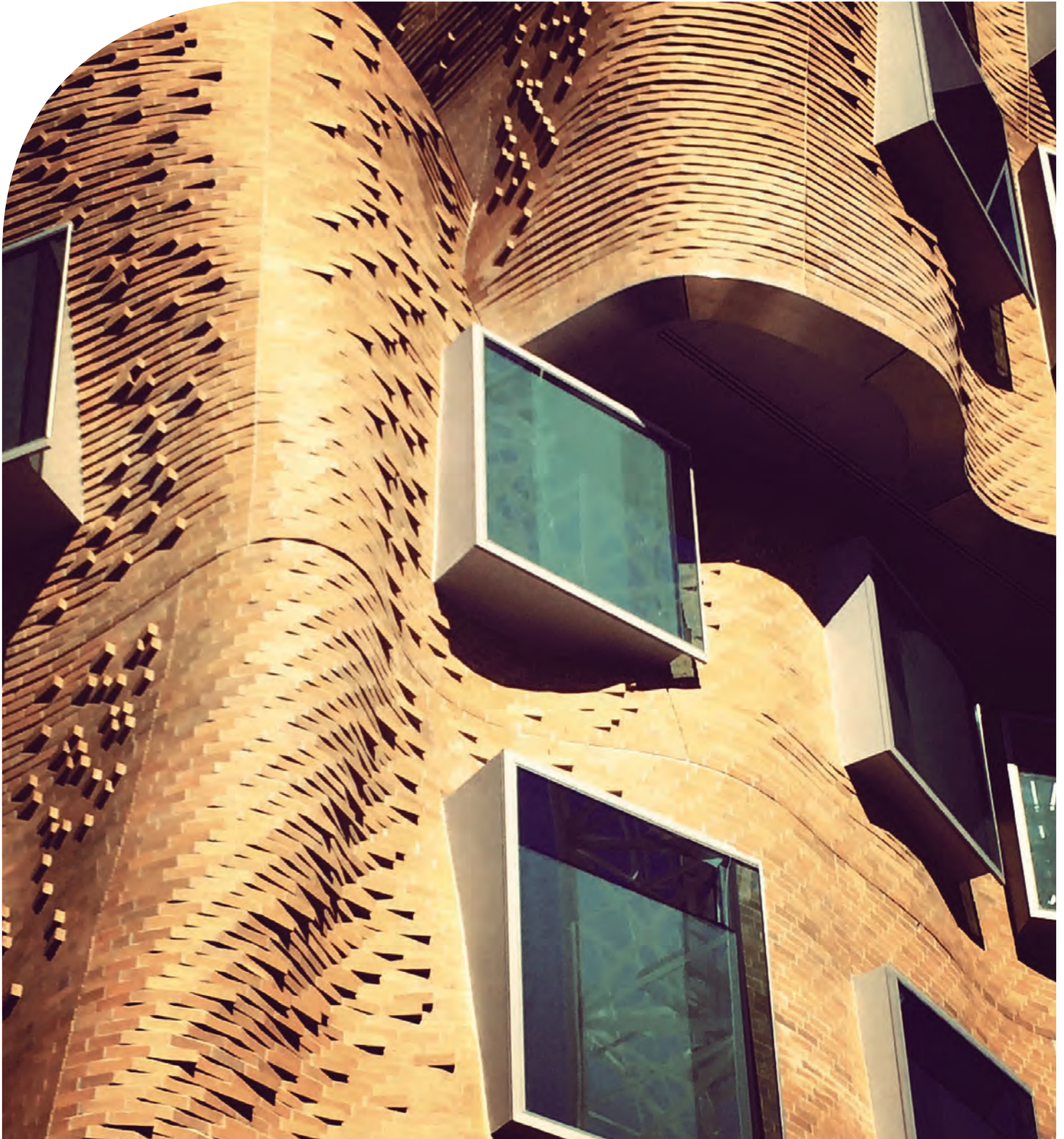


Section 96(1A) Modification Supporting Information

BRINGELLY BRICKWORKS

Prepared for Boral CSR Bricks Pty Ltd - August 2016



SECTION 96(1A) MODIFICATION SUPPORTING INFORMATION: BRINGELLY BRICKWORKS

Prepared for Boral CSR Bricks | August 2016

REPORT STATUS - FINAL

Job number - PR32

Prepared by	Darren Green	Reviewed by	Neville Hattingh	Kathy Pasalich
Company	Element Environment Pty Ltd	Company	Element Environment Pty Ltd	CSR Limited
Position	Project Manager	Position	Project Director	Property Development Manager
Date	01 August 2016	Date	01 August 2016	02 August 2016

