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Environmental Management System

Rix's Creek South

HISTORIC HERITAGE MANAGEMENT PLAN

Doc No: Historic Heritage Management Plan

Doc Owner: Environment Manager – Rix's Creek Pty Ltd

Approval: Group Environmental Manager – The Bloomfield Group

Signed: C Knight

Date: 9/12/2020

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Table of Contents

1	Introduction	4
1.1	Background	4
1.2	Local Setting	4
1.3	Document Structure.....	5
2	Statutory Requirements.....	8
2.1	Historic Heritage Management Plan Conditions	8
2.2	Environmental Impact Statement Commitments.....	10
2.3	Plan Objectives and Performance Indicators.....	11
3	Stakeholder Consultation	12
3.1	Department of Planning, Industry and Environment	12
3.2	Heritage NSW	12
3.3	Singleton Council	12
3.4	Landowner Consultation.....	13
4	Historical Heritage Impact Assessment	14
4.1	Heritage Items.....	14
4.2	Project Impacts.....	16
5	Heritage Sites Statement of Significance	17
6	Coke Oven Management Measures	18
7	Mitigation Measures	20
7.1	Granbalang Trig Station.....	20
7.2	Permit to Disturb.....	20
7.3	Heritage Inductions.....	20
7.4	Provision of HHMP	21
7.5	Management of Discovery of New Historic Heritage Objects	21
7.6	Management of Skeletal Remains	21
7.7	Blasting	22
8	Compliance Protocol	24
8.1	Compliance Reporting	24
8.2	Complaints Handling	24
9	Reporting and Review	26
9.1	Annual Review	26
9.2	Auditing.....	26
9.3	Management Plan Review	26
10	Roles and Responsibilities.....	28
11	References	30

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 2 of 47

List of Tables

Table 1	SSD 6300 Management Plan Conditions.....	8
Table 2	SSD 6300 Historic Heritage Statement of Commitments	10
Table 3	Plan Objective and Performance Indicators	11
Table 4	Impact Assessment Summary.....	16
Table 5	Statement of Significance	17
Table 6	Coke Oven Management Measures.....	18
Table 7	Roles and Responsibilities.....	28

List of Figures

Figure 1	Locality.....	6
Figure 2	Conceptual Approved Rix's Creek South Mine	7
Figure 3	Historic Heritage Sites	15

List of Appendices

Appendix A	Development Consent Conditions
Appendix B	Regulatory Correspondence
Table B1	Key Heritage NSW Comments and Where Addressed
Appendix C	Coke Oven Management Measures

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	3 of 47

1 Introduction

Rix's Creek Mine (RCM) is an open cut coal mine owned and operated by The Bloomfield Group (Bloomfield). RCM comprises the original Rix's Creek Mine, now known as Rix's Creek South (RCS) and the former Integra Open Cut Project Mine now known as Rix's Creek North (RCN).

RCM is located approximately 5 to 10 km north-west of Singleton both east and west of the New England Highway (NEH) (**Figure 1**).

This Historic Heritage Management Plan (HHMP) forms part of a series of Environmental Management Plans for RCM. This HHMP is applicable to RCS only and is the primary tool that will be utilised to manage items of historical significance predicted to be impacted by the development of RCS.

The management of Historical Heritage at RCN is managed under the separate *Heritage Management Plan Rix's Creek North* (Bloomfield, 2016).

1.1 Background

Operations at RCS commenced in 1990. Mining has been completed in the original Pit 1 and Pit 2 areas in line with Development Approval DA 49/94 on the east side of the New England Highway (NEH), which have been mostly backfilled and rehabilitated. RCS received approval for State Significant Development (SSD) 6300 on 12 October 2019 which allows expansion of the West Pit on the west side of the NEH and mining of a small section on the eastern side of the highway. The approved operations within RCS are shown in **Figure 2**.

RCS is approved under SSD 6300 until 12 October 2040 for the following operations:

- West Pit (previously known as Pit 3) and associated OEAs;
- North Pit (on the eastern side of the New England Highway);
- RCS CHPP;
- Train loading facility located on the RCN rail loop and clean coal stockpiles; and
- Associated maintenance and administration buildings.

1.2 Local Setting

RCS is located in the Hunter Valley region of New South Wales (NSW), northwest of Singleton and southeast of Camberwell (see **Figure 1**).

The area surrounding RCS typically comprises various open cut and underground coal mining operations, agricultural operations, industrial and commercial activities and a mix of rural residences and urban residential areas.

The majority of land to the north-west of RCS is privately owned or owned by Ashton mine, with RCN lying directly north. A number of private residences are located surrounding RCS, as shown in **Figure 1**. The highest density of private residences is located to the south-east and an industrial precinct is located to the south of RCM. The private residences are more sparsely located in areas to the west, north and northeast.

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	4 of 47

1.3 Document Structure

The remainder of the HHMP is structured as follows:

- Section 2:** Outlines the statutory requirements applicable to the HHMP.
- Section 3:** Describes the Stakeholder Consultation undertaken.
- Section 4:** Summarises the Historical Heritage Impact Assessment.
- Section 5:** Provides the Heritage sites Statements of Significance.
- Section 6:** Introduces the Coke Oven Plan of Management.
- Section 7:** Discusses the general mitigation measures to be implemented.
- Section 8:** Describes the compliance protocol.
- Section 9:** Provides details for the reporting and review of the environmental performance process.
- Section 10:** Provides a summary of responsibilities relevant to this HHMP.
- Section 11:** Provides the references cited in the HHMP.

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 5 of 47



**Figure 1
Locality**

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	6 of 47



Figure 2
Conceptual Approved Rix's Creek South Mine

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	7 of 47

2 Statutory Requirements

2.1 Historic Heritage Management Plan Conditions

The operations at Rix's Creek South are subject to the conditions contained in SSD 6300 dated 12 October 2019.

The specific requirements for the HHMP and where each condition is addressed within the plan are provided in **Table 1**. Other relevant conditions are provided in **Appendix A**.

Table 1
SSD 6300 Management Plan Conditions

Ref	Condition	Section
Condition B17(b)	<p>Blast Operation Conditions</p> <p>The Applicant must:</p> <p>(b) ensure that blasting on the site does not damage heritage items, except in accordance with the predictions in the document/s listed in condition A2(c), and develop specific measures to protect heritage items outside the approved disturbance areas from any blasting damage associated with the development;</p> <p><i>The locations of the heritage items referred to in paragraph (b) are shown in Appendix 6.</i></p>	Appendix C
B19(i)	<p>Blast Management Plan</p> <p>The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: ...</p> <p>(i) include a strategy to monitor, mitigate and manage the effects of blasting on the Coke Ovens, including:</p> <p>(i) undertaking annual dilapidation surveys (or as otherwise agreed by the Planning Secretary) by a suitably qualified structural engineer, the first of which must be undertaken prior to any blasting in the North Pit and the last of which must be undertaken within one year after blasting is completed in the North Pit.</p> <p>(ii) reviewing and establishing final ground vibration criteria and tailoring blast design to comply with these criteria; and</p> <p>(iii) remediating any blasting-related damage to the satisfaction of the Council and the Heritage Division;</p>	<p>Appendix C</p> <p>7.7</p> <p>Appendix C</p>

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	8 of 47

Ref	Condition	Section
Condition B59	HISTORIC HERITAGE MANAGEMENT PLAN The Applicant must prepare a Historic Heritage Management Plan for the development, in respect of all non-Aboriginal cultural heritage items, to the satisfaction of the Planning Secretary. This plan must:	
	(a) Be prepared by a suitably qualified and experienced person/s;	Title Page
	(b) Be prepared in consultation with the Heritage Branch, Council and relevant landowners and in accordance with the relevant Heritage Branch guidelines;	Appendix B
	(c) Be submitted to the Planning Secretary for approval within six months of commencing development under this consent;	Appendix B
	(d) Describe how historic heritage values of the site would be recorded and preserved;	Appendix C
	(e) Identify all heritage items in the vicinity of the site and include a statement of significance for each item;	5
	(f) For the Coke Ovens, describe the measures to: <ul style="list-style-type: none"> (i) Minimise impacts of the development and to improve the integrity of the Ovens; (ii) Identify if there is any association with the nearby Mound with Historic Material and the Linear Embankment; (iii) Ensure full recording of the Ovens; (iv) provide public access; and (v) manage the Ovens over the life of the development and post-mining; 	Appendix C
	(g) Describe the measures to be implemented on the site or within and offset areas to: <ul style="list-style-type: none"> (i) ensure all workers receive suitable heritage inductions prior to carrying out any activities which may cause impacts to historic heritage, and that suitable records are kept of these inductions; (ii) Undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance, including the Mound with Historic Material and the Linear Embankment; 	7.3 Appendix C

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	9 of 47

Ref	Condition	Section
	(iii) Protect heritage items located outside the approved disturbance area from unpredicted impacts of the development, disrepair or vandalism (where practicable), including the Coke Ovens and Granbalang Trig Station; and (iv) Manage any new heritage items discovered during the life of the development; and	Appendix C 7.1 7.5
	(h) Include a strategy for the care, control and storage of relics salvaged from the site.	Appendix C
Condition B60	The Applicant must implement the Historic Heritage Management Plan as approved by the Planning Secretary.	This Plan

2.2 Environmental Impact Statement Commitments

Table 2 lists the historic heritage management commitments made in the *Rix's Creek Continuation of Mining Environmental Impact Statement* (AECOM, 2015) (RCS EIS) and indicates where each is addressed in this BMP.

Table 2
SSD 6300 Historic Heritage Statement of Commitments

SOC No.	Factor	Management and Mitigation Measures	Section
17	Vibration and Blasting	The internal Explosive Management Plan will be updated to include established methodology for calculating blast limits for blasting in close proximity to the Rix's Creek Coke Ovens as well as blast monitoring.	7.7
39	Historic Heritage	The Historic Heritage Management Plan (HHMP) consistent with any conditions of consent and include: <ul style="list-style-type: none"> • Consideration of opportunities to minimise impacts on the Coke Ovens; • A research program and evaluation of options available to minimise the impact of tree roots on the integrity of the Coke Ovens; • Research to determine the potential for salvage and recording of some or all components of the Coke Ovens; and • Potential ways to establish public access to the Coke Ovens, following mine closure. 	This document Appendix C

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	10 of 47

2.3 Plan Objectives and Performance Indicators

The primary objectives of the HHMP and associated performance indicators are presented in **Table 3**.

Table 3
Plan Objective and Performance Indicators

Objectives	Performance Indicators
Compliance with legislative requirements.	<ul style="list-style-type: none"> Compliance with the planning approvals. Compliance with the management actions in Appendix C
Minimise the impacts of the development on Historic Heritage items.	<ul style="list-style-type: none"> Implementation of the Coke Oven Management Measures in Appendix C. Compliance with the mitigation measures (Section 7).

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 11 of 47

3 Stakeholder Consultation

3.1 Department of Planning, Industry and Environment

Condition B59(c) of SSD 6300 requires Bloomfield to submit the HHMP to the Secretary of DPIE (Planning Secretary) for approval within six months of commencing development. Development commenced on 24 February 2020.

This HHMP includes other regulatory correspondence and consultation as described in **Section 3.2**. The final HHMP was submitted to DPIE for approval on 21 August 2020.

During November 2020 TBG received a request for further information in regard to the RCS Historic Heritage Management Plan. A copy of this request and table, including TBG's response is provided in **Appendix B**.

A copy of all regulatory correspondence pertaining to this Plan is provided in **Appendix B**.

3.2 Heritage NSW

The draft HHMP was provided to Heritage NSW on 9 July 2020 for consultation and comment. In the response dated 7 August 2020, Heritage NSW noted the following;

- That the draft included 'extended timeframes' for actions such as the preparation of a Conservation Management Plan (CMP);
- That the preparation of the coke oven management plan in this HHMP had not been informed by a site visit; and

That Condition B59(f) had not been fulfilled due to the lack of a proper condition assessment and recording of the coke ovens.

A copy of the response from Heritage NSW is included in **Appendix B**. Table B1 lists Heritage NSW issues and where each has been addressed in this HHMP.

As a consequence of this advice, a site visit, including an archival recording of the historic features was undertaken by Ozark on 14 August 2020. In addition, Bloomfield has commissioned the preparation of an updated CMP to be completed in 2020. A major focus of the CMP will be the removal of the substantial trees that are currently growing within the historic items. In the draft of this HHMP it was stated that the trees would be removed by 2026. However, Bloomfield has agreed to undertake these works in a timely manner following the completion of the CMP and this will occur within 36 months of the approval of the Plan by DPIE.

3.3 Singleton Council

The draft HHMP was provided to Singleton Shire Council (SSC) on 9 July 2020 for consultation and comment. At the date of this submission of the HHMP to DPIE no response has been provided by Singleton Council. A copy of the emails requesting comments of the plan is included in **Appendix B**.

Bloomfield has noted to Singleton Council that they will consider any comments which may be received after the date this plan is submitted to DPIE in accordance with Sch. 2 Condition B 59 (c).

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	12 of 47

3.4 Landowner Consultation

The land where the heritage items are located is owned by the Bloomfield Group, therefore no consultation with 'relevant landowners' was required.

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	13 of 47

4 Historical Heritage Impact Assessment

The *Rix's Creek Mine Non-Indigenous Heritage Impact Assessment* (AECOM, 2015) (HIA) was undertaken as part of the Rix's Creek Mine Continuation Project (the Project) to identify the potential impacts of the Project on Historic Heritage.

