

Environmental Impact Statement Industrial Subdivision & Site Remediation Part Lot 1131 Deposited Plan 1057179



Prepared by Barr Property and Planning For Cessnock City Council On behalf of Broaden Management Pty Ltd



Document Control

Title:

Environmental Impact Statement

Proposal:

Concept Development Application

Stage Two - Industrial Subdivision and Site Remediation

Address:

John Renshaw Drive, Black Hill, NSW, 2322

Job No.

16NEW0055

Client:

Broaden Management Pty Ltd

Document Issue

Issue	Date	Prepared by	Reviewed by
Draft 1	18 July 2018	Liam Buxton	Mathew Egan
Draft 2	15 August 2018	Liam Buxton	Mathew Egan
Draft 3	17 August 2018	Liam Buxton	Stephen Barr
Final	20 August 2018	Liam Buxton	

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Statement of Validity

Development Application Details

Applicant name:

Broaden Management Pty Ltd

Applicant address:

Suite 11.02, 205 Pacific Highway

St Leonards, New South Wales, 2065

Land to be developed: 30 lot Torrens Title subdivision, including the treatment of

approximately 82,279m² of contaminated soil.

Environmental Impact Statement Prepared By

Names:

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Certification

I certify that I have prepared the content of this Environmental Impact Statement and to the best of my knowledge:

It is in accordance with Schedule 2 of the Environmental Planning

and Assessment Regulation 2000,

The statement contains all available information that is relevant

to the assessment of the development to which the statement

relates, and

The information contained in this statement is neither false nor

misleading.

Signature:

Name:

Stephen Barr

Date:

Friday, 17 August 2018



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Executive Summary

This Environmental Impact Statement has been prepared by Barr Property and Planning on behalf of F & F Properties. It accompanies a concept development application for the proposed industrial development and site remediation works of Part Lot 1131 in Deposited Plan 1057179. This EIS provides the following:

- A description of the site context, including identification of the subject site, and surrounding development (section 2),
- A description of the proposed development (section 3).
- An assessment of the proposed development against the relevant planning controls and relevant matters under Section 4.15 of the *Environmental Planning and Assessment Act 1979* (section 6)
- Identification and environmental assessment of key issues relevant to the proposed development (section 7),
- Summary of the collective measures required to mitigate the impacts associated with the proposed works (section 8), and
- The justification of the proposal in light of the environmental assessment (section 9).

The proposal seeks assessment under Part 4 of the EPA Act for an industrial subdivision and associated site remediation works within the IN2 Light Industrial zone and a minor portion of vegetation located within the E2 Environmental Conservation zone (section 3).

This application is submitted to Cessnock City Council for determination by the Hunter Region Joint Regional Planning Panel, as detailed within section 6.1 & 6.3. The proposal is designated development, pursuant to Clause 15 under Schedule 3 of the *Environmental Planning and Assessment Regulations 2000* because of the extent of remediation required to ensure the site is suitable for the intended future use as industrial land. In addition, the proposal is also integrated development (section 6.8.5) under the EPA Act. As a result, the proposal is to be referred to the following authorities to provide their respective general terms of approval:

- NSW Subsidence Advisory, in accordance with Section 22 of the Coal Mine Subsidence Compensation Act 2017,
- The Office of Environment and Heritage, under Section 90 of the National Parks and Wildlife Act 1974,
- The Environment Protection Authority, under Section 48 of the Protection of the Environment Operations Act 1997,
- The Roads and Maritime Service, pursuant to Section 138 of the Roads Act 1993, and
- The Natural Resources Access Regulator in accordance with Section 91 of the Water Management Act 2000.

This proposal has been supported by a NSW EPA Accredited Site Auditor, who has undertaken a review of the Remedial Action Plan that has been prepared to ensure the site can be utilised for the future intended use as an industrial estate.



This EIS in association with the prepared subconsultant reports demonstrates that the proposed development will not give rise to any significant adverse environment, social or economic impacts, which cannot be appropriately managed or mitigated.

The proposed development will increase the provision of useable industrial land within an identified growth area (refer to section 5.2 & 5.4). This will provide more direct investment and employment opportunities, with additional flow-on benefits arising from construction and operation phases of the development. The proposed development is consistent with Direction 24 of the Regional Plan; to provide additional opportunities within an employment precinct that does not conflict with adjoining land uses. Overall it is considered to have positive social and economic impacts, representing a net benefit to the local community and to the region.

We therefore submit this application to Cessnock City Council on behalf of our Client. Following a detailed planning assessment of the concept plan, we recommend approval of the application. Approval is recommended subject to the mitigation measures outlined in the specialist subconsultant reports that accompany this application.



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1 Introduction

Barr Property and Planning has been engaged by Broaden Management Pty Ltd to prepare an Environmental Impact Statement (EIS) and associated Development Application (DA) documentation in support of an industrial subdivision involving land remediation works on Part of Lot 1131 in Deposited Plan 1057179. This EIS has been prepared in accordance with the requirements of Part 4 of the *Environmental Planning and Assessment Act 1979* (EPA Act), Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation), and the Secretary's Environmental Assessment Requirements (SEARs). This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

1.1 Purpose of this Environmental Impact Statement

The purpose of this EIS is to accompany a development application made pursuant to Section 4.12(8) of the EPA Act in relation to the proposed development, as described in section 3 of this report.

1.2 Background to the Development

1.2.1 Planning Proposal

A Planning Proposal¹ was lodged with the Department of Planning and Environment in November 2012 to rezone the subject land to part General Industrial IN1 and appropriate environmental conservation zones.

The Planning Proposal was amended in response to community and agency consultation, and detailed studies over the site in 2014. The revised Planning Proposal (PP) proposed the rezoning of approximately 200 hectares of land from Zone RU2 Rural Landscape to a combination of IN2 Light Industrial (195.6 ha), E4 Environmental Living (64 ha) and E2 Environmental Conservation (40.4 ha) under the Cessnock Local Environmental Plan 2011. The draft Local Environmental Plan was endorsed by Cessnock City Council on 12 December 2016. The plan² was subsequently gazetted on 13 April 2017.

1.2.2 Stage 1 (Site Clearing) Development Application

A development application was lodged to Cessnock City Council on 23 February 2018. This proposal sought consent for the clearing of all vegetation present within the IN2 Light Industrial zone and a minor portion of vegetation located within the E2 Environmental Conservation zone. The proposed site clearing was the first stage of a concept development application lodged to Cessnock Council under s.4.22 of the EPA Act to facilitate the future development of the Black Hill Industrial Site; in alignment with the original rezoning proposal (section 1.2.1), the Hunter Regional Plan (section 5.2) and the Draft Greater Newcastle Metropolitan Strategy (section 5.4). At the time of lodgement for Stage 2 (this application), the site clearing development application was still under assessment by Cessnock City Council.

² NSW Government. (2017). *Gazettal Notice: Cessnock Local Environmental Plan 2011 (Amendment No 24*). Adopted 13 April 2017.



¹ City Plan Services. (2015). Planning Proposal. Job No. N-12001. Rev F. prepared 14 October 2015

1.3 Project Team

 $The following \ project\ team\ was\ commissioned\ to\ provide\ their\ respective\ documentation.$

Table 1: Environmental Impact Assessment Team

Company & Contact	Document	EIS Reference
ADW Johnson	Engineering Civil Plans	Appendix C
Richard Kerr	Stormwater Management Strategy	Appendix D
Senior Project Manager	Servicing Strategy	Appendix E
Barr Property and Planning Stephen Barr Director	Environmental Impact Statement	This document
Intersect Traffic Jeff Garry Director	Traffic Impact Assessment	Appendix F
JBS&G Kane Mitchell Managing Principal	Environmental Site Assessment Remedial Action Plan	Appendix G Appendix H
MJD Environmental	Biodiversity Assessment Report	Appendix I
Matt Doherty Director	Bushfire Threat Assessment	Appendix J
Ramboll	Site Audit Statement	Appendix K
Fiona Robinson NSW EPA Site Auditor	Site Audit Report	i
RAPT Consulting Greg Collins Director	Noise and Vibration Assessment	Appendix L
Douglas Partners	Mine Subsidence Assessment	Appendix M
RPS Alex Byrne Senior Heritage Consultant	Aboriginal Cultural Heritage Assessment Report	Appendix N



1.4 Secretary's Environmental Assessment Requirements

In accordance with s.4.39 of the EPA Act, the Secretary of the Department of Planning and Environment issued the requirements for the preparation of the EIS on 28 May 2018. A copy of the SEARs is included within Appendix A.

Table 2 provides a detailed summary of the individual matters listed in the SEARs (No 1224) and identifies where each of these requirements has been addressed in this report and accompanying technical studies.

Table 2: Secretary's Environmental Assessment Requirements

Requirement	Location in Environmental Assessment				
General					
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation).	Environment Statement	tal Impact			
Key Issues	EIS	Technical			
The EIS must address the following specific matters:	Reference	Study			
 Strategic context – including: a detailed justification for the proposal and suitability of the site for the development, 	Section 9				
 a demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistences, and 	Section 5				
 a list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out. 	Section 6				
Remediation action plan – including: a site audit statement from a site auditor accredited under the Contaminated Land Management Act 1997 determining the appropriateness of and approving the Remediation Action Plan,	Section 6.6	Appendix K			
 details of the nature and extent of the contaminated material, comprehensive program of the works proposed, including estimation of the surface area to be disturbed and excavation of contaminated material proposed to be undertaken, 	Section 7.5	Appendix G			



		Location in Environmental Assessment	
•	details of the proposed measures to manage any disturbance of contaminated material, justification for the proposed remediation approach, details of the proposed remediation process, including equipment to be used and measures to dispose of contaminated material, justification of the remediation criteria and process for the cleaning/ verification of all equipment leaving the site (including workers clothing), a detailed site validation plan, and Details of the consistency of the Remediation Action Plan with the relevant NSW Government legislation, environmental planning instruments, guidelines and standards.		Appendix H
3. Waste	Management – including: details of waste handling including, transport, identification, receipt, stockpiling and quality control, and the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21.	Section 7.14 Section 7.14.2	
4. Hazar	ds and risk – including: an assessment of the risk of bushfire, including addressing the requirements of Planning for Bush Fire Protection 2006 (RFS). Any proposed Asset Protection Zones must not adversely affect environmental objectives (e.g. buffers). Provision is to be made for their appropriate management into the future, and Any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations to address this.	Section 7.4 Section 7.9	Appendix J
5. Air Qu	uality – including: a description of all potential sources of air and odour emissions,	Section 7.2	





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Requirement	Location in Environmental	
	Assessment	
8. Traffic and transport – including: • details and road transport routes and access to the site, • road traffic predictions for the development during construction, and • an assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development.	Section 7.12.2 Section 7.12.8	Appendix F
 9. Biodiversity – including: accurate predictions of any vegetation clearing on site or for any road upgrades, an assessment of the proposal in accordance with the Biodiversity Assessment Method (BAM) including an assessment of any potential impacts on aquatic and riparian vegetation and groundwater dependant ecosystems, a detailed assessment of the potential impacts on any threatened species, populations, endangered ecological communities or their habitats, groundwater dependent ecosystems and any potential for offset requirements, details of weed management during construction and operation in accordance with existing State, regional or local weed management plans or strategies, and A detailed description of the measures to avoid, minimise, mitigate and offset biodiversity impacts. 	Section 7.3	Appendix I
 Contamination – including: conceptual site model detailing the potential risks to human health and the environmental receptors in the vicinity of the site, the preparation of a Remedial Action Plan (RAP) for the site, and a Part B Site Audit Statement and Report, prepared by an accredited NSW EPA Site Auditor, which details the site can be made suitable for a particular land use if remediated in accordance with the approved RAP. 	Section 7.5	Appendix G Appendix H Appendix K
11. Visual – including:an impact assessment at private receptors and public vantage points.	Section 7.13	



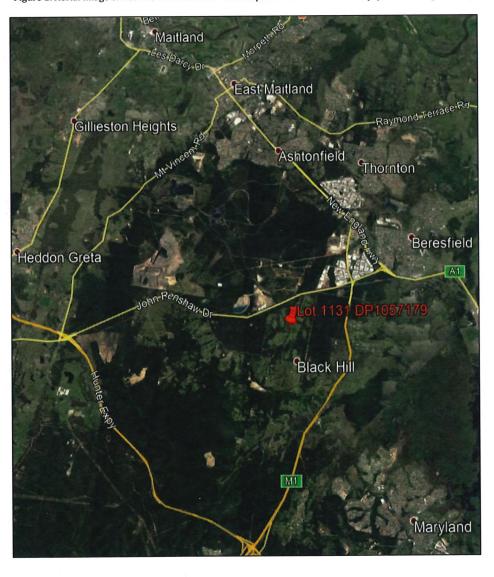
Requirement	Location in Environmental Assessment	
12. Heritage – including:		
Aboriginal and non-Aboriginal cultural heritage.	Section 7.1	Appendix N
Environmental Planning Instruments and other Policies	EIS Reference	Technical Study
The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: • State Environmental Planning Policy (Infrastructure) 2007, • State Environmental Planning Policy (Rural Lands) 2008, • State Environmental Planning Policy No. 33 – Hazardous and Offensive Development, • State Environmental Planning Policy No. 44 – Koala Habitat Protection,	Section 6.8.6	
 State Environmental Planning Policy No. 55 – Remediation of Land, Cessnock City Council Local Environmental Plan 2011, an Relevant development control plans and section 94 plans. Consultation	33. 333 133113373	
Consultation		
During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups. In particular, you should consult with the:	Section 4	
 Environment Protection Authority, Office of Environment and Heritage, Department of Primary Industries, Roads and Maritime Services, Rural Fire Service, NSW Subsidence Advisory, Cessnock City Council, and The surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultation carried out and issues raised must be included in the EIS.		



2 Site Context

The subject land, known as Part Lot 1131 DP1057179 and referred to as 'the Site', occupies a parcel of irregular shaped land approximately 300 hectares in size. The Site was previously used as a poultry farm and is zoned IN2 Light Industrial and E2 Environmental Conservation. The site is bounded by rural residential lots to the south, vegetated land to the west, Donaldson Coal Mine to the north and the proposed Black Hill Employment Land to the east. Black Hill Road runs to the south of the portion of E4 Environmental Living zoned land and John Renshaw Drive traverses along the northern boundary of the Site.

Figure 1: Aerial image of Lot 1131 DP 1057179 with respect to the broader locality (source: Google Earth)





2.1 Regional Context

Black Hill is located within the eastern pocket of the Cessnock LGA approximately 20 kilometres northwest of Newcastle City Centre. The area is characterised by rural land and vegetated hills. The Site is located to the south west of the intersection of John Renshaw Drive and the M1 Pacific Motorway (as depicted in Figure 1). The desired role for the Beresfield-Black Hill catalyst area as identified within the draft Greater Newcastle Metropolitan Plan (GNMP) includes³:

- Freight and logistics hub, with complementary manufacturing and light industrial activity, and
- Potential for growth and expansion of industries.

The GNMP proposed that Cessnock City and Newcastle City Council will work with Transport for NSW to prepare a master plan for the emerging Black Hill Precinct that considers freight and logistic uses, the adjoining mine site, and includes an internal road network and access points to John Renshaw Drive. Black Hill is located approximately:

- 20km north-west of the Newcastle central business district,
- 12 km east of Maitland,
- 15 km east of Kurri Kurri, and approximately
- 14 km south-west of Raymond Terrace.

These centres provide a wide range of facilities and services including business, commercial and residential options. The site is also in close proximity to major transport links, such as:

- John Renshaw Drive,
- New England Highway,
- Pacific Highway,
- Hunter Expressway, and
- M1 Pacific Motorway.

These links provide access to key economic centres such as Sydney and Brisbane, as well as the Greater Newcastle 'global gateway', through the Port of Newcastle and Newcastle Airport. The site's location with respect to the broader locality is shown in Figure 1.

2.2 Site Description

The subject site is identified as Part Lot 1131 in DP 1057179 and comprises a single parcel of land with an area of approximately 300 hectares (as shown in Figure 2). The land is divided into two portions via a long, narrow lot bisecting the site from the north-west to the south-west (Lot 119 in DP 1154904), developed to accommodate a Hunter Water Corporation water supply pipeline. The 300 hectares includes both the IN2 and E2 zoned

³ Department of Planning and Environment. (2017). *Draft Greater Newcastle Metropolitan Plan*. Page 72

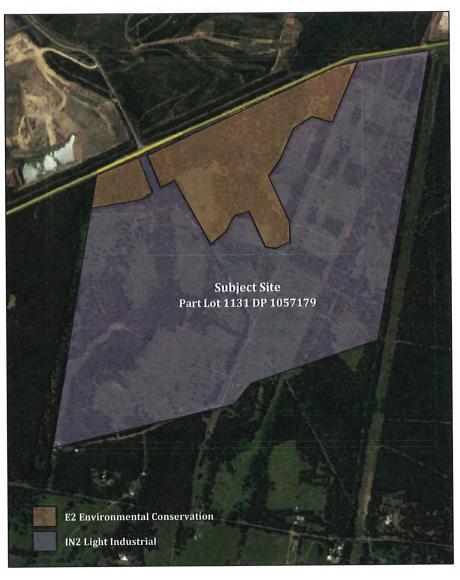


land which is the subject of this application and the E4 land to the south which will be separated from the site and further subdivided under a separate application.

2.3 Physical Characteristics

The site is a mix of grassy paddocks, used for low-scale grazing purposes, and tree covered areas. A significant portion of the site has been cleared in the past to accommodate various rural activities and is now vegetated with pasture grasses. Areas of native woodland vegetation remain scattered throughout the site, though this vegetation is fragmented with little or no native understorey remaining.

Figure 2: Aerial Image of Lot 1131 DP1057179. Development area illustrated by purple shading (Source: Google Earth)





2.3.1 Acid Sulfate Soils

The National Acid Sulfate Soils (ASS) Map accessed through the Australian Soil Resource Information System (ASRIS) indicated that the site is located in an area where the probability of acid sulfate soil being present is extremely low (with very low confidence). Cessnock City Council Local Environmental Plan (LEP) 2011 does no map the site to be in an area classified as containing acid sulfate soils.

2.3.2 Geology and Soil

The 1:100,000 Geological sheet 'Newcastle Coalfield Regional Geology'. This sheet indicates that the site is underlain by the Late Permian aged Tomago Coal Measure. The main rock types of this Group include sandstone, siltstone, coal, tuff and minor carbonaceous claystone. In this area, the regional dip of Tomago Coal Measure strata is mapped in the order of 2 to 4 degrees about horizontal, dipping regionally to the southeast.

In the north-eastern corner of the site, the bedrock dips to the southwest, while the bedrock in the south east corner of the site dips to the south east, associated with the Four Mile Creek Anticline to the west of the site. The geology map also indicates that strata within the site boundaries are intersected by two geological structures (faults) trending northwest/ southwest.

Reference to the Abel Mine – Area 1 Subsidence Management Plan Application – Written Report⁴, prepared by Donaldson Coal, indicates that the site is underlain by sedimentary strata of the Dempsey Formation, which form part of the Hexham Subgroup of the Tomago Coal Measures.

2.3.2.1 Subsurface Conditions

Surface soils are anticipated to consist of clay, sandy clay, and clayey sand derived from weathering of bedrock belonging to the Tomago Coal Measures Group, which in turn may be overlain by shallow Alluvium in localised areas; associated with drainage lines.

The presence of faults in the area are unlikely to have a significant bearing on foundation or subgrade conditions with respect to the future development of the site. Rocks that are fractured by the fault can be expected to be heavily weathered.

The Soil Landscape Series Sheet 9232 for Newcastle indicates that the site is situated within the 'Beresfield' residual soil landscape group. The 'Beresfield' soil landscape group is characterised by undulating low hills and rises on Permian age sediments in the East Maitland Hills region. Local Alluvium/ silty soils are prone to seasonal waterlogging, have a low wet strength and can be a foundation hazard. There is also some risk of tunnel and gully erosion within these soils due to their high dispersibility. The depressiveness may be simply associated with the fine grained granular (silty) nature of the soils.