DOCUMENT CONTROL

Revision	Date	Description	Prepared by	Reviewed by
0	03 August 2016	For Submission	Darren Green	Neville Hattingh
1	17 August 2016	Address DP&E comments	Darren Green	Neville Hattingh

This report has been prepared in accordance with the scope of services set out in the contract between Element Environment Pty Ltd and the client. The report is for the use of the client and no responsibility will be taken for its use by other parties.

© 2016 - Reproduction of this report is prohibited without Element Environment prior written permission.

CONTENTS

1	INTRODUCTION	2
1.1	Overview	2
1.2	The Proponent	2
1.3	Background	2
2	PROPOSAL	4
2.1	The Site	4
2.2	Need & Justification	4
2.3	Proposed Modification	4
3	ENVIRONMENTAL ASSESSMENT	6
3.1	Key Issues	6
3.2	Assessment of Impact	6
4	CONCLUSION	10

FIGURES

Figure 2-1	Regional location	5
------------	-------------------	---

TABLES

Table 3-1	Assessment of Impact	6
-----------	----------------------	---

APPENDICES

Appendix A:	Vehicle Movement Breakdown	11
-------------	----------------------------	----

1 INTRODUCTION

1.1 Overview

Boral CSR Bricks Pty Ltd (hereon referred to as “BCB”) owns and operates the Bringelly Brickworks development in Bringelly, New South Wales.

BCB is seeking to modify the current Project Approval (SSD_5684) under Section 96(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), to provide for the following:

- Increase raw material import limit to 321,000 tonnes per annum.

The modification proposed above will constitute Modification 1 to the current Project Approval. The Minister for Planning is the consent authority for the Project.

PACT has prepared this supporting document on behalf of BCB to assess the potential environmental and community impacts associated with the proposed modification to the current Project Approval.

1.2 The Proponent

In May 2015, CSR Limited (CSR) and Boral Limited (Boral) formed a joint venture, Boral CSR Bricks Pty Ltd (BCB), which combined their brick operations along the east coast of Australia. Bringelly Brickworks was transferred from Boral to BCB, and therefore BCB is the Proponent for this modification application.

Founded in Australia in 1946, Boral produces and distributes a broad range of construction materials and products, including quarry products, cement, fly ash, pre-mix concrete, asphalt, clay bricks, clay and concrete roof tiles, concrete masonry products, plasterboard & ceilings, and timber products. With A\$4.4 billion worth of sales, Boral has over 12,000 employees working across over 560 operating sites. Boral first entered the brick industry in the late 60’s, and since that time have expanded to become one of the largest producers of clay bricks & pavers in Australia and in the USA. On the east coast of Australia, five brick plants located in Victoria, New South Wales and Queensland now form part of BCB.

Established in Australia in 1855, CSR is one of Australia's oldest companies and today has revenues over \$2.0 billion and is part of the ASX100 with over 3,000 employees across Australia and New Zealand. CSR first entered into the brick industry in 1989 with the part acquisition of PGH Bricks & Pavers, which is now part of BCB.

1.3 Background

Bringelly Brickworks is located in the Camden Council local government area, at 60 Greendale Road, Bringelly. Bringelly Brickworks received Project Approval on 3 March 2015 subject to a State Significant Development (SSD) application. Since Project Approval, changes in the brick business with regards to the types of fired products sought by BCB’s customers has necessitated changes in the raw materials utilised during the manufacturing process. These changes in demand have resulted in BCB needing to increase its import of raw materials to the site for brick manufacturing.

Currently, Condition 6(d) of Schedule 2 of the Project Approval limits the development to 96,000 tonnes of raw material import in any calendar year.