The HIA was prepared in consideration of the following guidelines and policies:

- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (ICOMOS, Australia) 2013);
- *NSW Heritage Manual* (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996a);
- *Statements of Heritage Impact* (NSW Heritage Office, 2002);
- *Assessing Heritage Significance* (NSW Heritage Office, 2001);
- *Heritage Curtilages* (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996b); and
- *Levels of Heritage Significance* (NSW Heritage Office, 2008).

The HIA consisted of reviews of statutory and non-statutory heritage registers and inventories, and undertaking an archaeological survey of land within the Project area.

4.1 Heritage Items

The review of heritage registers and inventories identified the 'Rix's Creek Coke Ovens & Associated Works' within the *Singleton Local Environmental Plan 2013* (LEP). This heritage item consists of:

- Two batteries of Coke Ovens;
- A Linear Embankment thought to have housed tracks for trolley cars or trams to transport material to and from the Coke Oven area; and
- A Mound with Historic Material containing small quantities of wood, metal and glass.

The HIA also identified the 'Granbalang Trig Station', located to the west of the Project, as having local historical significance.

These Heritage Sites are shown on **Figure 3** and a description is provided in **Section 5**.

Section 4.0 of the HIA details the European history of the Rix's Creek South area, where the first coal pit opened in 1860. The first battery of Coke Ovens was constructed in the 1880s and a second battery around 1900. The raised linear earth mound marks the original route of a tramway in operation between the coal pits area and Rix's Creek Station from at least 1887 until it fell into disuse and the rails removed. The HIA does not specify the age of the Trig Station, however notes that "*this style of trig station was being constructed from the 1870s onwards...*".

While the Granbalang Trig Station is of heritage value, it was constructed by Ashley and Brendon Wright, both Bloomfield employees, during the late 1970's.

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	14 of 47

Historic Heritage Management Plan

Rix's Creek South

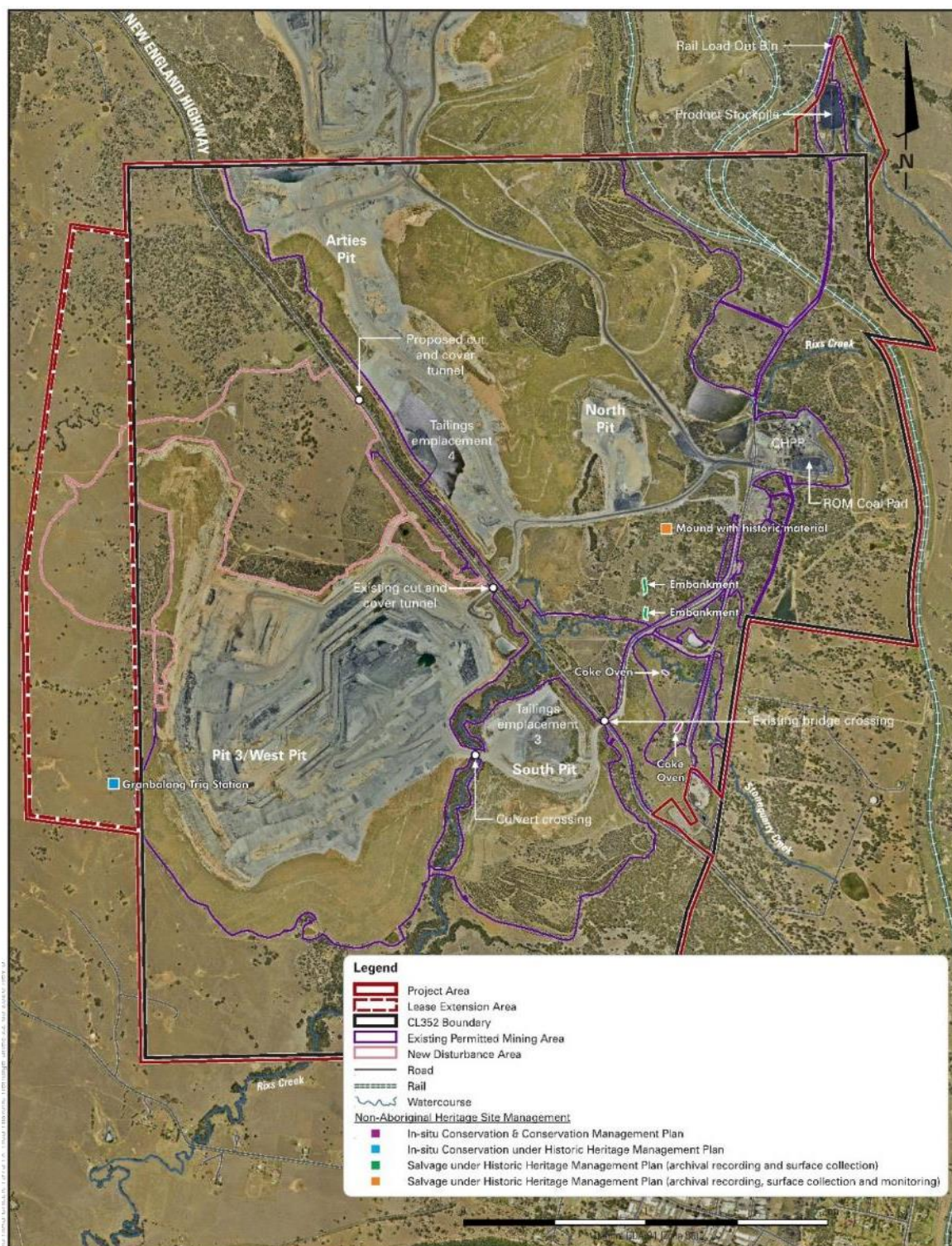


Figure 3
Historic Heritage Sites

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	15 of 47

4.2 Project Impacts

The HIA identified that potential impacts on heritage items are primarily limited to indirect impacts due to potential vibration impacts from blasting in the North Pit on the Coke Ovens and changes to the visual setting of Granbalang Trig Station. These impacts are expected to be negligible.

Two of the four potential historical heritage items located in the Project area would be destroyed by the development of North Pit, namely the Linear Embankment and the Mound with Historic Material. The impacts to the historic heritage items and values will be suitably managed and mitigated in accordance with the requirements of the Management Measures contained in the Rix's Creek Coke Ovens and Associated Works Plan, Section 2.7. (**Appendix C**) This plan requires digital archival photographic recording and a brief report detailing background information to be documented with copies sent to Singleton Library and the Singleton Historical Society & Museum Inc. A copy of this report will also be held onsite. All items of historical significance salvaged at the linear embankment and historic mound will be held in a secure location at RCM and offered to the Singleton Historical Society & Museum Inc. for inclusion into the museum.

All photographic recording will be conducted in accordance with the *"Photographic Recording of Heritage Items using Film or Digital Capture, NSW Heritage 2006"*.

The potential impacts are summarised in **Table 4**, reproduced from Table 9 of the HIA.

Table 4
Impact Assessment Summary

Site Name	Significance	Type of Impact	Degree of Impact
Rixs Creek Coke Ovens & Associated Works	Local (but descried in local LEP listing as having State significance)	Indirect (possible vibration impacts)	Potentially partial
Granbalang Trig Station	Local	Indirect (possible visual impacts)	Potentially partial
Linear Embankment	Local	Direct (mine disturbance area)	Whole
Mound with historic material	Local	Direct (mine disturbance area)	Whole

The management of impacts is discussed in **Sections 6** and **7**.

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro		Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 16 of 47

5 Heritage Sites Statement of Significance

Section 6 of the HIA described and assessed the significance of the identified heritage items. As required by Condition B59(e), the statements of significance are provided in **Table 5**.

Table 5
Statement of Significance

Site Name	Statement of Significance
Rixs Creek Coke Ovens & Associated Works	<p>The Rixs Creek Coke Ovens & Associated Works have local and State significance for their historical links, research potential, rarity and representativeness.</p> <p>As an example of an early mining related activity in the Rixs Creek area, it provides material evidence of the development of industrial development and coke manufacturing processes. It is one of five locally listed coke ovens in NSW, but is the only one listed with its design type, place and period of use. This item demonstrates the principal characteristics of a coke oven site, also having subsurface archaeological potential due to the associated works that surrounded the coke ovens during their period of operation.</p>
Granbalang Trig Station	<p>The Granbalang Trig Station has local historical significance at the local level due to its link to the surveying and mapping of the area. It also has representative significance embodying the principal characteristics of a trig station.</p> <p>The trig station has been constructed and/or updated with contemporary materials. The setting of the Trig Station includes a prominent view-line to the south, taking in both Gowrie Terrace and Rixs Creek. Other heritage listed trig stations have additional significance due to their location being integral in opening up new areas or providing important parts of the baseline used for early survey and mapping activity in NSW. Granbalang Trig Station is of a common design with numerous other representative examples present throughout NSW.</p>
Linear Embankment	<p>The linear embankment is of local historical significance as it relates specifically to the Rixs Creek Coke Ovens & Associated Works and the local coal industry.</p>
Mound with historic material	<p>The mound with historic material is of local significance due to its link to the Rixs Creek Coke Ovens & Associated Works and the local coal industry.</p>

Source: HIA (AECOM, 2015)

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 17 of 47

6 Coke Oven Management Measures

Condition B59(f) of SSD 6300 requires Bloomfield to describe the management and mitigation measures for the Rixs Creek Coke Ovens & Associated Works. The Coke Oven Management Measures have been developed by OzArk Environment & Heritage and are provided in **Appendix C**.

Appendix C describes the measures to:

- Minimise impacts of the development on and improve the integrity of the Coke Ovens;
- Manage and protect the Coke Ovens over the life of the development;
- Complete archival recording of the items, including photographic records;
- Manage the Linear Embankment and Mound until mining commences in North Pit which is anticipated at approximately 2038;
- Mitigate the loss of heritage values through surface collection and archival recording at the time the Linear Embankments and Mound will be destroyed; and
- Provide access and information on the Coke Ovens to the public at such time as the area is no longer an active mining area.

A summary of the management actions is provided in **Table 6**.

Table 6
Coke Oven Management Measures

Management Issue	Description	Responsibility	By When
Establishment of the outer buffer	The outer buffer protects the coke ovens and associated features from inadvertent damage.	Environment Manager	31/12/20
Establishment of the inner buffer	The inner buffer will be established around the Coke Ovens	Environment Manager	By 2037
Maintenance actions within buffers	Maintenance works including weed and pest control, fire load reduction, vegetation removal as required	Environment Manager	As required
Update Conservation Management Plan	The CMP will identify the detailed actions to manage the full recording and integrity of the Ovens, including tree removal and ongoing protection	Environment Manager	31/12/20
Provision of access to Coke Ovens	Strategy to allow access post mining	Environment Manager	By 2040

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 18 of 47

Management Issue	Description	Responsibility	By When
Protection of heritage items	Potential impacts to heritage items to be assessed prior to any ground disturbance works related to erosion control, weed management, bushfire management	Environment Manager	As required
Protection of heritage items	The removal of trees will take place in a timely manner following the approval of the CMP by DPIE.	Environment Manager	36 months of approval of the CMP
Vibration Impacts	Assessment by heritage specialist and blasting specialist to be completed at least 1 year prior to mining in North Pit. Recommended actions to be implemented.	Environment Manager Mining Manager	12 months prior to mining in North Pit (approximately 2037).
Further investigations	Measures to identify association between Coke Ovens, Mound with Historic Material and Linear Embankment.	Environment Manager	31/12/20
Archival recording	Undertake photographic/archival recording of Mound and Linear Embankment prior to disturbance.	Environment Manager	31/12/20

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 19 of 47

7 Mitigation Measures

7.1 Granbalang Trig Station

The HHIA determined that there would be no direct impacts on the Granbalang Trig Station, however indirect impacts may occur if the outlook of the item is obstructed. The visual outlook of the Trig Station was considered to be integral to its function and heritage value, particularly to the south. The HHIA noted that the emplacement of overburden could impact on the item's heritage value.

Since the HHIA was completed, the proposed overburden emplacement area (OEA) has been considerably reduced. The OEA will now be approximately 600m from the Trig Station, thereby minimising the visual impact. The Trig Station is currently located within approximately 100m of an existing rehabilitated OEA and the visual outlook will remain consistent with this, with the view south towards Gowrie Terrace and Rixs Creek remaining unobstructed.

The Trig Station is located on Bloomfield owned land, and access to this area is restricted. Vandalism is not considered a high risk for this item.

No further mitigation is considered necessary to protect this heritage item.

7.2 Permit to Disturb

The locations of all identified Heritage Sites are maintained on the Bloomfield GIS system, and will be mapped on drawings and plans and be supplied to any relevant personnel and contractors who may be working within close proximity to these sites.

All proposed disturbance works are managed through Bloomfield's 'Permit to Disturb' process. When a request for a Permit is made to the Environment Team, a search is made of the GIS database to identify any Historic Heritage sites within or in close proximity (i.e. 200m) of the proposed disturbance footprint.

Where the search identifies sites in close proximity to the footprint, these sites will be clearly marked on a figure to be provided with the Permit to Disturb and management and mitigation instructions provided in accordance with approvals. Where necessary, the sites will also be identified on the ground prior to works commencing.

7.3 Heritage Inductions

As required by Condition B59(g)(i), an historical heritage component will be included as part of the Site Inductions undertaken by relevant site personnel and contractors. All relevant site personnel and contractors involved in proposed works that have the possibility of impacting identified heritage sites will undertake an induction regarding the heritage status and values of the identified archaeological and historical heritage resource within the project area.

