

DOCUMENT CONTROL	
Doc No. BRK- BRI-HMP-V4	Version: 4
Reason for Revision: DP&E Amendments	
Issue Date: 12/02/19	Review Date: 09/01/20
Writer: RM	Authorised by: DC



Bringelly Brickworks Heritage Management Plan

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GLOSSARY AND ABBREVIATIONS

BCB	Boral CSR Bricks Pty Ltd, trading as PGH Bricks & Pavers
Boral	Boral Bricks Pty Limited
CoA	Conditions of Approval for SSD_5684, including Modification 1
CSR	CSR Building Products Limited
DCP	Development Control Plan
DP&E	Department of Planning & Environment
EIS	Bringelly Brickworks Quarry Extension Environmental Impact Statement (Hyder Consulting, 5 September 2013)
EMS	Environmental Management Strategy
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
HMP	Heritage Management Plan
LEP	Local Environment Plans
NWP Act	<i>National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment & Heritage
PIRMP	Pollution Incident Response Management Plan
POEO Act	<i>Protection of the Environment Operations Act 199</i>
RTS	Response to Submissions
Secretary, the	The Secretary of the DP&E
SSD	State Significant Development
TLALC	Tharawal Local Aboriginal Land Council
WMS	Work method statements

1 INTRODUCTION

1.1 Context

This Heritage Management Plan (HMP or Plan) forms part of the Environmental Management Strategy (EMS) for Bringelly Brickworks (the facility). The Plan has been prepared following the approval of the Bringelly Brickworks Extension Project (SSD_5684) on 3 March 2015 and a Section 96(1A) modification application (MOD1) which was determined on 31 October 2016.

This HMP has been prepared to address the requirements of the Conditions of Approval (CoA) as updated following the determination of MOD 1, the mitigation measures listed in the *Bringelly Brickworks Quarry Extension Environmental Impact Statement* (EIS) (Hyder Consulting, 5 September 2013) and applicable legislation identified in this Plan.

On 1 May 2015, CSR Limited (CSR) and Boral Limited (Boral) formally completed the establishment of a joint venture for brick manufacturing operations located in New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT. Ownership of Bringelly Brickworks (including quarrying activities) was transferred to the joint venture Boral CSR Bricks Pty Ltd (BCB), trading as PGH Bricks & Pavers. PGH Bricks & Pavers (PGH) is the controlling entity of the facility and responsible for implementing the Environmental Management Strategy of the site. On 31 October 2016 CSR agreed to acquire Boral's interest in BCB, therefore resulting in CSR owning 100% of PGH.

Bringelly Brick Works currently operates under DA 91/1194, however approval for State Significant Development (SSD 5684) was issued in March 2015 for the extension of the quarry and to upgrade ancillary infrastructure.

Schedule 2, Condition 9 of SSD 5684 requires PGH to surrender DA 91/1194 within 4 months of commencing development, as approved in SSD 5684.

In anticipation for the future surrender of DA 91/1194, draft management plans were prepared in accordance with SSD 5684 and submitted to the Department of Planning and Environment (DP&E) on 21 February 2017 for comment. DP&E provided comments on 15 March 2017, which subsequently necessitated minor updates to some of the draft management plans. These plans were resubmitted on the 3rd of July with further comments received on the 10th of September.

Following an internal meeting with senior PGH management, PGH agreed upon an SSD take-up date of June 2019. PGH have appointed a project implementation team in order to meet all relevant requirements.

1.2 Background

Bringelly Brickworks (the facility) is a clay/shale quarry and brick making facility located at 60 Greendale Road, Bringelly, on Lot 100 in DP 1203966 and comprises an area of approximately 104 hectares in the Camden Local Government Area. The facility has been in operation since 1968, and in its original form it had the capacity to process approximately 51,500 tonnes of bricks per annum.

In 1991, Boral Bricks (NSW) Pty Limited undertook to upgrade the facility with new technology and increase production to ensure the continued economic viability of the site due to the age of the manufacturing plant and machinery. The Council of the Municipality of Camden, as the approving authority at the time, approved the Development Application on 13 September 1991 (Council ref. DA 91/1194). From 1991 until 2013, the Bringelly Brickworks facility operated under this approval, which permitted (among other things) quarry extraction up to 200,000 tonnes per annum, the receipt of up to 96,000 tonnes of supplementary materials and brick production up to 160,000 tonnes per annum.