BCB has undertaken a review of its production limitations and has concluded that the development could increase its raw material import volume without having to modify the transportation limits stipulated in Condition 7(b) and (c) of Schedule 2 of the Project Approval. BCB believes a modification to Condition 6(d) of Schedule 2 only will have minimal

environmental impact and would not substantially alter the development for which Project Approval was granted.

2 PROPOSAL

2.1 The Site

Bringelly Brickworks, which encompasses the clay quarry and brick manufacturing plant, is located on Lot 100 in DP 1203966, comprising an area of approximately 104 hectares. Bringelly Brickworks is situated within the Camden Local Government Area and is approximately 55 kilometres southwest of the Sydney Central Business District.

2.2 Need & Justification

Since granting Project Approval on 3 March 2015, the following factors have driven changes in the type of bricks required to be manufactured by BCB:

- To manufacture the bricks demanded by customers, the type, composition and quantity of the raw materials to be imported to Bringelly Brickworks has changed; and
- The BCB joint venture has resulted in increased brick manufacturing facilities and sources of raw materials which has subsequently necessitated BCB to review its production to ensure the most efficient use of all resources.

Given the type, composition and quantity of the raw materials required to be manufactured for the brick market, and that not all of these types of raw materials can be extracted on site, Bringelly Brickworks is now required to import raw materials predominantly from outside sources.

The proposed increase in raw material importation can be undertaken:

- within the approved transportation limits; and
- without the need for additional stockpile areas or an increase in stockpile heights.

2.3 Proposed Modification

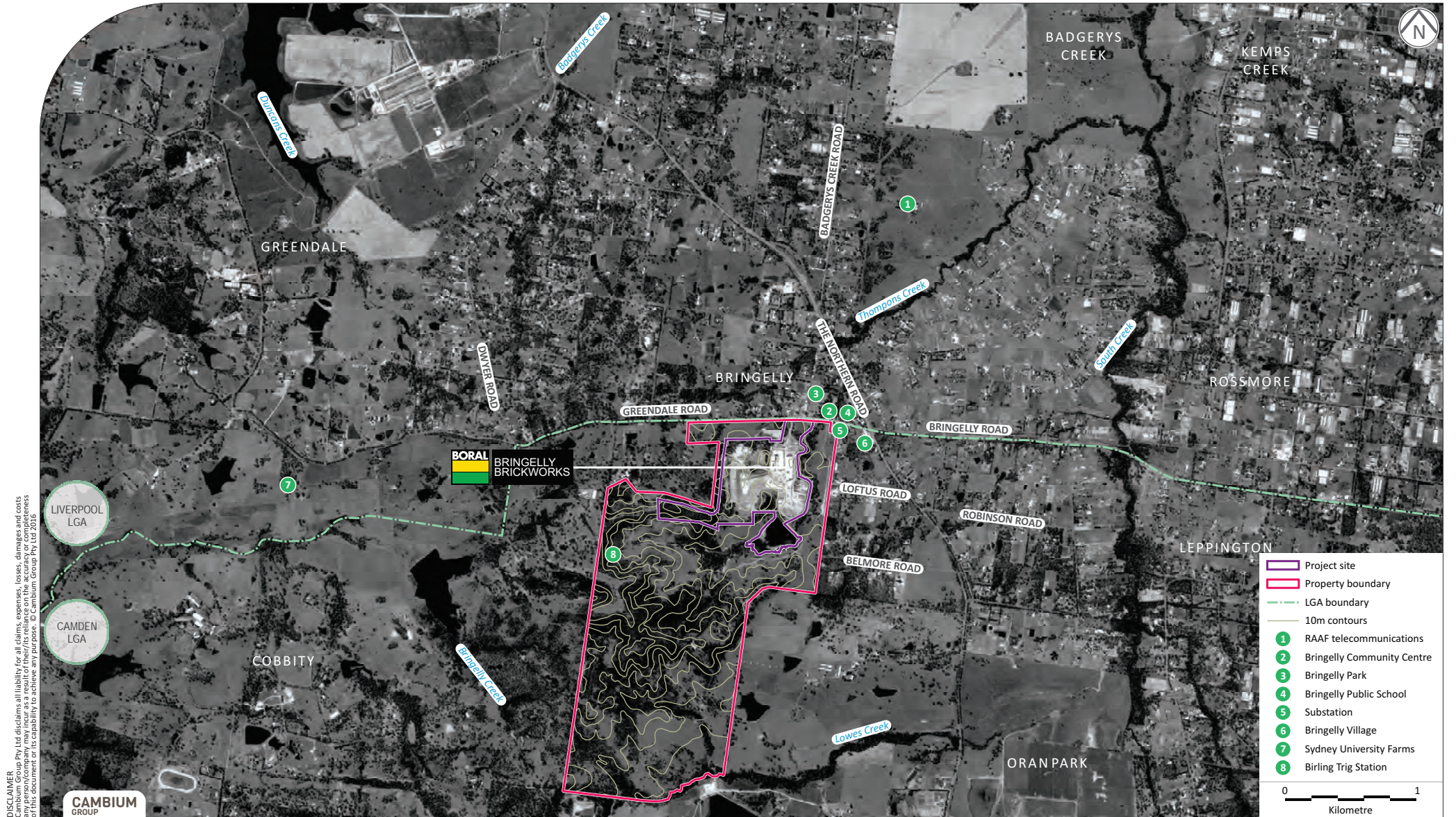
In accordance with Condition 6(d) of Schedule 2 of the Project Approval, Bringelly Brickworks is currently limited to importing no more than 96,000 tonnes of raw materials per calendar year.