The inductions will include (but not necessarily be limited to) the following:

- the nature and location of the potential archaeological sites;
- the significance of the potential archaeological resource;
- the nature of the management strategies being undertaken;

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	20 of 47

- procedures for contacting the Environment Manager if previously unknown historical heritage items and/or artefacts are uncovered during works; and
- information related to the relevant legislation for the protection of historical heritage sites/items (particularly provisions Section 139 and 146 of the *Heritage Act 1977* (NSW)) and the penalties which may arise if sites/items are disturbed/destroyed.

Records of these inductions will be maintained in accordance with Bloomfield internal procedures.

7.4 Provision of HHMP

The Mine Manager and Environment Manager will ensure that all relevant personnel and contractors working at RCS are supplied with copies of the HHMP and any other detailed plans/specifications they may require to ensure adherence to the management strategy.

7.5 Management of Discovery of New Historic Heritage Objects

Condition B59(g)(iv) requires Bloomfield to manage and new heritage items discovered during the life of RCS.

If during the course of works any previously unknown historical archaeological material or heritage sites/items are uncovered or identified, all work in the area of the item(s) shall cease immediately and the Environment Manager will arrange for a suitably qualified and experienced archaeologist to be consulted.

Should the archaeologist determine that the find is an Aboriginal Site, the find will be managed as detailed in the *Aboriginal Cultural Heritage Management Plan* (Bloomfield).

If the archaeologist considers the archaeological material uncovered constitutes an archaeological 'relic', the Heritage NSW will be consulted, in accordance with Section 146 of the *Heritage Act 1977* (NSW), to determine an appropriate course of action prior to the recommencement of work in the area of the item.

A 'relic' under the Heritage Act is defined as any deposit, object or material evidence that:

- Relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and
- Is of state or local heritage significance.

7.6 Management of Skeletal Remains

Condition B53 of SSD 6300 requires Bloomfield to manage any suspected human remains.

In the unlikely event that a burial site or human skeletal material is exposed during works, all relevant procedures for excavation and removal will be undertaken in accordance with:

- *Policy Directive –Exhumation of Human Remains* (NSW Department of Health 2008);
- *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977* (NSW Heritage Office 1998) (Skeletal remains guidelines); and
- *The Aboriginal Cultural Heritage Standards and Guidelines Kit* (NPWS 1997).

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	21 of 47

As soon as remains are exposed:

- Work is to halt immediately and the find will be reported to the relevant supervisor who will notify the Open Cut Examiner (OCE) and Environmental Manager to allow assessment and management.
- The Environment Manager will contact NSW Police;
- A 20 m buffer (or as advised by the NSW Police) around the known or suspected human remains will be established using temporary fencing. Works can continue outside of this area providing there is no risk of interference to the human remains or the assessment of human remains;
- A physical or forensic anthropologist will be commissioned by the Police to inspect the remains in situ (organised by the police unless otherwise directed by the police), and make a determination of antiquity (pre-contact, historic or modern) and ancestry (Aboriginal or non-Aboriginal) and:
 - If the remains are identified as modern the area is deemed as crime scene and will be managed by NSW Police. Work will only recommence when NSW Police advise;
 - If the remains are identified as historic and non-Aboriginal, the site is to be secured and Heritage NSW notified, and the site managed in liaison with Heritage NSW. Work will only recommence when Heritage NSW advise;
- If the remains are identified as Aboriginal (pre-contact or historic), the site is to be secured and Heritage NSW notified, and the site managed in liaison with Heritage NSW. Work will only recommence when Heritage NSW advises.

If the remains are identified as Aboriginal, they will be managed as detailed in the *Aboriginal Cultural Heritage Management Plan* (Bloomfield).

Prior to removal a site specific management plan for the removal of any potential human skeletal remains uncovered will be developed in consultation with a suitably qualified and experienced archaeologist and consider the requirements of the Skeletal Remains guidelines.

7.7 Blasting

Blasting during the development of the North Pit could cause impacts on the Coke Ovens through ground vibration. Mining in the North Pit will not occur until approximately 2038.

The report *Effects of Blasting in the Rix's Creek Continuation Project Area* (Terrock, 2018) (Blasting Report) was provided in response to the first Independent Planning Commission review. The Blasting Report noted that blasting had been conducted in 1991 within 150 m of the coke ovens. Assessment reports of the Coke Ovens from 1992 (McCarthy and Brassil, 1992) and 2007 (Lonergan, 2007) show no deterioration of the Coke Ovens following this blasting.

The Blasting Report proposed an interim ground vibration limit of 10 mm/s for all blasts and recommended ongoing blast measurement and monitoring of the Coke Ovens when blasting in North Pit.

The control of ground vibration is achieved by environmental blast design as discussed in the *Blast Management Plan* (Bloomfield, 2020).

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	22 of 47

Appendix C notes that mining in the North Pit will not occur until approximately 2038, and a baseline assessment by a heritage specialist and vibration specialist will be completed at least 12 months prior to mining starting in this area. This assessment will provide recommendations for the management of any vibration impacts. The internal Explosive Management Plan will be updated at this time to include methodology for calculating blast limits in close proximity to the Coke Ovens.

Document Title:	Historic Heritage Management Plan – Rix’s Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	23 of 47

8 Compliance Protocol

8.1 Compliance Reporting

Condition E7 of SSD 6300 require Bloomfield to immediately report any incidents to DPIE and any other relevant agencies. An incident is defined as:

“An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance.”

An incident report includes:

- Identification of the development (including development application number and name);
- Location and nature of the incident;

Bloomfield is required to report any non-compliances to DPIE in writing within seven (7) days of becoming aware of the non-compliance under Condition E8 of SSD 6300 A non-compliance is defined as:

“An occurrence, set of circumstances or development that is a breach of this consent.”

A non-compliance report includes:

- Identification of the development (including development application number and name);
- Set out the condition of this approval that the development is non-compliant with;
- The way in which it does not comply and the reasons for the non-compliance (if known)
- What actions have been, or will be, undertaken to address the non-compliance.

8.2 Complaints Handling

Rix's Creek Mine has a 24-hour telephone hotline (02 4930 2665) for the members of the public to lodge complaints and concerns or to raise issues associated with the operations. This service aims to promptly and effectively address community concerns and environmental matters.

The hotline number is advertised on the Bloomfield Group web site (<https://www.bloomcoll.com.au/>) and members of the community are encouraged to contact the hotline if they need to highlight any environmental issues or seek information regarding environmental aspects associated with RCM.

In addition, a member of the community can contact an RCM Environmental Advisor or Manager in person, by phone, e-mail or letter. Any person that is likely to be in a position to receive concerns is trained to deal with complaints in a professional and effective manner.

All complaints received are recorded in accordance with the *Privacy Act 1988* and lodged in the complaint register. The complaint register is only viewable by environmental personnel and is protected to prevent others viewing recorded information. All complainants are questioned if they would like their complaint and details recorded.

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	24 of 47

Information which may be recorded includes:

- Date and time the complaint was lodged;
- The method by which the complaint was made;
- Personal details provided by the complainant;
- Nature of the complaint;
- Action taken or if no action was taken, the reason why; and
- Follow up contact with the complainant following investigation.

All anonymous complaints will be received, investigated and actioned (if required). However, if no details are provided Bloomfield will not be able to provide feedback to the complainant. The outcome of the complaint will be recorded in the register.

Only generalised, non-personal information is published in the monthly complaint register on the Company website. No personal details such as name, address, phone number are published or any other information which may allow the complainant to be identified. A summary of complaints also will be reported in the EPL Annual Return and Annual Review and presented at the CCC meetings.

The complaint record will be kept for at least four years after the complaint was made.

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	25 of 47

9 Reporting and Review

9.1 Annual Review

By the end of March each year, Bloomfield will provide an Annual Review required under Condition E9 of SSD 6300 to the Planning Secretary. The Annual Review will

- Describe the development over the previous calendar year and that proposed for the next calendar year;
- Report on actual versus proposed surface disturbance;
- Summarise the environmental performance of RCM for the previous calendar year, including the effectiveness of noise and air quality management systems and compliance with relevant criteria,
- Include the presentation and analysis of the results of monitoring, including any relevant trends;
- Discuss any non-compliances, incidents, complaints and any management actions implemented at RCM over the reporting period.
- Identify any discrepancies between the predicted and actual impact of the development and analyse the potential cause of any significant discrepancy; and
- Include a description of what measures will be implemented over the coming year to improve the performance of the air quality management system.

The Annual Review will be made publicly available through placement on Bloomfield's website <http://www.bloomcoll.com.au/> and will be provided to the CCC.

9.2 Auditing

Under Condition E10 an independent environmental audit of the RCS operations will be conducted every three years and the results reported to the Secretary DPIE and made available on the website. This audit will consider any relevant Historical Heritage information.

Actions and recommendations are communicated to senior management and actioned as necessary. Any relevant findings are considered in the planning processes as part of the Environmental Management System.

9.3 Management Plan Review

Condition E5 requires that, within three months of the submission of the following documents, Bloomfield will review, and if necessary, revise the HHMP to the satisfaction of the Planning Secretary:

- Annual Review in accordance with Condition E9;
- Incident report under Condition E7;
- Audit report under Condition E10; or
- Modification to the conditions of SSD 6300 (unless the conditions require otherwise).

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	26 of 47

When a review leads to revision of the HHMP, then within six weeks of the review decision, unless the Secretary agrees otherwise, the revised HHMP will be submitted to the Secretary for approval.

Any major amendments to the HHMP that affect its application will be undertaken in consultation with the appropriate regulatory authorities and stakeholders. Minor changes such as formatting edits may be made with version control.

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	27 of 47

10 Roles and Responsibilities

Relevant roles and responsibilities associated with this HHMP are presented in **Table 7** below.

Table 7
Roles and Responsibilities

Role	Responsibilities	Section
Mine Manager	• Provide adequate resources for the implementation of this HHMP and the Coke Oven Plan of Management.	7
	• Implement the Coke Ovens Management Measures.	6
Environment Manager (or delegate)	• Implement this plan during mining operations to ensure compliance with consent requirements.	2
	• Update the CMP and remove trees within 36 months of the approval of the Plan by DPIE.	3.2
	• Ensure that the plan is relevant to current operations.	9.3
	• Include non-Aboriginal heritage induction component for all relevant mine personnel.	7.3
	• Contract a suitably qualified and experienced archaeologist, the Heritage Branch and Heritage Branch as appropriate should previously unknown historical archaeological material/ heritage sites/items be uncovered or identified.	7.5
	• Contact all appropriate stakeholders in the event that human skeletal material is exposed during works.	7.6
	• Coordinate the reviews of this HHMP.	9.3
	• Ensure that potential archaeological sites are contained within the mine's survey records and can be incorporated in plans generated for future works, and the Permit to Disturb process is implemented.	7.1
	• Ensure a report of results at the completion of any archaeological testing/investigation undertaken is completed.	Appendix C
	• Implement the Coke Ovens Management Measures and CMP.	Appendix C and 6
	• Report to external stakeholders.	8.1

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 28 of 47

Role	Responsibilities	Section
All employees and contractors	<ul style="list-style-type: none"> Comply with the management requirements and commitments contained within this management plan relevant to their roles. 	7.3
	<ul style="list-style-type: none"> Report all non-compliances with this plan as per the Bloomfield Group reporting procedures. 	8.1

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	29 of 47

11 References

- AECOM (2015), *Rix's Creek Continuation of Mining Environmental Impact Statement*
- AECOM (2015), *Rix's Creek Mine Non-Indigenous Heritage Impact Assessment*
- Bloomfield, *Heritage Management Plan Rix's Creek North*
- Bloomfield, *Aboriginal Cultural Heritage Management Plan*
- ICOMOS, Australia (2013), *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*
- Loneragan, P (2007), *Rix's Creek Colliery Coke Ovens Conservation Plan. Cracknell & Loneragan Architects and Heritage Consultants (Photos taken in 1989 and 2006)*
- McCarthy, J and Brassil, A. (1992), *Assessment of the Heritage Significance of the Rix's Creek Coke Ovens by the National Trust of Australia*
- NSW Department of Health (2008), *Policy Directive – Exhumation of Human Remains*
- NSW Heritage Office and NSW Department of Urban Affairs and Planning (1996a), *NSW Heritage Manual*
- NSW Heritage Office and NSW Department of Urban Affairs and Planning (1996b), *Heritage Curtilages*
- NSW Heritage Office (1998), *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977*
- NSW Heritage Office (2001), *Assessing Heritage Significance*
- NSW Heritage Office (2002), *Statements of Heritage Impact*
- NSW Heritage Office (2006), *Photographic Recording of Heritage Items using Film or Digital Capture*
- NSW Heritage Office (2008), *Levels of Heritage Significance*
- NSW Parks and Wildlife Service (1997), *The Aboriginal Cultural Heritage Standards and Guidelines Kit*

