the initial construction works on the Quarry site;</p> <p>(b) section 10 describes the measures to be implemented to mitigate dust emissions to comply with the relevant conditions of this Project Approval;</p> <p>(c) the Air Quality Management Plan describes the air quality management system to be implemented; and</p> <p>(d) section 11 describes then air quality monitoring program to evaluate the performance of the project;</p> <ul style="list-style-type: none"> • section 12 outlines a protocol for assessing any exceedance of the air quality conditions of approval; • sections 15 and 16 describe the reports and evaluation of the adequacy of the air quality management system. <p>The Air Quality Management Plan will be implemented when site preparation works re-commence after the completion of the bridge over Stony Creek.</p> <p>Dust monitoring was not conducted strictly in accordance with Air Quality Management Plan section 11.6 and AS/NZS 3580.10.1:2003, as between September 2016 and May 2017 dust deposition bottles were not collected monthly.</p>	<div style="background-color: #92D050; padding: 5px; margin-bottom: 5px;">Compliant</div> <div style="background-color: #FFD700; padding: 5px;">Non-Compliant (Low Risk)</div>
	METEOROLOGICAL MONITORING			
12	<p>During the life of the project, the Proponent must ensure that there is a suitable meteorological station in the vicinity of the site that complies with the requirements in the "Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales" guideline.</p>	<ul style="list-style-type: none"> • <i>Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales</i> 	<p>A meteorological station was established on the New Berrima Quarry site on 19 September 2016. The meteorological station measures:</p> <ul style="list-style-type: none"> • Temperature (at 2m and 10m) • Wind speed and direction (at 2m and 10) • Rainfall • Solar radiation • Barometric pressure 	Compliant

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	SOIL AND WATER			
	<i>Note: The Proponent is required to obtain the necessary water licences for the project under the Water Act 1912 and/or Water Management Act 2000.</i>			Noted
	Riparian Buffer Distance			
13	The Proponent must maintain a minimum buffer distance of 515 metres (measured from the top of bank) between extraction area and Wingecarribee River.		No construction activities had occurred within 515m of the bank of the Wingecarribee River at the date of this audit (August 2017).	Observation
	Surface Water Discharges			
14	The Proponent must ensure that all surface water discharges from the site comply with section 120 of the POEO Act or, if an EPL has been issued regulating water discharges from the site, the discharge limits (both volume and quality) set for the project in the EPL.	<ul style="list-style-type: none"> • <i>Protection of the Environment Operations Act 1997 section 120</i> 	No conditional surface water discharge from the Quarry site had occurred to the date of this audit (August 2017).	Not triggered
	Surface Water Supply			
15	The Proponent must ensure it has sufficient water for all stages of the project, and if necessary, adjust the scale of quarrying operations on site to match its available supply.		No quarry extraction operations had commenced at the date of this audit (August 2017). The Site Water Balance section 9.3.1 states that Dam 7 will have "adequate capacity to supply the amount of water required in most years and may be supplemented by Dams 1,4 and 56 if required."	Noted
	On-Site Sewage Management			
16	The Proponent must manage on-site sewage to the satisfaction of Council and EPA.		No onsite sewerage facility had been installed at the date of this audit (August 2017).	Not triggered
	Storage of Chemicals & Petroleum Products			
17	The Proponent must ensure all chemicals and/or petroleum products on site are stored in accordance with Australian Standard AS1940-2004, <i>The Storage and Handling of Flammable and Combustible Liquids</i> , and in appropriately banded areas with impervious flooring and of sufficient capacity to contain 110% of the largest container stored within the bund. The flooring and bund(s) must be designed in accordance with: <ul style="list-style-type: none"> • the requirements of relevant Australian Standards; and • DECC's <i>Storing and Handling Liquids: Environmental Protection – Participants Manual</i>. 	<ul style="list-style-type: none"> • AS1940-2004, <i>The Storage and Handling of Flammable and Combustible Liquids</i> • <i>Storing and Handling Liquids: Environmental Protection – Participants Manual</i>, DECC, 2007 	No storage of chemicals or fuels was occurring on site at the date of this audit (August 2017).	Not triggered
	Water Management Plan			

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18	The Proponent must prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary . This plan must be prepared in consultation with the EPA, WaterNSW and DPI-Water by suitably qualified and experienced persons whose appointment has been approved by the Secretary , and be submitted to the Secretary for approval prior to the construction the Visibility Barriers on site. In addition to the standard requirements for management plans (see condition 3 of schedule 5), this plan must include a:	<ul style="list-style-type: none"> • Letter from DPI re Approval of Andrew MacLeod of SEEC, 31 Jul 2012 • Email to EPA re Consultation on Water Management Plan, 16 Aug 2012 • Email to DPI-Water re Consultation on Water Management Plan, 16 Aug 2012 • Email to Sydney Catchment Authority re Consultation on Water Management Plan, 16 Aug 2012 • Water Management Plan, June 2016 	<p>DP&E approved Andrew MacLeod of SEEC on 31 July 2012 to prepare the Water Management Plan for the New Berrima Clay/Shale Quarry. Consultation occurred with EPA, DPI-Water, and Sydney Catchment Authority (now WaterNSW) on 16 August 2012. DPI-Water discussed groundwater management and monitoring (the requirements for which are reflected in Project Approval 08_0212 MOD 1 Schedule 3 condition 18(c) and are included in the Water Management Plan).</p> <p>A draft Water Management Plan was provided to DPI-Water, and Sydney Catchment Authority for comment on 4 February 2016.</p> <p>The Water Management Plan was revised taking account of comments from the agencies, submitted to the Secretary of DP&E on 18 March 2016 and approved on 9 June 2016.</p>	Compliant
18(a)	<p>Site Water Balance that:</p> <ul style="list-style-type: none"> • includes details of: <ul style="list-style-type: none"> o sources and security of water supply, including contingency planning for future reporting periods; o water use on site; o water management on site; o reporting procedures, including comparisons of the site water balance each calendar year; and • describes the measures that would be implemented to minimise clean water use on site; 	<ul style="list-style-type: none"> o Water Management Plan section 9 – Site Water Balance, Jun 2016 	<p>The Site Water Balance is included in the Water Management Plan section 9 and addresses the requirements of Project Approval 08_0212 Schedule 3 condition 18(a):</p> <ul style="list-style-type: none"> o section 9.3 addresses water sources and security of water supply, including contingency planning for future reporting periods; o section 9.2 outlines water use on site; o section 9.4 describes water management on site; o section 9.3.2 reporting procedures, including the requirement for comparison of the site water balance each calendar year; and o section 9.4.7 describes the measures that would be implemented to minimise clean water use on site. 	Compliant
18(b)	<p>Surface Water Management Plan, that includes:</p> <ul style="list-style-type: none"> • detailed baseline data on surface water flows and quality in the water-bodies that could be affected by the project; • a detailed description of the surface water management system on site, including the: <ul style="list-style-type: none"> o clean water diversion systems; o erosion and sediment controls; and o water storages; 	<ul style="list-style-type: none"> • Water Management Plan sections 5 and 9.4, Jun 2016 	<p>Surface Water Management Plan, is included in the Water Management Plan section 9.4 and addresses the requirements of Project Approval 08_0212 Schedule 3 condition 18(b) that include:</p> <ul style="list-style-type: none"> • Section 5.4 presents comments on baseline data on surface water flows and quality in the water-bodies that could be affected by the project; 	Compliant

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	<ul style="list-style-type: none"> • a plan for identifying, extracting, handling, and the long-term storage of potentially acid forming material on site; • detailed plans, including design objectives and performance criteria, for: <ul style="list-style-type: none"> o the water storage dams; o reinstatement of drainage lines on the rehabilitated areas of the site; o control of water pollution from rehabilitated areas of the site; • performance criteria for the following, including trigger levels for investigating any potentially adverse impacts, for the following: <ul style="list-style-type: none"> o the water management system; o surface water quality of local water ways; and o ecosystem health of local water ways; • performance criteria for surface water quality attributes relevant to water quality impacts on biological diversity and aquatic ecological integrity, including salinity, heavy metals, sediment load, pH, hardness and biological oxygen demand; • a program to monitor <ul style="list-style-type: none"> o the effectiveness of the water management system; o surface water flows and quality in local water ways; and o ecosystem health of local water ways; • a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project; and <p style="color: blue; margin-top: 10px;">The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>	<ul style="list-style-type: none"> • Letter from DP&E Show Cause re Water Monitoring, 19 May 2017 • Letter to DP&E re Show Cause Correspondence, 14 June 2017 • Letter from DP&E re Official Caution, 30 June 2017 	<ul style="list-style-type: none"> • Section 9.4 and Appendix A present a description of the surface water management system on site, including clean water diversion systems; erosion and sediment controls; and water storages; • No potentially acid forming (PAF) material has been identified on site in the Environmental Assessments; • section 9.4 and Appendix A provide plans, including design objectives and performance criteria, for water storage dams; reinstatement of drainage lines on the rehabilitated areas of the site and control of water pollution from rehabilitated areas of the site; • section 11 outlines performance criteria, including trigger levels for investigating any potentially adverse impacts, for water management system; surface water quality of local water ways; and ecosystem health of local water ways; • section 11 describes performance criteria for surface water quality attributes relevant to water quality impacts on biological diversity and aquatic ecological integrity, including salinity, heavy metals, sediment load, pH, hardness and biological oxygen demand; • Appendix A provides a program to monitor the effectiveness of the water management system, surface water flows and quality in local water ways, and ecosystem health of local water ways; • Sections 14, 16 and 17 outline plans to respond to any exceedance of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project. <p style="margin-top: 10px;">The water monitoring program (section 11) was not implemented between October 2016 and August 2017 as no site establishment or construction activities had occurred on the Quarry site.</p>	<p style="margin: 0;">Compliant</p>
				<p style="margin: 0;">Non-compliant (Low Risk)</p>