However, due to changes in the brick market and following the formalisation of the CSR and Boral joint venture, BCB reviewed its raw material needs for Bringelly Brickworks. BCB concluded that an increased raw material import volume of 321,000 tonnes per calendar year could be accommodated with minimal environmental impact.

BCB accordingly requests Condition 6(d) of Schedule 2 of the Project Approval be modified to reflect a maximum importation volume of 321,000 tonnes in any calendar year.

FIGURE 1
Regional context

BRINGELLY BRICKWORKS AND QUARRY EXPANSION - ENVIRONMENTAL MANAGEMENT PLAN



DISCLAIMER
 Cambium Pty Ltd disclaims all liability for all delays, expenses, losses, damages and costs
 incurred by any person or company as a result of their reliance on the accuracy or completeness
 of this document or its capability to achieve any purpose. © Cambium Group Pty Ltd 2016

CAMBIUM
GROUP

3 ENVIRONMENTAL ASSESSMENT

3.1 Key Issues

The Environmental Impact Statement (EIS) titled *Bringelly Brickworks and Quarry Expansion* (September 2013) prepared for the SSD application assessed the following environmental issues:

- Land resources;
- Noise;
- Traffic and transport;
- Air quality;
- Water resources (surface water and groundwater);
- Biodiversity;
- Heritage (Aboriginal and non-Aboriginal);
- Waste;
- Greenhouse gases;
- Visual;
- Hazards; and
- Social and economic.

3.2 Assessment of Impact

The potential impacts of the proposed modification in relation to the environmental issues identified in the EIS are considered in **Table 3-1**.

Table 3-1 Assessment of Impact

Environmental Issue	Consideration	Potential Impact
Land resources	<p>The proposed modification will not require the purchase or acquisition of additional land, the disturbance of ground, additional stockpiling areas nor will it impact the soils and geology of the site.</p> <p>Therefore, the proposed modification will not result in any additional impacts on land resources on site or in surrounding areas and would not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Noise	<p>The proposed modification will not exceed the transportation limits set in Condition 7(b) and (c) of Schedule 2 of the Project Approval. As the traffic noise modelling results reported in the EIS were based on these transportation limits, no additional road traffic noise is anticipated.</p> <p>The proposed modification does not alter the noise criteria at any residence on privately owned land as stipulated in Condition 2 of Schedule 3 of the Project Approval, therefore there is no change in the noise performance criteria of the site.</p> <p>Furthermore, BCB is required to relocate the site access road and construct noise bunds along Greendale Road in accordance with Condition 3 of Schedule 3 of the Project Approval to mitigate traffic noise. No change is required to these accepted road noise mitigation measures as a result of the proposed modification.</p>	No impact greater than assessed in the EIS.