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 30 of 47

Appendix A – Development Consent Conditions

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 31 of 47

Table A1
SSD 6300 Consent Conditions

Ref	Legal Requirement	Section
Part E Condition E4	Management plans required under this consent must be prepared in accordance with any relevant guidelines, and include:	
	(a) a summary of relevant background or baseline data;	2
	(b) details of:	
	(i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);	2
	(ii) any relevant limits or performance measures/criteria; and	N/A
	(iii) 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;	2.3
	(c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c)	Appendix C
	(d) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	7 Appendix C
	(e) a program to monitor and report on the:	
	(i) impacts and environmental performance of the project; and	9.1
	(ii) effectiveness of any management measures (see (c) above);	
	(f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	7 Appendix C
	(g) a program to investigate and implement ways to improve the environmental performance of the project over time;	9
	(h) a protocol for managing and reporting any:	
	(i) incident, non-compliance or exceedance of any impact assessment criteria or performance measure;	8.1
	(ii) complaint; or	8.2
	(iii) failure to comply with other statutory requirements;	8.1

Document Title:	Historic Heritage Management Plan – Rix's Creek South		Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro		Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 32 of 47

Ref	Legal Requirement	Section
	(i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and	9.1
	(j) a protocol for periodic review of the plan. <i>Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i>	9.3
Condition E5	<p>Revision of Strategies, Plans & Programs</p> <p>Within 3 months of:</p> <ul style="list-style-type: none"> (a) the submission of an incident report under condition E7; (b) the submission of an annual review under condition E9; (c) the submission of an Independent Environmental Audit under condition E10, or (d) the modification of the conditions of this consent (unless the conditions require otherwise), <p>The suitability of existing strategies, plans, and programs required under this consent must be reviewed by the Applicant.</p>	9.3
Condition E6	<p>Revision of Strategies, Plans & Programs</p> <p>If necessary, to either improve the environmental performance of the development or cater for a modification, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within 6 weeks of the review.</p> <p><i>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 development.</i></p>	9.3
Condition E7	<p>Incident Notification</p> <p>The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing to compliance@planning.nsw.gov.au and identify the development (including the development application number and name) and set out the location and nature of the incident.</p>	8.1

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	33 of 47

Ref	Legal Requirement	Section
Condition E8	<p>Non-compliance Notification</p> <p>Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing to compliance@planning.nsw.gov.au and identify the development (including the development application number and name), set out the condition of this approval that the development is non-compliant with, the way in which it does not comply and the reasons for the noncompliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i></p>	8.1

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	34 of 47

Appendix B – Regulatory Correspondence

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	35 of 47

Table B1
Key Heritage NSW Comments and Where Addressed

Issue	Where Addressed
The consent conditions seem to be misnumbered in Table 1 as B58 when in fact under the IPC consent issued in 12 October 2019, the relevant number appears to be B59, as B58 refers to an ACHMP.	2.1
Heritage NSW notes however, that there are extended timeframes for such work and it is suggested that work should be undertaken sooner rather than later as sites may continue to deteriorate over time.	3.2
<p>The OzArk section of the HHMP refers to the need to update the CMP for the Coke Ovens as it appears no formal assessment of Condition has occurred since 2007 (13 years). Section 6 of the Plan suggests that would happen by 2026. This would be a 20 year interval, when current heritage practice is for CMPs to be updated every 5 to 10 years.</p> <p>The OzArk section of the HHMP refers to the need for that process to include a site visit, proper recording and development of 'strategies to determine the long-term preservation of the coke ovens'. HNSW agrees with this general advice, but is concerned that specific actions, policies and management measures are effectively deferred again, until there is better understanding and knowledge about the current condition of the Coke Ovens.</p>	3.2, 10 and Appendix C
Heritage NSW therefore considers that the HHMP needs to be informed by current knowledge and assessment of physical condition. It is not appropriate for detailed information and critical actions to be delayed possibly until 2026, especially in the event that physical conservation works or other interventions are urgently required to protect and conserve the extant heritage fabric. In this regard it is urgent that the physical conservation needs of the significant Coke Ovens are accurately and adequately assessed and documented.	3.2, 10 and Appendix C

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	36 of 47



Our ref: DOC20558634
File: SF20/72537

Mr C Knight
Environment Manager – Rix's Creek Pty Ltd
The Bloomfield Group

Email: enviro@bloomcoll.com.au

Dear Mr Knight,

SSD 6300 – Rix's Creek South – Draft Historic Heritage Management Plan

I refer to your submission received 10 July 2020 via the Major Projects website. It is understood that the Historic Heritage Management Plan for Rix's Creek South was submitted for consultation in accordance with Conditions of Approval for SSD 6300. The following document was reviewed for this response:

*Historic Heritage Management Plan – Rix's Creek South Prepared By: K Blaikie/ B Churcher,
Draft dated 7-Jul-20*

It is noted that the draft HHMP addresses a number of items including Coke Ovens (2 batteries in separate locations), a Linear Embankment (tramway remnant) a Mound containing historic material and a Trig Station. Of these, the Coke Ovens are the only elements likely to be of State significance for their rarity, technological and archaeological values (even though they are not currently listed on the State Heritage Register).

The first section of the draft HHMP is clearly set out with a description of the project, relevant consent conditions and discussion of prior assessments and identified impacts. The consent conditions seem to be misnumbered in Table 1 as B58 when in fact under the IPC consent issued on 12 October 2019, the relevant number appears to be B59, as B58 refers to an ACHMP. Management measures for sites of local significance in the draft HHMP are generally appropriate and would include further investigations and archival recording.

Heritage NSW notes however, that there are extended timeframes for such work and it is suggested that work should be undertaken sooner rather than later as sites may continue to deteriorate over time.

In particular, I note that Condition B59(f) of SSD 6300 requires:

(f) for the Coke Ovens describe the measures to:

- (i) minimise impacts of the development and to improve the integrity of the Ovens*
- (ii) identify if there is any association with the nearby Mound with Historic Material and the Linear Embankment*
- (iii) ensure full recording of the Ovens*
- (iv) provide public access; and*
- (v) manage the Ovens over the life of the development and post-mining*

These requirements are said to be addressed in Appendix C of the HHMP which is a document titled:

Management Measures Rix's Creek Coke Ovens & Associated Works, July 2020 prepared by OzArk Environment & Heritage.

Level 6, 10 Valentine Ave Parramatta NSW 2150 ■ Locked Bag 5020 Parramatta NSW 2124
P: 02 9873 8500 ■ E: heritagemailbox@environment.nsw.gov.au

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	37 of 47

Of concern is that the OzArk document relies entirely on prior reports and secondary source information, which is re-presented largely from the 2015 AECOM report. That is not the role or purpose of this HHMP. Appendix C (OzArk report) clearly states on p.7:

OzArk has not had the opportunity to visit the site and the current condition of the Rixs Creek Coke Ovens & Associated Works is unknown to OzArk. Although not clearly stated, it would also appear that AECOM did not visit the site for their historic heritage assessment in 2015 (AECOM 2015). Therefore, the last visit that resulted in a record of the visit being undertaken was in 2006 (Lonergan 2007).

In this regard it appears that the Appendix C report is not an independent heritage assessment, nor does it include verified, current information. It seems that the Management Measures and commentary about current condition of fencing and other matters may have been directly supplied by the RCM Environment Manager (e.g Section 2.4 Table 2-1).

The OzArk section of the HHMP refers to the need to update the CMP for the Coke Ovens as it appears no formal assessment of Condition has occurred since 2007 (13 years). Section 6 of the Plan suggests that would happen by 2026. This would be a 20 year interval, when current heritage practice is for CMPs to be updated every 5 to 10 years. The OzArk section of the HHMP refers to the need for that process to include a site visit, proper recording and development of 'strategies to determine the long-term preservation of the coke ovens'. HNSW agrees with this general advice, but is concerned that specific actions, policies and management measures are effectively deferred again, until there is better understanding and knowledge about the current condition of the Coke Ovens.

In this regard, the submitted draft HHMP is considered not to have adequately addressed the matters listed above that are required under Condition B 59 (f). In addition, the Coke Ovens and Linear Feature are interconnected sites and they also relate to the area of over 8 ha identified by the 2007 CMP as containing various features and elements.

Heritage NSW therefore considers that the HHMP needs to be informed by current knowledge and assessment of physical condition. It is not appropriate for detailed information and critical actions to be delayed possibly until 2026, especially in the event that physical conservation works or other interventions are urgently required to protect and conserve the extant heritage fabric. In this regard it is urgent that the physical conservation needs of the significant Coke Ovens are accurately and adequately assessed and documented.

Therefore, the submitted draft HHMP is not considered fit for purpose as in its current form it has not met the requirements of the relevant consent conditions.

If you have any questions regarding the above advice, please contact me at Heritage NSW on (02) 9873 8546 or siobhan.lavelle@environment.nsw.gov.au.

Yours sincerely,



07 August /2020

Dr Siobhan Lavelle OAM
Senior Team Leader, Specialist Services
Heritage NSW
Department of Premier and Cabinet
As Delegate of the Heritage Council of NSW

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
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Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	38 of 47

Chris Knight

From: Mary-Anne Crawford <mccrawford@singleton.nsw.gov.au>
Sent: Monday, 17 August 2020 3:57 PM
To: Chris Knight
Subject: RE: Consultation- Rix's Creek South Management Plans

Hi Chris

Thanks for the reminder, unfortunately we have 10 SSD matters on foot in the portal at the moment, which impacts some pretty stretched resources ☹️

We won't be able to meet the deadline of today and appreciate that we can still provide comment into the process for consideration at a later date. We will note this on the file, when the next audit is due, which looks like in about 6 months?

MAC

From: Chris Knight <cknight@bloomcoll.com.au>
Sent: Monday, 17 August 2020 3:05 PM
To: Mary-Anne Crawford <mccrawford@singleton.nsw.gov.au>
Subject: RE: Consultation- Rix's Creek South Management Plans

Hi Mary-Anne,
 I hope all is well....thank you for sending through SSC's comments in regard to the Rehabilitation Strategy last Friday. I note that we are yet to receive Council's comments on the Social Impact Management Plan (comments due 10 August) and the Historic Heritage Management Plan (comments due 7 August) which were sent for consultation to SSC through the NSW Major Project Portal.

In accordance with our Project Approval for SSD 6300 Rix's Creek Continuation we are required to submit all Management Plans within 6 months of commencement being 24 August 2020.

Unfortunately in order to be able to address Council's comments appropriately we would need Council's response to the above plans by close of business today. If not received from Council today we would be happy to accept them after this date and can review and address any comments at the next update of the Plan (which would be during review of the plan by DPIE or after the upcoming IEA or the next Annual Review).

Please give me a call to discuss if you have concerns.

Best Regards



WE CARE. WE DELIVER.

Chris Knight
 Environment Manager
 E: cknight@bloomcoll.com.au | T: 02 6578 8824 | M: 0403 058 777
 W: www.bloomcoll.com.au
 PO Box 4, East Maitland, NSW 2323
 North: Bridgman Road, South: Rix's Creek Lane, Singleton, NSW 2330 Australia

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From: Chris Knight
Sent: Tuesday, 11 August 2020 9:32 AM
To: 'Mary-Anne Crawford' <mccrawford@singleton.nsw.gov.au>

1

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Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	39 of 47

Cc: Geoff Moore <gmoore@bloomcoll.com.au>
Subject: RE: Consultation- Rix's Creek South Management Plans

Hi Mary-Anne,
I hope all is well...Just a quick email to follow up if you received my email last week in regard to the Rix's Creek South Rehabilitation Strategy and Social Impact Management Plan which were sent for consultation to SSC through the NSW Major Project Portal.

In accordance with our Project Approval for SSD 6300 Rix's Creek Continuation we are required to submit all Management Plans within 6 months of commencement being 24 August 2020.

If comments are not received from Council by the end of this week we would be happy to accept them after this date and can review and address any comments at the next update of the Plan (which would be after the upcoming IEA or the next Annual Review).

Please give me a call to discuss if you have concerns.

Best Regards


Chris Knight
 Environment Manager
 E: cknight@bloomcoll.com.au | T: 02 6578 8824 | M: 0403 058 777
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Please note: If you have received this e-mail in error, please notify the sender immediately by reply e-mail and delete all copies of this transmission together with any attachments as the information contained and any attached files may be confidential and/or subject of legal professional privilege.

From: Chris Knight
Sent: Monday, 3 August 2020 11:26 AM
To: 'Mary-Anne Crawford' <mcrawford@singleton.nsw.gov.au>
Cc: Geoff Moore <gmoore@bloomcoll.com.au>
Subject: Consultation- Rix's Creek South Management Plans

Hi Mary-Anne,
Just a quick email to follow up on a couple of Management Plans / Strategies which have been submitted for consultation with Singleton Council via the NSW Major Projects Portal.

- Rehabilitation Strategy- submitted 17 June 2020.
- Social Impact Management Plan – submitted 13 July 2020.

In accordance with our Project Approval for SSD 6300 Rix's Creek Continuation we are required to submit all Management Plans within 6 months of commencement being 24 August 2020.
To allow inclusion of any comments or recommendations from Council can you please provide feedback on the above documents by 13 August 2020, or sooner if possible please.

If you require anything further please don't hesitate to give me a call.

Best Regards,


Chris Knight
 Environment Manager
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Reviewed By:	D Munro			Issue Date:	09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	40 of 47



Planning,
Industry &
Environment

Christopher Knight
Four Mile Creek Road
Ashtonfield, NSW 2323

18/12/2020

Dear Mr Knight

**Rix's Creek Coal Extension (SSD-6300-PA-25)
Historic Heritage Management Plan**

I refer to the Historic Heritage Management Plan which was submitted in accordance with Condition 59 of Schedule 2 of the Consent of Approval for the Rix's Creek Coal Extension (SSD-6300-PA-25).

The Department has carefully reviewed the document and is satisfied that it addresses the recent RFI issued.