In 2013, Boral prepared an Environmental Impact Statement (EIS) to assess the environmental impacts of an increase in production at the facility and continued extraction of the quarry to meet the anticipated demand for its brick products ('Bringelly Brickworks Extension Project', Application No. SSD_5684). The project was determined to be State Significant Development (SSD) under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Clause 8 *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional Development SEPP).

Since Project Approval, the type of bricks demanded by the market have changed and the BCB joint venture was established. These two critical factors necessitated PGH to review its manufacturing requirements to ensure the most efficient use of all the resources available. To manufacture the bricks demanded by the market, the type, composition and quantity of the raw materials to be imported to Bringelly Brickworks was reconsidered because the type of raw materials required could not be solely extracted from the Bringelly quarry. PGH therefore applied to DP&E to modify SSD_5684 under Section

On 1 May 2015, CSR Limited (CSR) and Boral Limited (Boral) formally completed the establishment of a joint venture for brick manufacturing operations located in New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT. Ownership of Bringelly Brickworks (including quarrying activities) was transferred to the joint venture Boral CSR Bricks Pty Ltd (BCB), trading as PGH Bricks & Pavers. PGH Bricks & Pavers (PGH) is the controlling entity of the facility and responsible for implementing the Environmental Management Strategy of the site. On 31 October 2016 CSR agreed to acquire Boral's interest in BCB, therefore resulting in CSR owning 100% of PGH.

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In anticipation for the future surrender of DA 91/1194, draft management plans were prepared in accordance with SSD 5684 and submitted to the Department of Planning and Environment (DP&E) on 21 February 2017 for comment. DP&E provided comments on 15 March 2017, which subsequently necessitated minor updates to some of the draft management plans. These plans were resubmitted on the 3rd of July with further comments received on the 10th of September. Plans were then edited with all relevant comments addressed and re-submitted on the 9th of January 2019.

1.2.1 *Aboriginal Heritage*

The development of the project has the potential to result in the removal of vegetation and disturbance of ground within areas identified for the expansion of the quarry, brickworks building and construction of new infrastructure. An Aboriginal Archaeological Assessment was completed in 2013 for the EIS, in accordance with the *Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation* (DP&I 2005) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (OEH 2010). The purpose of the assessment was to determine whether the project would, or could, cause harm to Aboriginal objects and sites.

During the assessment, three Aboriginal heritage sites were identified to be directly impacted by the project (BB OS1, BB OS2 and BB OS4) and one site adjacent to the quarry pit may be indirectly impacted (BB OS3). However, it was concluded that all sites were of low archaeological significance and had no specific cultural significance. It was also determined post-assessment, that potential impacts to BB OS3 would be avoided by implementing a range of management measures, including temporary fencing around the site.

During a test excavation of BB OS2, several artefacts were salvaged and were proposed to be buried at a nearby location within the study area that won't be impacted. Consultation regarding this was conducted as part of the Aboriginal stakeholder review of the *Aboriginal Cultural Heritage Assessment Report* (Artefact Heritage, 2013). The salvaged artefacts from BB OS2 were subsequently reburied, and an Aboriginal Site Impact Recording Form was forwarded to the OEH AHIMS Registrar. No additional management measures are proposed for BB OS1, BB OS2 and BB OS4.

In the *Secretary's Environmental Assessment Report* (February 2015) it was concluded that both the Department of Planning & Environment (DP&E) and NSW Office of Environment & Heritage (OEH) were satisfied with the Aboriginal Archaeological Assessment and agreed with the conclusions and proposed management measures.

1.2.2 Historic Heritage

The EIS prepared for the project included a historic heritage assessment. The historic heritage assessment concluded that no historic heritage sites are located within the project site. Maryland Estate and Bringelly Public School were identified as heritage sites under the Camden Council and Liverpool Council Local Environment Plans (LEP) respectively. However, it was noted that these sites would not be impacted by the project. The rural cultural landscape of Bringelly Road/Greendale Road is identified as historically significant under Camden Council's Development Control Plan (DCP). DP&E considers the potential visual impacts of the project to be minor, and hence the potential impact on the historical significance of the road would also be minor.

In the *Secretary's Environmental Assessment Report* (February 2015), DP&E was satisfied that the project would not significantly impact the surrounding historic heritage sites or landscapes, and therefore no specific CoA were recommended.

1.3 Environmental Management Document System

The environmental management document system is described in Section 5.1 of the EMS and this HMP forms part of that system.