	<p>Therefore, the proposed modification would not result in any additional noise sources or higher noise levels and does not substantially alter the development for which Project Approval was granted.</p>																																		
<p>Traffic and transport</p>	<p>Condition 7(b) and (c) of Schedule 2 of the Project Approval states that BCB shall not: (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.</p> <p>The above condition obligates BCB to a total of 180 heavy vehicle movements per day (90 inbound movements and 90 outbound movements), equating to a total of 1080 movements per week (based upon a 6-day week).</p> <p>As demonstrated by the vehicle movement predictions summarised below (refer Appendix A for detailed breakdown), BCB is able to comply with the approved transportation limits set in Condition 7(b) and (c) of Schedule 2 of the Project Approval. These predictions have been calculated based upon actual movements and include the predicted movements of the proposed modification.</p> <table border="1" data-bbox="528 882 1241 1330"> <thead> <tr> <th>Truck type</th> <th>Total Movements per week</th> <th>Annual Tonnage</th> </tr> </thead> <tbody> <tr> <td>Water Cart</td> <td>28</td> <td></td> </tr> <tr> <td>Fuel Delivery</td> <td>2</td> <td></td> </tr> <tr> <td>Manganese</td> <td>6</td> <td></td> </tr> <tr> <td>General Deliveries</td> <td>20</td> <td></td> </tr> <tr> <td>Brick Products</td> <td>634</td> <td>~263,500</td> </tr> <tr> <td>Equipment Float</td> <td>2</td> <td></td> </tr> <tr> <td>Contractor Fuel</td> <td>2</td> <td></td> </tr> <tr> <td>Raw materials</td> <td>386</td> <td>~321,000</td> </tr> <tr> <td>Movements per day</td> <td>180</td> <td></td> </tr> <tr> <td>Movements per week</td> <td>1080</td> <td></td> </tr> </tbody> </table> <p>On the basis that the proposed modification complies with the transportation limits stated in Condition 7(b) and (c) of Schedule 2 of the Project Approval, the limit on the number of inbound and outbound heavy vehicles per hour will be complied with too.</p> <p>The proposed modification does not require a modification to approved transportation limits set in Condition 7(b) and (c) of Schedule 2 of the Project Approval. The proposed modification complies with the transportation limits, does not alter the intersection performance or carrying capacity of the approaching roads and does not introduce any new heavy vehicles as assessed in the EIS.</p> <p>The proposed modification does not alter Bringelly Brickworks days and hours of operation as stipulated by Condition 1 of Schedule 3 of the Project Approval.</p> <p>The proposed modification does not require the altering of Condition 19 of Schedule 2 of the Project Approval; however, BCB will be obligated to pay Camden Council for the increased raw material tonnage proposed to be transported to site.</p> <p>On the basis of the above, the proposed modification is considered to have minimal environmental impact and does not substantially alter the development for which Project Approval was</p>	Truck type	Total Movements per week	Annual Tonnage	Water Cart	28		Fuel Delivery	2		Manganese	6		General Deliveries	20		Brick Products	634	~263,500	Equipment Float	2		Contractor Fuel	2		Raw materials	386	~321,000	Movements per day	180		Movements per week	1080		<p>No impact greater than assessed in the EIS.</p>
Truck type	Total Movements per week	Annual Tonnage																																	
Water Cart	28																																		
Fuel Delivery	2																																		
Manganese	6																																		
General Deliveries	20																																		
Brick Products	634	~263,500																																	
Equipment Float	2																																		
Contractor Fuel	2																																		
Raw materials	386	~321,000																																	
Movements per day	180																																		
Movements per week	1080																																		