Accordingly, the Planning Secretary has approved the Historic Heritage Management Plan (Revision 1.2, dated December 2020). Please ensure that the approved plan is placed on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Charissa Pillay on 0299955944.

Yours sincerely

Matthew Sprott
Director
Resource Assessments (Coal & Quarries)
As nominee of the Planning Secretary

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Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 41 of 47



Christopher Knight
Four Mile Creek Road
Ashtonfield, NSW 2323

25/11/2020

Dear Mr Knight

**Rix's Creek Coal Extension (SSD-6300-PA-25)
Historic Heritage Management Plan**

I refer to the Historic Heritage Management Plan which was submitted in accordance with Condition 59 of Schedule 2 of the Consent of Approval for the Rix's Creek Coal Extension (SSD-6300-PA-25).

After careful consideration, the Department is requesting that you provide additional information, as per the attachment.

You are requested to provide the information, or notification that the information will not be provided, to the Department by Friday 11 December 2020. If you are unable to provide the requested information within this timeframe, you are required to provide, and commit to, a timeframe detailing the provision of this information.

If you have any questions, please contact Charissa Pillay, who can be contacted on / at Charissa.Pillay@planning.nsw.gov.au.

Yours sincerely

Matthew Sprott
Director
Resource Assessment

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Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 42 of 47

Rix's Creek SSD-6300-PA-25
Post Approval Review



**Planning,
Industry &
Environment**

Document: Historic Heritage Management Plan

Revision: Version 1.1 June 2020

Reviewed: Charissa Pillay on "November 2020"

<i>Historic Heritage Management Plan, Condition B59, Schedule 2</i>	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
The Applicant must prepare a Historic Heritage Management Plan for the development, in respect of all non-Aboriginal cultural heritage items, to the satisfaction of the Planning Secretary. This plan must:				
(a) Be prepared by a suitably qualified and experienced person/s;	Yes	-	-	-
(b) Be prepared in consultation with the Heritage Branch, Council and relevant landowners and in accordance with the relevant Heritage Branch guidelines;	Yes	Appendix C	-	-
(c) Be submitted to the Planning Secretary for approval within six months of commencing development under this consent;	Yes	Appendix B	-	
(d) Describe how historic heritage values of the site would be recorded and preserved;	partial	Section 4 describes the historic heritage values of the sites and furthers describes two of four potential historical heritage items would be destroyed by the development of North Pit. Section 4.2 states the heritage items will be mitigated "through recordings carried out in accordance with this HHMP."	Describe the measures, protocols to preserve and recordings to be conducted or include a summary and refer to Appendix C section 2.	See update section 4.2.
(e) Identify all heritage items in the vicinity of the site and include a	Yes	Section 5, Table 5	-	

1

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Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 43 of 47

Rix's Creek SSD-6300-PA-25
Post Approval Review



Document: Historic Heritage Management Plan

Revision: Version 1.1 June 2020

Reviewed: Charissa Pillay on "November 2020"

statement of significance for each item;				
(f) For the Coke Ovens, describe the measures to:	Yes	The Conservation Management Plan (CMP) is referred to in Appendix C will address the full recording and detail strategies to <i>determine the long-term preservation of the coke ovens..</i> – This is currently being prepared.	Include the content of the CMP within a revised HHMP and submit the plan within three months of completion of the CMP.	Noted.
(i) Minimise impacts of the development and to improve the integrity of the Ovens;				
(ii) Identify if there is any association with the nearby Mound with Historic Material and the Linear Embankment;				
(iii) Ensure full recording of the Ovens;				
(iv) Manage the Ovens over the life of the development and post-mining				
(g) Describe the measures to be implemented on the site or within any offset areas to:	Yes	Section 4, section 5 and section 7	-	-
(i) ensure all workers receive suitable heritage inductions prior to carrying out any activities which may cause impacts to historic heritage, and that suitable records are kept of these inductions				
(ii) undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance, including the Mound with				

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Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No: 1.2
Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 44 of 47

Rix's Creek SSD-6300-PA-25
Post Approval Review



Document: Historic Heritage Management Plan

Revision: Version 1.1 June 2020

Reviewed: Charissa Pillay on "November 2020"

Historic Material and the Linear Embankment; (iii) protect heritage items located outside the approved disturbance area from unpredicted impacts of the development, disrepair or vandalism (where applicable), including the Coke Ovens and Grandbalang Trig Station; and (iv)manage any new heritage items discovered during the life of development; and				
(h) Include a strategy for the care, control and storage of relics salvaged from the site	Partial	Appendix C provides a background of the relics and its condition.	Table 2-3 updated to demonstrate salvaging all relics onsite not only items of the linear embankment.	Table 2-3 and 2-4 of Appendix C already note that salvaging (surface collection) of all historic items will be undertaken for the linear embankment and historic mound. Other areas such as the coke ovens are not approved for salvage and the two coke oven areas are protected from any further disturbance.

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Reviewed By:	D Munro			Issue Date: 09/12/2020
Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 45 of 47

Rix's Creek SSD-6300-PA-25
Post Approval Review



Document: Historic Heritage Management Plan

Revision: Version 1.1 June 2020

Reviewed: Charissa Pillay on "November 2020"

General Comment	Action Required	Company Response
Please provide a key or legend describing the highlighted texts/paragraphs throughout the document.		As previously discussed the blue highlight was changes made to the original new document in response to consultation with NSW Heritage. Changes made in response to DPIE have been highlighted yellow in Version 4 for your easy reference.
Reference and include section 7.7 of the HHMP into the Blasting Management Plan		This has been completed and submitted with the Blast Management Plan resubmitted 8/12/2020.
Other Agency Comments	Action Required	Company Response

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Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No: 46 of 47

Appendix C – Coke Oven Management Measures

Document Title:	Historic Heritage Management Plan – Rix's Creek South			Document Owner:	Chris Knight
Prepared By:	K Blaikie/ B Churcher	Print Date:	18-Dec-20	Version No:	1.2
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Approved By:	Chris Knight	Review Frequency:	Per Condition E5	Page No:	47 of 47



View of the Rixs Creek Coke Ovens in 2020.

MANAGEMENT MEASURES

RIXS CREEK COKE OVENS & ASSOCIATED WORKS

RIX'S CREEK MINE

V 4.0 DATED 9 DECEMBER 2020

Prepared by

OzArk Environment & Heritage



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DOCUMENT CONTROLS

Proponent	The Bloomfield Group	
Client	Hansen Bailey Environmental Consultants	
Document Description	Management Measures. Rixs Creek Coke Ovens & Associated Works. Rix's Creek Mine	
File Location	OzArk Job No.	
► Hansen Bailey ► Rixs Creek ► Coke Ovens PoM 2020 ► Report	2593	
Document Status: V3.0 FINAL		Date: 17 August 2020
Draft V1.1 Author to Editor OzArk 1 st Internal (Series V1._ = OzArk internal edits)		V1.0 BC author 2/5/20 V1.1: SR edit 4/5/20
Draft V2.0 Report Draft for release to client (Series V2._ = OzArk and Client edits)		V2.0: BC amends following edits 5/5/20 V2.1 BC incorporates client edits 28/6/20 V2.2. BC edit 9/7/20
FINAL V3._once latest version of draft approved by client		V3.0 BC finalises 17/8/20
FINAL V4. Revised following request for further information from DPIE		V4.0 BC address DPIE comment.
Prepared For		Prepared By
Kirstin Blaikie Senior Environmental Scientist Hansen Bailey		Ben Churcher Principal Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 F: 02 6882 6030 ben@ozarkehm.com.au
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Enquiries should be addressed to OzArk Environment & Heritage.		

CONTENTS

1	INTRODUCTION	1
1.1	Description of the Plan	1
1.2	Purpose	2
1.3	Scope	2
1.4	Background.....	2
1.4.1	2020 Site Inspection	3
1.5	Site description	3
1.5.1	The Coke Ovens.....	3
1.5.2	The linear embankment	7
1.5.3	Mound with historic material.....	8
2	MANAGEMENT OF THE RIXS CREEK COKE OVENS & ASSOCIATED WORKS	10
2.1	Preamble	10
2.2	Management zones	10
2.3	Legislative requirements	11
2.4	Management of the coke ovens	13
2.4.1	Permitted developments within the outer buffer	15
2.5	Management of the linear embankment	16
2.6	Management of the mound with historic material	16
2.7	Onsite digital archival photographic recording.....	17
2.7.1	Photographic Archival Record.....	17
3	IMPLEMENTATION	18
4	MEASUREMENT AND EVALUATION.....	18
5	REVIEW AND IMPROVEMENT	19
6	ADDITIONAL ASSESSMENT AND CONSENT REQUIRED	19
7	DOCUMENT INFORMATION.....	19
	REFERENCES	20

FIGURES

Figure 1-1: Aerial showing the location of the Rixs Creek Coke Ovens & Associated Works.....	1
Figure 1-2: Aerial showing the Rixs Creek Coke Ovens and associated features.....	5
Figure 1-3: Map of Rixs Creek Coke Ovens & Associated Works (after Croft & Associates).	6
Figure 1-4: Views of the coke ovens from the 2020 site visit.	6
Figure 1-5: View of the linear embankment (AECOM 2015: 30).	8
Figure 1-6: View of the mound with historic material (AECOM 2015: 32).	9
Figure 2-1: Aerial showing the outer and inner buffers for the coke ovens.	11
Figure 2-2: Aerial showing the extent of the LEP heritage curtilage.....	13

TABLES

Table 2-1: Management of the coke ovens.	13
Table 2-2: Permitted developments within the boundary of the outer buffer.	15
Table 2-3: Management of the linear embankment.	16
Table 2-4: Management of the mound with historic material.....	17

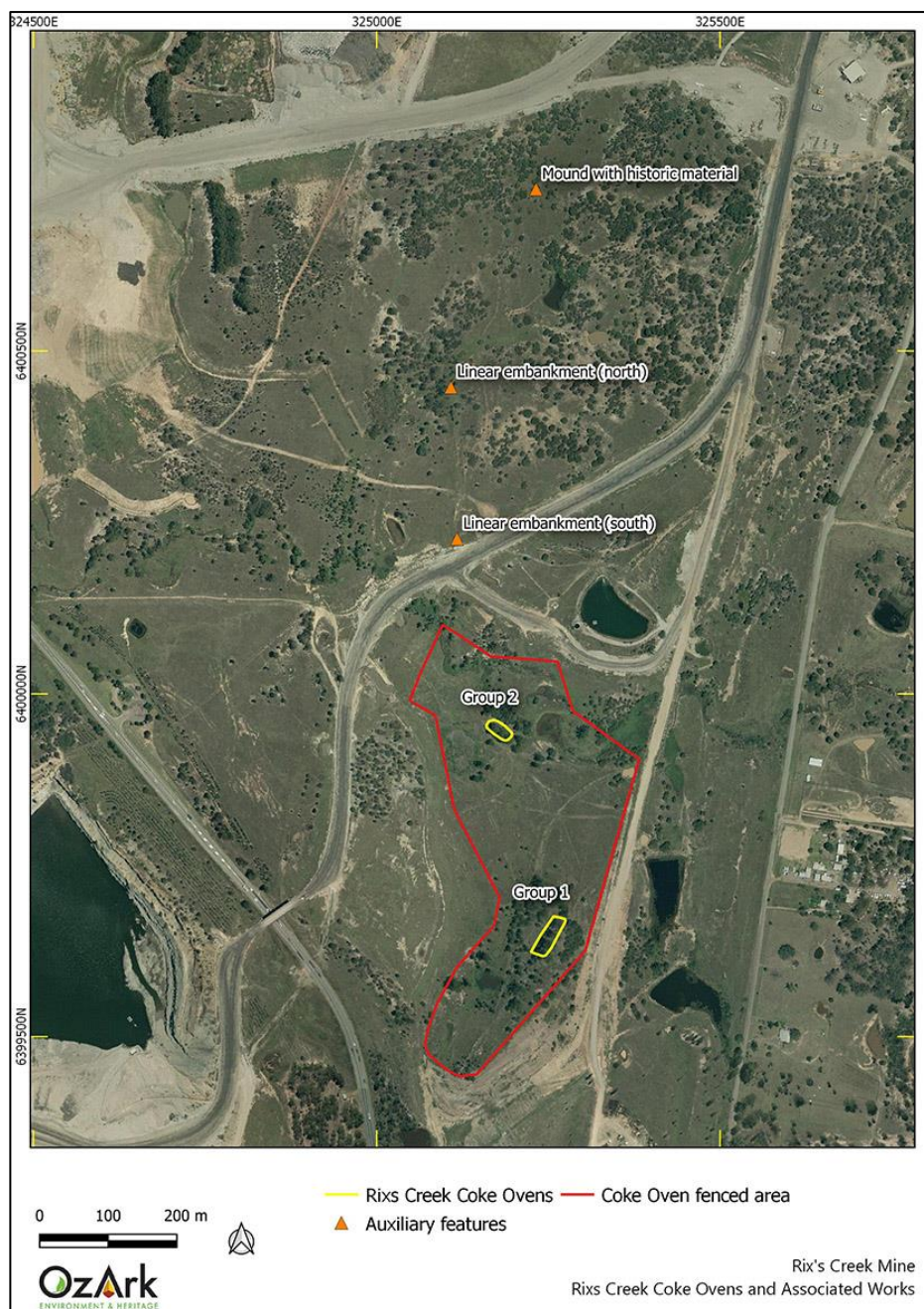
1 INTRODUCTION

1.1 DESCRIPTION OF THE PLAN

OzArk Environment & Heritage (OzArk) has been engaged by Hansen Bailey Environmental Consultants (Hansen Bailey), on behalf of the Bloomfield Group to complete a Plan of Management (the Plan) with regards to the Rixs Creek Coke Ovens & Associated Works. This Plan will form part of the Historic Heritage Management Plan (HHMP) that Hansen Bailey is preparing for the Rix's Creek Mine (RCM).