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18(c)	<p>Groundwater Management Plan, which includes:</p> <ul style="list-style-type: none"> • detailed baseline data on groundwater levels, yield and quality in the area, that could be affected by the project; • groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts; • a program to monitor: <ul style="list-style-type: none"> - groundwater inflows to the quarrying operations; - the impacts of the project on: <ul style="list-style-type: none"> o local alluvial aquifers; o any groundwater bores on privately-owned land that could be affected by the project; o the seepage/leachate from water storages or backfilled voids on site; and o groundwater dependent ecosystems; • a plan to respond to any exceedances of the groundwater assessment criteria. <p style="color: blue; font-size: small;">The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>	<ul style="list-style-type: none"> • Water Management Plan section 12, Jun 2016 	<p>The Groundwater Management Plan, is included in the Water Management Plan section 12 and addresses the requirements of Project Approval 08_0212 Schedule 3 condition 18(c):</p> <p>includes:</p> <ul style="list-style-type: none"> • section 12.2 describes baseline data on groundwater levels, yield and quality that could be affected by the project; • groundwater assessment criteria, including trigger levels for investigating potentially adverse groundwater impacts; • section 12.2 presents a program to monitor groundwater inflows to the quarrying operations, impacts of the project on local alluvial aquifers, any groundwater bores on privately-owned land that could be affected by the project, seepage/leachate from water storages or backfilled voids on site, and groundwater dependent ecosystems; <p>A plan to respond to any exceedance of the groundwater assessment criteria had not been prepared at the date of this audit (August 2017) as no excavation that would affect groundwater had occurred on the Quarry site.</p>	Compliant
				Not yet applicable
18A.	<p>Groundwater Monitoring</p> <p style="color: blue; font-size: small;">The Proponent must install 3 pairs of nested piezometers prior to the quarry pit floor reaching 660 m AHD, in consultation with DPI – Water and to the satisfaction of the Secretary.</p>		<p>The development of the quarry pit had not commenced at the date of this audit (August 2017). Installation of the piezometers will occur prior to Stage 3 quarry extraction before the pit floor reaches 660 m AHD.</p>	Not triggered
	VISUAL			
	Establishment of Effective Vegetative Screens			
19	<p>The Proponent must vegetate (with grasses, shrubs and trees) the Visibility Barriers as soon as practicable after the completion of the construction of the bunds, to the satisfaction of the Secretary.</p>		<p>Construction of the visibility barriers at the Quarry had not been completed at the date of this audit (August 2017).</p>	Not triggered
19A.	<p>Prior to transporting any product from the site, the Proponent must establish a 0.68 ha tree screen adjacent to the Northern Visibility Barrier, as shown on Figure 1 in Appendix A. The screen shall include native plant species from the <i>Southern Highlands Shale Woodland Endangered Ecological Community</i>.</p>		<p>No product has been quarried or transported from the New Berrima Clay/Shale Quarry at the date of this audit (August 2017).</p>	Not triggered
	Advertising			

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20	The Proponent must not erect or display any advertising structure(s) or signs on the site without the written approval of the Secretary . <i>Note: This condition does not require approval for any business identification, traffic management, and/or safety or environmental signs.</i>		No advertising structure(s) or signs had been erected on the New Berrima Clay/Shale Quarry site at the date of this audit (August 2017). The only signage at the entrance to the Quarry site is related safety requirements on the site and name and number for onsite contact.	Compliant
	Operating Conditions			
21	The Proponent must : (a) implement all reasonable and feasible measures to minimise the visual impacts and any off-site lighting impacts of the project; and (b) maintain and improve the effectiveness of the bunds and vegetative screens over the life of the project.		The alignment of the central visibility barrier was subjected to soil stripping in September 2016. No further construction had occurred at the date of this audit (August 2017) due to the requirement to replace the bridge over Stony Creek, to enable large equipment to be transported to the site for the bund construction.	In progress
22	Deleted.			
	TRANSPORT			
	Road upgrades (local roads)			
23	Prior to transporting any extractive material from the site, the Proponent must : (a) construct the junction of the site access road with Berrima Road to Basic Right Turn and Basic Left Turn Treatment standard for a 19m semi-trailer; (b) construct a raised concrete median in Berrima Road on the south bound approach to its junction with MR372; (c) provide appropriate traffic signage and line-marking, in accordance with AUSTROADS <i>Guide to Road Design</i> and to the satisfaction of the Council.		No transport of materials from the New Berrima Clay/Shale Quarry site had occurred at the date of this audit (August 2017). Construction of the junction of the site access road with Berrima Road to Basic Right Turn and Basic Left Turn Treatment standard for a 19m semi-trailer, construction of a raised concrete median in Berrima Road on the south bound approach to its junction with MR372, and provision of appropriate traffic signage and line-marking had not occurred at the date of this audit (August 2017).	Not triggered
	Road upgrades (main roads)			
24	Prior to transporting any extractive material from the site, the Proponent must : (a) construct the Berrima Road/Taylor Avenue junction to give priority to MR372 incorporating Rural BA Left and Right turn treatments for a 19m semi-trailer; (b) provide appropriate traffic signage and line-marking, in accordance with AUSTROADS <i>Guide to Road Design</i> and to the satisfaction of the Council and the RMS. <i>If the Council undertakes or proposes to undertake a superior treatment of this intersection upgrade, then this condition may be fulfilled by the Proponent paying a monetary contribution to</i>		No transport of extracted material from the New Berrima Clay/Shale Quarry had occurred at the date of this audit (August 2017). Wingecarribee Shire Council has proposed the construction of a roundabout at the Berrima Road / Taylor Avenue junction. Austral will provide funding for the roadworks when the construction of the Quarry is completed.	Not triggered

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	the Council equivalent to the cost of the upgrades specified under this condition, as assessed by a qualified independent valuer or quantity surveyor appointed by the Secretary. The costs of the valuation are to be paid by the Proponent. Any dispute over the interpretation of this condition or a satisfactory valuation can be referred by any party to the Secretary for resolution. The decision of the Secretary in any such dispute shall be final.			
	Transport Route			
25	The Proponent must ensure heavy vehicles associated with the Project travel along haulage routes specified in the EA and the haulage route diagram in Figure 3 of APPENDIX A to this approval to the satisfaction of the Secretary.		Transport of product from the New Berrima Clay/Shale Quarry by heavy vehicles had not commenced at the date of this audit (August 2017).	Not triggered
	Road Maintenance Contribution			
26	The Proponent must pay to Council an annual contribution of 91.2 cents per cubic metre of extractive material exported from the site (indexed annually to Consumer Price Index) for the life of the Project. The volume of extractive material exported from the site must be established by way of a volumetric survey of the site carried out by a registered surveyor. Each annual volumetric survey must be provided to Council to allow verification of the contribution amount. The first annual payment falls due 12 months from the commencement of operation. <i>Note: The Proponent must provide a base-line survey of the site to the Council prior to the commencement of operations.</i>		No transport of product from the New Berrima Clay/Shale Quarry by heavy vehicles had commenced at the date of this audit (August 2017).	Not triggered
	Parking			
27	The Proponent must provide sufficient parking for all project-related traffic, in accordance with Council's parking code.	<ul style="list-style-type: none"> Environmental Assessment Modification 2 - Figure 1, Jan 2017 	Allowance for parking adjacent to the site office when constructed will be provided for, as shown in Environmental Assessment Modification 2 - Figure 1 (dated 19 January 2017).	Not yet triggered
	Operating Conditions			
28	The Proponent must ensure that: (a) vehicles on site do not exceed a speed limit of 30 kilometres per hour; (b) all loaded vehicles entering or leaving the site have their loads covered; and (c) all loaded vehicles leaving the site are cleaned of sand and other materials before they leave the site so they do not track dirt onto the public roads.	<ul style="list-style-type: none"> Transport Management Plan, Mar 2016 Drivers Codes of Conduct, Transport Management Plan Appendix A, Mar 2016 	(a) Transport Management Plan section 8.4 states: "...drivers are to comply with the Drivers Code of Conduct, including complying with speed limits at the quarry of 30km/hr". (b) and (c) No product had been transported from the New Berrima Clay/Shale Quarry at the date of this audit (August 2017).	Compliant Ongoing
	Transport Management Plan			Not triggered

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29	<p>The Proponent must prepare and implement a Transport Management Plan for the project to the Secretary. This plan must:</p> <p>(a) be submitted prepared in consultation with the RMS and Council, and submitted to the Secretary for approval prior to carrying out any quarrying operations on site;</p> <p>(b) include a drivers' code of conduct for the project;</p> <p>(c) describe the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> • establishing a CB radio communication protocol with the local bus companies, to improve driver awareness of quarry truck and school bus locations along haulage routes; • the drivers of project-related vehicles comply with the drivers' code of conduct for the project; and • compliance with the relevant conditions of this approval; and <p>(d) include a program to monitor the effectiveness of the implementation of these measures.</p> <p style="color: blue; font-size: small;">The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>	<ul style="list-style-type: none"> • Transport Management Plan, Mar 2016 • Drivers Code of Conduct, Mar 2016 	<p>The Transport Management Plan was prepared to satisfy Project Approval 08_0212 Schedule 3 condition 29:</p> <p>(a) section 3.1 describes consultation with the RMS and WSC and the Transport Management Plan revised, submitted to the Secretary of DP&E on 18 March 2016 and approved on 13 May 2016 prior to any quarrying operations on site;</p> <p>(b) Appendix A includes a Drivers' Code of Conduct for the New Berrima Quarry project;</p> <p>(c) section 8 describes measures to be implemented to ensure:</p> <ul style="list-style-type: none"> • Section 8.4 addresses a CB radio communication protocol with the local bus companies, to improve driver awareness of quarry truck and school bus locations along haulage routes; • Section 8.4 requires drivers of project-related vehicles comply with the Drivers' Code of Conduct for the project; and • Section 9 addresses compliance with the relevant conditions of this approval; <p>(d) section 9 also outlines the program to monitor the effectiveness of the implementation of traffic related measures.</p> <p>No transport of material had occurred from the New Berrima Clay/Shale Quarry site between September 2016 and August 2017, so the Transport Management Plan had not been implemented.</p>	Compliant
30	<p>Should the Traffic Management Plan (TMP) for the proposed works require a reduction of the speed limit on Berrima Road and/or Taylor Avenue, a Speed Zone Authorisation must be obtained from RMS Traffic Operations Unit (TOU) prior to commencing work within the road reserve.</p>		<p>Work within the Berrima Road and/or Taylor Avenue road reserve had not commenced at the date of this audit (August 2017).</p>	Not triggered
	WASTE			
31	<p>The Proponent must:</p> <p>(a) monitor the amount of waste generated by the project;</p> <p>(b) investigate ways to minimise waste generated by the project;</p> <p>(c) implement reasonable and feasible measures to minimise waste generated by the project;</p>		<p>No waste was generated by Austral from the New Berrima Quarry site at the date of this audit (August 2017) as no quarrying had commenced. Contractors establishing the site in September-October 2016 removed any waste generated by their works for disposal to an approved waste</p>	Not triggered