Management measures identified in this HMP will be addressed in relevant work method statements, environmental procedures and sensitive area plans produced for the facility.

Work method statements (WMS) are approved by the Plant Manager. Operational personnel are required to undertake works in accordance with the safeguards identified in WMS.

Sensitive area plans provide detailed site-specific environmental constraints. Prior to works commencing, sensitive area plans will be prepared to ensure all environmentally sensitive areas are known and identified.

The review, auditing and document control processes for this HMP are described in Section 8 and Section 9.

1.4 HMP Approval

The HMP has been prepared in consultation with NSW Office of Environment & Heritage (OEH) who provided comments on 6 September 2016 (refer Section 4).

The HMP must be endorsed by the Plant Manager and National Workplace Health, Safety and Environmental Manager prior to submission to the Secretary of the DP&E.

The HMP is required to be submitted to the Secretary of the DP&E for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise.

2 PURPOSE AND OBJECTIVES

2.1 Purpose

The purpose of this HMP is to describe how PGH proposes to manage and protect known heritage objects and sites for the operational lifetime of the facility.

2.2 Objectives

The key objective of the HMP is to ensure that impacts to Aboriginal cultural heritage and historic heritage of the facility are minimised.

To achieve this objective, PGH will undertake the following:

- Ensure appropriate controls and procedures are implemented during ground disturbance activities;
- Where appropriate, facilitate engagement with the local Aboriginal community to suitably manage Aboriginal cultural heritage values associated with the facility;
- Ensure appropriate measures are implemented to address the relevant CoA outlined in **Table 1** and the management measures detailed in **Table 3** ; and
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 7 of this HMP.

2.3 Targets

The following targets have been established for the management of heritage during the operational lifetime of the facility:

- Ensure full compliance with the relevant legislative requirements and CoA of SSD_5684;
- Minimise or avoid impacts on known Aboriginal heritage objects; and
- Follow correct procedures and ensure notification of any unexpected heritage discoveries during ground disturbance activities.

3 ENVIRONMENTAL REQUIREMENTS

3.1 Relevant Legislation and Guidelines

3.1.1 Legislation

Legislation relevant to heritage management includes:

- *Aboriginal Land Rights Act 1983*;
- *Environmental Planning and Assessment Act 1979* (EP&A Act);
- *Heritage Act 1977*;
- *National Parks and Wildlife Act 1974* (NPW Act); and
- *National Parks & Wildlife Amendment Regulation 2010* (NPW Regulation).

Relevant provisions of the above legislation are explained in the register of legal and other requirements included in Appendix A of the EMS.

3.1.2 Guidelines and Standards

The main guidelines, specifications and policy documents relevant to this HMP include:

- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010);
- Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010);
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011); and
- CoA of SSD_5684.

3.1.3 Minister's Conditions of Approval

The CoA relevant to this HMP are listed in **Table 1**. A cross reference is also included to indicate where the condition is addressed in this HMP or other environmental management documents.

Table 1 Conditions of Approval relevant to the HMP

CoA No.	Requirement	Reference
Schedule 3, Condition 27	The Applicant must prepare and implement a Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:	This Plan
	a) be prepared in consultation with OEH	Section 4
	b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;	Section 1.4 Section 3.1.3
	c) describe the measures that would be implemented to: <ul style="list-style-type: none">• manage identified heritage objects, previously unidentified heritage objects or discovery of any human remains on the site;• ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and• protect sites identified adjacent to the development.	Section 7 Section 4.1
	The Applicant must implement the approved management plan as approved from time to time by the Secretary.	

4 CONSULTATION

As outlined in **Table 1**, this Plan has been prepared in consultation with OEH (refer to **Appendix A**). A version of this Plan was provided to OEH on 23 August 2016 and comments were received on 6 September 2016. OEH's comments were minor, recommending that **Table 2** will reflect the findings of the test excavation and not just the initial findings. OEH also noted the low significance of BB OS2 was determined during the test excavation and recommended updates to the unexpected finds process if suspected human remains are discovered.

4.1 Ongoing Consultation

The facility is located within the boundaries of the Tharawal Local Aboriginal Land Council (TLALC). Consultation between PGH and TLALC regarding the management of Aboriginal cultural heritage at the facility will continue where appropriate. Appropriate instances for consultation include (but are not limited to):

- If unexpected Aboriginal objects or sites are discovered during ground disturbance works; and
- If amendments to this HMP do not constitute a “minor amendment” as defined in Section 11.2 of the EMS.