⁴ GSS Environmental (2014). *Abel Underground Coal Mine Rehabilitation Management Plan*. Revision 1. August 2014.



2.3.3 Hydrology

Three principal tributaries of Weakley's Flat Creek converge within the subject site and convey water flows to the north. Weakley's Flat Creek converges with Viney Creek approximately 1,500m downstream of the site, which ultimately discharges to the Hunter River. At its point of discharge from the site, Weakley's Flat Creek has a catchment area of approximately 290 hectares.

The eastern portion of the site drains eastward to a channel within the adjoining property (Lot 30 DP874011). Approximately 26 hectares from the subject site drains to this channel. Channel flows are then conveyed beneath John Renshaw Drive via a culvert and ultimately flows northward into Viney Creek.

With reference to the topographic and geotechnical conditions (section 2.3.5 & 2.3.2), it is evident that the site's hydrological regime is dominated by surficial runoff into distinct watercourses.

2.3.4 Hydrogeology

Registered groundwater bore information was obtained from the NSW Office of Water. A review of the registered bore information indicated that a total of 10 bores are located within a 1km radius of the site. The bores identified in the search are summarised in Table 3.

Table 3: Registered Bores within a 1.5km Radius of Site.

Bored ID	Use	Property	Standing Water Level	Well Depth	Distance from Site
			(mbgs)		merce sa
GW078128	Monitoring Bore	Beresfield Boral, Beresfield	-	30.00	0.3 km E
GW078127	Monitoring Bore	Not Known	- - // 1000/15 4 12 1 14	30.00	0.9 km SW
GW078124	Monitoring Bore	N/A	-	40.00	0.5 km N
GW078121	Monitoring Bore	N/A	- 0.000 mm	43.00	0.8 km W
GW078122	Monitoring Bore	N/A	-	35.40	0.8 km NW
GW078123	Monitoring Bore	N/A	-	33.00	0.7 km NW
GW078126	Monitoring Bore	N/A	-	30.00	0.9 km E
GW078125	Monitoring Bore	Beresfield Boral, Beresfield	-	30.00	0.7 km N
GW078120	Monitoring Bore	N/A	-	24.00	0.6 km N



GW078047	Monitoring	N/A	-	54.30	0.5 km N
	Bore				-

It is understood that up to ten groundwater monitoring bores may have been installed across the site. Based on the historic groundwater conditions, it is understood that there is perched groundwater located atop of bedrock at the site. This water is likely highly influenced by seasonal rainfall. True groundwater is likely located deeper within bedrock, which is influenced by mining activities below and surrounding the site.

2.3.5 Topography

The subject site is slightly undulating, with a general slope downwards from south to north (gradients of approximately 2.5 to 10 degrees). One creek and its tributary traverse the site in a general east-west direction. The natural topography has been disturbed by farming activities in areas cleared of vegetation to a depth of in excess of 200 centimetres.

2.3.6 Vegetation

The vegetation on site includes fragmented patches of eucalypt woodland and riparian vegetation with a large portion of the site being identified as cleared pastoral lands. The site lies on the north-eastern edge of the Sugarloaf Range, where Narrabeen sandstone and siltstone vegetation communities adjoin the lower lying Permian/ Newcastle Coal Measure communities.

2.4 Servicing

A Preliminary Infrastructure Investigation⁵ was conducted by SMEC to determine the trunk servicing requirements for the site in support of the original planning proposal⁶. The investigation included:

- Water,
- Wastewater,
- Electricity,
- National Broadband Network, and
- · Gas.

In addition, ADW Johnson has prepared a Water and Wastewater Servicing Strategy in relation to the entire Industrial precinct $^{7\&8}$. The outcome of these investigations and strategies are discussed in further detail below,

2.4.1 Water

The water supply authority responsible for the proposed development is Hunter Water Corporation (HWC). Water for the proposed development will be primarily supplied from

⁸ ADW Johnson. 2014. *Wastewater Servicing Strategy*. Reference: 190057E. Issued 23 January 2015, page 4.



⁵ SMEC. 2018. Black Hill Development: Preliminary Infrastructure Investigation. Project No. 30011471. Revision A. Issued September 2013.

⁶ Ibid 6

⁷ ADW Johnson. 2014 Water Servicing Strategy. Reference: 190057E. Issued 23 January 2015.

the South Wallsend Reservoir with back-up supply from Stoney Pinch Reservoir⁹. HWC have indicated that there is adequate hydraulic capacity for the site at the nominated connection point (DN500 waterman) on the southern side of John Renshaw Drive¹⁰.

2.4.2 Wastewater

HWC have previously indicated that the nearest wastewater connection point is Beresfield 21 Wastewater Pumping Station (WWPS)¹¹. It is noted that there is limited capacity within this system and as a result augmentation will be required to generate sufficient capacity to cater for the proposed development¹².

2.4.3 Electricity

The electricity authority responsible for the proposed development is Ausgrid. An existing 132kV transmission line traverses the site within an Ausgrid easement. This line is critical to maintaining supply capacity and reliability on the Ausgrid network¹³. Ausgrid have indicated that there appears to be about 4mVA capacity within the current assets.

2.4.4 National Broadband Network

NBN Co has determined that the Black Hill industrial development is within the NBN fibre footprint ¹⁴.

2.4.5 Gas

The authority responsible for the proposed development area is Jemena. Jemena have indicated that natural gas is available in the vicinity, which may supply the proposed development¹⁵.

2.5 Surrounding Development

Specific land uses in the immediate vicinity of the subject site are described below.

2.5.1 North: Donaldson Open-Cut Mine

The northern boundary of the site is adjoined by John Renshaw Drive, a major 2-lane thoroughfare providing connections from Kurri Kurri in the west to the New England Highway to the east. The Donaldson Open-Cut Mine is located on the northern side of John Renshaw Drive, separated from the road by a vegetated buffer. Further to the north-east of the site lie several industrial and business estates, the New England Highway and the township of Beresfield.

2.5.2 East: Hunter Land & Stevens Group Joint Development

Overhead 330kV transmission lines run the length of the site's eastern boundary within a 60-metre-wide easement that is cleared to grass level. The land immediately to the east

¹⁵ Ibid 5, page 10.



⁹ Ibid 5, pg. 2

¹⁰ Ibid 7, page 2.

¹¹ Ibid 8, page 2.

¹² Ibid 8, page 4.

¹³ Ibid 5, page 9.

¹⁴ Ibid 5, page 10.

of the site has been zoned Industrial. A development application has been lodged by the Stevens Group & Hunter Land to Newcastle Council for an industrial subdivision.

2.5.3 South: E4 Environmental Living Zoned Land

A development application was lodged on 23 February 2017 to subdivide the subject land from the original parcel of land; Lot 1131 DP 1057179. This subdivision would result in the existing four dwellings located on the southern portion of Lot 1131 DP 1057179 exist on their own respective titles to the south of the proposed development; within the E4 Environmental Living portion of land.

2.5.4 West: Significant Vegetated Land

Land to the west comprises a significant area of heavily vegetated bushland.



3 Description of the Development

The proposed development seeks consent for the subdivision of Part Lot 1131 in Deposited Plan 1057179 to create 39- industrial lots, to be delivered in six stages and 1 environmental conservation lot, as shown on the subdivision plan¹⁶, which is included within Appendix C. Additionally, the proposal includes the remediation of the site to ensure that site is suitable for future occupation for industrial use.

This proposal constitutes stage 2 of a concept development application submitted to Cessnock City Council, pursuant to s.22 of the *Environmental Planning and Assessment Act* 1979 (refer to section 6.8.3). This stage of the concept development application includes:

- Creation of two signalised intersections to provide suitable access to the subdivision.
- The realignment of the existing watercourse that traverse the western portion of the site.
- Civil earthworks to provide a suitable foundation for future industrial development,
- Extension, augmentation and/ or adaptation of essential services (i.e. water, sewer & telecommunications) to cater for the future tenants of the industrial development,
- Construction of a 132/11kV substation and the relocation of the existing aboveground 132kV high voltage transmission line,
- Remediation of the site to ensure suitable occupation for industrial use,
- Subdivision of Part of Lot 1131 in Deposited Plan 1057179 to create 39- industrial lots, to be delivered in six stages and 1 environmental conservation lot,
- Construction of the ring-road network to provide suitable access to all proposed industrial lots, and
- Infrastructure to capture, detain and treat all stormwater collected on site.

More detail in relation to the components of the proposed development are provided below.

3.1 Access

Access to the site will be obtained off John Renshaw Drive via two signalised intersections; as depicted on the concept plan prepared by ADW Johnson and included within Appendix C. The eastern intersection will provide shared access for the proposed development and the adjoining development to the east of the subject site. Vehicles will be able to enter and leave the site via both intersections east or west bound.

3.2 Channel Realignment

It is proposed that a vegetated channel will be constructed to convey road and lot runoff northwards into an upper tributary of Weakley's Flat Creek. The channel is a realignment of a 1st order stream. The channel shall be trapezoidal in shape, vegetated and generally

¹⁶ ADW Johnson. (2018). *Plan of Subdivision*. Drawing Reference 239590-PSK-001. Revision D



parallel with the western access road as illustrated within the concept engineering plans contained in Appendix C.

3.3 Earthworks

Substantial earthworks are proposed to provide to achieve overall finished site levels as shown in the civil drawings at Appendix C. To achieve the required finished site levels across the site, the proposal requires a significant amount of cut & fill. It is important to note that no cut/ fill will be imported or exported as a result of the development.

3.4 Infrastructure and Services

The proposed development has access to all essential services, as previously discussed in section 2.4. ADW Johnson has prepared a Water and Wastewater Servicing Strategy to ensure that the proposed development is adequately serviced. These strategies, included within Appendix E, and have been approved by Hunter Water Corporation.

In addition, an application has been prepared by Power Design & Energy Projects Pty Ltd to Ausgrid to support the construction of a 132/11kV substation in the south eastern corner of the development site.

It is proposed that gas and telecommunication services will be provided to each of the allotments within the proposed subdivision. Consultation with the relevant service authority for the supply of each service will be conducted before the issue of the subdivision certificate.

3.5 Site Remediation

The site will be remediated in accordance with the Remedial Action Plan prepared by JBS&G, which is included in Appendix H. The preferred remedial approach for the impacts comprises the following:

- Excavation and on-site encapsulation of identified Asbestos Containing Material (ACM) impacted Area of Environmental Concern (AEC),
- Excavation and on-site encapsulation of identified ACM, nutrient and bacterial impacted AEC (i.e. areas where all three of these contaminant groups are present),
- On-site treatment (i.e. excavation, drying and aeration) and reuse of nutrient and bacteria only impacted AEC, and
- Excavation and disposal of any waste material in fill and on ground (aesthetic), with recycling of this material to the extent practicable and onsite reuse after recycling subject to geotechnical considerations.

Unexpected finds that may arise following demolition and during remediation or bulk earthworks will also require to be addressed along similar lines.



3.6 Subdivision and Staging

The proposed subdivision will be delivered in accordance with the staging plan prepared by ADW Johnson and included within Appendix C. The industrial subdivision and site remediation works will be conducted in six stages. Details of the proposed subdivision are provided in Figure 3 and Table 4 below.

Table 4: Proposed Subdivision

Stage	No of Lots	Area (ha)
1	Six	18.73
2	Eight	32.09
3	Seven	31.17
4	Six	35.86
5	Six	29.1
6	Six	28.89

The concept proposal allows for flexibility in the staging and timing of development of the catalyst precinct to enable development to respond to changing site conditions, opportunities efficiencies, infrastructure delivery and market demands.

3.7 Stormwater Strategy

The development will be supported by typical civil infrastructure including roads, water and sewer reticulation and other services. Stormwater management infrastructure associated with the development will incorporate a conventional pit-and-pipe drainage network discharging to water courses described in section 2.3.3.

3.8 Waste Management

A Waste Management Plan has been prepared to accompany the development application and has been discussed in section 7.14. The Waste Management Plan has identified the nature and volumes of waste generated as a result of the proposed development, as well as the mitigation measure to be implemented to ensure no adverse harm to human health or environment.

3.9 Capital Investment Value

The estimated Capital Investment Value (CIV) for the Project is \$76,970,000 (Appendix 0).



Figure 3: Concept Subdivision Plan, ADW Johnson 2018





4 Consultation

This chapter of the EIS details the matters of consideration that have been addressed in accordance with the consultation that has been conducted with government agencies and relevant community groups.

4.1 Agency Consultation

In preparation of the Secretary's Environmental Assessment Requirements (section 1.4), the Department of Planning and Environment consulted with a range of government agencies, which included:

- Environment Protection Authority (EPA),
- Office of Environment and Heritage (OEH),
- Natural Resources Access Regulator (NRAR),
- Roads and Maritime Services (RMS),
- New South Wales Rural Fire Service (NSW RFS)
- Department of Primary Industries: Agriculture (DPI Agriculture), and
- Subsidence Advisory New South Wales (SA NSW).

Consultation was undertaken with the various agencies during the preparation of this EIS. A summary of the consultation is provided in table below.

Agency	Date of Meeting	Purpose
Office of	15	A meeting was held at the Office of Environment and
Environment	February	Heritage to discuss the biodiversity offset strategy
and Heritage	2018	required to satisfy the VPA, refer to section 6.8.10.1.
Natural	12 April	DPI: Water (now NRAR), met Barr Property and
Resources	2018	Planning and Broaden Management Pty Ltd on site to
Access Regulator	1 755	discuss the treatment of the known watercourses,
		offset strategies, as well as conduct a preliminary
	-	watercourse inspection.
Roads and	30 June	Ongoing consultation has been conducted with RMS
Maritime	2017	during the preparation of this concept development,
Services	Mind in the s	specifically pertaining to access requirements and
		impact on existing road network.
Rural Fire	9 July	MJD Environmental discussed the proposal with
Service	2018	NSW RFS in relation to their respective input letter;
0017100		refer to section 4.1.5.
Subsidence	17	As a result of extensive geotechnical investigations
Advisory	November	(section 7.9), Subsidence Advisory have been
	2017	consulted in relation to the residual subsidence
		across the site.



The requirements of each government agency are provided in further detail below. All referral letters have been included in Appendix A.

4.1.1 Environment Protection Authority

The Environment Protection Authority (EPA) considered the proposed development, as defined in section 3, and provided a list of requirements that should be addressed in the preparation of the Environmental Impact Statement (this document). Table 5 details the relevant matters of consideration prepared by the EPA and provides a reference to where the requirement has been addressed as part of the development application.

Table 5: EPA Requirements

EPA Requirement	EIS	Technical
The EIS must address the following specific matters:	Reference	Study
 Environmental impacts of the project. Impacts related to the following environmental issues need to be assessed, quantified and reported on: Air quality, Noise and vibration, Water, soil quality and management, Waste management, Dangerous goods, chemical storage and bunding. The EIS should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. 	Section 7	
2. Licensing requirements It is likely the site will require an Environment Protection Licence under s.48 of the Protection of the Environment Operations Act 1997 (POEO Act); schedule 1, in particular for Contaminated Soil Treatment and Extractive Activities.	Section 6.7	
 3. The proposal and premises The objective of the proposal should be clearly stated and referred to: The size and type of the operation, The nature of the processes and the products, by-products and wastes produced, The types and quantities of any chemicals to be used and stored onsite, Proposed operational hours, Proposed staging and timing of the proposal. 	Section 3	



EPA Requirement The EIS must address the following specific matters:	EIS Reference	Technical Study
The EIS will need to fully identify all the processes and activities intended for the site over the life of the development.		
 4. Contamination and remediation – including: The proponent must demonstrate that any potential land or groundwater contamination can be remediated, A site auditor accredited under the Contaminated Land Management Act 1997 is required for remediation and validation works. 	Section 7.5 Section 6.6	Appendix G Appendix K
5. Air issues The EIS should include an air quality impact assessment (AQIA) in accordance with the approved methods for the modelling and assessment of air pollutants in NSW.	Section 7.2	
 6. Noise and vibration A noise and vibration impact assessment is required, which includes: Identification of the hours of operation, Assessment of all activities proposed, and Impacts on sensitive receptors associated with the proposed hours of operation. 	Section 7.10	Appendix L
 7. Water and soils Water Describe the proposal and demonstrate that all practical options to avoid discharges have been investigated and implemented. Prepare an impact assessment that includes: Description of the nature and degree of impact the proposed development will have on the receiving environment, Detail any contractual arrangements that will be put in place, Assess the impacts against relevant ambient water quality outcomes, Assess impacts on groundwater and groundwater dependant ecosystems. 	Section 7.11	Appendix G
Soil	Section 7.5	Appendix M



EPA Requirement	EIS	Technical
The EIS must address the following specific matters:	Reference	Study
The EIS should include an assessment of potential impacts on soil and land resources. The nature and extent of any significant impacts should be identified in accordance with Soil and Landscape Issues in <i>Environment Impact Assessment</i> (DLWC 2000).		
8. Waste – including:	a	
 A detailed plan for in-situ classification of waste material, 	Section 7.14	
 Identify, quantify, characterise all waste that 	7.14	
currently exists on site,		
 Identify, characterise and classify all waste 		
that will be generated on-site through excavation, demolition or construction.		
 Identify, characterise and classify all waste 		
that is proposed to be disposed of to an offsite		
location.Provide details of how waste will be handled		
and managed onsite to minimise pollution.		

4.1.2 Office of Environment and Heritage

The Office of Environment and Heritage (OEH) completed a desktop review of the information that was provided by the Department of Environment and Planning and provide a list of requirements to be considered as part of the development application. Table 6 details the relevant requirements to be considered as part of the development application as provided by the OEH.

Table 6: OEH Requirements

OEH Requirement	EIS	Technical		
The EIS must address the following specific matters:	Reference	Study		
1. The proposal				
The objectives of the proposal should be clearly	Section 3			
stated and identify:				
 The size, scale and type of the proposed 				
activity/ development,				
 All anticipated environmental impacts, 				
 Threatened species, populations, ecological 				
communities or habitats impacted upon,				
 The staging and timing of the proposal, and 				
 The proposals relationship to any other 				
proposals and developments.				



OEH Requirement	EIS	Technical
The EIS must address the following specific matters:	Reference	Study
 2. Environmental impacts of the proposal The proponent must consider, assess, quantify and report on the likely environmental impacts of the proposal if applicable, particularly:	Section 7	
 Aboriginal cultural heritage The EIS must identify and describe the Aboriginal cultural heritage values that exist across the area that will be affected by the proposal. Impacts on Aboriginal cultural heritage values are to be assessed and documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation with Aboriginal people must be undertaken and documented in accordance with the guidelines. 	Section 7.1	Appendix N



4.	Biodiversity Where the proposal is likely to significantly affected threatened species within the meaning of s.7.2 of the <i>Biodiversity Conservation Act 2016</i> , the application for development consent is to be accompanied by a Biodiversity Development Assessment Report (BDAR).	Section 7.3	Appendix I
9.	 Water and soils – The EIS must: Map all features relevant to water and soils, Describe background conditions for any water resource likely to be affected by the proposal, Assess the impacts of the proposal on water quality, Assess the impacts of the proposal on hydrology. 	Section 7.11	Appendix G

4.1.3 Natural Resources Access Regulator

The Natural Resources Access Regulator (NRAR – previously DPI Water) reviewed the information supplied to them by the Department of Planning and Environment and provided the advice contained within Table 7.