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	(d) ensure that all waste generated by the project is lawfully disposed of to an appropriate facility; and (e) report on waste management and minimisation in the annual review, to the satisfaction of the Secretary .		depot (e.g. Wingecarribee Shire Council Waste Recycling Centre Berrima Road Moss Vale).	
	ABORIGINAL HERITAGE			
	Aboriginal Heritage Management Plan			
32	<p>The Proponent must prepare and implement an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH and the relevant Local Aboriginal Land Council;</p> <p>(b) be submitted to the Secretary for approval prior to any ground disturbance; and</p> <p>(c) include a:</p> <ul style="list-style-type: none"> • protocol for the engagement of an Aboriginal Site Officer for any necessary ground disturbance monitoring; • program for the recording, notifying, salvage and surface collection of any Aboriginal objects/sites that may be encountered within the project area; • description of the measures that would be implemented if any Aboriginal skeletal remains are discovered during the project; and • protocol for the ongoing consultation and involvement of the Aboriginal community in the conservation and management of the Aboriginal heritage of the objects/sites. <p>The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>	<ul style="list-style-type: none"> • Aboriginal Heritage Management Plan, Mar 2016 	<p>The Aboriginal Heritage Management Plan prepared to satisfy Project Approval 08_0212 Schedule 3 condition 32:</p> <p>(a) section 3.1 outlines consultation with OEH and section 3.2 outlines consultation with Local Aboriginal Land Councils (Illawarra LALC, Wodi Wodi Elders Corporation and Korewal Elouera Jerrungarugh.);</p> <p>(b) The Aboriginal Heritage Management Plan was revised to address comments and submitted to the Secretary of DP&E on 18 March 2016 and approved on 13 May 2016 prior to any ground disturbance; and</p> <p>(c) includes:</p> <ul style="list-style-type: none"> • section 9.3 addresses the engagement of an Aboriginal Site Officer for any necessary ground disturbance monitoring (see Schedule 5 condition 7). • section 8 outlines Site Recording Forms for recording, notifying, salvage and surface collection of any Aboriginal objects/sites that may be encountered within the project area; • section 9.4 describes measures to be implemented if any Aboriginal skeletal remains are discovered during the project; and • section 3.2 addresses a protocol for ongoing consultation and involvement of the Aboriginal community in conservation and management of the Aboriginal heritage of the objects/sites. 	<div style="background-color: #709238; color: white; padding: 5px; margin-bottom: 5px;">Compliant</div> <div style="background-color: #ffff00; color: black; padding: 5px; margin-bottom: 5px;">Non-compliance (Low Risk)</div> <div style="background-color: #709238; color: white; padding: 5px;">Compliant</div>

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance								
	The Proponent must implement the approved management plan as approved from time to time by the Secretary.	<ul style="list-style-type: none"> Letter from DP&E Show Cause re Aboriginal Heritage Monitoring, 19 May 2017 Letter to DP&E re Show Cause Correspondence, 14 June 2017 Letter from DP&E re Official Caution, 30 June 2017 	The Aboriginal heritage inspection of surface soil stripping monitoring by a representative of the ILALC (section 9.3) was not implemented at the time of grading and soil stripping on the area for the central visibility barrier in September 2016. A representative of the ILALC inspected the site on 6 June 2017 and one artefact was found. No other areas of the site requiring inspection by the ILALC were disturbed between October 2016 and August 2017.	Non-compliant (Low Risk)								
32A	<p>If any item or object of potential Aboriginal heritage significance is identified during works associated with the project, the Proponent must ensure that:</p> <p>(a) all work in the immediate vicinity of the potential Aboriginal item or object ceases immediately;</p> <p>(b) a 10 m buffer area around the potential item or object is cordoned off; and</p> <p>(c) the OEH is contacted immediately.</p> <p>Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.</p>	<ul style="list-style-type: none"> Aboriginal Heritage Management Plan, Mar 2016 		Not triggered								
	LANDSCAPE											
	Rehabilitation Objectives											
33	<p>The Proponent must rehabilitate the site to the satisfaction of the DRG. This rehabilitation must be consistent with the proposed rehabilitation strategy in the EA (MOD 1), and comply with the objectives in Table 6.</p> <p><i>Table 6 - Rehabilitation Objectives</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Feature</th> <th style="text-align: center;">Objective</th> </tr> </thead> <tbody> <tr> <td>Site (as a whole)</td> <td>Safe, stable & non-polluting</td> </tr> <tr> <td>Surface Infrastructure</td> <td>To be decommissioned and removed, unless the DRG agrees otherwise</td> </tr> <tr> <td>Quarry Walls</td> <td>Final slopes of 1:3 (vertical: horizontal), except the south western wall of Bench 1. Vegetated with native endemic flora species to be consistent with surrounding landscape and to minimise visual impacts</td> </tr> </tbody> </table>	Feature	Objective	Site (as a whole)	Safe, stable & non-polluting	Surface Infrastructure	To be decommissioned and removed, unless the DRG agrees otherwise	Quarry Walls	Final slopes of 1:3 (vertical: horizontal), except the south western wall of Bench 1. Vegetated with native endemic flora species to be consistent with surrounding landscape and to minimise visual impacts	<ul style="list-style-type: none"> Landscape Management Plan, section 11.2, Mar 2016 		Not triggered
Feature	Objective											
Site (as a whole)	Safe, stable & non-polluting											
Surface Infrastructure	To be decommissioned and removed, unless the DRG agrees otherwise											
Quarry Walls	Final slopes of 1:3 (vertical: horizontal), except the south western wall of Bench 1. Vegetated with native endemic flora species to be consistent with surrounding landscape and to minimise visual impacts											

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	Quarry Pit Floor	Suitable for grazing or other agricultural activities			
	Other Land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: <ul style="list-style-type: none"> • local native species: and • a landform consistent with the surrounding environment 			
	Progressive Rehabilitation				
34	The Proponent must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim rehabilitation strategies must be employed when areas prone to dust generation cannot yet be permanently rehabilitated.		<ul style="list-style-type: none"> • Landscape Management Plan, section 11, Mar 2016 	The site activities to the date of this audit (August 2017) have only been associated with the initial site preparation works in September 2016. Following surface land disturbance, reasonable and feasible measures will be undertaken to minimise the total exposed area of the site to reduce potential for dust generation. The topsoil stockpiles established in the area of the Central Visibility Barrier had not been stabilised at the date of this audit (August 2017) as required in Statement of Commitment 9.4	Non-Compliance (Low Risk)
	Landscape Management Plan				
35	The Proponent must prepare and implement a Landscape Management Plan for the project to the satisfaction of the Secretary . This plan must: <ol style="list-style-type: none"> (a) be prepared in consultation with OEH and Council, and submitted to the Secretary for approval prior to carrying out any development on site under this approval; (b) describe the short, medium and long term measures that would be implemented to: <ul style="list-style-type: none"> • manage the remnant vegetation and habitat on site; • rehabilitate the riparian land adjacent to the Wingecarribee River on site; and • ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; (c) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggering remedial action (if necessary); (d) include a detailed description of the measures that would be implemented over the next 3years, including the procedures to be implemented for: 		<ul style="list-style-type: none"> • Landscape Management Plan, Mar 2016 	The Landscape Management Plan was prepared to satisfy Project Approval 08_0212 Schedule 3 condition 35: <ol style="list-style-type: none"> (a) consultation occurred with OEH and Wingecarribee Shire Council in October 2015. The Landscape Management Plan was revised to address comments received, submitted to the Secretary of DP&E on 18 March 2016 and approved on 13 May 2016 prior to carrying out any development on site; (b) section 9 describes measures to be implemented to: <ul style="list-style-type: none"> • Section 9.2.1 describes management of remnant vegetation and habitat on site; • No riparian land adjacent to the Wingecarribee River occurs within the area of development of the Quarry site; and • Section 5 addresses rehabilitation objectives and progressive rehabilitation compliance obligations; 	Compliant

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	<ul style="list-style-type: none"> ensuring compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; enhancing the quality of existing vegetation and fauna habitat; restoring native endemic vegetation and fauna habitat within the biodiversity areas and rehabilitation area; maximising the salvage of resources within the approved disturbance area – including vegetative and soil resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area; collecting and propagating seed; minimising the impacts on fauna on site, including undertaking pre-clearance surveys; controlling weeds and feral pests; controlling erosion; managing grazing and agriculture on site; controlling access; and bushfire management; <p>(e) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;</p> <p>(f) identify the potential risks to successful implementation of the rehabilitation of the site, and include a description of the contingency measures that would be implemented to mitigate against these risks; and</p> <p>(g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.</p> <p style="color: blue;">The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>		<p>(c) section 11 outlines performance and completion criteria for evaluating the performance of the rehabilitation of the site;</p> <p>(d) sections 9 and 11 address measures to be implemented:</p> <ul style="list-style-type: none"> Section 11.6 addresses compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; Section 9 outlines enhancing the quality of existing vegetation and fauna habitat on site; Section 9 outlines restoration of native endemic vegetation and fauna habitat within the biodiversity areas and rehabilitation area; Sections 9.1 and 9.2 describes maximising salvage of vegetative and soil resources within the approved disturbance area, for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area; Section 9.1 – control of weeds and feral pests; Section 11.5 – control of erosion; Section 7 – control of access on the Quarry site; and Section 9.3 - bushfire management; <p>(e) section 11.6 outlines a program to monitor the progress against the performance and completion criteria;</p> <p>(f) section 11.6 - identifies the potential risks to successful implementation of the rehabilitation of the site, and includes a description of the contingency measures to be implemented to mitigate these risks;</p> <p>(g) section 6 details role and responsibilities for monitoring, reviewing, and implementing the plan.</p> <p>The Landscape Management Plan will be implemented as site preparation and operation progresses.</p> <p>The topsoil stockpiles established in the area of the Central Visibility Barrier had not been stabilised at the date of this audit (August 2017) as required in Statement of Commitment 9.4</p>	<div style="background-color: #FFFF00; padding: 5px; text-align: center;">Non-Compliance (Low Risk)</div>
36	Deleted.			