The Rixs Creek Coke Ovens & Associated Works are in the Singleton Local Government Area (LGA) (**Figure 1-1**).

Figure 1-1: Aerial showing the location of the Rixs Creek Coke Ovens & Associated Works.



1.2 PURPOSE

This Plan pertains to activities associated with the Rixs Creek Coke Ovens & Associated Works. The primary area surrounding the coke ovens is an approximate 11.5 hectare fenced area mostly within Lot 2 DP598097 and Lot 11 DP1187455. At its closest, this area is approximately 100 metres (m) northeast of the New England Highway 220 m west of Rixs Creek Lane. Currently there is no public access to this area as it is within active mining areas. This Plan also refers to auxiliary features; specifically, a mound with historic material and a 220 m long linear embankment. However, the exact relationship of these features to the coke ovens is at this time unclear.

The HHMP has been prepared in accordance with condition B59 of development consent SSD 6300. This Plan is part of the HHMP and is specifically designed to provide management protocols for the Rixs Creek Coke Ovens & Associated Works to ensure that the coke ovens are conserved within the landscape and that the auxiliary features are appropriately managed.

The Rixs Creek Coke Ovens & Associated Works are listed on the Singleton Local Environmental Plan 2013 (LEP) as item I45. The LEP heritage curtilage includes the coke ovens in both Group 1 and Group 2, but not the auxiliary features. The item is described in the Singleton LEP as having state significance due to its association to the coal mining industry of NSW. It is not, however, listed on the State Heritage Register or State Heritage Inventory, only being listed locally on the Singleton LEP.

The Rixs Creek Coke Ovens & Associated Works are within the RCM that is managed by the Bloomfield Group.

1.3 SCOPE

This Plan will be used by the RCM Environment Department to manage the coke ovens to ensure that the cultural heritage values of the location are maintained. The Plan will also provide appropriate management in relation to the auxiliary features. Procedures within this Plan will be used by contractors engaged by RCM to carry out works within the buffer area of the coke ovens.

1.4 BACKGROUND

The site features the relics of a coking operation conducted in the late nineteenth century.

According to a historical synopsis in the Rix's Creek Mine Non-Indigenous Heritage Impact Assessment (AECOM 2015), a syndicate formed by Dr Richard Read that had opened the New Park Mine in 1881, also opened the Rix's Creek Coke Ovens. A battery of coke ovens was built at Rixs Creek in the 1880s; these later had a second battery of ovens constructed around 1900. The coke produced at the ovens was described in 1890 as "the best available". Both batteries are visually discernible in the area.

1.4.1 2020 Site Inspection

In August 2020, Heritage NSW reviewed a draft of this document and noted that it was their preference for the site to be visited and a current condition assessment undertaken to be fully compliant with Condition B59(f) of SSD 6300 and to inform these management measures.

In response to this request, OzArk Principal Archaeologist, Ben Churcher, undertook a site visit on Friday, 14 August 2020. The site visit included mapping the features within the outer buffer (defined in **Section 2.2**), undertaking an archival photographic record of the coke ovens and gathering sufficient information to inform a revision of the Conservation Management Plan (CMP) that is being prepared.

1.5 SITE DESCRIPTION

1.5.1 The Coke Ovens

Historical photographs from 1906 show seven coke ovens in one continuous battery. Materials used to build the ovens included brick and sandstone. The 1906 photographs show the coke ovens to be situated within the larger Rixs Creek mining area, surrounded by such infrastructure as rail tracks housing trolley cars, wooden huts and earth embankments (AECOM 2015).

In 1989, a CMP for the coke ovens (author unknown) described the coke ovens as follows:

The Group 1 battery of coke ovens consists of 26 'beehive' type ovens, thirteen of which are back to back. The ovens are dome-shaped with a hole in the centre top, an arched opening at the front and are mostly in a badly dilapidated condition. It is thought the ovens were constructed in the early 1870s and were used up until 1919.

The Group 2 ovens consist of eight 'beehive' ovens and four 'arched' or 'culvert' ovens, the latter being of a more advanced design. It has been estimated that this group was constructed in the mid-1880s and ceased operation by about 1905.

Three mines operated in association with the coke ovens. Each mine is blocked by falls at its entrance. Embankments which once supported skip tracks link Mines 1 and 3 with the coke ovens and mullock heap.

In 2006 for an updated CMP (Lonergan 2007), Peter Lonergan described the site as follows:

The site comprises of approximately: 8ha of previous activity, 2 batteries of coke ovens three drift entries, random mullock heaps and a complex of embankments that supported the tressle system servicing the mine, oven and coal loaders.

There are trees growing out of both batteries, and there are some weeds about the ground and embankments. There is a large amount of dead wood on the ground and

some fallen trees on the larger battery that has caused some damage. These are evident also in the 1989 photos.

The coke oven relics are in fair condition. The large battery (26 ovens) is in better condition than the smaller (12 ovens) battery but was apparently built after the smaller, and used for 20 years after the smaller battery were decommissioned.

In 2009 the coke ovens were inspected and described as being overgrown by vegetation, having also undergone collapse and vandalism in some areas (AECOM 2015). In 2014 the president of the Singleton Historical Society & Museum advised AECOM (2015: 22) that “*the trees were growing through the ovens even before the present mine owned the land*”.

1.5.1.1 Current Condition

- The coke oven area is currently fenced, although the fence needs repair/replacement.
- Historically the ovens have been disturbed by theft and vandalism, e.g. removal of sandstone blocks.
- Vegetation, including substantial trees, continues to grow over the ovens.
- The ovens remain in an interpretable form but are in a generally poor condition with obvious signs of substantial deterioration.
- The public do not have access to the coke ovens as the area is within the designated active mining area.

Figure 1-3 shows an aerial of the area surrounding the coke ovens based on observations from the August 2020 site visit. The linear embankment (north) (**Section 1.5.2**) and mound with historic material (**Section 1.5.3**) are the items referenced in Condition B59(f) of SSD 6300. As can be seen on **Figure 1-3**, a portion of linear embankment was recorded to the north of Stonequarry Gully and south of the existing haul road. This portion lines up with the linear embankment (north) and indicates that the two features are remnants of a single embankment that probably supported a tramway bringing coal to the Group 2 coke ovens. This, and a portion of embankment to the east of the outer buffer, are shown as ‘extrapolated’ on **Figure 1-3**.

Figure 1-3 shows a plan of the outer buffer features from the 1989 CMP. While the drift for ‘Mine No1’ as shown on this figure was clearly visible during the 2020 inspection, the portals for ‘Mine No2’ and ‘Mine No3’ were not visible, potentially obscured by long grass.

Figure 1-4 shows views of the coke ovens from Group 1 and Group 2 taken during the August 2020 site visit. These photographs show the substantial nature of the encroaching vegetation and the generally poor condition of the items.

Figure 1-2: Aerial showing the Rixs Creek Coke Ovens and associated features.

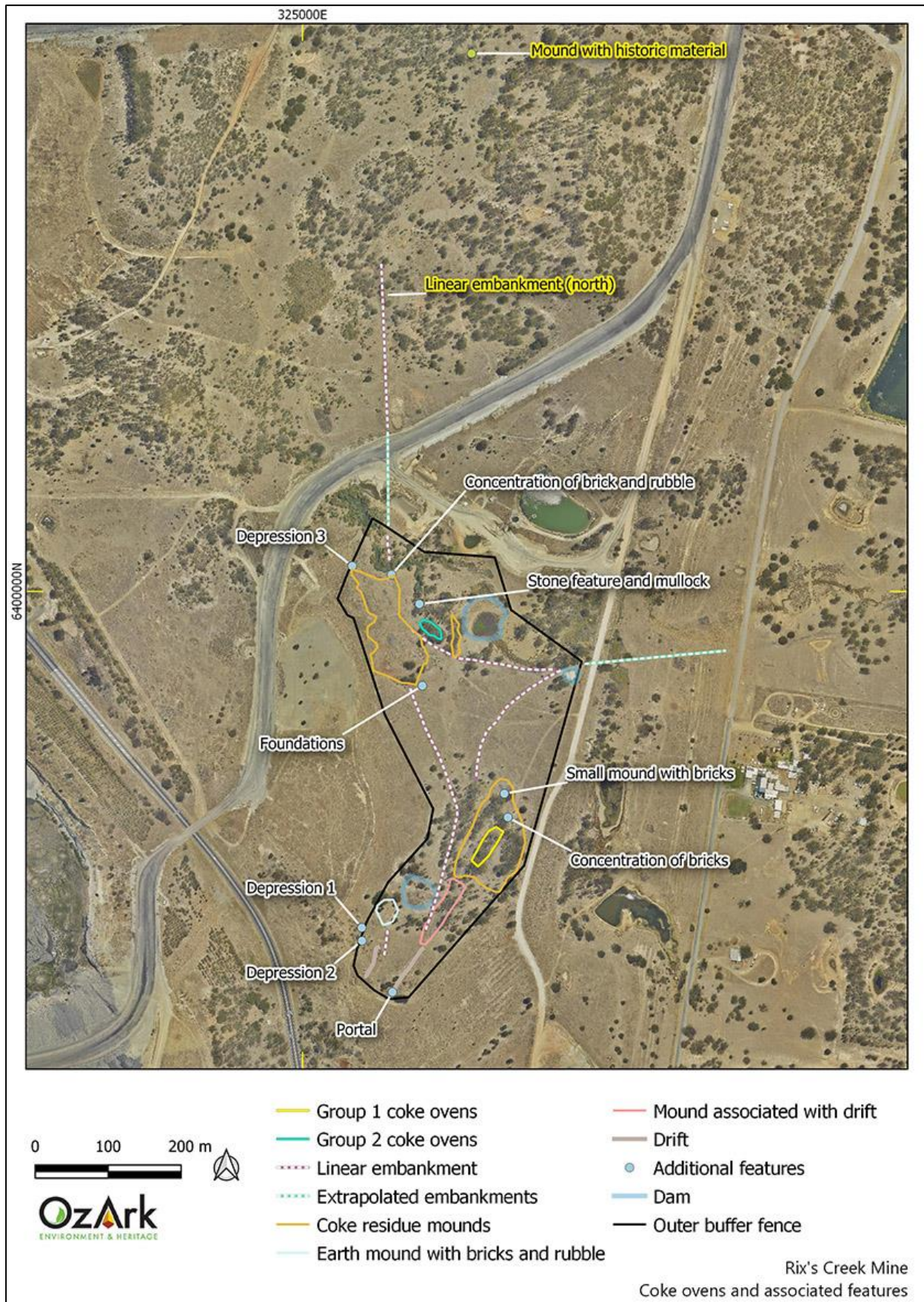
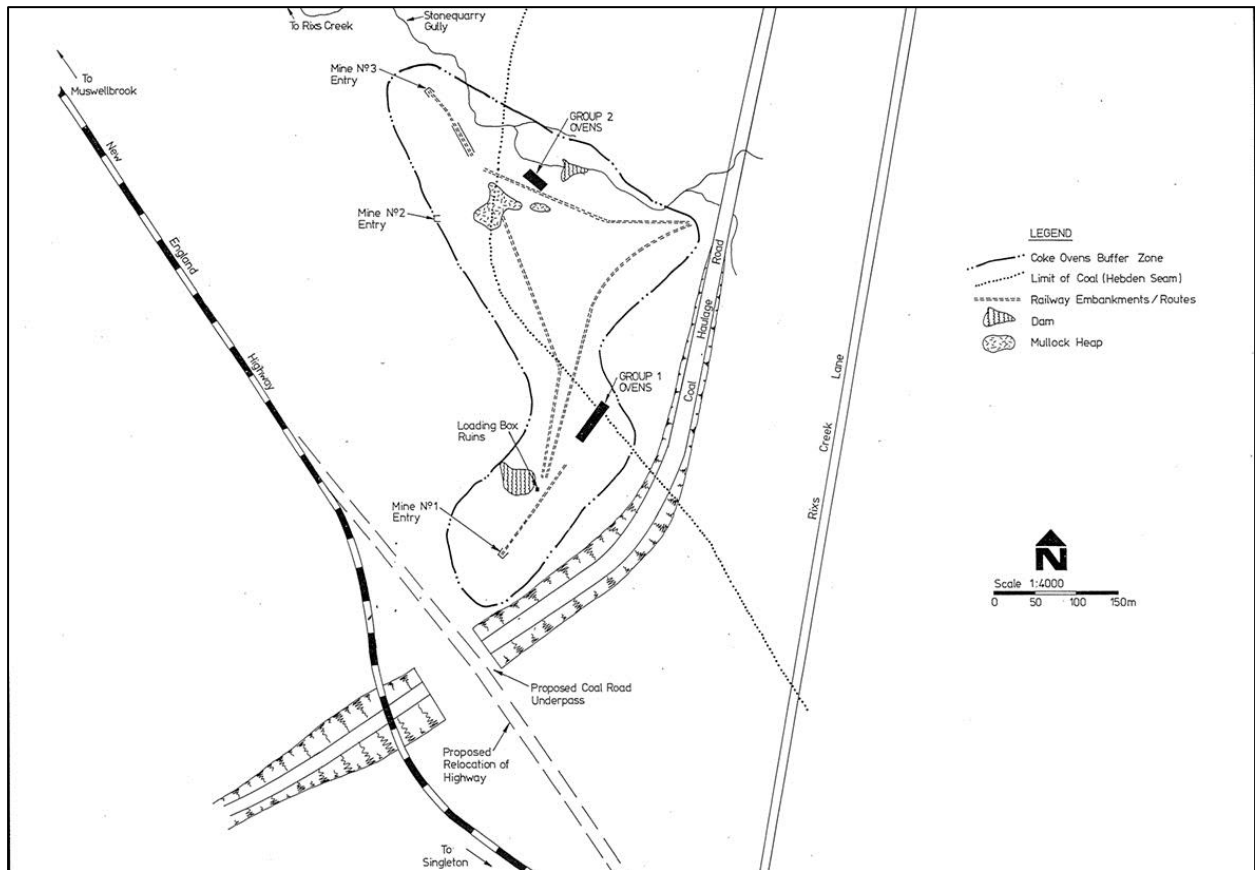
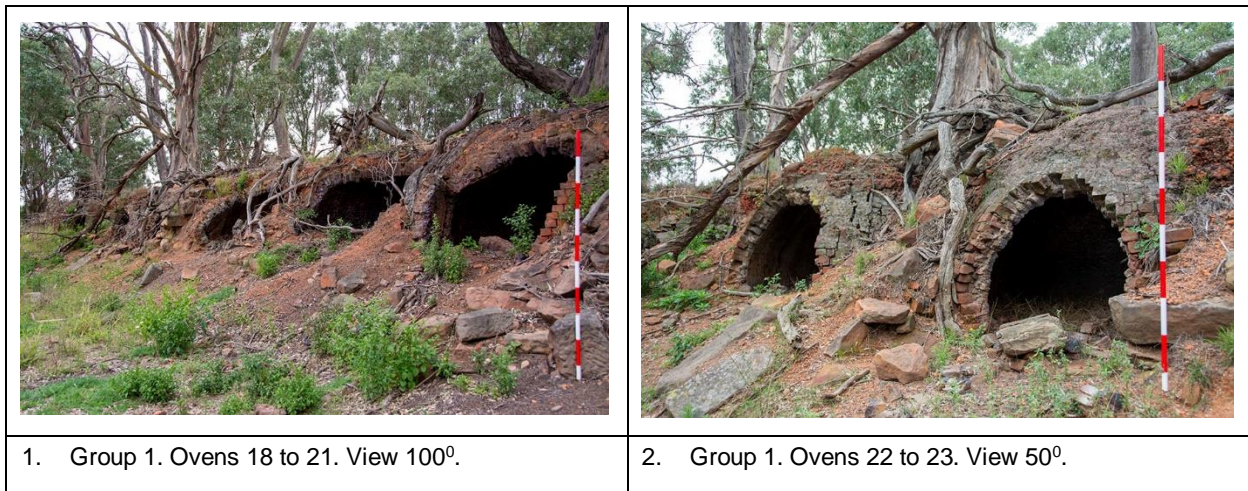