Table 7: NRAR Requirements

	AAR Requirement e EIS must address the following specific matters:	EIS Reference	Technical Study
•	Annual volumes of surface water and groundwater proposed to be taken by the activity (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.	N/A	
•	Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).	N/A	
•	The identification of an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.	Section 2.4	Appendix G
•	A detailed and consolidated site water balance.	N/A	
•	Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, and	Section 7.11 &	Appendix G



NRAR Requirement	EIS	Technical
The EIS must address the following specific matters:	Reference	Study
basic landholder measures proposed to reduce and mitigate these impacts.	Section 7.5	-j., -, 9
Full technical details and data of all surface and groundwater modelling.	Section 7.11.2	Appendix D
 Proposed surface and groundwater monitoring activities and methodologies. 	1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
 Provide groundwater contour maps for any shallow or deep aquifers showing the groundwater table elevation and flow directions in the vicinity of the site. 		
 Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts. 	Section 7.11	Appendix G
Consideration of relevant policies and guidelines.	Section 6	.k
 A statement of where each element of the SEARs is addressed in the EIS (i.e. in the form of a table). 	This table.	

4.1.4 Roads and Maritime Services

The Roads and Maritime Services (RMS) and Transport for NSW's primary interest are in the road network, traffic and broader transport issues. In particular, issues of relevance are the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport. As such, RMS have reviewed the 'Request for SEARS' application (2018) prepared by Barr Property and Planning and issued their comments as shown in Table 8 below.

Table 8: RMS Requirements

RM	S Requirement	EIS	Technical
The	EIS must address the following specific matters:	Reference	Study
	Roads and Maritime were requested to provide input on the Black Hill Urban Design Guidelines for MP10_0093, specifically the location of the future intersection accessing Lot 30 DP 870411, which is the neighbouring site east.	Noted.	
•	Roads and Maritime provided written comment to the Department on 13 February 2018, regarding the Black Hill Urban Design Guidelines for MP10_0093 and provided subsequent comment to the Department on 3	Noted.	



RMS Requirement	EIS	Technical
The EIS must address the following specific matters:	Reference	Study
May 2018. Roads and Maritime understand that the		
Department is yet to make a determination regarding		
the intersection location for the Black Hill Urban		
Design Guidelines.		
The lot layout for this site is provided in the submitted	Section	Appendix
documentation. The lot layout cannot be considered	7.12	F
nor the proposed access from Johns Renshaw Drive		
until the location of the eastern intersection is first		
determined by the Department.		
The EIS should refer to the following guidelines:		
 Roads and Related Facilities within the 		
Department's EIS Guidelines, and		
 Section 2 Traffic Impact Studies of Roads and 		
Maritime's Guide to Traffic Generating		
Developments 2002.		
A Traffic and Transport Study shall be prepared in		
accordance with the Roads and Maritimes Guide to Traffic		
Generating Developments 2002.		

4.1.5 NSW Rural Fire Service

The NSW Rural Fire Service (NSW RFS) reviewed the information provided by the Department of Planning and advised that a bushfire assessment report is to be prepared by a suitably qualified bushfire consultant.

Consultation between MJD Environmental and Matt Apps, NSW RFS Development Assessment & Planning Officer, was undertaken on Monday 9th July to discuss that the development proposal type and land zoning is intended to facilitate industrial / commercial development. This development type and buildings contained therein do not trigger the criteria outlined with Planning for Bushfire Protection (PBP) (2006) for residential and/or Special Fire Protection Purpose (SFPP). On this basis, it was agreed that APZs in accordance with Appendix 2 of PBP are not required.

In these instances, section 1.3(b) of PBP states that the provisions under the BCA for fire safety will be accepted for bushfire purposes where the aims and objectives outlined in section 1.1 of PBP (2006) can be met.

An appraisal against these objectives is provided in section 7.4 of this EIS.



4.1.6 Department of Primary Industries: Agriculture

The Department of Primary Industries Office of Agriculture were consulted by the Department of Planning during the preparation of the SEARs. DPI Agriculture raised no matters for consideration in preparing the EIS.

4.1.7 Subsidence Advisory New South Wales

The Subsidence Advisory (SA NSW) was notified by the Department of Planning to provide input into the preparation of the SEARs document. Although, the Department did not receive a response from SA NSW within the prescribed reporting period.

The proposed development is located in a Mine Subsidence District and will be referred to SANSW for comment during the assessment process, pursuant to s.4.46 of the EPA Act.

4.2 Community Consultation

Relevant community stakeholders were engaged during the preparation of this EIS, including but not limited to, the Catholic Diocese of Maitland-Newcastle and the Steven Group who are involved with a development on the adjoining lot to the east.

Notwithstanding, the proposed development will be further notified to all relevant stakeholders during the assessment process, as discussed in section 9.3. During this period, recipients will be able to review the proposed development application and provide a submission to the consent authority.



5 Strategic Context

This chapter of the EIS examines the strategic planning documents relevant to the subject site and proposed development, which include:

- NSW: Making it Happen,
- Hunter Regional Plan 2036,
- Hunter Economic Infrastructure Plan,
- Draft Greater Newcastle Metropolitan Plan,
- Newcastle-Lake Macquarie Western Corridor Strategy, and
- Cessnock City-Wide Settlement Strategy.

An assessment of the proposal is provided below, to demonstrate compliance with each applicable Priority, Action or Direction.

5.1 NSW: Making it Happen

NSW: Making It Happen was released by the Premier for NSW on 14 September 2015. *NSW: Making it Happen* outlines 30 key reforms for the State, including personal priorities for the Premier¹⁷. The proposed development aligns with these priorities, in particular:

Table 9: NSW Priorities relevant to the proposed development 18

Priorities	Alignment
Creating jobs	The proposal should facilitate significant employment opportunities during construction and operation.
Building infrastructure	The site is located within an Urban Release Area and is subject to the Hunter Region State Infrastructure Contribution (SIC) catchment. A significant monetary contribution will be captured as part of this proposed development to assist in the construction of infrastructure around the Hunter Region in accordance with the Hunter SIC Plan.
Making it easier to start a business	The proposal will provide a foundation for business opportunities to be created or expanded during both the construction phase and operation of the final product.
Encouraging business investment	The proposal will provide an opportunity for future business investment within the Industrial Sector. Companies of a greater scale may occupy the created industrial sites that encourage future investment.

¹⁷ NSW Government. (2015). NSW: Making it Happen.

¹⁸ Ibio



The Department of Planning and Environment released the Hunter Regional Plan 2036 in October 2016. The Regional Plan provides an overarching framework that will guide the preparation of detailed land use plans. Black Hill has been identified in the Regional Plan as an employment precinct. Industry clusters such as Black Hill close to the Hunter's interregional transport networks and global gateways will improve efficiencies and stimulate the regional economy¹⁹.



Figure 4: Location of the subject site with respect to the inter-regional transport connections 20

Maintaining an adequate stock of industrial lands throughout the Lower Hunter is essential to provide for economic growth, ensure competitiveness and affordability of

²⁰ Ibid 3, page 22.



¹⁹ Ibid 3, page 59.

land stocks and ensure the market is not constrained by land supply shortages. Freight and logistics operations contributes approximately 14% each year to the NSW gross state

The proposal will provide approximately 178 hectares of land for industrial purposes, which could adequately accommodate land uses such as: freight transport facilities, warehousing and distribution centres. This should be considered consistent with Direction 4 & 24 of the Regional Plan; to enhance inter-regional linkages to support economic growth and to provide additional opportunities within an employment precinct that does not conflict with adjoining land uses²².

5.3 Hunter Economic Infrastructure Plan

The Hunter Economic Infrastructure Plan is a strategic framework used to guide infrastructure development and investment within the context of the region as a whole. The Plan prioritises infrastructure improvements that will contribute most to facilitate development of industry and affected communities ²³. Although this plan has been considered, none of the proposed recommendations will impact the proposal; directly or indirectly. No further assessment is considered relevant to this proposal.

5.4 Draft Greater Newcastle Metropolitan Plan

The Department of Planning and Environment released the draft Greater Newcastle Metropolitan Plan²⁴ (GNMP) in November 2017. The GNMP sets out strategies and actions that will drive sustainable growth throughout the greater Newcastle community.

Black Hill is identified as a 'Catalyst Area' in the GNMP region catchment and illustrated within Figure 5 below. The industrial land and employment precinct of Black Hill is the nexus of the national road and rail trade routes that intersect with an international port.

The desired future use of the Beresfield-Black Hill area is to provide a freight and logistics hub, with complementary manufacturing and light industrial activity²⁵.

²⁵ Ibid 3, page 72.



²¹ Department of Planning and Environment (2016), Hunter Regional Plan, page 21.

²² Ibid pages 21-24 & 59.

²³ Infrastructure NSW. 2013. *Hunter Economic Infrastructure Plan.* 16 October 2013. Page 1.

²⁴ Ibid 3.

Table 10 portrays the future employment growth expected for the Beresfield-Black Hill catalyst area based on the Metropolitan Strategy.





2016	2036	Growth
5,250	5,450	+200

The job prediction from the strategy is considered very conservative given the total area of land and the potential floor space that will be generated. The Department of Planning and Environment delivered a media release at the time of the rezoning, which expected up to 1,000 jobs to be created on the site²⁷.

Thornton MAITLAND

Beresfield Research
Beresfield Precinct

TO

NORTH
COAST

NEWCASTLE

Tarro

CESSNOCK

Putertial Beresfield

NEWCASTLE

Telegraphy Black Miles

Frederick

Thornton MAITLAND

To NORTH
COAST

NEWCASTLE

Figure 5: Black Hill - Emerging Catalyst Precinct 28

This proposal will provide growth opportunities for freight, logistics and industrial sectors to help connect Greater Newcastle and the Hunter to global markets. As a result, the proposal should be considered in alignment with strategy 4.1, 4.3 & 4.4 to facilitate Outcome 4 of the Metro Plan²⁹.

²⁹ Ibid 3, pages 31 & 64.



²⁶ Ibid 3, page 17.

²⁷ Department of Planning and Environment. (2017). *Media Release: 1,000 jobs in Cessnock possible following Black Hill rezoning*. Published 18 April 2017.

²⁸ Ibid 3, page 73.

5.5 Newcastle-Lake Macquarie Western Corridor Strategy

The broad objective of this planning strategy is to identify key planning principles and provide a broad strategic land use framework to guide future urban expansion and conservation outcomes in the identified western corridor area³⁰. The subject site adjoins the western corridor strategy area, as shown in Figure 6.



Figure 6: Western corridor strategy area³¹

This environmental impact statement has considered the relevant aims of the Newcastle-Lake Macquarie Western corridor planning strategy due to the close proximity of the site. The neighborhood planning principles that are considered relevant to the proposal include:

³¹ Ibid, page 3.



³⁰ NSW Department of Planning. (2010). *Newcastle-Lake Macquarie Western Corridor Planning Strategy*, Publication 10_049. Issued July 2010. Page 1.

- Jobs available locally and regionally, reducing the demand for transport services,
 and
- Easy access to major town centres with a full range of shops, recreational facilities
 and services along with smaller village centres and neighbourhood shops. Streets
 and suburbs planned so that residents can walk to shops for their daily needs.

To support these neighborhood principles the strategy includes subsequent outcomes and actions. Compliance with these actions are illustrated in Table 11.

Table 11: Compliance with relevant outcomes of the Newcastle-Lake Macquarie Western Corridor Strategy

Outcome	Compliance with Action
To locate and plan employment land areas that: • Minimise impacts on the environment, infrastructure and adjoining land uses, • Are close to where workers live, • Allow for a diverse range of land uses, and • Take advantage of the proximity of the F3 (now M1) and other major transport and employment corridors.	The proposed access arrangements have been designed in accordance with the access infrastructure map ³² with two proposed intersections off John Renshaw Drive. A Traffic Impact Assessment (Appendix F) has been prepared that demonstrates a precinct-based solution that adequately caters for the entire employment zoned land; including adjacent site that is located within the strategy area.
To maintain an efficient transport network by managing access to major transport corridors.	

³² Ibid 30, page 21.



5.6 Cessnock City Council City-Wide Settlement Strategy

The Cessnock City Wide Settlement Strategy 2010³³ (CWSS) was adopted by Council on 15 September 2010. It sets out strategic directions for the Cessnock LGA and implements a number of outcomes and actions arising under the Lower Hunter Regional Strategy (previous regional plan, now superseded by HRP 2036). Chapters of the CWSS relevant to this proposed development include:

• Section 3, Chapter 10 – Employment Lands,

This chapter is discussed in further detail below.

5.6.1 Employment Lands

The CWSS provides projections for Cessnock's short-term industrial land supply needs for the life of the Strategy (until 2031), based on projections of local demand calculated historic 'take-up' rates³⁴. Direction EL3 of the CWSS indicates that opportunities should be provided for *additional sites to be developed for employment lands to meet local needs for general purpose industrial lands;* and an associated Action calls for the identification of suitable industrial sites in the short term to meet these needs.

While the CWSS does not direct the identification of strategic centres in the LGA within the strategic timeframe to 2031, it acknowledges that a buffer supply of 1,000 hectares of employment land in areas (including Black Hill) has been identified in the regional plan³⁵. It also recognises that employment lands must be developed in the region *not only to accommodate its own projected growth, but also to contribute to meeting the employment land needs of the broader metropolitan region of Sydney*³⁶.

Consequently, the CWSS acknowledges and supports the actions of the regional plan³⁷, whilst providing for the development of additional local employment land to satisfy the needs of the LGA within the short-to-medium term.

³⁷ Ibid 33.



³³ Cessnock City Council. (2010). Cessnock City-Wide Settlement Strategy.

³⁴ Ibid, page 132.

³⁵ Ibid, page 22.

³⁶ Ibid 33, page 130.

6 Statutory Context

This chapter of the EIS identifies all of the legislation that must be considered as part of the development application, namely:

- Federal legislation, including:
 - Environment Protection and Biodiversity Conservation Act 1999 (section 6.4)
- State legislation, including
 - o Biodiversity Conservation Act 2016,
 - o Contaminated Land Management Act 1997,
 - o Protection of the Environment Operations Act, 1997 and
 - o Environmental Planning and Assessment Act 1979.
- Subordinate legislation, including:
 - o State Environmental Planning Policies, and
 - Local Environmental Plans.

Furthermore, under s.4.15(1)(a)(ii) & (iii) of the EPA Act the proposed development must also consider:

- Draft Legislation, and
- o Any relevant development control plan.

The application of these environmental planning instruments, draft environmental planning instruments, and relevant chapters of the development control plan are discussed in further detail below.

6.1 Approval Pathway

The development application is defined as 'designated' development (section 6.8.4), which constitutes stage 2 of a concept development application (section 6.8.3). This application will be lodged to Cessnock City Council for determination by the Hunter Region Joint Regional Planning Panel (section 6.8.6.1).

6.2 Permissibility

Section 4.38(2) of the EPA Act provides that 'Development consent may not be granted if the development is wholly prohibited by an environmental planning instrument'.

The proposal is located entirely in the Cessnock LGA. The proposed development area is zoned IN2 Light Industrial and E2 Environmental Conservation under the Cessnock LEP 2011 (see section 6.8.7 for further detail). The land use table for zone IN2 - Light Industrial and E2 - Environmental Conservation lists development that is permitted without consent, development that is permitted with consent, and development that is prohibited. The proposed industrial subdivision is permitted with consent within both land use zones, pursuant to cl.2.6 of the Cessnock LEP 2011.



The permissibility of site remediation works is governed by SEPP 55 (see section 6.8.6.4). Clause 8(1) of SEPP 55 states that Category 1 remediation work is permissible with development consent (despite anything to the contrary in any other environmental planning instrument).

Furthermore, clause 19 of SEPP 55 states that where there is an inconsistency between the SEPP and another Environmental Planning Instrument, the SEPP would prevail to the extent of that inconsistency. Site remediation works are therefore considered permissible with development consent in both the IN2 Light Industrial and E2 Environmental Conservation zone.

6.3 Consent Authority

The proposed development constitutes 'regionally significant development' under SEPP (State and Regional Development) 2011 (refer to section 6.8.6.1). The development will be referred to the Hunter Region Joint Regional Planning Panel for determination pursuant to s.4.7 of the EPA Act.

6.4 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is Australian Commonwealth legislation that is applied to protect, and manage nationally and internationally important flora and fauna, ecological communities, and heritage places.

Subdivision B of Part 3, Division 1 is applicable to the proposal, pursuant to the SEARs requirement to consider the impact of the proposed development on the neighbouring Ramsar wetland; being the Pambalong Lagoon Wetlands. According to s.16(1) of Subdivision B:

A person must not take action that:

- (a) Has or will have a significant impact on the ecological character of a declared Ramsar wetland, or
- (b) Is likely to have a significant impact on the ecological character of a declared Ramsar wetland.

An EPBC Act Protected Matters Search (accessed 13-03-2018) was undertaken to generate a list of those Matters of National Environmental Significance (MNES) from within 10 km of the Site. An assessment of those MNES relevant to biodiversity has been undertaken in accordance within EPBC Act Policy Statement 1.1. Significant Impact Guidelines Matters of National Environmental Significance (DoE, 2013). The Matters of National Environmental Significance protected under national environmental law include:

A total of 73 threatened species and 5 threatened ecological communities listed under the EPBC Act have been recorded on the protected matters search. A likelihood of occurrence assessment for these MNES has been completed as part of the Biodiversity Assessment Report (BDAR), refer to Appendix I.



6.4.1.1 Threatened Species

The five species were considered to have the potential to utilise the habitats within the development site:

- Cynanchum elegans (White-flowered Wax Plant)
- Eucalyptus glaucina (Slaty Red Gum)
- Grevillea parviflora subsp. parviflora (Small-flower Grevillea)
- Rutidosis heterogama (Heath Wrinklewort)
- Tetratheca juncea (Black-eyed Susan)

Formal targeted surveys carried out as part of the BAM methodology did not record any of the above species. Similarly, no habitat within the study area was identified as critical to their survival. The assessment³⁸ conducted by MJD Environmental concluded that the proposal is unlikely to impact the listed threatened species.

No threatened ecological communities listed under the EPBC Act were recorded within the study area.

6.4.2 Listed Migratory Species

The protected matters search nominated 30 migratory species or species habitats that may occur within the 10km site buffer search area. No listed migratory species were observed on site. The assessment contained in the BDAR concluded that no habitat within the study area as critical to their survival. Therefore, it is unlikely that the proposal over the study area will impact migratory species.

6.4.3 Wetlands of International Significance

The site is not a wetland of international significance or declared Ramsar wetland. The protected matters search nominated the following wetlands in international importance within proximity to the site:

- · Pambalong Wetland, and
- Hunter Estuary Wetlands.

6.4.3.1 Pambalong Wetland

The Pambalong Wetland is approximately 3km from the study area. The wetland forms part of the Hexham Swamp and is an integral part of a chain of wetland reserves that includes the internationally significant Ramsar-listed Hunter Estuary Wetlands. Several threatened bird species visit the reserve, including the black-necked stork, magpie goose, freckled duck, painted snipe and comb-crested jacana. Migratory wader species listed under international treaties have also been recorded in the reserve³⁹. As a result, the proposal is not anticipated to have any adverse impact on the Pambalong Wetland.

 ³⁸ MJD Environmental (2018). Biodiversity Assessment Report. Job No 17032. 10 August 2018
 ³⁹ NSW National Parks and Wildlife Service (2006). Pambalong Nature Reserve Plan of Management. Department of Environment and Conservation NSW.



6.4.3.2 Hunter Estuary Wetlands

The Hunter Estuary Wetland Ramsar site is approximately 13km from the study area. The wetlands supports 112 species of water birds and 45 species of migratory birds listed under international agreements, including the white-bellied sea-eagle, and the green and golden bell frog, which are listed as vulnerable under the EPBC Act, The Hunter Estuary wetlands also provide refuge for water birds such as ducks and herons, during periods of inland drought. The wetland supports 1% of the population of the eastern curlew and the red-necked avocet. The proposal is not anticipated to have any adverse impact on the Hunter Estuary Wetlands.

6.4.4 Commonwealth Marine Areas

The site is not part of a Commonwealth Marine Area and is not in close proximity to any such area.