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
37	Deleted.			
	SCHEDULE 4 ADDITIONAL PROCEDURES			
	NOTIFICATION OF LANDOWNERS			
1	As soon as practicable after obtaining monitoring results showing an: (a) exceedance of any relevant criteria in schedule 3, the Proponent must notify affected landowners in writing of the exceedance, and provide regular monitoring results to each of affected landowner until the project is again complying with the relevant criteria; and (b) an exceedance of the relevant air quality criteria in schedule 3, the proponent must send a copy of the NSW Health fact sheet entitled " <i>Mine Dust and You</i> " (as may be updated from time to time) to the affected landowners and/or existing tenants of the land.			Not triggered
	INDEPENDENT REVIEW			
2	If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent must : (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Secretary , to: <ul style="list-style-type: none"> • consult with the landowner to determine his/her concerns; • conduct monitoring to determine whether the project is complying with the relevant criteria in schedule 3; and • if the project is not complying with these criteria, then identify the measures that could be implemented to ensure compliance with the relevant criteria; and (b) give the Secretary and landowner a copy of the independent review.			Not triggered
3	If the independent review determines that the project is complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary . If the independent review determines that the project is not complying with the relevant criteria in schedule 3, then the Proponent must :			Not triggered

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	(a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until the project complies with the relevant criteria; or (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Secretary .			
	SCHEDULE 5 -ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING			
	ENVIRONMENTAL MANAGEMENT			
	Environmental Management Strategy			
1	<p>The Proponent must prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. The strategy must:</p> <p>(a) be submitted for approval to the Secretary prior to the commencement of construction activities;</p> <p>(b) provide the strategic framework for environmental management of the project;</p> <p>(c) identify the statutory approvals that apply to the project;</p> <p>(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;</p> <p>(e) describe the procedures that would be implemented to:</p> <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance; and • respond to emergencies; and <p>(f) include:</p> <ul style="list-style-type: none"> • copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and • a clear plan depicting all the monitoring to be carried out in relation to the project. <p>The Proponent must implement the approved strategy as approved from time to time by the Secretary.</p>	<ul style="list-style-type: none"> • Environmental Management Strategy, May 2016 	<p>The Environmental Management Strategy was prepared to satisfy Project Approval 08_0212 Schedule 5 condition 1:</p> <p>(a) was submitted to the Secretary of DP&E on 18 March 2016 and approved on 13 May 2016 prior to the commencement of initial site establishment activities;</p> <p>(b) section 3 provides the strategic framework for environmental management of the project;</p> <p>(c) section 4 identifies the statutory approvals that apply to the project;</p> <p>(d) section 15 describes the role and responsibilities of key personnel involved in the environmental management of the project;</p> <p>(e) describes procedures to be implemented to:</p> <ul style="list-style-type: none"> • informing stakeholder and local community about the operation and environmental performance of the project (section 12); • complaints handling (section 10.1); • resolution of disputes that may arise during the course of the project (section 10.2); • response to any non-compliance; and • response to emergencies (section 11); and <p>(f) includes:</p> <ul style="list-style-type: none"> • reference to approved copies of the strategies, plans and programs required under the Project Approval 08_0212 (available as separate documents); and • section 6 - a clear plan depicting all the monitoring to be carried out in relation to the project. 	Compliant

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	Adaptive Management			
2	<p>The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:</p> <p>(a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;</p> <p>(b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and</p> <p>(c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.</p>	<ul style="list-style-type: none"> Environmental Management Strategy, section 7, May 2016 	<p>Site works related to the initial topsoil stripping and stockpiling occurred in September 2016. No further works had occurred on the Quarry site between October 2016 and August 2017.</p>	Noted
	Management Plan Requirements			
3	<p>The Proponent must ensure that the Management Plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>(a) detailed baseline data;</p> <p>(b) a description of:</p> <ul style="list-style-type: none"> the relevant statutory requirements (including any relevant approval, licence or lease conditions); any relevant limits or performance measures/criteria; and the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; <p>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>(d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> impacts and environmental performance of the project; and effectiveness of any management measures (see (c) above); <p>(e) a contingency plan to manage any unpredicted impacts and their consequences;</p> <p>(f) a program to investigate and implement ways to improve the environmental performance of the project over time;</p> <p>(g) a protocol for managing and reporting any:</p>	<ul style="list-style-type: none"> Environmental Management Strategy, section 7, May 2016 Noise Management Plan, May 2016 Air Quality Management Plan, May 2016 Water Management Plan, June 2016 Transport Management Plan, May 2016 Aboriginal Heritage Management Plan, May 2016 	<p>The Management Plans required under Project Approval 08_0212 were prepared to satisfy the requirements of Schedule 5 condition 3 and approved by the DP&E prior to commencement of any works on the New Berrima Clay/ShaleQuarry site.</p>	Compliant

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	Revision of Strategies, Plans & Programs			
5	<p>Within 3 months of the submission of an: (a) annual review under condition 4 above; (b) incident report under condition 7 below; (c) audit report under condition 9 below; and (d) any modifications to this approval, the Proponent must review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. Within 4 weeks of conducting any such review, the Proponent must advise the Secretary of the outcomes of the review, and provide any revised documents to the Secretary for review and approval. Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</p>	<ul style="list-style-type: none"> Environmental Management Strategy, section 16, May 2016 		Noted
	Community Consultative Committee			
6	<p>The Proponent must establish and operate a CCC for the project to the satisfaction of the Secretary. This CCC must be operated in general accordance with the Department's Community Consultative Committee (CCC) Guidelines for State Significant Projects (November 2016), or its latest version), and be operating prior to any development being carried out on site under this approval. Notes: <input type="checkbox"/> The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval. <input type="checkbox"/> In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community.</p>	<ul style="list-style-type: none"> Department's Community Consultative Committee (CCC) Guidelines for State Significant Projects (November 2016) 	<p>The Community Consultative Committee was established CCC Meetings have been held on 7 September and 30 November 2016, and 29 March and 26 July 2017. The Minutes of the CCC Meetings are posted on the Company website: http://australbricks.com.au/environmental-monitoring-data .</p>	Compliant Ongoing
	REPORTING			
	Incident Reporting			
7	<p>The Proponent must notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent must notify the Secretary and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant</p>	<ul style="list-style-type: none"> Environmental Management Strategy, section 9, May 2016 	<p>No incidents were reported between September 2016 and August 2017.</p>	Not triggered

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	agencies with a detailed report on the incident, and such further reports as may be requested.			
	Regular Reporting			
8	The Proponent must provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	<ul style="list-style-type: none"> Environmental Management Strategy, section 14, May 2016 	The Annual Review 2016 is posted on the Company website - http://australbricks.com.au/environmental-monitoring-data .	Compliant
	INDEPENDENT ENVIRONMENTAL AUDIT			
9	<p>Within a year of the commencement of development on site under this approval, and every 3years thereafter, unless the Secretary directs otherwise, the Proponent must commission, commence and pay the full cost of an Independent Environmental Audit of the project. This audit must:</p> <p>(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;</p> <p>(b) include consultation with the relevant agencies;</p> <p>(c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals);</p> <p>(d) review the adequacy of any approved strategy, plan or program required under these approvals; and</p> <p>(e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and</p> <p>(f) be conducted and reported to the satisfaction of the Secretary.</p> <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.</i></p>	<ul style="list-style-type: none"> Environmental Management Strategy, section 7, May 2016 Letter from DP&E re Approval of Trevor Brown as Auditor for the New Berrima Quarry, 20 Jul 2017 	<p>Development commenced on the site on 19 September 2016 with initial topsoil stripping and stockpiling in the area of the Central Visibility Barrier. These works were conducted on the 19/20/23 September 2017. No further site preparation works had occurred between October 2016 and August 2017.</p> <p>(a) appointment of Trevor Brown as auditor has been endorsed by the Secretary on 20 July 2017;</p> <p>(b) consultation occurred with the DP&E, EPA, OEH, DPI-Water, DRG and Wingecarribee Shire Council;</p> <p>(c) environmental performance and compliance with requirements of Project Approval 08_0212 and EPL 20377 (including assessment, plan and program required under these approvals) is provided in section 6 and Attachments A-C;</p> <p>(d) approved strategy, plans or programs assessed; and</p> <p>(e) section 7 provides recommend measures or actions to improve the environmental performance of the project, gram required under these approvals.</p>	Compliant
9A	Within 12 weeks of commencing each audit, unless the Secretary agrees otherwise, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of any measures proposed to address the recommendations.		This Independent Environmental Audit was conducted in the 1 August 2017 and the report prepared for submission on 15 August 2017.	Compliant
10	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to			Noted

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Condition No.	Consolidated Project Approval 08_0212 Condition	Verification	Comments	Compliance
	any recommendations contained in the audit report.			
	ACCESS TO INFORMATION			
11	<p>Following the commencement of development on site under this approval, the Proponent must:</p> <p>(a) make the following information publicly available on its website:</p> <ul style="list-style-type: none"> • the documents listed in condition 2 of Schedule 2; • current statutory approvals for the project; • approved strategies, plans or programs; • a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval; • a complaints register, updated on a quarterly basis; • minutes of CCC meetings; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Proponent's response to the recommendations in any audit; and • any other matter required by the Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	<ul style="list-style-type: none"> • Environmental Management Strategy, section 17, May 2016 • http://australbricks.com.au/environmental-monitoring-data/NewBerimaQuarry 	<p>The following information is publicly available on the Austral Bricks – New Berrima Quarry website and keep the information up to date:</p> <ul style="list-style-type: none"> • Environmental Assessments and Appendices; • current statutory approvals for the project; • approved strategies, plans or programs; • a summary of the monitoring results of the project, reported in accordance with the approved plans and programs required under conditions of this approval; • a complaints register, updated on a quarterly basis; • minutes of CCC meetings; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Proponent's response to the recommendations in any audit <p>The 2016 Environmental Assessment and Consolidated Project Approval 7 July 2017 were not available on the website at the date of this audit (August 2017).</p>	<p>Compliant Ongoing</p>
				<p>Administrative Non-compliance</p>

Attachment B

Statements of Commitment

SoC No.	Statement of Commitment	Verification	Comments	Compliance
1.	Area of Activities and Operations			
1.1	All approved activities are undertaken in the area(s) nominated on the approved plans and figures (unless moved slightly to avoid individual trees). Survey and mark the boundaries of the areas of disturbance on the ground.	<ul style="list-style-type: none"> Survey Plan New Berrima Quarry, 18 Mar 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 1 and Appendix A</u></p> <p>Registered surveyors "Land Team" conducted a detailed site survey, marking the boundaries of the Quarry Site, extraction area boundary and footprints of the southern, central and northern visibility barriers. Survey Plans were submitted to the DP&E on 18 March 2016.</p>	Compliant
1.2	Satisfaction of the requirement of NSW Department of Industry for production data. Provide annual production data to NSW Department of Industry - Resources & Energy (and include in the AEMR).		<p><u>Refer to Project Approval 08 0212 Schedule 2 condition 15</u></p> <p>Quarry operations had not commenced at the date of this audit (August 2017).</p>	Not triggered
2.	Operating Hours Management of operations in accordance with the approved operating hours.	<ul style="list-style-type: none"> Noise Management Plan section 9.1, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 6</u></p> <p>The physical commencement of site preparation activities on the New Berrima Clay/Shale Quarry site, have been conducted between 7am and 5pm Monday to Friday. No works were conducted on Sundays or public holidays.</p>	Compliant Ongoing
2.1	Design and implement a Notification Protocol to alert all potentially affected residents of the intention to undertake activities outside of normal hours of operation.		The Notification Protocol will be developed when activities at the quarry site commence.	Not triggered
2.2	Institute a complaints telephone line for the reporting of complaints (if any) on activities undertaken outside of normal hours of operation.	<ul style="list-style-type: none"> Environmental Management Strategy, section 10.1, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 5 condition 1(e) and EPL 20377 condition M6</u></p> <p>Austral Bricks operates a telephone complaints line (1800 635 620).</p>	Compliant Ongoing
2.3	Maintain a Complaints Register to record complaints received and actions taken by the Proponent to address the complaints.	<ul style="list-style-type: none"> Environmental Management Strategy, section 10.1, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 5 condition 1(e) and EPL 20377 condition M6</u></p> <p>Austral Bricks maintains a complaints register to record complaints received and actions taken to address the complaints. No complaints had been recorded related to the New Berrima Quarry at the date of this audit (August 2017).</p>	Compliant Ongoing