Figure 1-3: Map of Rixs Creek Coke Ovens & Associated Works (after Croft & Associates).**Figure 1-4: Views of the coke ovens from the 2020 site visit.**

	
<p>3. Group 1. Oven 6 showing stonework and in situ door clasp. View 250°.</p>	<p>4. Group 2. South-western side. View 70°.</p>
	
<p>5. Group 2. Ovens 5 and 6. View 230°.</p>	<p>6. Group 2. South-western side. View 60°.</p>

1.5.2 The linear embankment

AECOM (2015: 29) describe the context of the linear embankment as follows:

During this assessment a section of mounded earth in a linear alignment was identified. Based on aerial images, historical photographs, comparison with the previously identified tramway remnants and the oral testimony of mine representative, John Hindmarsh, the alignment was tentatively identified as being associated with the coke ovens and historic mining area. An illustration of the coke oven area from 1982 suggests the linear embankment either led to the second group of coke ovens or to the No. 3 Mine that was adjacent to them. The mounded linear alignment is likely to have housed tracks for trolley cars or a tram, utilised to transport material to and from the coke oven area. Any rail lines that may have been present have since been removed.

In addition to the embankment, associated wooden pole remnants were present. Some surface material was also identified, including pieces of metal and broken glass. As the mounded embankment was constructed to house rails, which have since been removed, there is not likely to be a subsurface deposit at this location.

Small numbers of surface items (predominantly metal and wood) were identified in proximity to the item, likely associated with the (since removed) rails.

AECOM (2015: 31) concluded:

The linear embankment is of local historical significance as it relates specifically to the Rixs Creek Coke Ovens & Associated Works and the local coal industry.

Figure 1-5 shows a view of the linear embankment from AECOM's 2015 assessment.

Figure 1-5: View of the linear embankment (AECOM 2015: 30).



1.5.3 Mound with historic material

AECOM (2015: 32) describes the mound as follows:

An artificial mound was identified with some historic surface material on it. The purpose of the mound could not be determined, but its proximity to the historic coal pit and coke oven area means that it may have been associated in some way. The surface historic material included small quantities of wood, metal and glass. There is the potential for further items of the same type to be present in disturbed subsurface contexts within the mound.

AECOM (2015: 32) concluded:

The mound with historic material is of local significance due to its link to the Rixs Creek Coke Ovens & Associated Works and the local coal industry.

Figure 1-6 shows a view of the mound from AECOM's 2015 assessment.

Figure 1-6: View of the mound with historic material (AECOM 2015: 32).



2 MANAGEMENT OF THE RIXS CREEK COKE OVENS & ASSOCIATED WORKS

2.1 PREAMBLE

OzArk has had the opportunity to visit the site in August 2020 to assess the current condition of the Rixs Creek Coke Ovens & Associated Works and to inform the forthcoming updated CMP. To note the degree of deterioration (if any), the results of the 2020 condition inspection will compare the photographs taken in 2006 (Lonergan 2007) and the photographs in AECOM 2015 taken in 2009 during a visit by The Amateur Geological Society of the Hunter Valley.

2.2 MANAGEMENT ZONES

It is a recommendation of this Plan that two areas be designated surrounding the coke ovens:

- a) Outer buffer: The outer buffer includes the historic features shown on **Figure 1-2** including the two groups of coke ovens, up to three mine portals (all in-filled), mullock heaps and tramway embankments. This area is currently fenced; however, the fence is in poor condition. This fence will be repaired and reinstated to restrict personnel from entering the area. All gates to the area will be locked with restricted access by environmental personnel only. The outer buffer will be defined by a number of signs that will alert RCM employees and contractors to the presence of the heritage site
- b) Inner buffer: Coke ovens Group 1 and Group 2 will be fenced individually prior to the cessation of mining (year 2040) to protect the most significant items from impact post mining. The precise location of the fencing associated with the inner buffer will be determined in the updated CMP that is being prepared.

The indicative locations of the two buffers is shown on **Figure 2-1**.

Figure 2-1: Aerial showing the outer and inner buffers for the coke ovens.



2.3 LEGISLATIVE REQUIREMENTS

The New South Wales *Heritage Act* was introduced in 1977 to protect the important heritage places that form part of our environment and our identity.

Heritage listing provides formal recognition by your local council or the state government that a place has heritage significance and that the community wants to keep it for future generations. There are two levels of statutory listing:

- a) Local heritage items listed on heritage schedules to a local council's LEP
- b) State heritage items listed on the State Heritage Register. This list includes only those items which have been identified as having particular importance to the people of NSW.

Owners of heritage-listed properties need to seek approval from the local council or the Heritage Council of NSW if they wish to make major changes which may affect the heritage significance of a listed place.

The Rixs Creek Coke Ovens & Associated Works are listed on the Singleton LEP as item I45. It should be noted that the LEP curtilage includes all of the currently fenced heritage area, as well some surrounding areas (**Figure 2-2**).

Due to the LEP heritage listing, Section 5.10 of the Singleton LEP applies. The salient points of Section 5.10 applicable to the coke ovens are that it is not permissible under the *Heritage Act* to demolish or alter the coke ovens or associated historic features within the defined LEP curtilage unless a development consent is provided by council. This includes ground disturbance that could impact archaeological deposits. However, if RCM notifies council before work of a minor, non-impacting, nature is undertaken, an exemption to apply for a development consent may be granted.

An example of an action that would require development consent would be undertaking restoration of the coke ovens that would involve removing and replacing original fabric.

An example of an exempt action would be removing vegetation from the coke ovens that does not involve disturbing original fabric.

Section 5.10 of the Singleton LEP states (in part):

- (2) Requirement for consent Development consent is required for any of the following—
 - (a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance)—
 - (i) a heritage item
 - (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- (3) When consent not required However, development consent under this clause is not required if—
 - (a) the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development—
 - (i) is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or archaeological site or a building, work, relic, tree or place within the heritage conservation area, and
 - (ii) would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area.

Figure 2-2: Aerial showing the extent of the LEP heritage curtilage.

2.4 MANAGEMENT OF THE COKE OVENS

Table 2-1 sets out the appropriate management regime for the protection and maintenance of historic heritage values at the Rixs Creek Coke Ovens & Associated Works. These regimes reference either the outer or inner buffer as noted.

Table 2-1: Management of the coke ovens.

Management Issue	Management Strategy
Establishment of the outer buffer	<p>The fence currently enclosing the outer buffer is in poor condition and will be repaired and maintained. The outer buffer will be identified by:</p> <ol style="list-style-type: none"> The current alignment of the fence line will be identified as a 'heritage area' where ground disturbing impacts and disturbance of historic items will be prohibited unless previously assessed. Vehicle movement in this area will be minimised to essential land management activity. This area will be delineated on the RCM GIS database Signs will be erected on the outer buffer fence to alert people entering the area that they are entering a historic site. These signs will be particularly visible at any point where the outer perimeter can be accessed by vehicles.
Establishment of the inner buffer	<p>The inner buffer shown on Figure 2-1 will be fenced at the cessation of mining (year 2040) and will be signed around each of the two groups of coke ovens. The fence should have a lockable gate to allow access for maintenance.</p>
Maintenance of the outer buffer	<p>The outer buffer will be maintained by:</p> <ol style="list-style-type: none"> Allowing crash grazing by a small group of cattle to suppress weed and grass growth as these could become a fire hazard. Stock will be controlled from entering the inner buffer by use of temporary electric fencing Undertaking weed and feral animal control as per Section 3.2.14 of the RCM Mine Operation Plan (MOP). In particular, burrowing animals such as rabbits will be controlled within the outer buffer

Management Issue	Management Strategy
Maintenance of the inner buffer	<p>The inner buffer will be maintained by:</p> <ol style="list-style-type: none"> The gate in the fence surrounding the inner buffer, to be installed at the cessation of mining, will be kept locked to discourage unauthorised access The RCM Environment Department will seek advice from an archaeologist and an arborist on cutting and poisoning trees growing on or immediately adjacent to the coke ovens as this will assist in the long-term conservation of the ovens. The removal of trees will take place in a timely manner following the approval by DPIE of the CMP and the works will be undertaken within 36 months of the plan's approval. Fallen, dead timber on or immediately adjacent to the ovens will be removed, both for aesthetic reasons, as well as a bushfire suppression mechanism. Trees within 20 m of the coke ovens will be removed to prevent damage from falling limbs and/or trees Weed and grass growth within the inner buffer will be maintained to a reasonable level. The use of a mower or brush cutter to trim weeds/grass around the ovens is permissible, however, there should be no use of brush cutters within 20 centimetres of any visible remains from the coke ovens. If considered necessary, areas closer than 20 centimetres to visible remains should be controlled with an appropriate herbicide The RCM Environment Department will ensure that pest animals, such as rabbits that disturb the ground surface, are controlled within the inner buffer Staff from the RCM Environment Department will inspect the inner buffers annually to identify any maintenance issues. If maintenance issues are noted, such as excess weed/grass growth, an appropriate action will be put in place and actions documented
Update Conservation Management Plan	<p>The last update of the CMP was in 2007 (Loneragan 2007) and the CMP will be updated. The updated CMP that is currently being prepared will be informed by:</p> <ol style="list-style-type: none"> A site visit that was undertaken in August 2020 to view the Rixs Creek Coke Ovens & Associated Works and the auxiliary features so that accurate management recommendations can be made. The site visit documented the current condition of the items and established the relationship of the auxiliary features to the main Rixs Creek Coke Ovens & Associated Works A photographic record of all historic items to record the current condition, but also to compare with older photographs taken of the site and reproduced in Loneragan 2007 (see Section 2.7) was completed in August 2020. The record will follow the Heritage Council's 2006 publication, <i>Photographic Recording of Heritage Items using Film or Digital Capture</i>. The photographic record will be held by the Rix's Creek Mine for their records and a copy could be offered to the Singleton Library and/or the Singleton and District Historical Society. Strategies to determine the long-term preservation of the coke ovens and any other significant features identified <p>The CMP will be updated in 2020.</p>
Provision of access to the coke ovens	<p>RCM has a long-term goal to allow public access to the coke ovens. However, as the mine is currently in an active mining area, public access will not be possible until mining ceases (currently estimated as 2040). Before mine closure, RCM will undertake the preparation of an Interpretation Strategy that will establish policies for facilitating public access to the site (presumably from the Rixs Creek Rest Area), as well as other aspects such as interpretative (information) signage or other mechanisms to present information on the site.</p> <p>While the area is an active mine, RCM welcomes requests by special interest groups to visit the sites; although such visits will be arranged through the RCM Environment Department and would only be possible if there are staff available to escort the group</p>
Ongoing erosion within the outer buffer	<p>If any erosion control measures are to be carried out within the outer buffer the following will be undertaken:</p> <ol style="list-style-type: none"> Any erosion works within the outer buffer that involve ground disturbance will be inspected by a suitably qualified archaeologist to determine the likely impacts of the erosion works on archaeological items and to determine appropriate management recommendations The measures contained in the MOP Section 3.2.5 for erosion and sediment control will be used as a guiding principle for erosion control in the outer buffer
Vibration impacts	<p>Indirect impacts could occur from vibration caused by blasting and other mining related activity, as the approved North Pit is within 200 m of the outer buffer at its closest point and other project elements, such as a haul road are even closer. Vibration has the potential to detrimentally impact on heritage significance by damaging the physical structure of the item.</p> <p>As mining will not occur at the North Pit until around 2038, RCM will undertake to conduct an assessment by a heritage specialist and a blasting specialist at least 12 months prior to mining starting at the North Pit. This assessment will provide a baseline study of the heritage features, as well as providing recommendations for the management of any vibration impacts</p>