6.4.5 World Heritage Properties

The site is not a World Heritage area and is not in proximity to any such area.

6.4.6 National Heritage Places

The site is not a National Heritage area and is not in close proximity to any such area.

6.4.7 Great Barrier Reef Marine Parks

The site is not part of or within close proximity to any Great Barrier Reef Marine Park.

6.4.8 Nuclear Actions

The proposal over the site is not and does not form part of a nuclear action.

6.4.9 Water Resources in relation to Coal Mining and CSG

The proposal over the site is related to industrial development and as such is not or does not form part of a coal mining and/ or CSG proposal.

6.4.10 EPBC Referral

The proposal is unlikely to have an impact to MNES based on the assessment criteria set out in relevant Commonwealth policies and advices as at the time of this assessment. Notwithstanding, a referral will be made for the proposal under the EPBC Act.

6.5 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) is applied in relation to animals and plants and not (unless otherwise provided) in relation to fish and marine vegetation. The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community that is consistent with the principles of ecologically sustainable development.

Section 7.7 of the BC Act applies to an application for development consent under Part 4 of the EPA Act. Subsequently, 7.7(2) states:



(2) If the proposed development is likely to significant affect threatened species, the application for development consent is to be accompanied by a biodiversity development assessment report.

All vegetation, including any threatened species, will be removed as part of the Stage 1 (Site Clearing) Development Application (DA 8/2018/102/1), which is currently under assessment by Cessnock City Council. All impacts in respect to biodiversity were investigated as part of the previous development application for site clearing.

For the purposes of this proposal, it is not anticipated development will significantly affect threatened species beyond what has already been investigated and assessed. That said, pursuant to the SEARs, the proposal has been assessed in accordance with the Biodiversity Assessment Method (BAM) with all findings discussed in section 7.3.

6.6 Contaminated Land Management Act 1997

The *Contaminated Land Management Act 1997* (CLM Act) deals with sites where contamination is identified that is significant enough to warrant regulation by the EPA. The relevant objective of the CLM Act, as set out in s.3(2) of that Act, is to:

(d) Ensure that contaminated land is managed with regard to the principles of ecologically sustainable development.

To ensure that the contaminated land is appropriately managed, a NSW Environment Protection Authority (EPA) accredited site auditor was commissioned to prepare a site audit report, pursuant to s.53B of the CLM Act. As such, the requirements of the CLM Act have been addressed.

6.7 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) provides for the prevention of pollution, including licencing of activities with a higher potential for causing pollution by the EPA.

Section 48 of the POEO Act requires a person to obtain an environmental protection licence (EPL) from the EPA before carrying out any of the premises-based activities described in Schedule 1 of that Act.

The Preliminary Site Investigation (PSI) & Environmental Site Assessment (ESA) prepared by JBS&G⁴⁰ that accompanies this proposal (Appendix G) has estimated that approximately 82,297m³ of contaminated soil is present throughout the site. Furthermore, it is likely that an aggregate of more than three hectares of contaminated soil will be disturbed as part of the proposed earthworks.

⁴⁰ JBS&G. 2018. Preliminary Site Investigation/ Environmental Site Assessment. 54892/115852/Revision B. Issued 12 July 2018.



Due to the amount of earthworks and remediation required as part of the proposed development, the following premises-based activities will require licencing under s.48 of the POEO Act, as listed in Schedule 1:

- · Clause 15: Contaminated Soil Treatment Works, and
- Clause 19: Extractive Activities.

Prior to the commencement of any works on site, an EPL to carry out the relevant premises-based activities must be granted.

6.8 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EPA Act) provides the legislative framework for the assessment and approval of development throughout New South Wales. In accordance with Division 4.1 of Part 4 of the EPA, this EIS has been prepared to address:

 The SEARs issued under Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EPA Regulations).

The site is located in Black Hill within the Cessnock City Council Local Government Area. Development on this site is governed by the application of the EPA Act and relevant environmental planning instruments, in particular:

- State Environmental Planning Policy (State and Regional Development) 2011,
- State Environmental Planning Policy No 33 Hazardous and Offensive Development
- State Environmental Planning Policy No 44 Koala Habitat Protection,
- State Environmental Planning Policy No 55 Remediation of Land,
- State Environmental Planning Policy (Coastal Management) 2018,
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Rural Lands) 2008,
- State Environmental Planning Policy (Vegetation in Non-rural Areas) 2017, and
- Cessnock City Council Local Environmental Plan 2011.

Furthermore, under s.4.15(1)(a)(ii) & (iii) the proposed development must also consider:

• Cessnock Development Control Plan 2010.

The application of these environmental planning instruments, draft environmental planning instruments, and relevant chapters of the Cessnock Development Control Plan 2010 are discussed in further detail below.

6.8.1 Matters for Consideration

Under Part 4, Division 4.4, the consent authority, in this case the Regional Planning Panel, must take into consideration the matters set out in s4.15 of the EPA Act as are relevant to the subject of the development application. The matters to be taken into consideration by the consent authority under section 4.15(1) and the main sections of this EIS where they have been addressed are provided in Table 12.



Table 12: Matters of consideration under s.4.15 of the EPA Act

Section 4.15(1) Requirement	Document Reference
The provisions of any of the following that apply to the land to which the application relates,	development
Any environmental planning instrument, and	Section 6.8
Any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	Section 6.8.8
Any development control plan, and	Section 6.8.8
Any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	Section 0
The regulations (to the extent that they prescribe matters for the purposes of this paragraph), and	Section 6.8.2
The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	Section 7
The suitability of the site for the development,	Section 9.5
Any submissions made in accordance with this Act or the regulations,	Section 9.3
The public interest.	Section 0

6.8.2 Environmental Planning and Assessment Regulations 2000

In addition to the requirements under s.4.15 of the EPA Act (section 6.8.1), the consent authority must also have regard to any EIS which meets the requirements of s.4.12(8) of the EPA Act. Specifically, s.4.12(8) requires the EIS to be prepared in accordance with the requirements of the EPA Regulation. The requirements of Schedule 2 of the EPA Regulation regarding the form and content of the EIS and the main sections of this EIS where those requirements are addressed are set out in Table 13.



Table 13: EPA Regulation Requirements

Regulation	Requirement	Document
Clause		Reference
Clause 6(a)	Name, Address and Professional qualifications of person preparing the EIS.	Statement of Validity
Clause 6(b)	Name of the Consent Authority.	Section 6.3
Clause 6(c)	Address of Land.	Section 2.2
Clause 6(d)	Description of development.	Section 3
Clause 6(e)	Assessment of the environmental impact of the Project.	Section 7
Clause 6(f)	A declaration that the EIS has been prepared in accordance with the Schedule, contains all available information relevant to the environmental assessment of the Project and that the information contained in the EIS is neither false nor misleading.	Statement of Validity
Clause	Summary of the EIS.	Executive
7(1)(a)		Summary
Clause 7(1)(b)	A statement of the objectives of the development.	Section 3
Clause 7(1)(c)	An analysis of any feasible alternatives to the carrying out of the development, having regard to its objectives, including the consequences of not carrying out the development.	
Clause 7(1)(d)(i)	A full description of the development, activity or infrastructure.	Section 3
Clause 7(1)(d)(ii) Clause 7(1)(d)(iii)	A general description of the environment likely to be affected by the development. The likely impact on the environment of the development.	Section 7
Clause 7(1)(d)(iv)	A full description of the measures proposed to mitigate any adverse effects of the development on the environment.	
Clause 7(1)(d)(v)	A list of any approvals that must be obtained under any other Act or law before the development may be lawfully carried out.	
Clause 7(1)(d)(e)	A compilation of the mitigation measures referred to in Clause 7(1)(d)(iv). 7.12.8	
Clause 7(1)(d)(f)	The reasons justifying the carrying out of the development in the manner proposed, having regard to biophysical, economic and social considerations,	Section 9

Regulation Clause	Requirement	Document Reference
	including the principles of ecologically sustainable development.	

6.8.3 Concept Development Application

The proposal as detailed within section 3 seeks approval for a 'concept development' application under s.4.22, pursuant to cl.4.22(3) of the EPA Act. Where, a concept development application is defined under the EPA Act:

A development application that sets out concept proposals for the development of a site, and for which detailed proposals for the site or for separate parts of the site are to be the subject of a subsequent development application or applications.

This development application, as detailed within section 3, constitutes Stage 2 of the concept development application.

6.8.4 Designated Development

Section 4(1) of the EPA Regulations states:

(1) Development described in Part 1 of Schedule 3 is declared to be designated development for the Act unless it is declared not to be designated development by a provision of Part 2 or 3 of that Schedule.

Schedule 3 Part 1 Item 14 of the Regulations details 'Contaminated Soil Treatment Works'. Where, Contaminated soil treatment works (being works for on-site or off-site treatment of contaminated soils including incineration or storage or contaminated soil, but excluding excavation for treatment at another site):

- (a) [Not applicable]
- (b) [Not applicable]
- (c) That treat contaminated soil originating exclusively from the site on which the development is located and:
 - (i). [Not applicable], or
 - (ii). Treat otherwise by incineration and store more than 30,000 cubic metres of contaminated soil, or
 - (iii). Disturb more than an aggregate of 3 hectares of contaminated soil.

A previous investigation conducted by JBS& G^{41} provided a summary of potential volumes of contaminated material to be remediated. This contamination due diligence assessment estimated that approximately $82,000 \, \mathrm{m}^3$ of contaminated material is present throughout the site.

⁴¹ Ibid 40, page 13.



³⁶29

This volume exceeded the contaminated soil treatment criteria stated in Schedule 3 of the EPA Regulations and will result in the proposed development being defined as designated development.

6.8.5 Integrated Development

Development that requires one or more approvals listed within s.4.46 of the EPA Act is defined as 'integrated development'. The proposed development will trigger the requirements of the following approvals, included under s.4.46 of the EPA Act:

- Section 22 of the Coal Mine Subsidence Compensation Act 2017,
- Section 90 of the National Parks and Wildlife Act 1974,
- Section 48 of the Protection of the Environment Operations Act 1997,
- Section 138 of the Roads Act 1993, and
- Section 91 of the Water Management Act 2000.

Before granting development consent to an application for consent to carry out integrated development, the consent authority must, in accordance with the regulations, obtain from each relevant approval body the general terms of any approval. Further detail is provided for each approval below.

6.8.5.1 Coal Mine Subsidence Compensation Act 2017

As detailed within section 2.1 & 2.5, the site is under laden with previous mine workings (part of the Abel Underground Coal Mine, operated by Donaldson Coal). The site is mapped within a mine subsidence district by Subsidence Advisory NSW (SANSW). Extensive geotechnical investigations have been conducted as part of the original planning proposal and pre-development due diligence^{42&43}.

Referral to SANSW under s.22 of the *Coal Mine Subsidence Compensation Act 2017* will be required, pursuant to s.4.46 of the EPA Act.

Early discussions have been held with SANSW and additional advice was sought regarding the likelihood of future subsidence. Mining was completed under the site in 2014 and the immediate subsidence as a result of that activity has occurred 44 .

The mine subsidence assessment prepared by Douglas Partners detailed that the risk of mine subsidence to the proposed development is relatively low ⁴⁵. While residual subsidence is expected to occur, this would be of a minor nature and is anticipated to be completed prior to any works being undertaken on the site.

⁴⁵ Ibid 42.



⁴² Douglas Partners. 2017. *Mine Subsidence Assessment*. Project No. 91148.00. September 2017.

⁴³ Coffey. 2013. Preliminary Geotechnical Assessment and Preliminary Mine Subsidence Review. GEOTWARA21984AA-AB. 3 September 2013.

⁴⁴ Ibid 42, page 21.

6.8.5.2 National Parks and Wildlife Act 1974

A Preliminary Archaeological Assessment was prepared by RPS, which identified two registered Aboriginal Heritage Information Management System (AHIMS) sites within the project area boundary; with and additional three archaeologically sensitive areas observed during field surveys⁴⁶.

RPS are preparing an Aboriginal Cultural Heritage Assessment Report (ACHAR) in accordance with the *Aboriginal Cultural Heritage Consultation Requirements*⁴⁷ to support an application made to the Office of Environment and Heritage (OEH) under s.90A of the National Parks & Wildlife Act 1974 (NPW Act) for an Aboriginal Heritage Impact Permit (AHIP).

6.8.5.3 Protection of the Environment Operations Act 1997

As previous discussed in section 6.7, the proposal requires an EPL to carry out the following premised-based activities, pursuant to s.48 of the POEO Act:

- Clause 15: Contaminated Soil Treatment Works, and
- Clause 19: Extractive Activities.

Prior to the commencement of any works on site, an EPL to carry out the relevant premises-based activities must be granted.

6.8.5.4 Roads Act 1993

As identified in section 3.1, access to the site will be provided by two signalised intersections off John Renshaw Drive, which is defined as a *'classified road'* under the *Roads Act 1993*. Consequently, an application will be made to the Roads and Maritime Services to connect a road to a classified road, pursuant to s.138(1)(e) of the Roads Act 1993.

6.8.5.5 Water Management Act 2000

A riparian corridor traverses the western portion of the site in a north-east to south-west direction, refer to section 2.3.3. It is proposed that a vegetated channel will be constructed to convey road and lot runoff northwards into an upper tributary of Weakley's Flat Creek. The channel is a realignment of a 1st order stream. The channel shall be trapezoidal, vegetated and generally parallel with the western access road as illustrated within the concept engineering plans contained in Appendix C. A controlled activity approval will be required prior to works commencing, pursuant to s.91 of the Water Management Act 2000.

6.8.6 State Environmental Planning Policies

The following SEPPs apply to the proposed development or the land to which it relates and must be considered as part of the development application:

⁴⁷ Office of Environment and Heritage. 2011. *Guide to Investigation, Assessing and Reporting on Aboriginal Cultural Heritage in NSW.* State of NSW and the Office of Environment and Heritage, Department of Premier and Cabinet.



⁴⁶ RPS. 2018. Preliminary Archaeological Assessment. Project No. PR136115. 22 February 2018.

- State Environmental Planning Policy (State and Regional Development) 2011,
- State Environmental Planning Policy No 33 Hazardous and Offensive Development
- State Environmental Planning Policy No 44 Koala Habitat Protection,
- State Environmental Planning Policy No 55 Remediation of Land,
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Rural Lands) 2008, and
- State Environmental Planning Policy (Vegetation in Non-rural Areas) 2017.

The relevant SEPPs are investigated in further detail and discussed below.

6.8.6.1 SEPP (State and Regional Development) 2011

An aim of the *State Environmental Planning Policy (State and Regional Development) 2011* is to confer functions on joint regional planning panels to determine development applications.

Part 4 'Regional development' apples to development of a class or description contained within in Schedule 4A of the EPA Act, which includes:

General Development over \$30 million

Development that has a capital investment value of more than \$30 million.

Clause 22 of the SEPP considers that where a proposed development, that will be the subject of a concept approval, will in aggregate exceed the capital investment value, the JRPP will take on the functions of the council with regard to being the consent authority.

As a result, the development will exceed the capital investment values of \$30 million and will be subject to Part 4 of the State and Regional Development SEPP; with the functions of a Council conferred on the regional panel in accordance with s.22 of the SEPP.

6.8.6.2 SEPP No. 33 – Hazardous and Offensive Development

State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33) provides a systematic approach to planning and assessing proposals for potentially hazardous and offensive development for the purpose of industry or storage. Through the policy, the permissibility of a proposal to which the policy applies is liked to its safety and pollution control performance.

SEPP 33 ensures that only those proposals, which are suitably located and able to demonstrate that they can be built and operated with an adequate level of safety and pollution control, can proceed. SEPP 33 is applicable to those developments that fall under the category of 'potentially hazardous industry' or 'potentially offensive industry, as defined within this Policy.



Clause 13 of the SEPP requires the following additional matters to be considered by the consent authority with respect to potentially offensive developments:

- (a) Current circulars or guidelines published by the Department of Planning and Environment relating to hazardous or offensive development, and
- (b) Whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and
- (c) Any feasible alternatives to the carrying out of the development and the reasons for choosing the development which is the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location the subject of the application), and
- (d) Any likely future use of the land surrounding the development.

Preliminary consultation with relevant authorities was conducted to assist the Department in the preparation of the SEARs. Notwithstanding, the proposal is a scheduled activity under the POEO Act and will require an EPL from the NSW EPA (previously discussed in section 6.7). Conditions of this license will ensure mitigation measures for any potentially offensive impacts from the operation of the facility.

The subject site is considered best suited for the proposal as it is within a light industrial area surrounded by other light industrial uses. It is well separated from other sensitive receptors with the closest dwelling being more than 300 metres away. The quality of surface runoff from the site is managed through appropriate stormwater management systems to ensure that the water quality does not adversely affect adjoining development.

The matters for consideration, as required under cl.13, do not trigger any additional concerns or issues that identify the development as offensive to the extent that no mitigation measures can prevent significant damage to the environment or surrounding uses. Therefore, the proposal is considered permissible under SEPP 33.

6.8.6.3 SEPP No. 44 – Koala Habitat Protection

This SEPP aims to encourage the proper conservation and management of koala habitat areas in order to maintain the viability of koala populations. Land should be included in an environmental protection zone if it is 'Core Koala Habitat'.

Three species of koala feed trees have been identified on the site. However, the trees do not occur at the designated percentages which constitute 'Potential Koala Habitat' as defined within the SEPP. Additional investigations have been conducted to determine if

⁴⁸ NSW Government. 2011. *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33*. ISBN 978-1-74263-154-7



there was evidence of a koala population, but no 'Core Koala Habitat' was found (RPS 2013). No further considerations of the SEPP apply.

6.8.6.4 SEPP No. 55 – Remediation of Land

State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) sets out a State-wide planning approach to remediation of contaminated land, which includes ensuring that remediation work is permissible throughout the State.

In particular, cl.7 of SEPP 55 requires the consent authority to consider whether the land is contaminated, and if so, consider whether the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which development is proposed to be carried out.

Clause 9(a) of SEPP 55 provides that 'Category 1' remediation works include 'designated development'. The proposal is Category 1 remediation work because the development includes the treatment of in excess of $30,000 \, \mathrm{m}^2$ of contaminated soil.

Clause 8(2) of SEPP 55 reiterates that Category 1 remediation works require consent from the consent authority.

In addition, Clause 12 of SEPP 55 provides that the consent authority must not refuse consent for Category 1 remediation work unless:

- There would be a more significant risk of harm to human health or the environment from the carrying out of the remediation work that there would be from the lawful use of the land in the absence of the work, and/or,
- The concurrence of a person specified under by operation of an environmental planning instrument or under Section 79B(3) of the Act is required and has not been granted.

The proposed remediation works would not result in a significant risk of harm for the following reasons:

- The works comply with the relevant guidelines in terms of short term impacts,
 and
- They result in a net public interest benefit in the long term through the removal of the historical legacy of contamination at the Site.

Not carrying out remediation on the development site would allow the contamination to remain in place and therefore allow the significant risk of harm to human health and the environment to continue in perpetuity. As such, as described within this EIS, the effects and impacts of carrying out the proposed remediation can be appropriately managed and are therefore less significant than the potential impact of leaving the existing contamination in place.



A RAP (Appendix H) has been prepared, which determined acceptable site-specific treatment criteria. The objective of the proposed remediation works are:

- Identify the management and/ or remediation strategies to be adopted by an assessment of remedial options and development objectives, and
- Document the procedures and standards to be followed in order to appropriately manage risks posed by the identified contamination.

An EPA accredited Site Auditor has reviewed the RAP and determined that if the remediation is carried out in accordance with the RAP, as is proposed, then the subject site can be remediated to a standard suitable for its future intended use.

As such, it is considered that the proposal has addressed all the requirements of SEPP 55.

6.8.6.5 SEPP (Infrastructure) 2007

The aim of *State Environmental Planning Policy (Infrastructure) 2007* is to facilitate the effective delivery of infrastructure across the State. Divisions under Part 3 of the Infrastructure SEPP that are relevant to the proposed development include:

- Division 5: Electricity transmission or distribution, and
- Division 17: Roads and traffic.