5 EXISTING ENVIRONMENT

5.1 Aboriginal Heritage

The predictive model of White and McDonald (2010) indicates that open sites or isolated finds are the most likely Aboriginal site type that would be identified within the project site, and that artefact densities are likely to be low, with higher densities of sites likely to be found on crest and slope landforms within 300 metres of a permanent watercourse and/or on vantage points, spread across the landscape.

5.1.1 Confirmed Aboriginal Site Records

Four Aboriginal sites were identified in the *Aboriginal Archaeological Assessment* (Artefact Heritage, 2013) for the EIS. Three of the sites are located within the project site of the Bringelly Brickworks Extension Project, with one site (BB OS3) located immediately outside the southern boundary of the project site (refer **Figure 1**).

These sites have since been registered on the Aboriginal Heritage Information Management System (AHIMS) database maintained by OEH. **Table 2** provides a summary of the assessment of overall archaeological significance for each of the sites identified in the EIS.

Table 2 Summary of Survey Findings

Site Name	AHIMS No.	Site type	Landform	Artefact Characteristics	Overall Significance following test excavations
BB OS1	45-5-4285	Artefact Scatter	Crest	One red silcrete proximal flake fragment and one red silcrete angular fragment.	Low
BB OS2	45-5-4286	Isolated Artefact and PAD	Crest/Slope	Red silcrete medial flake fragment, potential archaeological deposit (PAD) due to low level of disturbance and location on slope between two crest forms potentially conclusive to Aboriginal occupation.	Low
BB OS3	45-5-4287	Isolated artefact	Slope	Pink silcrete proximal flake fragment.	Low
BB OS4	45-5-4288	Isolated artefact	Slope	Milky white quartz proximal flake fragment.	Low

During a test excavation of BB OS2, several artefacts were salvaged and were proposed to be reburied at a nearby location within the study area that won't be impacted. Consultation regarding this was conducted as part of the Aboriginal stakeholder review of the *Aboriginal Cultural Heritage Assessment Report* (Artefact Heritage, 2013). The salvaged artefacts from BB OS2 were subsequently reburied, and an Aboriginal Site Impact Recording Form was forwarded to the OEH AHIMS Registrar. No additional management measures were proposed for BB OS1, BB OS2 and BB OS4.

5.1.2 Archaeological potential

Archaeological potential is closely related to levels of ground disturbance in the area. Other factors also considered when assessing archaeological potential include whether artefacts were located on the surface, and whether the area is within a sensitive land form unit according to the predictive statements for the area.

The *Aboriginal Archaeological Assessment* (Artefact Heritage, 2013) reported that there is a high level of disturbance across the project site. The land in the centre of the project site has been extracted as part of previous quarry activities and the old growth woodland that once covered the project site has been cleared.

5.1.3 Statement of Significance

A Statement of Significance refers to the archaeological and cultural significance of a landscape or area. Archaeological significance is characterised using archaeological criteria such as archaeological research potential, representativeness and rarity of the archaeological resource and potential for educational values. Cultural significance is characterised using both primary and secondary sources, including consultation with Aboriginal cultural knowledge holders who have specific knowledge about objects, places or cultural features.

The Statement of Significance reported in *Aboriginal Cultural Heritage Assessment Report* ('CHAR', Artefact Heritage, 2013) concluded that the archaeological significance of the study area was found to be generally low, mainly due to high levels of disturbance resulting from the establishment and operation of the quarry. Three Aboriginal sites with low archaeological significance were located within the project site, namely BB OS1, BB OS2 and BB OS4. Site BB OS3, whilst also demonstrating low archaeological significance, is located outside the project site.

Due to the future expansion of the quarry, conservation of BB OS1 and BB OS4 is not practicable and it was concluded in the CHAR that no further archaeological investigation of sites BB OS1 and BB OS4 is necessary as they are of low archaeological significance.

During construction, management measures will be put in place to avoid inadvertent impact to site BB OS3, located immediately outside the southern boundary of the project site.

Due to the future expansion of the quarry, conservation of BB OS2 is also not practicable. Site BB OS2 was assessed to be of low archaeological significance in the CHAR and no further archaeological investigation of that area is required prior to impacts taking place. An Aboriginal Site Impact Recording Form (ASIRF) has been submitted to the OEH AHIMS Registrar by Artefact Heritage detailing the procedure and results of the test excavation program and the assessment of Site BB OS2 as demonstrating low archaeological significance.