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SoC No.	Statement of Commitment	Verification	Comments	Compliance
3.	Traffic Minimisation of traffic impacts, including road safety:	<ul style="list-style-type: none"> Transport Management Plan, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 conditions 23 to 30</u>	
3.1	Seal the last 400m of the Quarry Access Road from the entrance to the Quarry.	<ul style="list-style-type: none"> Transport Management Plan, section 8.3.3, May 2016 	Sealing of the quarry access road had not commenced at the date of this audit (August 2017). The security gates and fencing of the entrance to the site had been installed.	Not triggered
3.2	Cover all loads.	<ul style="list-style-type: none"> Transport Management Plan, section 8.3, May 2016 Drivers Code of Conduct, Transport Management Plan, Appendix 1 section 4 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 28(b)</u> No transport of product from the New Berrima Clay/Shale Quarry had occurred at the date of this audit (August 2017).	Not triggered
3.3	Ensure truck drivers adhere to the existing Austral Bricks Drivers Code of Conduct which identifies the required safety and courtesy requirements for drivers travelling to and from all Austral Bricks quarries.	<ul style="list-style-type: none"> Transport Management Plan, section 8.3, May 2016 Drivers Code of Conduct, Transport Management Plan, Appendix 1 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 29</u> All truck drivers transporting product from the New Berrima Clay/Shale Quarry site will be required to conform with the Austral Brick Drivers Code of Conduct.	Not triggered
3.4	Adopt all safety procedures during the Berrima Road / access driveway intersection construction and incorporate in the Section 138 Permit sought under the Roads Act 1993.	<ul style="list-style-type: none"> Transport Management Plan, section 8.2, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 23</u> Works on the Berrima Road intersection with the access road had not commenced at the date of this audit (August 2017).	Not triggered
4	Surface Water Minimisation of potential impacts on surface water quality and supply of the local watercourse system, particularly the Wingecarribee River:	<ul style="list-style-type: none"> Water Management Plan, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 conditions 18(b)</u>	
4.1	Ensure early and progressive revegetation of visibility barriers and rehabilitation of completed extraction areas.	<ul style="list-style-type: none"> Water Management Plan, section 10.2.1.1, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 34</u> Visibility barriers had not been constructed at the date of this audit (August 2017).	Not triggered
4.2	Use of any water sourced from the sedimentation basins for dust suppression within the upslope catchment of a sedimentation basin.	<ul style="list-style-type: none"> Water Management Plan, May 2016 	There were no activities on the quarry site that required dust suppression at the date of the audit.	Noted
4.3	Install sediment control fencing around the visibility barriers under construction and other areas of exposed soil until vegetation has been established.	<ul style="list-style-type: none"> Water Management Plan, Appendix A, May 2016 	Sediment fencing had been installed around the central visibility bund construction area prior to surface disturbance in September/October 2016. The cattle grazing in the quarry site had trampled the sediment fences at the date of this audit, but there was no surface disturbance occurring associated with quarry development at this time. The sediment	Not triggered

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			fences will be reinstated when site preparation recommences.	
4.4	Construct and operate various surface water management controls such as diversion structures and sedimentation basins in accordance with the Water Management Plan.	<ul style="list-style-type: none"> Water Management Plan, Appendix A, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 18(b)</u></p> <p>No construction activities were occurring at the date of this audit (August 2017).</p>	Not triggered
4.5	Armour potential scour points (e.g. channel inlets/outlets and bends) with rock.	<ul style="list-style-type: none"> Water Management Plan, Appendix A, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 18(b)</u></p>	Noted - Not triggered
4.6	Inspect diversion structures monthly and within 24 hours following any rain event that generates flow in the drains to identify areas of erosion, scour or damage. Repair any problem areas and/or take appropriate stabilising action.	<ul style="list-style-type: none"> Water Management Plan, section 10.2.2, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 18(b)</u></p> <p>No diversion structure had been constructed at the date of this audit (August 2017).</p>	Not triggered
5	<p>Noise</p> <p>Minimisation of the noise impacts attributable to extraction and transportation of clay /shale product from the Quarry:</p>	<ul style="list-style-type: none"> Noise Management Plan, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 conditions 3 to 8</u></p>	
5.1	Retain the existing tree screen on the eastern side of the extraction area.	<ul style="list-style-type: none"> Noise Management Plan section 9.2, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 19</u></p> <p>Vegetation on the eastern side of the proposed extraction area had been retained at the date of this audit (August 2017).</p>	Compliant
5.2	Regularly service all equipment to ensure sound power levels of each item remains at or below that nominated for noise modelling purposes.	<ul style="list-style-type: none"> Noise Management Plan, section 9.3, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 7</u></p> <p>No equipment operated on site between October 2016 and August 2017.</p>	Not triggered
5.3	Ensure all earth-moving equipment are fitted with mid-frequency band reversing alarms.	<ul style="list-style-type: none"> Noise Management Plan, section 9.3, May 2016 	<p>No equipment operated on site between October 2016 and August 2017</p>	Noted
6	<p>Flora</p> <p>Minimisation of the spread of weeds, on and off Site</p>	<ul style="list-style-type: none"> Landscape Management Plan, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 35(d)</u></p>	
6.1	Quick establishment of a selected cover crop.	<ul style="list-style-type: none"> Landscape Management Plan, section 11.2, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 34</u></p> <p>No rehabilitation works conducted between October 2016 and August 2017.</p>	Not triggered
6.2	Spray weeds with an authorised herbicide, as required	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, May 2016 	<p><u>Refer to Project Approval 08 0212 Schedule 3 condition 35(d)</u></p>	Not triggered
6.3	Ensure all earthmoving equipment is appropriately cleaned prior to being brought to the Quarry for each campaign.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, May 2016 	<p>No earthmoving equipment on site between October 2016 and August 2017.</p>	Not triggered

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SoC No.	Statement of Commitment	Verification	Comments	Compliance
7	Visual Amenity Reduce visible amenity impacts	<ul style="list-style-type: none"> Landscape Management Plan, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 conditions 19 to 21</u>	
7.1	Plant trees screenings at the eastern side of the surplus overburden stockpile area to screen stockpiles from the east.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.2.3, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 19</u> The surplus overburden stockpile area had not been established at the date of this audit (August 2017).	Not yet triggered
7.2	Commence progressive rehabilitation of completed faces and all other completed disturbed areas as soon as possible after completion of extraction. Rehabilitation of the southern extraction area wall would be very advanced (13-18 years) and protect against views of extraction faces during Stages 5 to 7.	<ul style="list-style-type: none"> Landscape Management Plan, section 11, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 34</u> No areas of disturbance from the site preparation works had been completed at the date of this audit (August 2017) so no progressive rehabilitation had commenced.	Not triggered
8	Air Quality Limit the generation of dust and other emissions from Quarry Activities:	<ul style="list-style-type: none"> Air Quality Management Plan, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 conditions 9 to 11</u>	
8.1	Construct vegetated visibility barriers to provide barriers to minimise the spread of dust from the Quarry.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 3</u> Visibility barriers had not been established at the date of this audit (August 2017) so vegetation of the barriers had not commenced at the date of this audit (August 2017).	Not triggered
8.2	Commence progressive rehabilitation of all disturbed areas as soon as possible after the completion of excavation in that area.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 34</u> Excavation of the quarry for product had not commenced at the date of this audit (August 2017).	Not yet triggered
8.3	Use water truck to routinely spray unsealed roads, tracks and stockpile areas.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10, May 2016 		Not triggered
8.4	Cover and effectively seal tailgates of trucks leaving the Quarry.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 28(b)</u> No transport of materials from the New Berrima Quarry had occurred at the date of this audit (August 2017).	Not triggered
8.5	Prohibit all vehicles and machinery from idling unnecessarily.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10, May 2016 		Noted
8.6	Maintain all vehicles and machinery in accordance with manufacturers' specifications.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10, May 2016 	<u>Refer to EPL 20377 condition O2</u>	Noted
8.7	Amend extraction practices as required during adverse wind conditions to minimise the generation and spread of dust from the Quarry.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10.1, May 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 10(c)</u>	Not triggered

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8.8	Minimise drop heights between front-end loader buckets and truck trays through operator training and education on the management of dust.	<ul style="list-style-type: none"> Air Quality Management Plan, section 10.1 – Table 7, May 2016 	Excavation of the quarry for product had not commenced at the date of this audit (August 2017)	Not triggered
8.9	Apply dust suppressants (e.g. Gluon or TerraControl) on unsealed roads used for product transport.	Air Quality Management Plan, section 10.1 – Table 7, May 2016	No product had been transported from the site at the date of this audit (August 2017).	Not triggered
9	Conservation of topsoil resources	<ul style="list-style-type: none"> Landscape Management Plan, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u>	
9.1	Strip all available topsoil to a depth of approximately 0.15m from the surface of each extraction stage.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35(d)</u>	Not triggered
9.2	Wherever practicable, place stripped topsoil directly onto the constructed visibility barriers or areas prepared and awaiting rehabilitation.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35(d)</u>	Not triggered
9.3	Stockpile topsoil around the perimeter of the surplus overburden stockpile area for later reclamation if no areas are available. Limit topsoil stockpiles to no more than 2.0m in height to minimise adverse impacts upon the biological activity of the topsoil.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u>	Not triggered
9.4	Broadcast a pasture seed mix to assist with temporary stabilisation if topsoil stockpiles are likely to remain for extended periods.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 34 and 35</u> Topsoil stockpiles from the initial soil stripping in the area of the Central Visibility Barrier should be seeded.	Non-Compliant (Low Risk)
9.5	Avoid excessive handling of soil during the stripping and stockpiling operation and handling when the soils are wet to protect soil structure.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u>	Noted
9.6	Restrict driving of machinery on the topsoil stockpiles, as well as the respread soil, to maximise soil aggregation and prevent compaction, particularly when the stockpiles are moist.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u>	Noted
9.7	Place silt-stop fencing or similar immediately downslope of stockpiles and visibility barriers where required, until a stable vegetation cover is established.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u> Silt fencing had been installed around the downslope areas of topsoil stockpiles and Central Visibility Barrier. The silt fence had been damaged by stock and should be reinstated prior to re-commencement of site works.	Noted
	Minimise the potential for soil contamination.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u>	Noted
9.8	Restrict all refuelling and vehicle maintenance activities to designated areas which are either sealed, bunded or located with access to spill control kits.	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 35</u>	Not triggered