Each division is discussed in further detail below.

6.8.6.5.1 Electricity transmission or distribution

The consent authority must take into consideration any response received from the electricity supply authority if the proposal includes any development stated under cl.45(1) of the Infrastructure SEPP. The following triggers as stated under cl.45(1), specific to this proposal include:

- (a) The penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,
- (b) Development carried out:
 - (i) Within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or
 - (ii) Immediately adjacent to an electricity substation, or
 - (iii) Within 5m of an exposed overhead electricity power line,
- (c) [Not relevant]
- (d) Development involving or requiring the placement of power lines underground, unless an agreement with respect to the placement underground of power lines is in force between the electricity supply authority and the council for the land concerned.

The consent authority is required to provide written notice to Ausgrid, because the proposal includes development within and adjacent to an electricity easement.



6.8.6.5.2 Roads and Traffic

The proposed development has primary frontage to John Renshaw Drive, which is a 'classified road' under the Roads Act 1993. Development with frontage to a classified road must consider cl.101 of the Infrastructure SEPP, which has the following objectives:

- (a) To ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and
- (b) To prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.

Consequently, the consent authority must not grant consent to development on land that has a frontage to a classified road unless they are satisfied the proposal has addressed the matters of consideration under cl.101(2) of the Infrastructure SEPP. Table 14 responds to all the relevant matters of consideration.

Table 14: Matters of consideration under cl.101 of the Infrastructure SEPP

Consideration	Compliance		
cl.101(2) The consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that:			
cl.101 (2)(a) Where practicable, vehicular access to the land is provided by a road other than the classified road.	There is no viable access alternative to the site instead of John Renshaw Drive.		
cl.101(2)(b)The safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of: (i) The design of the vehicular access to the land, or (ii) The emission of smoke or dust from the development, or (iii) Nature, volume or frequency of vehicles using the classified road to gain access to the land. cl.101(2)(c) The development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicles emissions within the site of the development arising from the adjacent classified road.	Discussed in section 7.12.		

As such, it is considered that the proposal has addressed all the requirements of the Infrastructure SEPP.



6.8.6.6 SEPP (Rural Lands) 2008

The State Environmental Planning Policy (Rural Lands) 2008 (Rural Lands SEPP) aims to facilitate the orderly and economic use and development of rural lands for rural and related purposes. The Department of Planning and Environment approved the Planning Proposal⁴⁹ to rezone the subject site from RU2 Rural Landscape to IN2 Light Industrial and E2 Environmental Conservation. Consequently, the Rural Lands SEPP does not apply to the proposal and will not be considered further.

6.8.6.7 SEPP (Vegetation in Non-Rural Areas) 2017

The State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP) aims to protect the biodiversity values of trees and other vegetation in non-rural areas, as well as, to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

All vegetation that is proposed to be removed is subject to Stage 1 of the Concept Development Application, as described in section 1.2.2. That said, pursuant to cl.8(1) of the Vegetation SEPP an approval under Part 4 of the Vegetation SEPP is not required because development consent is sought under Part 4 of the *Environmental Planning and Assessment Act 1979*.

The proposal, which is subject to this Environmental Impact Statement does not include site clearing or any form of vegetation removal. For this reason, the Vegetation SEPP does not apply to this proposal and will not be considered further.

6.8.7 Cessnock Local Environmental Plan 2011

The site, as described in section 2.2 is in the Cessnock LGA and must comply with the planning controls stated within the Cessnock Local Environmental Plan 2011 (LEP). The relevant clauses within the LEP to be considered are:

- Clause 2.3 Zone Objectives and Land Use Table,
- Clause 2.6 Subdivision consent requirements,
- Clause 4.1 Minimum subdivision lot size,
- Clause 5.10 Heritage conservation,
- Clause 6.1 Arrangements for designated State public infrastructure,
- Clause 6.2 Public utility infrastructure, and
- Clause 6.3 Development control plan.
- Clause 7.1 Acid sulfate soils, and
- Clause 7.2 Earthworks.

All relevant clauses under the LEP are discussed in greater detail below.

6.8.7.1 Aims of the LEP

The relevant aims of the Cessnock LEP 2011 pursuant to cl.1.2 that are applicable do this development are:





(c) To encourage development for employment purposes in appropriate locations having regard to proximity to appropriate infrastructure, to ensure the efficient use of land and services, to provide walkable urban environments to reduce dependency on the use of private vehicles.

The subject site is strategically located at the intersection of major transport routes (section 2.1), which will adequately accommodate permissible land uses such as: freight transport facilities, warehousing and distribution centres. The proposal will provide approximately 178 hectares of land for industrial purposes and has been forecast to provide over 1,000 employment opportunities⁵⁰ for residents within the Cessnock Local Government Area. Subsequently, the proposal is considered consistent with the relevant objectives of the Cessnock LEP.

6.8.7.2 IN2 Light Industrial

The site is zoned IN2 Light Industrial and E2 Environmental Conservation under the Cessnock LEP 2011 (sheet LZN_009) as depicted in Figure 7.

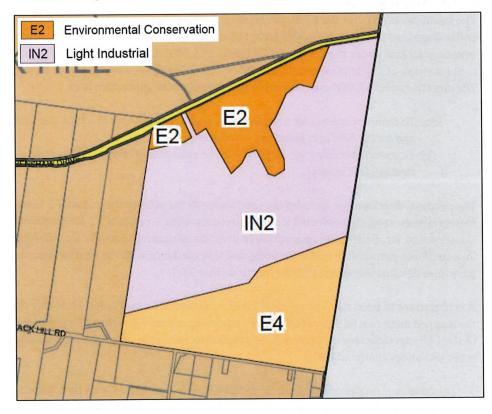


Figure 7: Extract from the Cessnock LEP: Land Zoning Map, Sheet LZN_009

⁵⁰ Department of Planning and Environment. (2017). *Media Release: 1,000 jobs in Cessnock possible following Black Hill rezoning.* Published 18 April 2017.



The proposal seeks to subdivide the portion of land zoned IN2 Light Industrial to create 39 large industrial lots, with one residual E2 Environmental Conservation Lot. The large-industrial lots will be delivered in six stages (section 3.6) The creation of these large industrial lots will provide additional employment opportunities to the Cessnock LGA to meet the day to day needs of workers in the area. The proposed subdivision, as detailed within section 3, is permissible with consent within the IN2 Light Industrial zoned land, refer to section 6.8.7.3.

To facilitate the subdivision two points of access will be provided, one of which requires minor works within the E2 Environmental Conservation zone. The proposed road works are permissible with consent with the E2 Environmental Conservation zone. No further development is proposed within this zone.

6.8.7.3 Subdivision

The proposed industrial subdivision is permissible with consent in both the IN2 Light Industrial and the E2 Environmental Conservation zoned land pursuant to cl.2.6 of the LEP, because there are no dwellings located on any created or existing lots.

6.8.7.4 Minimum Lot Size

The minimum lot size for the E2 Environmental Conservation zoned land is 80 hectares, and is illustrated in Figure 8. The IN2 Light Industrial zoned land does not have a mapped minimum lot size under the Cessnock LEP (sheet LSZ_009). Clause 4.1 of the LEP applies to subdivision of any land within the Cessnock LGA that requires development consent. The objectives of cl.4.1 that are relevant to this development application are:

- (a) To ensure minimum lot sizes are appropriate for the zones to which they apply and for the land uses permitted in those zones,
- (b) To ensure minimum lot sizes reflect the outcomes of any adopted settlement strategy for Cessnock.

The proposal development includes the subdivision of the subject site to create 39 large-industrial lots, ranging between 1.2 to 8.4 hectares; with 1 residual E2 Environmental Conservation lot. Each lot is appropriately sized to adequately provide for the future industrial use, permissible under the zone, and in accordance with the employment land principles detailed within the CWSS; refer to section 5.6.1.

It is important to note, that the residual E2 Environmental Conservation lot is less than the mapped minimum lot size of 80 hectares, as shown in Figure 8. Although, despite cl.4.1 of the LEP, development consent may be granted to subdivide an original lot to create other lots under clause 4.1B if:

- (a) Land in a residential, business or industrial zone that has an area that is not less than the minimum size shown on the Lot Sze Map in relation to that land, and
- (b) All of the land in Zone E2 Environmental Conservation or Zone E3 Environmental Management that was in the original lot, and



(c) All other resulting lots will contain land that has an area that is not less than the minimum lot size shown on the Lot Size Map in relation to that land.

Clause 4.1B applies to the proposal because the proposed subdivision seeks to create appropriately sized IN2 Industrial Lots, with a residual E2 Environmental Conservation lot, that formed part of the original lot.

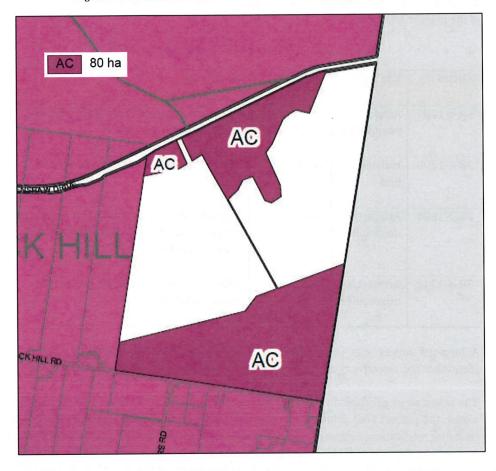


Figure 8: Extract from the Cessnock LEP: Minimum Lot Size Map, Sheet LSZ_009

Consequently, with the application of cl.4.1B, the proposed subdivision is consistent with the Cessnock LEP and should be supported for approval.

6.8.7.5 Heritage Conservation

Clause 5.10 of the Cessnock LEP requires development consent to demolish, disturb, excavate, or develop land on which an Aboriginal object is located or that is within an Aboriginal place of significance. Council must consider the effect of a proposal on the significance of an Aboriginal place and any Aboriginal object located at that place. In addition, Council must inform the local Aboriginal community about the application.



In 2013, RPS prepared an Aboriginal Heritage Due Diligence Assessment for the original planning proposal for the whole site (section 1.2.1). This assessment identified two registered on the Aboriginal Heritage Information Management System (AIHMS) sites the project area boundary. An additional three archaeologically sensitive areas were identified during the site inspections.

An updated assessment was then prepared by RPS in 2018 specifically for the subject site, which identified three registered sites within the project area and one within 100 metres of the project area boundary.

Table 15: Details of AHIMS Artefacts found within Project Area

AHIMS ID	Site Type	Site Status	Description
38-4-1289	Artefact/s unspecified	Partially destroyed	On boundary of project area. Comprises at least four surface artefacts.
38-4-1290	Isolated find	Valid	Isolated artefact in northern portion of project area.
28-4-1688	Artefact/s unspecified	Valid	Artefact scatter within northern portion of project area. Site card states that artefacts have been collected.
38-4-1742	Artefact/s unspecified	Valid	100m south of project area. Comprises surface artefact.

A targeted survey was undertaken on 15 February 2018. No additional sites were identified. The artefacts at each site within the project areas, were also not identified.

The assessment concluded that test excavation should be undertaken at five locations within the project area prior to the commencement of any ground disturbance works, including vegetation clearance and the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR). Subsequently, section 7.1 of this EIS details the work that has been conducted by RPS in relation to the preparation of the ACHAR to be submitted to OEH for an Aboriginal Heritage Impact Permit (AHIP).



6.8.7.6 Urban Release Area

The site has been identified as an Urban Release Area (URA), pursuant to map URA_009A of the Cessnock LEP; as depicted in FIGURE below.

HILL

SHAWDEAN

Black Hill

Figure 9: Extract from the Cessnock LEP: Urban Release Area Map, Sheet LSZ_009A

Development within URAs must consider Part 6 of the Cessnock LEP, which includes:

- Clause 6.1 Satisfactory Arrangements,
- Clause 6.2 Public Utility Infrastructure,
- Clause 6.3 Development Control Plan, and
- Clause 6.4 Relationship between Part and remainder on Plan.

All relevant clauses are discussed in further detail below.

6.8.7.6.1 Satisfactory Arrangements

The objective of cl.6.1 of the Cessnock LEP is to require satisfactory arrangements to be made for the provision of designated State Public Infrastructure before the subdivision of land in an urban release area to satisfy needs that arise from development on the land but only if the land is developed intensively for urban purposes.



A draft VPA has been prepared to address the requirements of cl.6.1. This has been lodged with the Department of Planning and Environment with a request for satisfactory arrangements to be issued subject to execution.

6.8.7.6.2 Public Utility Infrastructure

Clause 6.2(1) of the LEP states that before granting consent for development on land within an urban release area; the consent authority must be satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when required.

It is important to note, however, that the provision of public utilities was investigated as part of the original rezoning proposal (section 1.2.1) including, telecommunications, and gas. This proposal was supported by a Preliminary Infrastructure Investigation⁵¹, which demonstrated that the site could be adequately serviced by water, sewer, stormwater and electricity.

Expanding on the investigation conducted by SMEC⁵², ADW Johnson have prepared a Water and Wastewater Servicing Strategy (Appendix E) that has been supplied to Hunter Water for assessment. In addition, an electrical servicing strategy prepared by Power and Design, has been supplied to Ausgrid to secure funding to construct a substation to cater for the entire Black Hill Catalyst Precinct.

It is therefore considered compliant concerning cl.6.2(1) of the LEP.

6.8.7.6.3 Development Control Plan

Clause 6.3(2) of the LEP requires a Development Control Plan (DCP) to be prepared before granting consent for development on land located in an urban release area. The objective of cl.6.3 is to ensure that development on land in an urban release area occurs in a logical and cost-effective manner. Subclause (2) states;

(2) Development consent must not be granted for development on land in an urban relase area unless a development control plan that provides for the matters specified in subclause (3) has been prepared for the land.

Although subclause (2) states that *consent must not be granted... unless a development control plan has been prepared for the land,* reference is made to s.4.23(2) of the EPA Act, which states:

(2) However, if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligations may be satisfied by the making and approval of a concept development application in respect of that land.

⁵² Ibid 51.



 $^{^{51}}$ SMEC (2013). *Preliminary Infrastructure Investigation*. Project No. 30011471. Issued 16 September 2013.

A Concept Plan (Appendix C) has been prepared, as a requirment of Stage 1 (Site Clearing) of the Concept Development Application, which is discussed in section 6.8.3. Consequently, a development control plan is not required for the consent authority to determine this development application.

Notwithstanding, we recognise the importance of a development control plan in relation to the proposal and broader catalyst precinct. Therefore, a DCP has been prepared in consultation with Cessnock Council and will be supplied for exhibition under separate cover to this development application.

6.8.7.7 Acid Sulfate Soils

Acid Sulfate Soils (ASS) are mitigated throughout the Cessnock LGA under cl.7.1 of the Cessnock LEP 2011. The National Acid Sulfate Soil (ASS) Map accessed through the Australian Soil Resource Information System (ASRIS) indicates that the site is located in an area where the probability of acid sulfate soil being present is extremely low (with very low confidence). In addition, the site is not mapped under the Cessnock City Council LEP to be in an area classified as containing acid sulfate soils.

As such, an ASS Management Plan is not considered necessary to accompany this development application.

6.8.7.8 Earthworks

The objective of cl.7.2 of the LEP as stated within cl.7.2(1) is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

Pursuant to cl.7.2(2) of the LEP, development consent must be obtained for this proposal because the proposed earthworks are not exempt development or ancillary to other development for which development consent has been given. Therefore, before the consent authority can issue consent, they must consider the following, pursuant to cl.7.2(3):

(a) The likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of development.

Three principle tributaries of Weakley's Flat Creek converge within the subject site and convey flows to the north. Weakley's Flat Creek converges with Viney Creek approximately 1,500m downstream of the site, which ultimately discharges to the Hunter River.

Erosion and sediment control and stormwater management measures will be implemented in accordance with Erosion and Sediment Control Plan, refer to Appendix D. A formal in-ground drainage system will be designed and constructed in accordance with proposed stormwater strategy. Therefore, it is not anticipated that the proposed earthworks will have a detrimental impact on existing drainage patterns and soil stability.



(b) The effect of the proposed development on the likely future use or redevelopment of the land.

The proposed development has been designed to provide a more suitable developable area to cater for the intended use as an industrial estate. The proposed subdivision will provide 39 large industrial lots, to support the growing employment and economic needs of the Cessnock LGA; in alignment with the strategic directions prescribed within the Hunter Regional Plan 2036 (section 5.2) and the Draft Greater Newcastle Metropolitan Plan (section 5.4).

(c) The quality of the fill or the soil to be excavated, or both.

All excavated material will be screened and will be tested and certified by a suitability qualified geotechnical engineer prior to reuse on site. This will be managed in accordance with the remedial action plan (Appendix H) and Construction Environment Management Plan, which will be prepared prior to the issue of a Construction Certificate.

(d) The effect of the proposed development on the existing and likely amenity of adjoining properties.

There is significant separation distance between the proposed development site and the adjoining E4 Environmental Living zoned land to the south. The site to the east has been zoned IN2 Light Industrial, and an application has been recently lodged to Newcastle Council to cater for an industrial subdivision, which will complement this development application. Furthermore, the site is bounded by existing vegetation to the west, which provides visual screening between the proposal and the adjacent properties. As such, the proposal is not anticipated to have an adverse effect on the existing amenity of adjoining properties and is considered consistent with this provision.

(e) The source of any fill material and the destination of any excavated material.

No fill will be imported as part of this development. Conversely, no excavated material will leave the site. The site grading plan (Appendix C) prepared by ADW Johnson has been designed to ensure that the cut volume equates to the fill volume; resulting in a net grade across the site.

(f) The likelihood of disturbing relics

An AHIMS search has identified three potential archaeological deposits located within the area of influence of the development; refer to section 6.8.7.5. RPS has been engaged to undertake the necessary works to prepare an Aboriginal Cultural Heritage Assessment Report in order to acquire an Aboriginal Heritage Impact Permit (section 7.1). This will allow excavation to be conducted within the identified areas. That said, no works will take place within proximity of the identified sites until such time an AHIP is obtained.

(g) The proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.



A known watercourse is mapped as traversing a portion of the site. The proposed development is within 40 metres of the known watercourse and will require a controlled activity approval in accordance with s.91 of the *Water Management Act 2000*.

6.8.8 Proposed Environmental Planning Instruments

Section 4.15(1)(a)(ii) requires the consent authority to consider:

Any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved).

At the time of lodgment of this development application there were no draft environmental planning instruments that are relevant to the proposed development or subject site; that should be considered as part of this development application.

6.8.9 Cessnock Development Control Plan 2010

The following chapters of the Cessnock Development Control Plan 2010 (DCP) must be considered as part of this development application:

- Chapter C.2: Flora and Fauna Survey Guidelines,
- Chapter C.3: Contaminated Lands, and
- Chapter D.1: Subdivision Guidelines.

Each chapter is discussed in further detail below.

6.8.9.1 Flora and Fauna Survey Guidelines & Trees and Vegetation Management

Chapter C.2: Flora and Fauna Guidelines & Chapter C.7: Trees and Vegetation Management have been prepared to enforce the requirements of the *Environment Protection and Biodiversity Conservation Act 1999, Threatened Species Conservation Act 1995* (now repealed) and cl.5.9 & 5.9A of the Cessnock LEP (now repealed).

A Biodiversity Assessment Report (BDAR) and updated Inventory Report has been prepared by MJD Environmental. All vegetation survey methods have been carried out in accordance with the following documentation and methods:

- Biodiversity Assessment Methodology (BAM): Office of Environment and Heritage (OEH), August 2017;
- Biodiversity Assessment Method Operational Manual- Stage 1 Office of Environment and Heritage (OEH), May 2018; and
- NSW Guide to Surveying Threatened Plants Office of Environment and Heritage (OEH), February 2016

The BDAR is based on an application of the NSW Biodiversity Assessment Methodology 2017 (BAM), which provides a framework for assessing the developments impact on



biodiversity. A two-stage investigation path was performed in accordance with the BAM as listed below:

Stage 1 - Biodiversity Assessment; and

Stage 2 - Impact Assessment.