No specific areas of cultural importance within the project site were identified by the registered Aboriginal stakeholders during test excavations; however, Aboriginal stakeholders did indicate that the country and area as a whole is culturally significant.

It was stated during test excavations that the Bringelly area has a connection of sites that are significant to the Darug people. No specific information on cultural significance within the study area was provided by the stakeholders at the time.

The historic and aesthetic significance of the project site were reported in the CHAR to be low.

The CHAR concluded that overall, the project site demonstrates low Aboriginal cultural heritage significance

Figure 1 Known Aboriginal heritage sites in relation to the project site



5.2 Historic Heritage

There are no listed historic heritage items occurring within the project site. However, two listed items identified in the LEP of Camden Council and Liverpool Council are within the vicinity of the project site and are listed below:

- Bringelly Public School Group; and
- Maryland Estate.

Bringelly Road/Greendale Road, with its associated rural cultural landscape is also listed as a potential heritage item in the Camden DCP 2011. This landscape possesses local historical and aesthetic significance as a rural landscape that has remained relatively intact since early settlement and maintains a clear visual link to the local area's agricultural history. The DCP control B3.1.5 states "development will optimise the preservation and interpretation of the identified significant cultural and Visual Landscapes."

6 ENVIRONMENTAL ASPECTS AND IMPACTS

6.1 Facility Activities

Key aspects of the facility that could result in adverse impacts to heritage include (but are not limited to):

- Ground disturbance;
- Vegetation clearing and topsoil stripping;
- Quarry/extractive activities; and
- Drainage installation and maintenance works.

6.2 Impacts

No impacts to historic heritage are predicted. Potential impacts on aboriginal cultural heritage are predominantly attributed to ground disturbance works. Section 7 of the HMP lists mitigation measures that will be implemented to avoid or minimise the identified impacts.

6.2.1 Aboriginal Heritage

The potential impacts of the project on Aboriginal heritage sites include:

- a direct impact and disturbance to the entire site or the majority of a site containing Aboriginal objects;
- complete or varying degrees of impact or disturbance to items with Aboriginal cultural significance which do not fall into the category of an Aboriginal object, such as mature trees; and
- indirect impact to Aboriginal objects from development related changes to the landscape or scenic context of a site or item.

Three identified Aboriginal sites would be directly impacted by the project: BB OS1, BB OS2 and BB OS4.

BB OS3 is located outside of the project site and would not be impacted by the proposed quarry expansion works. It is noted that due to the proximity of this Aboriginal site to the project site boundary (within 30 metres), there is the potential that quarrying activities may have an impact on the site, including increased erosion and movement of heavy machinery if appropriate mitigation measures aren't implemented.

6.2.2 Unexpected Aboriginal Finds

During ground disturbance activities (including construction activities associated with the project), there is potential to uncover unknown and unexpected Aboriginal sites or objects.

The potential impact on unexpected Aboriginal heritage sites or objects would typically be a direct impact and disturbance to the entire site or the majority of a site containing Aboriginal objects due to the unknown and unexpected nature of the discovery.

6.2.3 *Discovery of suspected human remains*

If any suspected human remains are discovered during works, all activity in the vicinity must cease immediately. The remains must be left in place and protected from harm or damage. The following contingency plan describes the actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the activity area must follow these steps:

1. Discovery:

If suspected human remains are discovered all activity in the vicinity must stop immediately to ensure minimal damage is caused to the remains; and the remains must be left in place, and protected from harm or damage.

2. Notification:

The NSW Police and OEH's Environment Line (131 555) must be notified immediately.

3. Release of hold-point:

Work in the vicinity of the find cannot recommence unless authorised by OEH in writing.

4. Consultation:

The Local Aboriginal Land Council will be kept informed of the above process as outlined in Section 4.1.

6.2.4 *Unexpected historic heritage archaeological finds*

In the event of unexpected historic heritage archaeological finds being encountered during works:

- All works in the immediate vicinity of the identified material must stop;
- The Heritage Branch (OEH) must be notified; and
- An archaeologist must be contacted to assess the significance of the material and recommend whether further action is required.

Works near the unexpected find must not recommence until investigations by the archaeologist have concluded.

7 ENVIRONMENTAL MANAGEMENT MEASURES

Aboriginal and historic heritage management measures identified in the EIS and CoA are consolidated in **Table 3**.