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			No refuelling of equipment on the New Berrima Quarry site occurred between September 2016 and August 2017.	
9.9	Complete regular housekeeping and maintenance of vehicle maintenance areas	<ul style="list-style-type: none"> Landscape Management Plan, section 9.1, Mar 2016 		Noted
10	Heritage Comply with the provisions of the <i>National Parks and Wildlife Act 1974</i> (as amended).	<ul style="list-style-type: none"> Aboriginal Heritage Management Plan, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 32</u>	
10.1	Instruct employees, earthmoving contractors, subcontractors, machine operators and their representatives, whether working in the survey area or elsewhere, that in the event of any bone or stone artefacts, or discrete distributions of shell, or any objects of cultural association, being unearthed during earthmoving, work would cease immediately in the area of the find.	<ul style="list-style-type: none"> Aboriginal Heritage Management Plan, section 7, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 32</u> Aboriginal Heritage Management Plan section 7 addresses competence training and awareness for all Austral personnel and contractors.	Noted
10.2	Immediately report the find to the Office of Environment and Heritage (OEH) and the relevant Local Aboriginal Land Councils.	<ul style="list-style-type: none"> Aboriginal Heritage Management Plan, section 9.4, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 32</u> Aboriginal Heritage Management Plan section 9.4 addresses Stop Work Procedures related to any Aboriginal finds during activities on the site.	Noted
10.3	In the event that any bone cannot be clearly identified by a qualified archaeologist as being of animal remains, inform the police of its discovery, inform OEH, and inform officials and/or their representatives of the Illawarra Local Aboriginal Land Council, Wodi Wodi Elders Corporation, and Korewal Elouera, Jerrungarugh.	<ul style="list-style-type: none"> Aboriginal Heritage Management Plan, section 9.4, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 32</u> Aboriginal Heritage Management Plan section 9.4 addresses Stop Work Procedures related to any bone material during activities on the site.	Noted
10.4	Do not recommence work in the area of the find, until both the police (if unidentified bone has been found) and those officials or representatives have given their permission to do so.	<ul style="list-style-type: none"> Aboriginal Heritage Management Plan, section 9.4, Mar 2016 	<u>Refer to Project Approval 08 0212 Schedule 3 condition 32</u> Aboriginal Heritage Management Plan section 9.4 addresses Stop Work Procedures related to any bone material during activities on the site.	Noted

Attachment C

Environment Protection Licence 20377

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance						
1	Administrative Conditions									
A1	What the licence authorises and regulates									
A1.1	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.</p> <table border="1"> <thead> <tr> <th>Scheduled Activity</th> <th>Fee Based Activity</th> <th>Scale</th> </tr> </thead> <tbody> <tr> <td>Extractive activities</td> <td>Land-based extractive activity</td> <td>> 50000 - 100000 T annual capacity to extract, process or store</td> </tr> </tbody> </table>	Scheduled Activity	Fee Based Activity	Scale	Extractive activities	Land-based extractive activity	> 50000 - 100000 T annual capacity to extract, process or store		The New Berrima Clay/Shale Quarry had not commenced production at the date of this audit (August 2017).	Noted
Scheduled Activity	Fee Based Activity	Scale								
Extractive activities	Land-based extractive activity	> 50000 - 100000 T annual capacity to extract, process or store								
A2	Premises or plant to which this licence applies									
A2.1	<p>The licence applies to the following premises: The Austral Brick Company Pty Ltd 1 Berrima Street, New Berrima, NSW 2577 Lot 1 DP 414246 (Mandurama)</p>		The establishment of the New Berrima Clay/Shale Quarry will occur on Lot 1 DP 414246 (Mandurama property).	Compliant						
A3	Information supplied to the EPA									
A3.1	<p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.</p> <p>In this condition the reference to "the licence application" includes a reference to:</p> <p>a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and</p> <p>b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</p>			Noted						

Independent Environmental Audit - Date

Project

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance										
2	Discharges to Air and Water and Applications to Land													
P1	Location of monitoring/discharge points and areas													
P1.1	<p>The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.</p> <p>Air</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">EPA ID No.</th> <th style="width: 15%;">Type of Monitoring Point</th> <th style="width: 75%;">Location Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">Dust Deposition Monitoring</td> <td>North of the quarry void and labelled A1 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).</td> </tr> <tr> <td style="text-align: center;">2</td> <td>East of the quarry void and labelled A2 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).</td> </tr> <tr> <td style="text-align: center;">3</td> <td>South east of the quarry void and labelled A3 on map "Environmental Monitoring Locations" dated 20 Nov 2015 (DOC16/206245).</td> </tr> </tbody> </table>	EPA ID No.	Type of Monitoring Point	Location Description	1	Dust Deposition Monitoring	North of the quarry void and labelled A1 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).	2	East of the quarry void and labelled A2 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).	3	South east of the quarry void and labelled A3 on map "Environmental Monitoring Locations" dated 20 Nov 2015 (DOC16/206245).		<p>Three dust deposition dust gauges have been installed at Sites A1, A2 and A3 on the New Berrima Quarry site,</p> <p>The locations of the dust gauges are consistent with those nominated in EPL 20377.</p> <p>Measurement of deposited dust commenced on 20 September 2016. Dust monitoring was not conducted strictly in accordance with Air Quality Management Plan section 11.6 and AS/NZS 3580.10.1:2003, as between September 2016 and May 2017 dust deposition bottles were not collected monthly.</p> <p>Monthly collection of dust bottles has occurred from May to July 2017.</p>	Compliant
EPA ID No.	Type of Monitoring Point	Location Description												
1	Dust Deposition Monitoring	North of the quarry void and labelled A1 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).												
2		East of the quarry void and labelled A2 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).												
3		South east of the quarry void and labelled A3 on map "Environmental Monitoring Locations" dated 20 Nov 2015 (DOC16/206245).												
P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.			Non-Compliant (Low Risk)										
P1.3	<p>The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.</p> <p>Water and land</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">EPA ID No.</th> <th style="width: 15%;">Type of Monitoring Point</th> <th style="width: 75%;">Location Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4</td> <td>Discharge to waters</td> <td>North west of the quarry void labelled W1 on map "Environmental Monitoring Locations" 20 Nov</td> </tr> </tbody> </table>	EPA ID No.	Type of Monitoring Point	Location Description	4	Discharge to waters	North west of the quarry void labelled W1 on map "Environmental Monitoring Locations" 20 Nov	<ul style="list-style-type: none"> Water Management Plan section 11.3.1.1, Jun 2016 	<p>Surface water monitoring from Points 4 and 5 would occur during discharge from the site.</p> <p>No conditional discharges occurred between September 2016 and August 2017.</p> <p>Water samples were collected on 31 May, 30 June and 31 July 2017 from EPL sampling points 4 and 5 and analysed for the parameters nominated in the approved Water Management Plan section 11.3.1.1</p>	Compliant Ongoing				
EPA ID No.	Type of Monitoring Point	Location Description												
4	Discharge to waters	North west of the quarry void labelled W1 on map "Environmental Monitoring Locations" 20 Nov												

Independent Environmental Audit - Date

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Condition No.	EPL 20377 Condition		Verification	Comments	Compliance	
	5	Water quality Monitoring 2015 (DOC16/206245). South west of the quarry void labelled W2 on map "Environmental Monitoring Locations" 20 Nov 2015 (DOC16/206245).				
3	Limit Conditions					
L1	Pollution of waters					
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.		<ul style="list-style-type: none"> Protection of the Environment Operations Act 1997, section 120 		Noted	
L2	Noise limits					
L2.1	Noise from the premises must not exceed the noise limits in the table below:		<ul style="list-style-type: none"> Noise Management Plan, May 2016 	Implementation of the noise monitoring program had not occurred in accordance with EPL condition L2.1 or the approved Noise Management Plan section 10 at the date of this audit (August 2017) as no attended noise monitoring was conducted between the date of commencement of site preparation (September 2016) and August 2017. (NB: No physical activities were undertaken on the Quarry site between October 2016 and August 2017 following the initial site preparation works in September and October 2016).	Non-Compliant (Low Risk)	
	ID Point	Noise Limit at any time LA _{eq(15 minute)}				Location
	N1	42				North of the quarry void labelled N1 on map "Environmental Monitoring Locations" dated 20 Nov 2015 (DOC16/206245).
	N2	49				East of the quarry void labelled N2 on map "Environmental Monitoring Locations" dated 20 Nov 2015 (DOC16/206245).
	N3	44	South east of the quarry void labelled N3 on map "Environmental Monitoring Locations" dated 20 Nov 2015 (DOC16/206245).			
4	Operating Conditions					
O1	Activities must be carried out in a competent manner		•			
O1.1	Licensed activities must be carried out in a competent manner. This includes:			No processing, storage, handling, or transport of materials and substances has occurred on the	Not applicable	

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Project

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance
	a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.		Quarry site between September 2016 and August 2017.	
O2	Maintenance of plant and equipment			
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.		No plant or equipment has been installed at the New Berrima Quarry site between September 2016 and August 2017.	Not applicable
5	Monitoring and Recording Conditions			
M1	Monitoring records			
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.			Noted
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.		Dust deposition and water quality monitoring results collected for the New Berrima Quarry project are available in a legible form.	Compliant Ongoing
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.		Monitoring samples collected for the New Berrima Quarry project have: a) the date on which the sample was taken; b) the time at which the sample was collected where relevant; c) the point at which the sample was taken; and d) the name of the person who collected the sample	Compliant Ongoing
M2	Requirement to monitor concentration of pollutants discharged			
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:			Noted
M2.2	Air Monitoring Requirements POINT 1,2,3		Measurement of deposited dust commenced on 20 September 2016. Dust monitoring was not conducted strictly in accordance with Air Quality	Non-Compliant (Low Risk)