In addition, preliminary assessment was also undertaken having regard to the threatened entities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). A detailed discussion about the findings of the BDAR is included in section 7.3 of this EIS.

It is therefore considered that the requirements of C2 & C7 have been addressed.

6.8.9.2 Contaminated Lands

The Council Development Control Plan for contaminated lands (Chapter C.3) provides a reference to SEPP 55 requirements and guidance issued by NSW EPA. SEPP 55 and NSW EPA guidance have been considered in the preparation of the Remedial Action Plan (RAP), pursuant to the controls stated within Chapter C.3 of the DCP. Compliance with the Guidelines are demonstrated within section 7.5 of this EIS.

6.8.9.3 Subdivision Guidelines

Chapter D.1 of the Cessnock DCP applies to all development for subdivision within the Cessnock LGA The purpose of this chapter is to provide detailed guidance to applicants in relation to the preparation of development applications for subdivision. An assessment against each relevant control contained within this chapter is provided in the table below.

Control Reference	Description	Compliance
D.1: Subdivision Guidelin	nes	
1.3.1	Development Principles	Compliant. Refer to section 6.8.9.3.1.
1.8.1	Lot Sizes and Shapes	Compliant
1.8.2	Access and Road Layout	Compliant
1.8.3	Adjoining Development	Compliant
1.8.4	Utility Service	Compliant

6.8.9.3.1 Development Principles

Chapter D.1, section 1.3.1 of the Cessnock DCP provides general development principles to assist in the design of a subdivision. An assessment against each general principles I provided in Table 16.



Table 16: General subdivision development principles

Development Principle	Compliance
The ratio of depth to frontage of ach allotment to be created by the subdivision shall be determined having regard to the purpose for which it is to be used and the need to minimise the creation of vehicular access points to any road and particularly to main or arterial roads.	Each lot will be serviced by an internal ring road to be constructed as part of the subdivision. This will ensure that there are only two points of access required to John Renshaw Drive. Each lot has been designed with wide
	frontages to accommodate the future use for warehouse and distribution centres. As a result, the proposed subdivision layout is considered compliant.
The subdivision shall not to any material extent, create or increase the potential for ribbon development along and road, particularly a main or arterial road.	The proposed development will not provide any opportunity for ribbon development along any main or arterial road.
Adequate weather flood-free access shall be available to each allotment to be created by the subdivision and located so as to minimise the risk of soil erosion.	Each lot will have flood-free, pursuant to the flood investigation works conducted by ADW Johnson, refer to Appendix D. Furthermore, an erosion and sediment control plan has been prepared to minimise all potential sources of erosion.
A subdivision shall be designed to maximise the retention of natural vegetation in any subsequent development.	Vegetation will be retained where possible. Replanting will occur during the realignment works for Weakley's Flat Creek.
Each allotment to be created by the subdivision shall include flood-free land for building sites and in rural areas for the movement of stock during floods.	As above.
Each allotment to be created by the subdivision shall provide potential building sites within minimum risk of damage by bushfires or soil instability's.	Compliant. Refer to section 7.11 & 7.4
Adequately soil erosion control measures shall be incorporated in the subdivision,	Compliant. Refer to section 7.11 & Appendix D.



including measures to be carried out prior to the subdivision taking place.	
Allotments intended for use for pastoral purposes shall be of sufficient size.	Not applicable.
The subdivision shall not create or increase the number of allotments having direct access to a watercourse.	The proposal seeks to realign Weakley's Flat Creek, which will reduce the amount of lots that will have frontage to the watercourse. Refer to section 3.2.

6.8.10 Planning Agreement

6.8.10.1 Existing Voluntary Planning Agreement

A Voluntary Planning Agreement (VPA) was entered into between *Cessnock City Council* and the *Trustees of the Roman Catholic for the Diocese of Maitland-Newcastle* under s.93F of the *Environmental Planning and Assessment Act 1979*. Before granting consent to Stage 1 of the Concept Development Application (this application), the parties must negotiate and agree on an overall plan of conservation measures for the whole subject site. The conservation measures may then be implemented in stages associated with the proposed concept plan. General principles for the negotiation and agreement of the conservation measures are outlined in clause 2 of Schedule 3. These include:

- a) That the conservation measures are to be fair and reasonable,
- b) That the conservation measures may include one or more of the measures in the *Threatened Species Act 1995*, and/ or any other measure agreed by the parties,
- c) That if more than one measure is reasonable and suitable, it is the Landowner's discretion to decide which measure shall be made,
- d) That conservation measures that are close to the site are to be given first consideration,
- e) That land that is not developed may be utilised as an on-site conservation measure,
- f) That the development could generate a requirement for up to 6,367 biobanking credits, and that the development contribution should not exceed the biobank credits.
- g) That it is assumed that no vegetation clearing will be required in the E2 or E4 zoned land, however should any clearing be required, appropriate conservation measures will be negotiated.

Pursuant to the terms set out in the Planning Agreement, specifically item 2(v), an application has been submitted on the 21 August 2017 to the NSW Office of Environment and Heritage (OEH) under Section 7A of the *Threatened Species Conservation Act 1995* being the Biodiversity Banking and Offsets Scheme.



Under the Planning Agreement terms, an overall plan of *reasonable conservation measures* is to be negotiated in good faith with Council. Subject to approval of the pending Biobanking application, the applicant intends to:

- 1. Stage retirement of ecosystem credits (as intended in Planning Agreement Item 2(iii)),
- 2. Investigate opportunities to retire credits on site within the E2 Environmental Conservation and E4 Environmental Living zoned land (subject to suitability and application of suitable conservation mechanisms), and/or
- 3. See suitable ecosystem credits for retirement external to the site available on the open market.

A Biobanking application has been lodged with the Office of Environment and Heritage to satisfy the matter relating to the biodiversity impact assessment, as well as, determine the level on conservation liability to inform environmental development contributions set out in the Planning Agreement. It is acknowledged that the Biobanking assessment is currently under consideration by OEH and is not finalised. Therefore, Council's environmental assessment will be contingent on a biobanking approval to satisfy the alternative legislative arrangements.



6.8.11 Section 7.12 Contribution Plan

The Cessnock City Council Section 94A (now s.7.12) Plan applies to the proposed development. The s.7.12 Plan authorises the imposition, as a condition of development consent, a requirement that the applicant pay a levy of the percentage of the proposed cost of carrying out the development. The Levy collected is then to be applied towards the provision, extension or augmentation of public amenities or public services (or towards recouping the cost of their provision, extension or augmentation). As such while the nexus between the proposed development and the expenditure of funds must not be expressly proven, the identified provision, extension or augmentation must have a relationship to the proposed development. That is to say that the development must create a demand. This is consistent with the planning circular 'Changes to the Application of Section 94A of the EPA Act' issued by the Department of Planning and Environment.

This application is not creating any additional demand. The process of preparing and creating the opportunity for development and investment is considered to be only preparatory. The work will not create any new permanent employment on site no will it create the need for traffic upgrades or the need for additional services. The proposal will instead create the conditions that will facilitate future significant investment at which time the demand will be generated.

Further to this a significant component of the works proposed for the site involve the remediation of the existing contamination that has been identified on site. The decontamination of the site will have significant benefits both for the community and the environment.

It is therefore considered that this proposal should be exempt from the provisions of Cessnock City Council Section 94A. This is due to the fact that work is preparatory only and does not generate any requirement for the provision, extension or augmentation of public amenities or public services. The conclusion is strengthened when considered is given to the considerable community benefit that will be created from the address of the outstanding environmental issues that the site has.



7 Environmental Assessment

An Environmental Impact Assessment of the proposal during the construction and operational phases with due consideration to the social, economic and environmental aspects, has been undertaken.

The SEARs issued by the Department of Planning and Environment provide the basis for an understanding of the issues and scope for the preparation of the EIS. This section covers the relevant background and assessment of various social, economic and environmental aspects to inform SEARs.

7.1 Aboriginal Cultural Heritage

This section addresses the Aboriginal heritage impacts associated with this proposal and details the management measures proposed to mitigate these impacts.

The information presented in this section is drawn from the *Aboriginal Cultural Heritage Assessment Progress Letter*⁵³ prepared by RPS to assess the Aboriginal cultural heritage values of the project area (Appendix N).

7.1.1 Background

An Aboriginal Heritage Due Diligence Assessment⁵⁴ was completed by RPS in 2013 for the original planning proposal. This assessment identified two registered Aboriginal Heritage Information Management System (AIHMS) sites within the project area boundary and identified an additional three archaeologically sensitive areas during the site inspection.

An updated assessment was then prepared by RPS in 2018 specifically for the subject site, which identified three registered sites within the project area and one within 100 metres of the project area boundary. A targeted survey was undertaken on 15 February 2018. No additional sites were identified. The artefacts at each site within the project areas, were also not identified.

The assessment concluded that test excavation should be undertaken at five locations within the project area prior to the commencement of any ground disturbance works, including vegetation clearance and the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR). Subsequently, section 7.1 of this EIS details the work that has been conducted by RPS in relation to the preparation of the ACHAR to be submitted to 0EH for an Aboriginal Heritage Impact Permit (AHIP).

⁵⁴ RPS (2013). Aboriginal Due Diligence Assessment: Proposed Rezoning of Lot 1131 Black Hill Road, Black Hill NSW. Reference PR110373-2. September 2013.



⁵³ RPS (2018). Aboriginal Cultural Heritage Assessment Progress Letter. Doc Ref PR139511. Issued 8 August 2018.

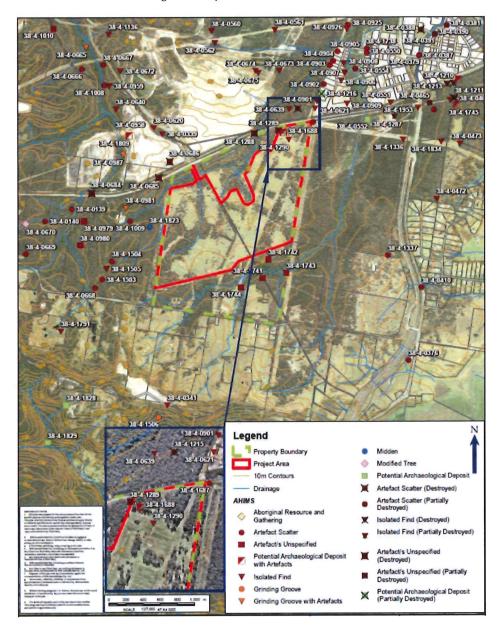


Figure 10: Project Area with AHIMS results55

⁵⁵ Ibid 53, page 3.



7.1.2 Aboriginal Cultural Heritage Assessment

RPS were engage in May 2018 prepare the ACHAR report in accordance with the *Guide to Investigation, Assessment and Reporting on Aboriginal Cultural Heritage in NSW*⁵⁶, the *Code of Practice of Archaeological Investigation of Aboriginal Objects in New South Wales*⁵⁷, and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents*⁵⁸.

The ACHAR will document the cumulative results of archaeological assessment and consultation with Aboriginal stakeholders and will include:

- Documentation of consultation with Aboriginal stakeholders in accordance with the consultation requirements⁵⁹,
- A summary of the environmental context of the Project Area and the results of relevant previous investigations. Previous investigations include archaeological survey and test excavations, which were undertaken as part of the current project, in order to determine the nature, extent and context of archaeological deposits within the Project Area. The findings of archaeological survey and test excavation will be detailed in the archaeological assessment report to be included as an appendix to the ACHAR. The recommendations of the archaeological report will be consistent with that provided in the ACHAR,
- Details of identified Aboriginal heritage values within the Project Area, including archaeological and cultural heritage,
- An assessment of the significance of Aboriginal heritage within the Project Area, including cultural heritage (based on the findings of Aboriginal stakeholder consultation) and archaeological and cultural heritage,
- An assessment of impacts associated with the proposal on identified Aboriginal heritage values, and
- Recommendations for managing and mitigating impact to Aboriginal heritage.

Due to the rigorous consultation requirements (refer to section 7.1.3), the ACHAR will be provided to Council under separate cover.

7.1.3 Community Consultation

OEH acknowledges that Aboriginal people are the primary determinants of the significance of their heritage. It is acknowledged that Aboriginal people should be involved in the Aboriginal heritage planning process and are the primary source of information about the value of their heritage.

Aboriginal community consultation has commenced for this assessment and has followed the consultation requirements 60 . The consultation requirements outline a four stage

⁶⁰ Ibid 57.



⁵⁶ Office of Environment and Heritage (2011). *Guide to Investigating, Assessing and reporting on Aboriginal Cultural Heritage in NSW*. Department of Premier and Cabinet.

⁵⁷ Office of Environment and Heritage (2010). *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales.* Department of Environment and Climate Change and Water. ⁵⁸ Department of Climate Change and Water (2010). *Aboriginal Cultural Heritage Requirements for Proponents.*

⁵⁹ Ibid 58.

Table 17: Stages of ACHAR Consultation.

Stage	Description
Stage 1: Notification of project proposal and registration of interest	Stage 1 requires that Aboriginal people who hold cultural information are identified, notified and invited to register an expression of interest in the assessment. This identification process should draw on reasonable sources of information including: relevant OEH Environment Protection and Regulation Group regional office, the relevant Local Aboriginal Land Council, the Register of Aboriginal Owners, the Native Title Tribunal, Native Title Services Corporation, local councils and the relevant Local Land Services. Aboriginal organisations and/or individuals should be notified of the activity and invited to register an expression of interest for Aboriginal consultation.
Stage 2: Presentation of information about the proposal	The aim of stage 2 is to provide registered Aboriginal parties identified during stage 1 information about the scope of the proposal and the proposed heritage assessment process.
Stage 3: Gathering information about cultural significance	Stage 3 provides the opportunity for registered Aboriginal stakeholders to recommend culturally appropriate research methodologies for the cultural heritage assessment. At this stage registered stakeholders are invited to provide input to determine the cultural significance of Aboriginal objects and/or places within the Project Area. In turn they are also given the opportunity to have an input into the development of any cultural heritage management options.
Stage 4: Review of draft cultural heritage assessment report	The final stage of the consultation requirements requires all registered Aboriginal stakeholders to be provided with a copy of the draft ACHAR and given 28 days in which to review the document. This stage provides Aboriginal stakeholders with an opportunity to review the ACHAR prior to its submission with the AHIP application. Further cultural information may be gathered at this stage and all comments received are then incorporate into the final report.

Works completed to date include the preparation of a preliminary assessment (Appendix N), which summarises the relevant environmental and archaeological information, as well as, the completion of Stage 1 and partial completion of Stages 2 & 3 of the ACHAR consultation requirement. Proposed works will continue post lodgment of this



application, with the intention to have a full ACHAR completed and submitted to Council by December 2018.

7.2 Air Quality

The air quality impacts of the proposal have been considered in the context of the proposed construction of the subdivision. Construction works can result in the generation of fugitive dust emissions with the potential to result in elevated Total Suspended Particulates (TSP), Particulate Matter (PM) PM₁₀ and PM_{2.5} concentrations and dust deposition rates in the vicinity of the works. Owing to the remediation works proposed the RAP incorporates specific requirements to mitigate and manage air quality⁶¹. The implementation of these provisions will ensure no adverse air quality impacts are generated.

Ambient dust can be generated from the movement of vehicles and construction equipment, excavation and rehabilitation, demolition, clearing and grading. Combustion emissions from vehicles and equipment can also generate pollutants such as oxides of nitrogen (NOx), carbon monoxide (CO), particulate matter (as TSP and PM_{10}), Sulphur dioxide (SO₂), volatile organic compounds (VOCs) and lead (Pb).

Air quality impacts from construction activities will be assessed using qualitative assessment mythologies prior to the issue of a Construction Certificate, to target key sources of construction emissions for mitigation and control. That said, it is anticipated that the risk of adverse air quality impacting adjoining developments is quite low. Furthermore, because the future occupants of the proposed development are not yet known, it is proposed that air quality modelling for the operational phase of the development be undertaken during the preparation of subsequent development applications, where applicable.

7.3 Biodiversity

A Biodiversity Development Assessment Report (BDAR) was prepared by MJD Environment for the construction and operation of the Black Hill Industrial Estate and is included in Appendix I. A preliminary assessment was also undertaken having regard to those threatened entities listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The Biodiversity Assessment Methodology (BAM) was used as the assessment method, to establish impacts on threatened species and threatened ecological communities in the locality under the *Biodiversity Conservation Act* 2016. The proposed development site was part of a planning proposal that received gateway on 11th December 2012 and a Draft LEP was received on 12th December 2016 with gazettal occurring on the 13th April 2017. The planning proposal assessed a land zoning change from RU2 Rural Landscape to IN2 Light Industrial and E2 Environmental Conservation. This planning proposal sought to provide opportunity to develop the previously disturbed study area environs for an industrial development whilst conserving higher value native vegetation via appropriate environmental zoning.

⁶¹ JBS&G (2018). Remedial Action Plan. Page 9.



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The current conditions on site are evidence of the past land uses. The previous use as a commercial poultry farm is evident in large areas of cleared exotic pasture where sheds where once located. Currently, the site is continuing to be grazed limiting native vegetation to re-establish across the central area of the site. Field Assessments carried out as part of the biodiversity assessment identified the following Plant Community Types (PCT):

- 77ha of varying condition PCT 1592: Spotted Gum Red Ironbark Grey Gum shrub - grass open forest of the Lower Hunter which is commensurate with the listed Endangered Ecological Community Lower Hunter Spotted Gum Ironbark Forest of the Sydney Basin; and
- 7,800m² of PCT 1584: White Mahogany Spotted Gum Grey Myrtle semi-mesic shrubby open forest of the central and lower Hunter Valley.

Targeted surveys for all flora and fauna candidate species recognised as having potential to occur within the subject land have been carried out by RPS Australia ⁶² and MJD Environmental ⁶³ as part of the works informing this BDAR. The following threatened species where observed or recorded during survey works:

- Grey Crowned Babbler Pomatostomus temporalis (Ecosystem Credit Species)
- Grey-headed Flying Fox *Pteropus poliocephalus* was also observed flying over and foraging on blossom (Dual Credit species) no camp was observed on site; and
- Little Bentwing Bat (*Miniopterus australis*), Eastern Bentwing Bat (*Miniopterus schreibersii oceanensis*), East-coast Freetail Bat (*Mormopterus norfolkensis*) both are dual Credit Species. The site was assessed as to have no maternity colonises present, so these species where accounted for as Ecosystem Credit Species.

7.3.1 Impact Analysis

The proposal will result in following impacts and required offsets as calculated using the BAM-C Calculator:

- 73.18ha of PCT 1592 requiring 1,942 ecosystem credits; and
- 7,800m² of PCT 1584 requiring 24 ecosystem credits to offset the loss under the NSW Biodiversity Offsets Scheme

There is no requirement to offset:

- 4.04ha of PCT1592 that was assessed to have a Vegetation Integrity score <15:
- 105.19 ha of pasture; and
- 4,400m² of non-indigenous planting

⁶³ MJD Environmental (2018). Ecological Assessment Advice – Black Hill Industrial Subdivision. Ref 17032



⁶² RPS (2018). Biodiversity Assessment Report. Project No. PR134159. 25 January 2018.

The development will be delivered in stages. It is proposed to stage the retirement of credits to achieve the required biodiversity credit liability, where the liability will be scheduled according the Staging and Clearing Plan (Appendix C). The total number of credits to be retired for each stage of the development shall be pro rata based on a credit / ha (of impact) calculation.