Table 3 Environmental Management Measures

ID	Measure / Requirement	Source	When to implement	Responsibility	Further details / Where addressed
AB1	Ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site.	Schedule 3, Condition 27 of SSD_5684	Construction and Operation	Plant Manager	Section 4.1
AB2	If quarrying activities take place in the vicinity of the BB OS3, a high-visibility fence will be temporarily installed around the perimeter of BB OS3 (with a 5 metre buffer) to protect the site from potential harm and mitigate potential impacts. Additionally, consideration will be given to erosion and spoil movement near the site to avoid inadvertent impact.	Section 7.9.6 of the EIS Schedule 3, Condition 27 of SSD_5684	Construction and Operation	Plant Manager	Section 6.2.1; Figure 1
AB3	If unexpected Aboriginal objects are located during construction or operations, works are to immediately cease and a qualified archaeologist is to be consulted. If a site inspection is necessary and it is determined that the find is an Aboriginal object, the archaeologist must record the site and submit a site card to the OEH AHIMS site register and advise on any further mitigation measures. The archaeologist must also assess the potential for further archaeological material in the surrounding area and provide recommendations regarding the need for further investigation, approvals and stakeholder consultation. Works may only recommence in the vicinity of the find, once all requirements for further investigation, approvals, recording and consultation have been fulfilled.	Section 7.9.6 of EIS Schedule 3, Condition 27 of SSD_5684	Construction and Operation	Plant Manager	Section 6.2.2

ID	Measure / Requirement	Source	When to implement	Responsibility	Further details / Where addressed
AB4	If suspected human skeletal remains are uncovered during works, all works must cease in the area. The remains must be left in place and protected from harm or damage. The NSW Police will be notified to provide details of the remains and their location. No recommencement of works in the vicinity of the skeletal remains can recommence until investigations by NSW Police have concluded.	Section 7.9.6 of the EIS Section 11.3 of the Aboriginal Archaeological Assessment, August 2013 (Appendix L of the EIS)	Construction and Operation	Plant Manager	Section 6.2.3
AB5	All employees, subcontractors and agents undertaking construction or quarrying activities at the site will attend a heritage induction to ensure they understand and are aware of the nature of possible Aboriginal heritage finds, including burials. The induction would include a brief introduction to the legal obligations relating to Aboriginal heritage, and provide pictures of the most likely Aboriginal objects to occur within the project site. This would include pictures of different types of stone artefacts, reflecting the main raw materials and colour variations that occur within the region. The induction will include information on the unexpected finds procedure, including the necessity to stop work immediately and notify a site supervisor, foreman and the Brickworks Plant Manager. The induction could be included as part of the general site induction for all workers.	Section 7.9.6 of the EIS Schedule 3, Condition 27 of SSD_5684	Construction and Operation	Plant Manager	Section 8.2
HH1	To minimise visual impacts on the unlisted Bringelly Road/Greendale Road Cultural Landscape, the proposed bund along part of the northern boundary will be grassed and then planted with a mixture of locally occurring native trees and shrubs, particularly those of the Cumberland Plain Woodland variety, and once established is likely to entirely obscure the built form of the noise bund. The noise bund will also completely	Section 7.10.4 of the EIS	Construction and Operation	Plant Manager	Section 5.2

ID	Measure / Requirement	Source	When to implement	Responsibility	Further details / Where addressed
	obscure the built structures of the brickmaking facility from commuters along Greendale Road, which will result in a positive impact on the Bringelly Road/Greendale Road cultural landscape.				
HH2	<p>Incorporate the following instructions in the event that unexpected archaeological finds are encountered during works:</p> <ol style="list-style-type: none"> 1. All works in the immediate vicinity of the identified material must stop; 2. The heritage Branch (OEH) must be notified; and 3. An archaeologist must be contacted to assess the significance of the material and recommend whether further action is required. 	Section 7.10.4 of the EIS	Construction and Operation	Plant Manager	Section 6.2.4

8 COMPLIANCE MANAGEMENT

8.1 Monitoring and Inspections

When working near BB OS3, the Plant Manager (or delegate) will undertake monthly inspections to ensure the delineation and separation of this site is fit for purpose, installed correctly and being maintained appropriately.

During inspections, the condition of BB OS3 and its associated protection controls are to be observed and recorded in an inspection checklist. The inspection checklist is to also include details of any maintenance actions required and a priority status.