Management Issue	Management Strategy
Impact by growth of noxious weeds and/or by removal of noxious weeds	<p>If any weed control is to be carried out within 50 m of a known heritage feature, the appropriate safeguards will be in place:</p> <ul style="list-style-type: none"> a) Contractors will be informed of the feature's location and its legislative protection under the <i>Heritage Act 1977</i> b) No vehicles will be driven within the inner buffer c) No ground disturbing activities associated with weed control can take place within 50 m of a known heritage feature d) The measures contained in the MOP Section 3.2.14 for weed management will be used as a guiding principle for weed management in the outer buffer
Impact by works associated with bushfire management	<p>As grazing will be permitted within the outer buffer, fuel loads will be controlled.</p> <p>The use of machinery to control fire hazards within the outer buffer, but outside known heritage features (including a 50 m buffer), will be permissible. If such controls involve ground disturbance, the potential impacts to historic items should be first assessed by a heritage specialist</p> <p>Any fire breaks required will be placed outside the boundary of the outer buffer. In an emergency situation, firebreaks within the outer buffer will be permissible if they will act to conserve important cultural heritage values. In this eventuality, the following precaution will be undertaken:</p> <ul style="list-style-type: none"> a) The local Rural Fire Service (RFS) will be advised of the presence of the historic sites in an effort to encourage, where possible, the RFS to avoid impacts within the outer buffer and particularly within the inner buffer b) If any fire hazard clearance that will result in ground disturbance is to be carried out within the confines of a heritage feature, including a 50 m buffer surrounding the feature, other than during an emergency situation, advice from a heritage specialist will be sought. Any approved works will be undertaken manually, and every effort made to avoid known heritage features
Accidental impact to the heritage features from other mine related works	<ul style="list-style-type: none"> a) All relevant mining personnel and contractors will receive historic heritage awareness training as part of the RCM site induction b) The outer buffer will be demarcated and will display appropriate signage c) The outer buffer should not be accessed by light vehicles in wet weather where there is a risk of vehicle bogging and other ground churning impacts d) If any other mine related activities resulting in ground disturbance are proposed to be undertaken within the outer buffer, assessment will be made by a heritage specialist before any such works may proceed. Any locations where ground disturbance is proposed will be first inspected by a suitably qualified archaeologist to determine precisely the likely impacts of the works and to determine appropriate management recommendations
Access to the outer buffer for archaeological research	Requests to undertake archaeological research within the outer and/or inner buffer will be considered by RCM and judged on their merit with consideration that the area is an active mining area

2.4.1 Permitted developments within the outer buffer

All Permitted Developments (**Table 2-2**) must be undertaken in a manner that they do not conflict with legislation such as the *Heritage Act 1977* that protects, for example, the heritage values of LEP listed sites such as Rixs Creek Coke Ovens & Associated Works.

Table 2-2: Permitted developments within the boundary of the outer buffer.

Permitted Development	Management Strategy
Site demarcation	The outer buffer will be demarcated by repairing the existing fence and by placing signs around the perimeter to alert people to the heritage area. In order to allow vehicle access in an emergency, a locked gate will be provided in the fence. A fence will be erected around the boundary of the inner buffer to at the cessation of mining to block public vehicle access and prevent damage by vandalism. The inner buffer will be protected by the installation of temporary electric fencing to prevent access by stock during crash grazing in the outer buffer
Entry of machinery	Machinery, such as a crane, may need to access the outer buffer to assist in the removal of vegetation from the coke ovens. The updated CMP will specify the route that such machinery will access the site and where it would park within the outer buffer.

Permitted Development	Management Strategy
Information Board	If agreed to by RCM, an information board will be erected at the end of mining. This board could either: <ul style="list-style-type: none"> a) Ask people to respect the historic significance of the area and provide an appropriate contact number to report any damage b) Provide information that records the history of the site and provides information on how the coke ovens were made and used
Other facilities	If a need is identified for the installation of any other items within the boundary of the outer buffer, the advice of a heritage specialist will be sought. Any additional infrastructure will be kept low-key in order to minimise attracting attention to the site and to maintain the aesthetics of the place

2.5 MANAGEMENT OF THE LINEAR EMBANKMENT

When mining occurs at the North Pit around 2038, the linear embankment will be destroyed by approved mining activities (the linear embankment is shown on **Figure 1-2** as ‘linear embankment (northern)’. Until such time as the destruction of the linear embankment is essential, the feature will be conserved in the landscape. In order to mitigate the loss of heritage values, the management strategies set out in **Table 2-3** will be followed.

Table 2-3: Management of the linear embankment.

Management Issue	Management Strategy
General management of the linear embankment	Until such time as the destruction of the linear embankment is essential it will be maintained by: <ul style="list-style-type: none"> a) Allowing crash grazing by a small group of cattle to suppress weed and grass growth as these could become a fire hazard b) Undertaking weed and feral animal control as per Section 3.2.14 of the RCM Mine Operation Plan (MOP). In particular, burrowing animals such as rabbits will be controlled in or adjacent to the linear embankment
Undertake further investigation	An update of the CMP for the coke ovens is being undertaken. The CMP will include an examination of the linear embankment to: <ul style="list-style-type: none"> a) Document the current condition of the item and establish the relationship of the item to the main Rixs Creek Coke Ovens & Associated Works as shown in Section 1.5.1.1 b) To document the archival record of the historic item that has been undertaken to record the current condition (see Section 2.7). The archival record will include a detailed plan of the feature and any associated features
Mitigation of loss of heritage values	At the time when the destruction of the linear embankment is required by approved mining activities, the following mitigation strategy will be undertaken: <ul style="list-style-type: none"> a) A surface collection of all historic items will be undertaken prior to the impact of the item b) Any historic items recovered will be held at a secure location at the RCM. At the time it should be investigated whether the Singleton Historical Society & Museum Inc. would be a suitable repository for any historic items

2.6 MANAGEMENT OF THE MOUND WITH HISTORIC MATERIAL

When mining occurs at the North Pit around 2038, the mound with historic material will be destroyed by approved mining activities (**Figure 1-2**). Until such time as the destruction of the mound is essential, the feature will be conserved in the landscape. In order to mitigate the loss of heritage values, the management strategies set out in **Table 2-4** will be followed.

Table 2-4: Management of the mound with historic material.

Management Issue	Management Strategy
General management of the mound with historic material	<p>Until such time as the destruction of the mound with historic material is essential it will be maintained by:</p> <ul style="list-style-type: none"> a) Allowing crash grazing by a small group of cattle to suppress weed and grass growth as these could become a fire hazard b) Undertaking weed and feral animal control as per Section 3.2.14 of the RCM Mine Operation Plan (MOP). In particular, burrowing animals such as rabbits will be controlled in or adjacent to the mound with historic material
Undertake further investigation	<p>An update of the CMP for the coke ovens is being undertaken. The CMP will include an examination of the mound with historic material to:</p> <ul style="list-style-type: none"> a) Document the current condition of the item and attempt to establish the relationship of the item to the main Rixs Creek Coke Ovens & Associated Works b) To document the archival record of the historic item that has been undertaken to record the current condition (see Section 2.7). The archival record will include a detailed plan of the feature and any associated features
Mitigation of loss of heritage values	<p>At the time when the destruction of the mound with historic material is required by approved mining activities, the following mitigation strategy will be undertaken:</p> <ul style="list-style-type: none"> a) A surface collection of all historic items will be undertaken prior to the impact of the item b) Based on the recommendations in AECOM 2015, the mound with historic material should be monitored by an archaeologist at the time it is being destroyed. This monitoring is to determine the nature of this mound and to recover further historic material should it be present. It is recommended that the mound be half-sectioned mechanically and the results used to determine the usefulness of investigating the remaining half and/or sieving the mound deposit c) Any historic items recovered will be held at a secure location at the RCM. At the time it should be investigated whether the Singleton Historical Society & Museum Inc. would be a suitable repository for any historic items

2.7 ONSITE DIGITAL ARCHIVAL PHOTOGRAPHIC RECORDING

An archival recording has been undertaken in accordance with Heritage NSW guidelines *Photographic Recording of Heritage Items Using Film or Digital Capture* (Heritage Office 2006).

The photographic recording included:

- Contextual photographs showing site/item and remains, and relevant relationships to other sites/items and surroundings
- Detailed photographs of each site/item
- Preparation of plans of the sites/items (unless nature of site/item does not warrant a site plan. In these instances, the photographs will be accompanied by a plan indicating the location of the site only)
- Photographic plans of all sites/items.

The photographic recording will then be collated into a photographic archival record for RCM's records.

2.7.1 Photographic Archival Record

The photographic archival record will comprise two copies of a brief report detailing background information and methodology in addition to the actual archival record. One copy will be for the records of RCM, the other copy will be deposited with Singleton Library and/or the Singleton and District Historical Society for their collection. The photographic prints forming the archival record

will be processed with archivally stable inks on archivally acceptable photographic paper and stored in archival polypropylene sleeves. The photographic report and photographic materials will be stored in an archival folder.

The archival record will include:

- One full set of archival 6" x 4" colour prints processed with archivally stable inks on archivally acceptable photographic paper
- One set of photocopies of full set of colour prints in copy of report for the Singleton Library (for public access)
- Photographic catalogue sheets (photographic record sheets)
- Measured plans of each site/item unless nature of site did not warrant a site plan. In these instances, the photographs will be accompanied by a plan indicating the location of the site only
- Photographic plans (referenced to the photographic catalogue sheets) particular to each site showing the locations of all of the photographic images unless nature of item does not warrant a photographic plan
- One electronic copy of all of the above to be retained by RCM as a safety copy.

3 IMPLEMENTATION

Implementation of this Plan will be the responsibility of Bloomfield following approval from the Department of Planning, Industry and Environment.

Implementation of the actions within the Plan will be the responsibility of Bloomfield.

Actions associated with the development of an updated CMP, including a site visit to inspect the historic items and the undertaking of a photographic record has been undertaken in line with Condition B59(f)(i) which requires actions to "*improve the integrity of the Ovens*" and Condition B59(f)(iii) which requires a "*full recording of the Ovens*".

Actions to remove vegetation from the coke ovens will occur in a timely manner following the completion of the CMP.

Actions associated with the linear embankment and the mound with historic material aimed at mitigating the loss of heritage values (i.e. artefact collection, mound investigation) should not be undertaken outside of 12 months prior to approved mining activities commencing at the North Pit.

4 MEASUREMENT AND EVALUATION

The on-going monitoring of the heritage items at the coke ovens, particularly those items within the inner buffer, will be carried out by the RCM Environment Department.

5 REVIEW AND IMPROVEMENT

This Plan, specifically the on-going maintenance of the coke ovens, can be reviewed on a 'needs basis' by RCM. The Plan should be reviewed if the nature of the currently assessed impacts in areas around the outer buffer change.

A thorough review of this Plan should take place at least 12 months before mining is initiated in the North Pit to re-evaluate the heritage items at that time and to propose management recommendations. This review should particularly consider the linear embankment and the mound with historic material that are proposed to be destroyed by approved mining activity in the North Pit.

6 ADDITIONAL ASSESSMENT AND CONSENT REQUIRED

Any works that involve ground disturbance within the outer buffer or impact to a historic item within the outer buffer will be assessed by a heritage specialist.

Works that potentially involve impact to the historic fabric of the coke ovens or actions that could diminish the heritage values within the outer buffer would require council consent.

7 DOCUMENT INFORMATION

This Plan is part of the RCM HHMP. Protocols for the discovery of additional historic objects and/or skeletal material within the outer buffer of the coke ovens are contained within the RCM HHMP.

REFERENCES

- | | |
|---------------|---|
| AECOM 2015 | AECOM Australia Pty Ltd. <i>Rix's Creek Mine Non-Indigenous Heritage Impact Assessment. Rix's Creek Mine Continuation Project.</i> Report for Rix's Creek Mine Pty Ltd. |
| Lonergan 2007 | Cracknell & Lonergan Architects and Heritage Consultants. <i>Rixs Creek Colliery Coke Ovens Conservation Plan.</i> Report for Bloomfield Collieries. |