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Condition No.	EPL 20377 Condition				Verification	Comments	Compliance
	Pollutant	Unit of Measure	Frequency	Sampling Method		Management Plan section 11.6 and AS/NZS 3580.10.1:2003, as between September 2016 and May 2017 dust deposition bottles were not collected monthly. Monthly collection of dust bottles has occurred from May to July 2017.	
	Ash	g/m ² /mth	Monthly	AS			
	Insoluble Solids	g/m ₂ /mth	Monthly	3580.1.1 - 2003			
M2.3	Water and/ or Land Monitoring Requirements POINT 4,5					Surface water monitoring from Points 4 and 5 would occur during discharge. No conditional discharges occurred between September 2016 and August 2017.	Not triggered
	Pollutant	Unit of Measure	Frequency	Sampling Method			
	Oil and Grease	Visible	Daily during any discharge	Inspection			
	pH	pH		Grab sample			
	Total Suspended Solids	mg/L					
M3	Testing methods - concentration limits						
M3.1	<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:</p> <p>a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or</p> <p>b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or</p> <p>c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</p> <p>Note: The <i>Protection of the Environment Operations (Clean Air) Regulation 2010</i> requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".</p>				<ul style="list-style-type: none"> <i>Protection of the Environment Operations (Clean Air) Regulation 2010</i> Approved Methods for the Sampling and Analysis of Air Pollutants in NSW 	Analysis of monitoring samples for the New Berrima Quarry has been conducted by NATA Registered laboratories: ALS Environmental – dust analysis Sydney Analytical Laboratories – surface water	Compliant Ongoing
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.						
M4	Weather monitoring						

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Condition No.	EPL 20377 Condition	Verification	Comments	Compliance
	At the Weather Station Monitoring Point, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified		<p>Austral commissioned Carbon Based Environmental Pty Ltd to install a meteorological station that was established on the New Berrima Quarry site on 19 September 2016. The meteorological station measures:</p> <ul style="list-style-type: none"> • Temperature (at 2m and 10m) • Wind speed and direction (at 2m and 10) • Rainfall • Solar radiation • Barometric pressure <p>The station installation is protected by a substantial cattle proof fence,</p> 	Compliant
M5	Recording of pollution complaints			
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	<ul style="list-style-type: none"> • Environmental Management Strategy, section 10.1, May 2016 	Austral Bricks maintains a complaints register to record the details of complaints received and actions taken to address the complaints.	Compliant
M5.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.		No complaints had been recorded related to the New Berrima Quarry at the date of this audit (1 August 2017).	Compliant Ongoing
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.			Noted

Independent Environmental Audit - Date

Project

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	•		Noted
M6	Telephone complaints line			
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	• Environmental Management Strategy, section 10.1, May 2016	Austral Bricks operates a telephone complaints line (1800 635 620). Austral operates on the following mechanisms for receiving complaints.	Compliant
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.		<ul style="list-style-type: none"> Directly via the 24-hour, 7 day per week Community Information Line (1800 635 620) or via the Bowral Brick Plant phone line 4861 3031). This number will be displayed on a sign at the Quarry entrance and on the Austral website. Directly via a dedicated email address nswenvironmental@australbricks.com.au that will be displayed on a sign at the Quarry entrance and on the Austral website. 	Compliant
M6.3	The preceding two conditions do not apply until 3 months after the date of the issue of this licence.			Not applicable
6	Reporting Conditions			
R1	Annual return documents			
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan, 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.		The first Annual Return for Environment Protection Licence 20377 is due within 60 days of 1 August 2017.	Noted
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below. <i>Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.</i>			Noted
R1.3	Where this licence is transferred from the licensee to a new licensee:			Not applicable

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Project

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance
	<p>a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and</p> <p>b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.</p> <p>Note: An application to transfer a licence must be made in the approved form for this purpose.</p>			
R1.4	<p>Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:</p> <p>a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or</p> <p>b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.</p>			Noted
R1.5	<p>The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date')</p>			Noted
R1.6	<p>The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.</p>			Noted
R1.7	<p>Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:</p> <p>a) the licence holder; or</p> <p>b) by a person approved in writing by the EPA to sign on behalf of the licence holder.</p>			Noted
R2	Notification of environmental harm			
R2.1	<p>Notifications must be made by telephoning the Environment Line service on 131 555.</p> <p>Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.</p>			Noted

Independent Environmental Audit - Date

Project

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.			Noted
R3	Written report			
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	•		Not triggered
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	•		Noted
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.			Noted
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.			Noted
7	General Conditions			

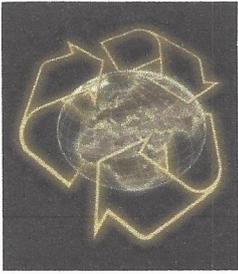
Independent Environmental Audit - Date

Project

Condition No.	EPL 20377 Condition	Verification	Comments	Compliance
G1	Copy of licence kept at the premises or plant			
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	<ul style="list-style-type: none"> Environment Protection Licence 20377 	<p>A copy of this EPL is kept at the premises in a box attached to the Environment sign board on the access road at the entrance to the quarry.</p>  <p>Copy of the EPL is available in the box attached to the Environment sign board</p>	Compliant
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.			Noted
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.			Noted

Appendix 1

Consultation Correspondence with Agencies



TREVOR BROWN & ASSOCIATES

Environmental Management Consultants

TBA Ref: NBSQ/17/07
Client Ref:

18 July 2017

Environmental Management

ISO14000 EMS development

EMP preparation

EMS Implementation

Environmental audits

Due Diligence Audits

Compliance Audits

Environmental Risk
Assessment

Environmental Training

Environmental Workshops

Environmental Project
Management

for

Mining

Construction

Industry

Government

Small-Medium Enterprises

Department of Planning and Environment
23-33 Bridge Street
SYDNEY NSW 2000

Attention: Sarah Fabian

Dear Sarah

Independent Environmental Audit – New Berrima Shale Quarry

In accordance with Project Approval 08_0212 Schedule 5 condition 9 for the New Berrima Shale Quarry, an Independent Environmental Audit is to be undertaken on 1 August 2017.

The independent environmental audit will assess the current environmental status of New Berrima Shale Quarry and its compliance with the requirements of Project Approval 08_0212, Environmental Protection Licence 20377, Water Bore Licence(s) and the project management plans. The audit will also involve a review of the status of strategies, plans and programs prepared under the abovementioned approvals and, where necessary, recommend appropriate measures or actions to improve the environmental performance of the project.

The audit will be comprehensive however, if there are any particular environmental aspects that you would like the audit to take into consideration, please contact me via email before the 30 July 2017.

Yours sincerely

18 July 2017

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates

136 Sanctuary Point Road, Sanctuary Point NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com

Trevor Brown

From: Lauren Evans <Lauren.Evans@planning.nsw.gov.au>
Sent: Tuesday, 18 July 2017 1:52 PM
To: Trevor Brown
Cc: Georgia Dragicevic
Subject: Independent Environmental Audit - New Berrima Shale Quarry

Hi Trevor

The Department requests that you address the following specific matters as part of the upcoming Independent Environmental Audit:

- Compliance with management plans, particularly the Noise Management Plan, Water Management Plan and Aboriginal Heritage Management Plan.
- Compliance with the Statement of Commitments.

If you require anything further, please let me know.

Regards

Lauren Evans
Planning Officer
Resource Assessments | Planning Services
320 Pitt Street | GPO Box 39 | Sydney NSW 2001
T 02 9274 6311 E lauren.evans@planning.nsw.gov.au

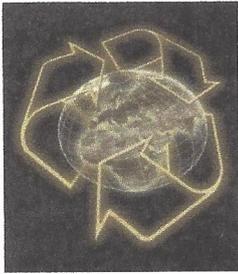


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From: Trevor Brown [<mailto:tebrown@bigpond.com>]
Sent: Monday, 17 July 2017 1:08 PM
To: Sarah Fabian <Sarah.Fabian@planning.nsw.gov.au>
Subject: Independent Environmental Audit - New Berrima Shale Quarry

Hi Sarah

I have been requested by Austral Bricks to undertake the Independent Environmental Audit of the New Berrima Shale Quarry as required within a year of the commencement of development on site under Project Approval 08_0212 Schedule 5 condition 9.



TREVOR BROWN & ASSOCIATES

Applied Environmental Management Consultants

TBA Ref: NBQ/17/07
Client Ref:

31 July 2017

Environmental Management

ISO14000 EMS development

EMP preparation

EMS Implementation

Environmental audits

Due Diligence Audits

Compliance Audits

Environmental Risk
Assessment

Environmental Training

Environmental Workshops

Environmental Project
Management

for

Mining

Construction

Industry

Government

Small-Medium Enterprises

NSW DPI-Water

Attention: Tim Baker Senior Water Regulation Officer

Independent Environmental Audit – New Berrima Shale Quarry

In accordance with Project Approval 08_0212 Schedule 5 condition 9 for the New Berrima Shale Quarry, an Independent Environmental Audit is to begin on 1 August 2017.

The independent audit will assess the current environmental status of New Berrima Shale Quarry and its compliance with the requirements of Project Approval 08_0212, Environmental Protection Licence 20377, and other environmental approvals and project management plans.

The audit will involve a review of the adequacy of strategies, plans and programs prepared under the abovementioned approvals and, where necessary, recommend appropriate measures or actions to improve the environmental performance of the project.

The audit will be comprehensive however, if there are any particular environmental aspects that you would like the audit to take into consideration, please contact me via email at your earliest convenience.

Yours sincerely

31 July 2017

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates

136 Sanctuary Point Road, Sanctuary Point NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com

Trevor Brown

From: Irene Zinger <irene.zinger@dpi.nsw.gov.au>
Sent: Friday, 18 August 2017 8:33 PM
To: tebrown@bigpond.com
Cc: John Galea; Water Referrals
Subject: OUT17/34134 DPI W response re Independent Environmental Audit
Attachments: DPI W response re Independent Environmental Audit.pdf

Dear Trevor

Please find enclosed DPI Water's comments on New Berrima Shale Quarry – Independent Environmental Audit.

For further clarification of our submission please contact John Galea, Water Regulation Officer (Parramatta) on (02) 8838 7520 or john.galea@dpi.nsw.gov.au.