8.2 Training

Employees and contractors working on site will undergo site induction training, which will cover issues relating to heritage management issues, including:

- Existence and requirements of this management plan;
- Relevant legislation;
- Location of identified heritage sites;
- Proposed heritage management and protection measures;
- Procedure to follow in the event of discovery of an unexpected heritage item; and
- Procedure to follow in the event of discovery of suspected human remains.

Further details regarding competence, training and awareness are outlined in Section 6 of the EMS.

8.3 Auditing and Reporting

Audits (both internal and external) and reporting will be undertaken to assess the effectiveness of environmental controls, compliance with this HMP, CoA and other relevant approvals, licenses and guidelines. Audit requirements are detailed in Section 9.3 of the EMS.

9 REVIEW AND IMPROVEMENT

9.1 Continuous Improvement

Continuous improvement of this HMP will be achieved through the ongoing evaluation of environmental management performance against environmental policies, objectives and targets.

The continuous improvement process is designed to:

- Identify areas of opportunity for improvement of environmental management and performance;
- Determine the cause or causes of non-conformances and deficiencies;
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies;
- Verify the effectiveness of the corrective and preventative actions;
- Document any changes in procedures resulting from process improvement; and
- Make comparisons with objectives and targets.

9.2 HMP Update and Amendment

Inspections, monitoring, auditing and management reviews may result in the need to update or revise this HMP.

The approval of updates or revisions to the HMP will need to be considered in accordance with Section 11.2 of the EMS.

APPENDIX A - CONSULTATION CORRESPONDENCE



From: [Cook, Debbie](#)
To: [Lisa Thomson](#)
Subject: FW: Bringelly Brickworks (SSD_5684): Management Plan Consultation
Date: Monday, 9 September 2019 1:09:17 PM
Attachments: [image002.png](#)

Consultation OEH- biodiversity, rehabilitation and heritage plan

From: Darren Green <darren@elementenvironment.com.au>
Sent: Tuesday, 6 September 2016 1:26 PM
To: Cook, Debbie <DECOOK@pghbricks.com.au>
Cc: Neville Hattingh <neville@elementenvironment.com.au>; PR32 <SMO-PR32@elementenvironment.com.au>
Subject: FW: Bringelly Brickworks (SSD_5684): Management Plan Consultation

Debbie,

Comments from OEH regarding the Biodiversity, Rehabilitation and Heritage Management Plans. There's nothing in the comments which is substantial. We possibly need to just clarify the nest box procedure/program matter. Other than that it's another good outcome.

Darren Green

Senior Environmental Consultant



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From: Richard Bonner [<mailto:Richard.Bonner@environment.nsw.gov.au>]
Sent: Tuesday, 6 September 2016 1:07 PM
To: Darren Green <darren@elementenvironment.com.au>
Cc: Elle.Donnelley@planning.nsw.gov.au
Subject: RE: Bringelly Brickworks (SSD_5684): Management Plan Consultation

Hello Darren,

Further to your recent conversation with Marnie Stewart, OEH provides the following comments on the draft Biodiversity Management Plan and draft Heritage Management Plan . OEH has no comments to make on the draft Rehabilitation Management Plan.

Draft Biodiversity Management Plan

- p.2, Glossary and Abbreviations – Typo, replace '*Plant*' in BMP abbreviation meaning with '*Plan*'

p.16 & 17, 4.2.1 Terrestrial Fauna Habitat, Woodland – Reference is made to a ‘*nest box procedure would be prepared and implemented in woodland habitat ...*’. It is unclear if this is referring to an action that will be implemented. If so, clarification is required on where and when it will be developed and how will it be incorporated within the BMP?