The current method to retire credits for the proposal has not been determined and will be dependent on the availability of credits on the open market, viability of establishing a stewardship site in the locality or retirement of credits via payment into the Biodiversity Conservation Fund. It is likely that credit retirement will incorporate a combination of these options as the development is delivered.

7.3.2 Impact Avoidance & Mitigation

A package of avoidance and mitigation measures have been described the BDAR prepared for this proposal. The subject site for development was selected due to the largely cleared or highly degraded lands as a result of past and present land use. All vegetation is to be removed within the subject site with the exception of the south to north reach of an ephemeral riparian corridor situated in the north-west of the site. The alignment will be subject to realigned in areas and rehabilitation as part of the staged development works.

The current layout of the industrial area has been developed in response to the rezoning of the study area and no further avoidance and mitigation measures have been considered, as the approval granted at the time of rezoning considered the conservation outcomes for the site and the proposed land usage to be sufficient to allow for the rezoning to be approved All measures have been incorporated into the design (avoidance) in the first instance with mitigation measures assessed for the construction and operational phases of the project.

7.4 Bushfire

MJD Environmental were engaged to prepare a Bushfire Threat Assessment (BTA), which aimed to consider and assess the bushfire hazard and associated potential threats relevant to the proposed development; refer to Appendix J. In addition, the BTA outlined the minimum mitigative measures, which would be required in accordance with the provisions of the *Planning for Bushfire Protection* (PBP) that has been released and adopted through the *Environmental Planning and Assessment Regulation 2007 (Planning for Bushfire Protection)* & the *Rural Fires Amendment Regulation 2007*.

Although the biodiversity impacts, including bushfire threat assessment was assessed as part of Stage 1 (vegetation removal), the SEARs have identified bushfire as a consideration to be included as part of this development application. As such, the following sections have been prepared with regard to the Bushfire Threat Assessment prepared by MJD Environmental.



7.4.1 Vegetation Assessment

The vegetation in and around the site, to a distance of 140 metres, was assessed in accordance with PBP. This assessment has been made via the following combination of methods:

- Aerial photo interpretation,
- Reference to regional community vegetation mapping and/ or vegetation delineation based on ecological assessment on site, and
- On site vegetation classification.

The results for the vegetation classification are provided in Table 18.

Table 18: Vegetation Classification 64

Direction	Description	Vegetation Classification
North	 E2 Environmental Conservation zone land containing native vegetation and watercourse John Renshaw Drive Donaldson Coal – now in care and control 	Forest / Managed
North- east	 A 330kV electrical powerline with associated easement followed by John Renshaw Drive followed by IN2 Light Industrial zone land containing native vegetation Proposed intersections and site access 	No hazard / Forest
North- west	 RU2 Rural Landscape zoned lands containing native vegetation Proposed intersections and site access 	Forest
East	 A 330kV electrical powerline with associated easement followed by IN2 Light Industrial zone land containing native vegetation. This land has been approved for an employment lands development as part of the Coal & Allied Lower Hunter Lands – Black Hill site project (Major Project ref: MP10_0093) 	No Hazard / Forest * Hazard will be removed when site is developed in the future.
South	E4 Environmental Living zoned lands containing native vegetation interspersed	Forest

 $^{^{64}}$ MJD Environmental (2018). Bushfire Threat Assessment. Job No. 17032. Version V2. Issued 9 August 2018.



	with tracks, existing farm dwellings and paddocks.	
West	RU2 Rural Landscape zone lands containing native vegetation	Forest

7.4.2 Bushfire Protection Measures

The proposed development does not strictly trigger the criteria outlined under PBP for residential and/ or Special Fire Protection Purpose (SFPP) developments. In these instances, section 1.3(b) of PBP states that the provision under the BCA for fire safety will be accepted for bushfire purposes. An appraisal against the PBP objectives is provided in Chapter 4 of the BTA and includes an assessment relating to:

- Access,
- Servicing requirements,
- · Landscaping and fuel management, and
- Emergency management.

Assessment against these objectives has determined that the proposal is able to comply with the relevant provisions of PBP.

7.5 Contamination

JBS&G Australia Pty Ltd (JBS&G) has been engaged to address the requirements of the SEARs with respect to land contamination issues. The work completed by JBS&G has been prepared under the guidance of a person certified by the Environment Institute of Australia and New Zealand (EIANZ) as a Certified Environmental Practitioner, Site Contamination Specialist (CEnvP SC). The work completed by JBS&G has been the subject of a Site Audit prepared by NSW EPA accredited Site Auditor (Contaminated Land) Fiona Robinson.

Numerous phases of contamination investigations have been conducted in relation to the site dating back to 1998. JBS&G has prepared an Environmental Site Assessment (ESA) which presents a summary of the information presented within historical reports as well as the findings of additional investigations completed during 2018. A site history review process completed as part of the ESA has identified a number of Areas of Environmental Concern (AECs) and Contaminants of Potential Concern (COPC) relating to former poultry sheds, waste/carcass burial pits, transpiration areas, uncontrolled demolition and petroleum storage/distribution. Numerous phases of investigation have been conducted in relation to the identified AECs and COPCs. The principal findings of these investigations can be summarised as follows:

- Site contamination which requires remediation exists in the context of the proposed industrial development, however, there is a lack of evidence displaying gross and widespread contamination;
- The primary contamination issues of concern relate to:



- Microbiological contamination (e.g. E. Coli, Total Coliforms) in some areas associated with historical animal wastes;
- The potential for aesthetically unsuitable materials related to buried animal carcasses;
- Relatively isolated soils with elevated nutrient concentrations;
- Relatively isolated petroleum hydrocarbon contamination in soil.

A Remedial Action Plan (RAP) has been prepared to provide a framework for the remediation and validation of the site. The RAP includes a remediation options assessment which has concluded that onsite treatment (where possible) and retention of contaminated soils is the preferred remediation option, with offsite disposal of contaminated materials to be minimised to the extent practicable consistent with the NSW EPA approved hierarchy for remediation and management. The treatment works predominantly relate to microbiological contamination (i.e. onsite stockpiling and aeration) and physical removal of ACM. Soils which are contaminated following treatment will be retained below future industrial lots and capped with either hardstand or a layer of chemically suitable fill material. Long term management of the residual contamination will be subject to lot specific Environmental Management Plans.

7.6 Remediation Alternatives

Due to the extent of contamination present through the site, as part of the preparation of the Remedial Action Plan, a number of remediation options were considered. Each remediation option has considered the treatment of:

- ACM in stockpiles/ surface spoils/ fill,
- Biological & Associated Malodourous Soils, and
- · Waste material in fill on ground.

Each option is discussed in further detail below.

7.6.1 Option 1

Onsite treatment of the soil so that the contaminants are either destroyed or the associated hazards are reduced to an acceptable level.

7.6.1.1 ACM in stockpiles/ surface spoils/fill

Handpicking of ACM within a soil matrix (such as stockpiles/ surface soils/ fill) is labour intensive and can be costly and time consuming. It involves laying the material in remedial 'pads' and repeated raking and hand picking until all ACM is removed. The success of the remediation method is highly dependent upon the soil and the amount of other building rubble present within the fill. The more 'clayey' the soil, or the more building rubble present, the harder it is to achieve validation. Given the relatively small amount of ACM material identified that requires remediation and the potential difficulties in achieving validation of handpicked soils, this is not the preferred option.



7.6.1.2 Biological & Associated Malodourous Soils

Biological impacted soils associated with disposal of poultry carcasses and general poultry operations may not have had sufficient oxygen and time to degrade. Treatment of these aspects may be achievable through excavation, drying and aeration to promote destruction of biological residues. Onsite treatment of biological impacted soils is a possible option.

7.6.1.3 Waste Material in fill on ground (aesthetic)

The waste materials, including building rubble and poultry carcasses, in and on soils poses an aesthetic issue that cannot be treated onsite. Screening may assist to segregate waste materials for preferred management (option 3, section 7.6.3).

7.6.2 Option 2

Offsite treatment of the soil so that the contaminants are either destroyed or the associated hazards are reduced to an acceptable level, after which the soil is returned to the site.

7.6.2.1 ACM in stockpiles/ surface spoils/fill

There are no known licensed offsite treatment facilities to treat asbestos impacted soils. This option is therefore not appropriate.

7.6.2.2 Biological & Associated Malodourous Soils

This option is technically feasible; however, it involves duplication of transport and material handling costs involved in removing the material to an appropriately licensed offsite treatment facility, assuming a facility licensed to treat this type of material can be identified. This option is considered not to be cost effective or sustainable, and offsite treatment facilities may not be licensed to treat these specific impacts.

7.6.2.3 Waste Material in fill on ground (aesthetic)

The waste material poses an aesthetic issue that cannot be treated and returned to the site. This is not a suitable option for remediation.

7.6.3 Option 3

Excavation and offsite removal of the impacted material.

7.6.3.1 ACM in stockpiles/ surface spoils/ fill

As the material is bonded and intact (based upon the information obtained to date), removal of ACM sheet is relatively inexpensive, easy to conduct, and the ACM can then be removed from the site. However, considering that significant earthworks proposed for the site, the opportunity and capacity to encapsulate the material onsite is financially viable option than disposing it offsite. Therefore, this is not the preferred option.



7.6.3.2 Biological & Associated Malodourous Soils

Given the ability to treat this material onsite and subsequent possible reuse of treated material, to minimise offsite disposal volumes and associated cost, this option is not preferred. However, should the preferred option (onsite treatment, section 7.6.1.2) for this material be unsuccessful, or the material be considered unsuitable for reuse for reasons other than the identified impacts (e.g. geotechnical unsuitable), offsite disposal may be a suitable alternative.0

7.6.3.3 Waste Material in fill on ground (aesthetic)

The waste materials, including building rubble and poultry carcasses, pose an aesthetic issue that cannot be treated and returned to the site. Some screening of materials may assist in reducing the volume of material required for disposal. Some materials may also be able to be recycled, which is considered within this 'disposal' option. As such, this option is preferred.

7.6.4 Option 4

Consolidation and isolation of the soil by onsite containment within a properly designed barrier with ongoing management

7.6.4.1 ACM in stockpiles/ surface spoils/ fill

Containment of ACM impacted materials is the preferred option given the potential for considerable ACM impacted soil volumes being generated, and the development requiring considerable cut and fill to achieve the design level. It is important to note that, remediation via containment will place restrictions on the proposed redevelopment of the site (i.e. a Site Management Plan, including capping requirements), as well as a legal requirement for ongoing management placed on the ultimate custodian of the land where material is contained.

7.6.4.2 Biological & Associated Malodourous Soils

Given the ability to treat this material onsite and subsequent reuse of treated material, to contain this material onsite (without any treatment) is not preferred.

7.6.4.3 Waste Material in fill on ground (aesthetic)

As some of these materials may be able to be removed for recycling, and containment may not be feasible for materials that are not able to be compacted without any segregation/treatment is not the preferred option.

7.7 EPA Site Audit Report

A site contamination audit (Appendix K) has been conducted in relation to the site and proposed development. The audit was conducted to provide an independent review by and EPA Accredited Auditor of the suitability and appropriateness of a plan of a remedial action plan (RAP).

Based on the information presented in the Environmental Site Assessment (ESA) and observations made on site, and following the decision-making process, the Auditor concluded that the site can be made suitable for the purposes of 'commercial' industrial'





land use for the area zoned as IN2 Light Industrial and 'recreation/ areas of ecological significance' for the area zoned E2 Environmental Conservation, if remediation in accordance with the following remedial action plan included in Appendix H.

The Auditor considered that sufficient information was provided to determine that the implementation of the plan is feasible and can enable the specified use of the site in the future.

Furthermore, the Auditor commented that further investigations proposed in the SAQP (Appendix G) prior to stage remediation will inform the variability in the remediation extent. Following these works development drawings should be updated to incorporate the proposed location of containment cells. Auditor review of this documentation should be completed for each stage prior to the commencement of remediation.

Following remediation and validation, a Site Audit Statement certifying suitability for the proposed use should be prepared. The validation report should include a long-term management plan for the appropriate management of retained contamination within containment cells. The long-term management should include as-built drawings for the containment cell construction.

Based on the likelihood of remediation occurring in stages over several years, staged site audit statements would be appropriate.

7.8 Erosion and Sediment Control

Councils requires the use of erosion and sediment controls to manage and contain pollutant runoff during construction. All erosion and sediment controls and practices are to be in accordance with Council's engineering requirements and Landcom's *Managing Urban Stormwater: Soils and Construction*.

Treatment devices will be utilised to contain the pollutants generated from the site during construction. These include but are not limited to:

- Silt fencing,
- Strawbale and geotextile fencing,
- Kerb inlet controls,
- · Sandbag kerb inlet sediment traps,
- · Shaker ramps, and
- Diversion drains.

Any clean water entering the site from upstream catchments is to be diverted around the construction site where possible, remaining clean. Runoff generated from within the site is to be treated and managed using a combination of the aforementioned treatment devices. It is noted that development of the site will incur significant earthworks. Construction is proposed in stages to minimise the area of disturbed soil at any given time. The construction of temporary sediment basins is expected for each stage of the works and should be sized and configured during detailed design.



A preliminary Erosion and Sediment Control Plan has been prepared by ADW Johnson and included in Appendix D. It is important to note however, that the erosion and sediment control plan is indicative only as another more detailed erosion and sedimentation control plan will be prepared as part of the construction certificate drawing and a further plan will be provided by the contractor prior to construction.

7.9 Mine Subsidence

A Mine Subsidence Assessment⁶⁵ was conducted by Douglas Partners and supported by Ditton Geotechnical Services⁶⁶. It is understood that the Donaldson Abel Underground Mine (Donaldson) has extracted coal, by board and pillar mining and pillar extraction, from a number of panels within the 'Donaldson Top Split' coal seam beneath parts of the property. In addition, it is noted that the depth of cover over the workings under the site ranges from about 45 to 135 metres. The purpose of the geotechnical assessment was to assess the risk of mine subsidence in relation to the proposed development.

7.9.1 Mine Workings

7.9.1.1 Previous Workings

A previous Mine Subsidence Assessment ⁶⁷ undertaken by Douglas Partners included correspondence with the Subsidence Advisory NSW (SANSW). The SANSW advised that workings beneath the Donaldson Upper seam have occurred. The mining was carried out by Abel Underground mine, operated by Donaldson Coal Pty Ltd. The mining method comprised primarily board and pillar mining with subsequent secondary pillar extraction, leading to full collapse and associate surface subsidence. This mining has taken place since 2007 when Abel Underground mine was approved. The mining ceased in April 2016 when the mine changed its operations to Care and Maintenance. Figure 11 illustrates the location and extent of Coal Exploration License EL 5497 in the vicinity of the Site.



Figure 11: Extent of Coal Exploration License 5497 (edged in red); ML 1618 shaded dark grey

⁶⁷ Doulas Partners (2015). *Report on Geotechnical Assessment*. Lot 1131 DP 1057179. Project 81771. September 2015.



⁶⁵ Douglas Partners (2017). *Mine Subsidence Assessment*. Project 91148.00. September 2017.

⁶⁶ Ditton Geotechnical Services (2018).

7.9.1.2 Future Workings

Future mining in the vicinity of the site relates to continued mining within Mining Lease 1618; under the existing development consent and possible future mining within Exploration License EL 5497.

7.9.2 Surface Disturbance

As part of the Mine Subsidence Assessment Douglas Partners conducted a survey to observe the site following mining and provide comment on any surface disturbance areas impacted by subsidence. In general, the observed features at the site were minimal and included a damaged irrigation system, leaning fences and possible localised surface depressions/ ponding of water.

It was noted at the time of the previous assessment⁶⁸ that some cracking may have been remediated prior to the inspection in accordance with a rehabilitation plan. The rehabilitation plan indicates that the methods used to fill cracks 'may include' grouting with 'self-cementing material'. It was considered that cracking may occur in the future, and that if cracking was to occur, the cracks should be appropriately remediated.

7.9.3 Conclusion and Recommendations

A review of past and future mining activities was undertaken to assess the risks of subsidence in connection with the proposed industrial subdivision. In summary:

- The final subsidence recorded was commonly about 20% to 35% less than the
 predicted subsidence. The reason for the lower subsidence is not known. It is
 possible that some additional movement could occur over time as a result of
 creep, the magnitude of which is generally commensurate with seasonal
 ground movement associated with reactive clay soils.
- Exploration License 5497, held by Donaldson Coal Pty Ltd, covers a portion of
 the site. The mining company advised that it 'reserves the right' to mine this
 area in the future. It is noted, however, that it would need to go through the
 approvals process to obtain consent.
- Donaldson Coal Mine is currently under a care and maintenance i.e. not producing coal. The mining lease for the site (ML 1618) expires on 15 May 2029.
- It is possible (although unlikely) that Donaldson Coal will seek to extend
 mining. If at some time in the future mining was permitted and undertaken,
 the mine would be expected to consider the effect of mining of any
 development in the area of the mining.
- Cracking of the ground surface was anticipated as a result of the secondary pillar extraction. It is possible that cracks may open up over time as material is washed into the cracks.

⁶⁸ Ibid 67, page 22.



In summary, the mine subsidence risk to the proposed industrial development is relatively low. That said, the proposed development will be referred to SANSW, pursuant to s.22 of the *Coal Mine Subsidence Compensation Act 2017*.

7.10 Noise and Vibration

A Noise and Vibration Assessment (N&V Assessment) has been prepared by RAPT Consulting and is included in Appendix L. Results for the N&V Assessment are provided in the following sections.

7.10.1 Noise Assessment

An unattended monitoring event was undertaken to establish ambient and background noise levels. The logger that was utilised is capable of measuring continuous sound pressure levels and are able to record LAmin, LA90, LA10 and LAeq noise descriptors. The instrument was programmed to accumulate environmental noise data continuously over sampling periods of 15 minutes for the entire monitoring period.

7.10.1.1 Ambient Noise Data

The cumulative background and ambient noise results have been provided in Table 19 below.

Table 19: Unattended Noise	Monitoring Event Results ⁶⁹
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Descriptor	Noise Level dB(A)	Time Interval
L _{Aeq(15hr)}	51	7:00am -10:00pm
L _{Aeq(9hr)}	46	10:00pm - 7:00am
L _{Aeq(24hr)}	50	12:00am - 12:00am
L _{Aeq(1hr)} Day	53	7:00am - 10:00pm
L _{Aeq(1hr)} Night	50	10:00pm - 7:00am
L _{A90} Day	40	7:00am - 6:00pm
L _{A90} Evening	37	6:00pm - 10:00pm
L _{A90} Night	34	10:00pm - 6:00am

7.10.1.2 Assessment of Potential Impacts

Although the final land use is unknown at this stage, generally the typical construction activity on the proposed subdivision will include excavation and site preparation. TABLE indicates general plan and machinery data that has been used to predict noise levels at the neighbouring properties. In addition, the noisiest data has been chosen for each piece of plant/ machinery to present a 'worst-case scenario' to assist the assessment.

⁶⁹ RAPT Consulting (2018). Noise Assessment, Lot 1131 D01057179, John Renshaw Drive.



Table 20: Predicted Construction Noise Data⁷⁰

Plant Item	Activity Noise Level L _{Aeq} @ 10m	Anticipated Usage %
Dozer	80	50
Tracked Excavator	79	50
Articulated Dump Truck	74	50
Roller	73	50

At this stage it is unknown exactly where each proposed development within the substation will be located. As such, each future proponent will need to undertake its own construction noise assessment. With that said, the worst case in this development would be during excavation works, which would attenuate to 50dB(A); meeting daytime construction goals at a distance of 360m. There are no dwellings located within 360 metres to the proposed earthworks.

Construction machinery would likely move about the study area altering noise for individual receivers. During any given period, the machinery to be used in the project area would operate at maximum sound power levels for brief moments. At other times, the machinery may only producer lower sound levels while carrying out activities, which do not require 'full power'.

Subsequently, it is highly unlikely that all construction equipment would be operating at their maximum sound level at any one time. Based on the nature of the works and the distance to nearest receptors, compliance is expected for construction noise goals.