Best regards

Irene

Irene Zinger | Manager
Regulatory Operations - Metro
NSW Department of Primary Industries - Water
Level 11, 10 Valentine Avenue | Parramatta NSW 2150
Locked Bag 5123 | Parramatta NSW 2124
T: 02 9842 8513 M: 0419 406416 F: 02 9895 7501
E: irene.zinger@dpi.nsw.gov.au
W: www.dpi.nsw.gov.au, www.industry.nsw.gov.au



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Contact John Galea
Phone (02) 8838 7520
Email john.galea@dpi.nsw.gov.au
Our ref OUT17/34134

Mr Trevor Brown
Principal Environmental Management Auditor
136 Sanctuary Point Road
Sanctuary Point NSW 2450
By email: tebrown@bigpond.com

Dear Mr Brown

New Berrima Shale Quarry – Independent Environmental Audit

Thank you for the opportunity to comment on the planned independent environmental audit of the New Berrima Shale Quarry.

DPI Water understands that the scope of the assessment as outlined under the development consent extends at least to compliance with:

- the conditions of consent;
- the statements of commitments as appended to the consent;
- any reporting or requirements within any relevant management plans prepared under the consent;
- all trigger action response plans for surface and groundwater impacts.

DPI Water requests that the audit considers compliance with the relevant water licensing requirements for the mining operation, specifically:

- Assessment as to whether the project holds the required water entitlements and licences under the *Water Management Act 2000* or *Water Act 1912* (as applicable);
- Compliance with the conditions of any water licences/approvals held.
- Identification of all water storages for the mine and identification of their licensing status being either exempt, subject to harvestable rights or regulated via a Water Access Licence.
- Quantification of both active and passive take by the project from each relevant water source and a comparison against previous predictions.

The following questions may aid in assessing the water licensing requirements of the mine operation:

- Does the proponent have enough licensed water entitlement to cater for active and passive take of water?

- Are adequate records kept to enable determination of the volume and source of surface and groundwater taken?
- Do any exemptions under the *Water Management (General) Regulation 2011* or Harvestable Rights Order (gazetted 31 March 2006) apply to the capture of water?

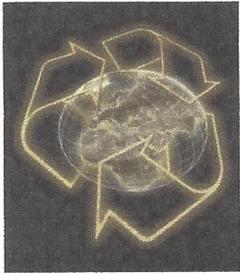
For further clarification of our submission please contact John Galea, Water Regulation Officer (Parramatta) on (02) 8838 7520 or john.galea@dpi.nsw.gov.au.

Yours sincerely



Irene Zinger
Manager, Regulatory Operations - Metro
Water Regulation

18 August 2017



TREVOR BROWN & ASSOCIATES

Applied Environmental Management Consultants

TBA Ref: NBQ/17/07
Client Ref:

18 July 2017

Environmental Management

ISO14000 EMS development

EMP preparation

EMS Implementation

Environmental audits

Due Diligence Audits

Compliance Audits

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for

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Small-Medium Enterprises

NSW EPA

Re: Environment Protection Licence 20377

Independent Environmental Audit – New Berrima Shale Quarry

In accordance with Project Approval 08_0212 Schedule 5 condition 9 for the New Berrima Shale Quarry, an Independent Environmental Audit is to be undertaken on 1 August 2017.

The independent audit will assess the current environmental status of New Berrima Shale Quarry and its compliance with the requirements of Project Approval 08_0212, Environmental Protection Licence 20377, and the project management plans.

The audit will involve a review of the adequacy of strategies, plans and programs prepared under the abovementioned approvals and, where necessary, recommend appropriate measures or actions to improve the environmental performance of the project.

The audit will be comprehensive however, if there are any particular environmental aspects that you would like the audit to take into consideration, please contact me via email before the 30 July 2017.

Yours sincerely

18 July 2017

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates

136 Sanctuary Point Road, Sanctuary Point NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com

Trevor Brown

From: Maureen Veronese <Maureen.Veronese@epa.nsw.gov.au> on behalf of EPA RSD Illawarra Mailbox <epa.illawarra@epa.nsw.gov.au>
Sent: Thursday, 27 July 2017 3:26 PM
To: tebrown@bigpond.com
Subject: EPA Response - Trevor Brown and Associates - Independent Environmental Audit - Austral Bricks Shale Quarry - New Berrima - EPL 20377
Attachments: EPA Response - Trevor Brown and Associates - Independent Environmental Audit - Austral Bricks Shale Quarry - New Berrima - EPL 20377.pdf

Dear Trevor

Please find attached EPA's response to the above matter.

Regards, Maureen

Maureen Veronese

Administrative Assistant – Illawarra Section

Metropolitan Branch, NSW Environment Protection Authority
+61 2 4224 4130

Maureen.Veronese@epa.nsw.gov.au www.epa.nsw.gov.au [@EPA_NSW](https://twitter.com/EPA_NSW)

Report pollution and environmental incidents 131 555 (NSW only) or +61 2 9995 5555



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DOC17/377399-02

Mr Trevor Brown
Trevor Brown & Associates Pty Ltd
136 Sanctuary Point Road
SANCTUARY POINT NSW 2540

Dear Mr Brown

**The Austral Brick Company Pty Ltd – New Berrima Shale Quarry Environmental Audit
Environment Protection Licence 20377**

I refer to correspondence from Trevor Brown & Associates received by the Environment Protection Authority (EPA) 18 July 2017 inviting feedback on key aspects the EPA may wish to be considered during the Independent Environmental Audit (IEA) at the above quarry.

The EPA understands that although some preliminary earthworks have occurred on site, the extraction of any shale resource is unlikely to occur for approximately 5 years. The EPA issued an Environment Protection Licence (EPL) in August 2016 and the first Annual Return has not yet been submitted.

The EPA is not currently aware of any particular issues of environmental concern in relation to the operation of the site. Stormwater management and air quality impacts (particularly dust generation, monitoring and management) are however aspects of environmental performance that are of interest to the EPA.

If you wish to discuss this matter further, please phone the contact officer.

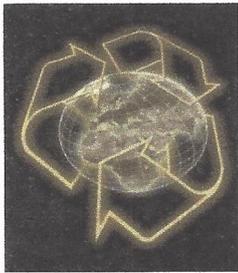
Yours sincerely

A handwritten signature in black ink, appearing to be 'P. Bloem', written over a circular scribble.

27/07/17

PETER BLOEM
Manager Regional Operations Illawarra
Environment Protection Authority

Contact officer: MATT FULLER
(02) 4224 4100



TREVOR BROWN & ASSOCIATES

Environmental Management Consultants

TBA Ref: NBQ/17/07
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Office of Environment and Heritage

Attention: Calvin Houlison

Independent Environmental Audit – New Berrima Shale Quarry

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Yours sincerely

31 July 2017

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates

136 Sanctuary Point Road, Sanctuary Point NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com

Trevor Brown

From: Calvin Houlison <Calvin.Houlison@environment.nsw.gov.au>
Sent: Monday, 31 July 2017 11:23 AM
To: tebrown@bigpond.com
Cc: Matthew Fuller
Subject: FW: New Berrima Quarry - Independent Environmental Audit
Attachments: 170731_Ltr_OEH Consultation NBQ IEA.pdf

Hi Trevor

Thanks for your attached letter relating to the New Berrima Quarry.

I can advise that EPL issues and the consultation required by Schedule 5 Condition 9 should be undertaken with the Environment Protection Authority, not OEH. I have CC'd Matt Fuller at the EPA who is dealing with post-approval requirements for this project. He will follow up your request directly with you.

Regards

Calvin Houlison
Senior Conservation Planning Officer, Planning (Illawarra)
South East Region
Regional Operations Division
Office of Environment and Heritage
Level 3, 84 Crown Street, Wollongong, NSW, 2500
PO Box 513, Wollongong, NSW, 2520
T: 02 4224 4179
E: calvin.houlison@environment.nsw.gov.au
(Please note I am out of the office on Wednesdays)

From: Trevor Brown [mailto:tebrown@bigpond.com]
Sent: Monday, 31 July 2017 11:11 AM
To: Calvin Houlison <Calvin.Houlison@environment.nsw.gov.au>
Subject: New Berrima Quarry - Independent Environmental Audit

Hi Calvin

I have been requested by Austral Bricks to undertake the Independent Environmental Audit of the New Berrima Shale Quarry as required within a year of the commencement of development on site under Project Approval 08_0212 Schedule 5 condition 9.

To satisfy Project Approval 08_0212 Schedule 5 condition 9(b) could you please let me know if there are any specific matters you require to be addressed in relation this audit.

Regards Trevor

Trevor E Brown
Director/Principal Environmental Management Consultant

trevor brown & associates
136 Sanctuary Point Road
Sanctuary Point NSW 2540

Mobile 0409 053 031

Trevor Brown

From: mail@wsc.nsw.gov.au
Sent: Monday, 17 July 2017 1:15 PM
To: Trevor Brown
Subject: Ticket: E55B86C5925AD Re: New Berrima Quarry - Independent Environmental Audit

Thank you for your email correspondence.

This email is to confirm receipt of your correspondence. It will be forwarded to the appropriate area for action.

Please allow up to 14 working days for Council to investigate and respond.

If you have not received further communication after this time, please contact Council on (02) 4868 0888 during business hours.

Customer Service Team Corporate & Community

Wingecarribee Shire Council

Civic Centre, Elizabeth St. Moss Vale, NSW 2577 | PO Box 141 Moss Vale NSW 2577

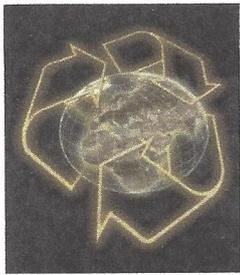
t: (02) 4868 0888 f: (02) 4869 1203

e: mail@wsc.nsw.gov.au

www.wsc.nsw.gov.au



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TREVOR BROWN & ASSOCIATES

Applied Environmental Management Consultants

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Wingecarribee Shire Council
Planning and Environment Officer
P O Box 141 Moss Vale NSW 2577

Re: Independent Environmental Audit – New Berrima Shale Quarry

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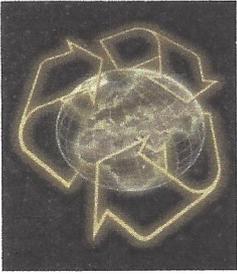
Yours sincerely

18 July 2017

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates

136 Sanctuary Point Road, Sanctuary Point NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com



TREVOR BROWN & ASSOCIATES

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Attention: Steve Cozens Senior Project Officer

Independent Environmental Audit – New Berrima Shale Quarry

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Yours sincerely

31 July 2017

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates

136 Sanctuary Point Road, Sanctuary Point NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com