	granted.	
Air quality	<p>Air quality impacts associated with the transportation of raw materials include dust and vehicular emissions. The proposed modification does not alter the transportation limits of the Project Approval or introduce any new types of air pollutants. Therefore, no additional air quality impacts greater than those reported in the EIS are predicted.</p> <p>The proposed modification does not seek to alter the air quality criteria applicable to the site, as stipulated in Condition 7 of Schedule 3 of the Project Approval, therefore there is no change in the air quality performance criteria of the site.</p> <p>Therefore, the proposed modification is unlikely to result in any additional air quality impacts and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Water resources	<p>The proposed modification will not require changes to the sites surface water management, nor would it require changes to water access or increase the area of ground disturbance of the site.</p> <p>The proposed modification does not seek to change the discharge limits of any Environment Protection License.</p> <p>Consequently, the proposed modification would not result in any additional impacts on water resources and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Biodiversity	<p>The proposed modification will not require vegetation clearance or ground disturbance.</p> <p>The proposed modification does not alter the number of truck movements (transportation limits) of the Project Approval and therefore would not increase the potential for fauna vehicle strikes.</p> <p>Consequently, the proposed modification would not result in any additional biodiversity impacts and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Heritage	<p>The proposed modification will not impact known heritage areas within the site or result in ground disturbance.</p> <p>Consequently, the proposed modification would not result in any additional impacts on either Aboriginal or historic heritage and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Waste	<p>The proposed modification will increase the importation of raw materials which will be used in the brick manufacturing process. The proposed modification does not increase or alter the annual brick production limit or introduce additional or new waste streams to the site.</p> <p>Consequently, the proposed modification would not result in any additional impacts associated with waste generation, handling or disposal and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Greenhouse gases	<p>The proposed modification will not result in a change in the brick production process that will result in an increase in the natural gas, electricity or diesel usage on the site.</p> <p>The proposed modification does not alter the number of truck movements (transportation limits) of the Project Approval and therefore would not increase the amount of diesel usage assessed in the EIS.</p> <p>Consequently, the proposed modification is unlikely to result in a significant change in greenhouse gas emissions from brick production or the transportation of raw materials and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.

Visual	<p>The proposed modification does not require any changes to the approved built structures or landforms of the site. Furthermore, there is no proposed change to the brick production capacity of the development, therefore the quantity of raw material required for brick production remains unaltered. As there is no change to the quantity of raw material required for brick production, there will be no change to the extent (area) or height of the approved stockpile areas as the proposed increase in imported raw material will be offset by an equivalent decrease in raw material extraction on site.</p> <p>Consequently, the proposed modification would not result in any additional visual impacts and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Hazards	<p>The proposed modification does not introduce new hazards to site nor are the raw materials considered to be dangerous goods.</p> <p>Consequently, the proposed modification is not considered a hazardous activity and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.
Social and economic	<p>The proposed modification does not alter the number of truck movements (transportation limits) of the Project Approval or result in any additional environmental, social or economic impacts than those identifies and thoroughly assessed in the EIS.</p> <p>Consequently, the proposed modification would not result in any additional social or economic impacts and does not substantially alter the development for which Project Approval was granted.</p>	No impact greater than assessed in the EIS.

4 CONCLUSION

BCB is seeking to modify the current Project Approval under Section 96(1A) of the EP&A Act to increase the raw material import limit to 321,000 tonnes per annum. This modification is required as the type, composition and quantity of the raw materials necessary to manufacture the type of bricks demanded by the current brick market cannot be extracted on site.

The proposed increase in raw material importation can be undertaken:

- within the approved transportation limits; and
- without the need for additional stockpile areas or an increase in stockpile heights.

Following a review of the potential impacts of the proposed modification against the key environmental issues identified in the EIS, it is considered that the proposed modification would result in minimal environmental impact and would not substantially alter the development for which Project Approval was granted.

APPENDIX A: VEHICLE MOVEMENT BREAKDOWN

Item Transported	Truck Type	Load Capacity	Proposed Weekly Inbound Loads	Proposed Weekly Outbound Loads	Proposed Total Inbound/Outbound Weekly Loads	Proposed Production Limits* (tonnes)
Raw Material Import	Truck & trailer	32T	193	193	386	321,152
Brick Product Export	Truck & trailer	16T	317	317	634	263,500
Manganese Import	Semi-trailer		3	3	6	
Fuel deliveries	Semi-trailer		2	2	4	
Water Cart	Semi-trailer		14	14	28	
General deliveries	Light truck		10	10	20	
Equipment service/float	Light truck		1	1	2	
<i>Total loads per week</i>			<i>540</i>	<i>540</i>	<i>1080</i>	
<i>Average loads per day</i>			<i>90</i>	<i>90</i>	<i>180</i>	

*Proposed production limits have been calculated using the load capacity of the vehicle type and the number of proposed outbound/inbound loads.

PACT.