- p.24, Measure B1 – Based on the description of the measure shouldn’t the ‘*when to implement*’ response be ‘*prior to commencement of construction*’?
- p.24, Measure B2 – How are ‘*rain events*’ defined?
- p.24, Measure B4 – The location of stockpiles and appropriateness of erosion and sediment controls should be in accordance with the required Surface Water Management Plan (although it is unclear how this relates to the Sensitive Area Plans). Alternatively, more objective measures could be included eg those in the relevant volume of the Managing Urban Stormwater best practice guidelines (Blue book).
- p.25, Measure B10 – Should be rewritten as a measure (i.e. not a recommendation).
- p.25, Measure B11 – Should be rewritten as a measure (i.e. not optional – replace ‘*should*’ and ‘*may*’ with ‘*will*’)
- p.26, Measure B13 – Further to comment above for p.16 & 17, has a ‘*nest box program*’ been developed? Is this the same as the ‘*Nest Box Procedure*’? Is the area with a ‘*naturally occurring low abundance of hollows*’ the proposed offset area?
- p.26, Measure B14 – Is the area of ‘*suitable nearby bushland*’ the proposed offset area? Replace ‘*should*’ with ‘*will*’.
- p.26, Measure B15 – Replace ‘*should*’ with ‘*will*’.
- p.26, Measure B16 – Is the three (not two) stage process based on best practice guidelines? The logic and practicality of removing non hollow-bearing trees 48 hours before hollow-bearing trees is unclear.
- p.27, Measure B20 – Replace ‘*... BMP and Rehabilitation strategy*’ with ‘*Rehabilitation Management Plan*’.
- p.29 (note: pages not numbered from page 28), 8. Biodiversity Offset Strategy.
 - Recommend the 4th paragraph be amended as follows (insert red text, delete strikethrough text): *The BOA will conserve CPW in a certified area to offset the clearing of ENV in a non-certified area in accordance with RMB 8 of the Biodiversity Conservation Order. and would maintain the minimum area of ENV to be retained and protected in the Growth Centre, as specified in RBM 6 of the Biodiversity Certification Order.*
 - Recommend the 2nd last paragraph be amended as follows: *BCB proposes to manage and enhance the biodiversity values of minimise impacts to the BOA through with the implementation of the environmental management measures cited in **Table 7**, and manage and enhance the existing vegetation of the BOA in accordance with the guidelines for managing remnant CPW described in Recovering Bushland on the Cumberland Plain: Best practice guidelines for the management and restoration of bushland (DEC, 2005) (refer **Appendix C**).*
- pp.31-33, 8.1 Implementation measures, 8.2 Performance Criteria and 8.4 Completion Criteria – Suggest combining as one table using existing sub-headings.
- p.31, 8.1.5 Retention or addition of habitat features, Medium and Long-term – Recommend replacing ‘*... clearing for mine development or approved thinning, ...*’ with ‘*... clearing for quarry expansion, ...*’.

Heritage Management Plan

- p.11, 5.1.1 Confirmed Aboriginal Site Records, Table 2 Summary of Survey Findings – Recommend this include the findings of the test excavation to reflect the assessment as a whole not just the initial survey. It should also be noted that the significance of BB OS2 was determined by the test excavation.
- p.15, 6.2.3 Discovery of suspected human remains - This section contains inappropriate instructions. Any reference to salvage, recording and reburial of human remains should be removed. It is recommended the text in this section be replaced with the following: *If any human remains are discovered the following actions must be taken:*
 - a. *immediately cease all work at the particular location;*
 - b. *secure the area so as to avoid further harm;*
 - c. *notify the local police and OEH's Environment Line on 131 555 as soon as practicable and provide any available details of the remains and their location, and*
 - d. *work cannot recommence at the particular location unless authorised by OEH in writing.*

Regards

Richard Bonner

Conservation Planning Officer

Greater Sydney Region

Regional Operations Group

Office of Environment and Heritage

T: 02 9995 6917

----- Original Message -----

From: Darren Green [darren@elementenvironment.com.au]

Sent: 23/08/2016 17:02

To: info@environment.nsw.gov.au

Cc: smo-pr32@elementenvironment.com.au

Subject: Bringelly Brickworks (SSD_5684): Management Plan Consultation

To whom it may concern,

Following the commencement of a State Significant Development application (SSD_5684) in December 2012 for a proposed expansion to Bringelly Brickworks at 60 Greendale Road, Bringelly, Development Consent was issued on 3 March 2015 by the Department of Planning and Environment (DP&E).

In accordance with this Development Consent, several conditions require Boral CSR Bricks, the owner of Bringelly Brickworks, to consult with OEH in the preparation of several of the development's management plans. More specifically, Conditions 21, 26 and 27 of Schedule 3 of the Development Consent requires Boral CSR Bricks to prepare a Biodiversity Management Plan, Rehabilitation Management Plan and Heritage Management Plan in consultation with OEH.

Therefore on behalf of Boral CSR Bricks, please find attached a covering letter and several draft management plans for review.

If you have any questions please don't hesitate to give me a call.

Regards,

Darren Green

Senior Environmental Consultant

[Inline image name : image001.png]

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