7.10.2 Vibration Assessment

Vibration impacts discussed in this section focus on potential structural damage to properties in proximity of the study area and/ or potentially affected by construction activities.

Energy from construction equipment is transmitted into the ground and transformed into vibrations, which attenuates with distance. The magnitude and attenuation of ground vibration is dependent on the following:

- The efficiency of the energy transfer mechanism of the equipment (i.e. impulsive, reciprocating, rolling or rotating equipment),
- · The frequency content,
- The impact medium stiffness,
- The Type of wave (surface or body), and
- The ground type and topography.

It is important to note, there is inherent variability in ground vibration predictions without site-specific measurement data. That said, RAPT Consulting state that 'due to the

⁷⁰ Ibid 69, page 15.



nature of the proposed works, vibration risk is low'⁷¹. TABLE outlines typical vibration levels for different plan activities sourced from the NSW RTA Publication *Environmental Noise Management Manual*⁷².

Table 21: Typical Vibration Levels Generated from Construction Equipment

Item	Peak Particle Velocity at 10m (mm/s)
Pile Boring	12-30
15 Tonne Compactor	7-8
7 Tonne Compactor	5-7
Roller	5-6
Dozer	2.5-4
Backhoe	1
Jackhammer	0.5

The results above indicate that vibration goals can be met for buildings within 10 metres, provided pile boring does not take place. Therefore, compliance at all residential and commercial receivers would meet the specified vibration compliance requirements

7.11 Stormwater Management

A Stormwater Management Report (Appendix D) has been prepared by ADW Johnson to address the stormwater management requirements of the proposed development. The SWMP specifically addresses both stormwater quantity and quality outcomes for the proposed development. Additionally, it presents a flood study for the water courses, which transect the development site (refer to section 2.3.3).

It is proposed that onsite detention (discussed in section 7.11.1) controls be provided on each developed lot to limit their peak discharge to less than or equal to their predeveloped magnitude. A stormwater routing model was created using the XPRAFTS software to calculate the peak discharge rates under pre-developed and post developed site conditions. Modelling indicates that the provision of OSD can sufficiently retard peak flows discharging from the site overall, noting the exception of a negligible (1%) increase in the 1-in-100 year (1% AEP) design event.

Similarly, individual lots shall incorporate Water Sensitive Urban Design (discussed in section 7.11.2) controls in accordance with Council's Development Control Plan. Stormwater treatment devices were modelled generically in the Model for Urban Stormwater Improvement Conceptualisation (MUSIC). Using MUSIC, a water quality treatment drain comprising generic allotment controls and gross pollutant traps was shown to meet pollutant reduction targets for the site overall.

⁷² Roads and Traffic Authority (Now RMS) (2001). Environmental Noise Management Manual.



⁷¹ Ibid 69, page 18.

7.11.1 Stormwater Detention

7.11.1.1 Catchment

The proposed development will increase the catchments impervious areas and therefore contributes to additional stormwater runoff. Using the runoff model XPRAFTS, this section details how onsite stormwater detention controls will attenuate stormwater flows from the site in accordance with Council's requirements.

The predevelopment catchment was assumed to be wholly pervious, which conservatively ignores the presence of remaining site structures, as well as, John Renshaw Drive to the north. Overall, it was found that a catchment of approximately 299 hectares drains to the box culvert over Weakley's Flat Creek, and 42 hectares drains to the existing channel to the east.

In accordance with Cessnock Council's *'Stormwater Drainage Design'*, an impervious fraction of 85% was assumed to account for all roadways and industrial land. The developed sub catchment areas were determined utilising the proposed site grading plan and concept stormwater layout included in Appendix D. In total, it was found that a catchment of approximately 310 hectares drains to the box culvert in the developed state, representing a modest increase of less than four percent.

7.11.1.2 **Detention**

It is proposed that onsite detention (OSD) is provided on created allotments with the intention of attenuating peak flows to their equivalent predeveloped magnitudes. It is also envisaged that developed lots will incorporate any or all of the following controls:

- Rainwater tanks the installation of rainwater tanks would facilitate the harvesting and reuse of rainwater for irrigation, toilets, bathrooms and fire tank replenishment.
- Stormwater detention basins open basins will either occupy the lot frontage or be positioned at rear-of-lot. Outlets shall integrate with street drainage infrastructure or tail out to receiving watercourses.
- Underground storage tanks depending on lot configuration and use, there may be preference to implement underground storage tanks, as well as open basins.

7.11.1.3 Results

The predeveloped, developed and detained peak flows were computed using XPRAFTS for AEPs ranging from 63.2% (1-year ARI) to 1%. The results are summarised in the tables below, and are shown without onsite detention (w/o OSD) and with onsite detention (w/ODS).



Table 22: Stormwater Detention Results at Outlet 1 (box culvert)

Storm Event (AEP)	Peak Discharges (m³/s)		
	Predeveloped	Developed (w/o OSD)	Developed (w/ OSD)
63.2%	8.3	12.5	8.4
39.3%	12.0	16.7	12.0
10%	18.8	24.6	18.7
5%	22.2	28.8	22.0
1%	28.9	36.6	28.5

Table 23: Stormwater Detention Results at Outlet 2 (circular culvert)

Storm Event (AEP)	Peak Discharges (m³/s)		
	Predeveloped	Developed (w/o OSD)	Developed (w/ OSD)
63.2%	1.4	4.5	1.2
39.3%	2.1	5.8	1.8
10%	3.1	8.4	2.9
5%	3.7	9.7	3.6
1%	5.2	11.8	4.9

From the tables above it can be seen that the provision of OSD reduces peak flows at both outlets to less than their predeveloped magnitudes. The exception is the 1-year ARI design storm at Outlet 1, for which modelling indicated a 1% increase in peak flow. Notwithstanding, this is a negligible increase, which would not meaningfully influence upstream or downstream flooding and, as such, the intent of Council's requirement for stormwater attenuation is achieved.

7.11.2 Stormwater Quality

The quality of the stormwater discharging from the development was determined using MUSIC. The MUSIC model was used to simulate pollutant source elements for the proposed development and the treatment of the pollutant loading using treatment devices. Like all industrial development, the proposed subdivision is subject to site-specific Water Sensitive Urban Design (WSUD) constraints. These are articulated below:

- Geomorphology the site's hydrologic regime is dominated by surficial runoff into well-defined watercourses. Owing to the presence of residual clays and site fill, soil profiles are expected to be moderately infiltrative. The adopted WSUD strategy should respect existing conditions, with preference given to conveyance and source controls over infiltration-centric treatment devices.
- Ecology the residual E2 Environmental Conservation land through which the site watercourses flow are subject to ecological controls. There is a clear objective to avoid implementation of on-line water quality basins within E2-zoned land. Consideration must also be given to nutrient loading of downstream riparian corridors to prevent algal blooms and exotic overgrowth.



Industrial land use – the created lots shall be well-suited (but not limited to)
warehousing, freight and engineering purposes. Given the unknown configuration
of each developed lot, the adopted WSUD strategy must be accommodating of all
potential applications and not impede the functionality and amenity of the site.

7.11.2.1 Treatment Devices

The adopted water quality treatment train included generic onsite WSUD controls and Gross Pollutant Traps (GPTs). The individual configuration of onsite WSUD controls will vary according to eventual land use, rainwater reuse rates and spatial arrangement. Subsequently, dictation of how each lot meets water quality improvement targets shall be the subject of further reporting at each subsequent DA stage. Notwithstanding, it is envisaged that developed lots will incorporate any or all of the following:

- Rainwater tanks these are at-source controls, which harvest roof water and store it for onsite reuse. Harvested rainwater could be reused for irrigation, toilets, bathrooms and fire tanks replenishment. Reuse rates are dependent on lot-specific factors such as roof areas, landscaping requirements and occupying staff numbers.
- 2. Stormwater detention basins these are end-of-line controls required for attenuating stormwater flows. Detention basins will either occupy the front or rear of lots draining to either street drainage infrastructure or receiving watercourses respectively. Open detention basins allow suspended particles to settle and may be planted out for enhanced nutrient removal.
- 3. Underground storage tanks these are end-of-line controls, which similarly retard peak stormwater flows. Depending on lot configuration and use, there may be preference to use underground storage tanks, as well as (or instead of) open basins.
- 4. Pit screens and trash racks sites with significant hardstand or car parking areas will require internal stormwater drainage infrastructure. There is opportunity to provide debris-capturing screens on stormwater pits prior to discharging into OSD facilities.

7.11.2.2 Results

A monitoring node was established to represent the cumulative pollutant loading from both discharge points. The combined average annual pollutant loads from the site overall are summarised in Table 24.

Table 24: Treatment Train Effectiveness - Outlet 1 (box culvert)

Pollutant	Developed Untreated Load	Developed Treated Load	Reduction %
TSS (kg/yr)	232,000	44,000	81.0
TP (kg/yr)	377	174	54
TN (kg/yr)	2,620	1,170	55.4



It is evident in Table 24 that the treatment train successfully reduced the pollutant loading from the development with an efficiently surpassing Australian Runoff Quality (ARQ) objectives. It subsequently follows that Council's requirement in relation to water quality improvement are met.

7.11.3 Flooding

Newcastle City Council's *Lower Hunter Flood Model at Hexham* is relevant to the subject site. In their 2008 version of the model, DHI Water & Environment employed numerical techniques to ascertain the regional flood behavior of the Lower Hunter River Flood. The extents of the 1% AEP regional flood level as modelled by DHI Water & Environment is present in Figure 12.

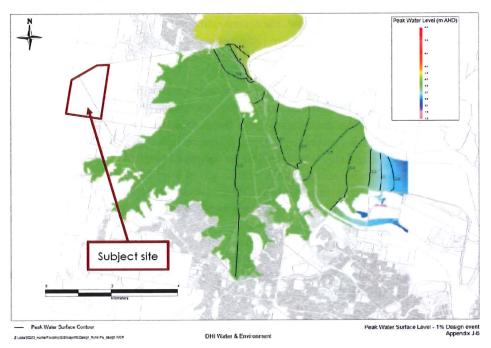


Figure 12: 1% AEP Flood Extents for the Lower Hunter River Floodplain

In addition, 1% AEP flood maps are readily available from Cessnock City Council's online mapping tool. Attention is drawn to Figure 13, which represents the 1% AEP flood extents of Four Mile Creek that lies approximately 1 kilometre west of the site.





A Flood Assessment was conducted by ADW Johnson, which utilised the U.S Army Corps of Engineers' River Analysis System (HEC-RAS). This software is capable of simulating one-dimensional flows through a full network of open channels, dendritic systems and Single River reaches.

Figure 14: HEC-RAS Flood Modelling Plan

It is evident from Figure 12 & Figure 13 that the proposed development is not prone to regional flooding of the Lower Hunter River or Four Mile Creek. Given that backwater





effects do not prevail, the downstream boundary condition applied within the HEC-RAS model was normal depth for a river slope of 1%.

7.12 Traffic and Transport

Intersect Traffic Pty Ltd were engaged to undertake a Traffic Impact Assessment (TIA), which has been included in Appendix F. The TIA was prepared in accordance with *RTA's Guide to Traffic Generating Developments*⁷³, Cessnock City Councils Development Control Plan 2010, Austroads Guide to Road Design – Part 4A – Signalised and Signalised Intersections and the Black Hill Planning Proposal – Traffic and Transport Report⁷⁴.

The purpose of the TIA was to provide an assessment of the potential traffic impacts that may arise as a result of the proposed development application, which included:

- · Identification of the existing road network,
- Justification for proposals traffic generation rates,
- · Assessment of the road capacity for John Renshaw Drive, and
- Discussion of the traffic impacts of the development.

In addition, the proposal considered the adjoining industrial land to determine the traffic impacts that may arise from the entire industrial precinct.

7.12.1 Description of the Development

The proposed development includes two signalised access intersections to John Renshaw Drive as described below:

- Eastern access- At the eastern boundary of the site, which will service Stages 1, 2
 & 3 of the development, as well as the adjoining industrial development to the
- Western access
 – Opposite the existing Donaldson mine access and constructed as
 a four-leg signalised intersection.

The subdivision access intersections are to be constructed to NSW RMS requirements while the internal road network (5 new roads) will be constructed to Cessnock City Council requirements.

7.12.2 Existing Road Network

The main travel routes to the site are via John Renshaw Drive to the M1 Motorway, Weakley's Drive, New England Highway and M15 Hunter Expressway. The main origin/destination are Newcastle, including the Port, Central Coast, Sydney, Maitland and the Hunter Valley. The main traffic routes to and from the site are shown in Figure 15.

⁷⁴ Hyder (2013). *Traffic and Transport Report*. Revision C. September 2013.



⁷³ RTA (2002). *Guide to Traffic Generating Development* (now Roads and Maritime)

Figure 15: Main transport routes to and from the site



As part of this assessment, Intersect Traffic engaged Northern Transport Planning and Engineering to undertake a traffic classifier count on John Renshaw Drive along the site frontage from 18/06/18 to 26/06/18. Additional information was sourced from NSW RMS commissioned TTM to undertake manual intersection counts at the M1 Pacific Motorway / John Renshaw Drive/ Weakley's Drive roundabout prior to the recent upgrading works commencing.

The TTM count identified the peak operating periods at the roundabout as 7.45 am to 8.45 am and 4.30 pm to 5.30 pm. This is likely to coincide with the peak traffic generation periods for the development. The two-way mid-block traffic volumes determined from this intersection count are shown in



For future (2028) traffic volumes without development have been estimated from these counts using a 1.6 % per annum background traffic growth which was determined as the historical background growth on John Renshaw Drive within the Traffic and Transport Report for the Black Hill Planning Proposal⁷⁵.

⁷⁵ Ibid 74.



Table 25: Existing and predicted 2028 peak hour traffic volumes

Road	Section 2018 (vtph)		2028 (vtph)		
191.000		AM PM		AM	PM
John Renshaw Drive	West of Weakley's Drive	899	1,069	1,054	1,253
John Renshaw Drive	East of Weakley's Drive	2,187	2,602	2,563	3,050
John Renshaw Drive	At Development Site	1,023	1,173	1,199	1,375
Weakley's Drive	North of John Renshaw Drive	1,757	1,505	2,059	1,764
M1 Pacific Motorway	South of John Renshaw Drive	2,583	2,918	3,027	3,420

7.12.4 Alternate Travel Modes

Public transport in the area is limited and is not accessible to the site. The Rover Coaches 160 and 163 services (Cessnock to Newcastle) which previously ran past the site now head down the M15 Hunter Expressway therefore cannot service the site.

The Hunter Rail Line runs from Newcastle to Scone via Maitland and runs near the site however the nearest railway station at Beresfield is some 4 km's from the site which would not provide any benefit to the site unless a new bus service linking the site to the station was provided.

There is no designated pedestrian or cycle network in the vicinity of the site or on John Renshaw Drive itself. Currently, pedestrians would be required to utilise the sealed shoulders or grass verges for trip making while cyclists would need to also utilise the sealed shoulders or share the travel lanes with other vehicles.

7.12.5 Traffic Generation

The RMS' *Guide to Traffic Generating Development* and the RMS *Technical Direction TDT 2013/04* provides specific advice on the traffic generation potential of various land uses. In relation to Business Parks and Industrial Estates the latest data for urban areas contained within TDT 2013/04 is as follows based on a unit of per 100m² GFA:

Daily vehicle trips – 7.83 (avg), Range: 3.78-11.99 PM Peak (1) Hour – 0.78 (avg), Range: 0.39-1.3 AM Peak (1) Hour – 0.7 (avg), Range 0.32-1.2

As a large lot industrial subdivision, Intersect Traffic have advised that it could be argued that the likely trip generation rate are likely to be at the lower end of the regional range. For the purposes of

Table 26, the adopted generations rates are 0.47 in the AM and 0.56 in the PM, which would equate to a daily rate of 0.56 approximately.



Stage	Total	GFA	Daily	AM Peak Hour	PM Peak Hour
1	Developable	(m ²)	Vehicle	Vehicles	Vehicles
	Area (m²)		Trips (vtpd)	(vtph)	(vtph)
1	166,000	58,100	3,254	273	325
2	298,000	104,300	5,841	490	584
3	285,000	99,750	5,586	469	559
4	301,000	105,350	5,900	495	590
5	272,000	95,200	5,331	447	533
6	281,000	98,350	5,508	462	551
Total	1,603,000	561,050	31,419	2,637	3,142

In assessing the impact of the proposed development on the road network, the cumulative impacts of the adjoining development must be considered. Intersect traffic concluded that the adjoining development is expected to generate:

- 2,265 vtph in the AM, and
- 2,589 vtph in the PM.

Furthermore, Intersect Traffic calculated the traffic generation expected to arise from the adjoining industrial.

7.12.6 Impacts of the Development

The traffic impacts that the proposed development will have on the local road network will include:

- The impact of the additional traffic generated by the development on the capacity of the road network,
- The road safety issues associated with the proposed access to the development,
- The parking demand generated by the development.

In addition, the adjoining development must be considered to provide a more accurate representation of the traffic impacts likely to affect the local road network; namely, John Renshaw Drive.

7.12.6.1 Road Network Capacity

The assessment undertaken by intersect Traffic has determined the likely maximum current and future peak traffic volumes (capacity) for the local road network. Table 27 identifies the development traffic, the road capacity and the post development 2018 & 2028 likely maximum peak traffic volumes; for both the proposed development and the entire industrial precinct.



Table 27: Road Capacity Assessment - Post Development

Road	Section	Development Traffic		Road Capacity	Precinct (2018)		Precinct (2028)	
	Alberta Laure	AM	PM		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
John Renshaw Drive	West of Weakley's Drive	3,821	4,417	2,390	4,720	5,486	4,875	5,670
John Renshaw Drive	West of Weakley's Drive and East Eastern Access	1,978	2,355	5,800	4,165	4,957	4,541	5,405
John Renshaw Drive	Between Eastern and Western access	1,362	1,622	2,800	2,385	2,795	2,561	2,997
John Renshaw Drive	West of Development Site	1,080	1,114	2,390	2,103	2,287	2,279	2,489
Weakley's Drive	North of John Renshaw Drive	775	946	2,800	2,532	2,451	2,834	2,710
M1 Pacific Motorway	South of John Renshaw	1,717	1,795	5,800	4,300	4,713	4,744	5,215

It is evident by the table above that when considering the proposed development against the existing road network capacity, the proposal remains generally compliant, with the exception to morning westbound traffic entering the site.

It is important to note that, exceedance in the road network capacity is only achieved when the traffic generated from the adjoining industrial development is included. Even then, the only section of road that is consistently exceeding the local road capacity is between the M1 Intersection and the eastern (shared) intersection of the proposed development; *i.e.* road along the frontage of the adjoining development within the Newcastle Local Government Area.

In regard to the road fronting the subject site, it is not until, 2028 when the entire precinct is completely developed, that the section of road between both the eastern (shared) and western intersection exceeds capacity by 7%.

The results indicate that John Renshaw Drive should be widened to four lanes between the development site (eastern intersection) and the M1 Pacific Motorway; section of road within the Newcastle LGA. Additional investigation are required throughout the staging of the proposed development to determine an accurate representation of the traffic impacts on the section of road between both the eastern (shared) and western intersection. Due to the minor exceedance of capacity along the frontage of the subject site in 2028, the additional investigation will allow further refinement to the trip generation rate, which is currently 0.56 and considered conservative for the intended future use of the site. Until then, the impact of the proposal on this section of road would be inaccurate, which may lead to the unnecessary upgrade of John Renshaw Drive.



Therefore, subject to the widening of John Renshaw Drive between the eastern intersection and the M1 Pacific Motorway to four lanes, the proposal will not adversely impact on the mid-block traffic flows on the local and state road network.

7.12.7 Intersection Capacity

In assessing the intersection performance, the main external intersections that may be impacted by the development would include:

- M1 Pacific Motorway/ Weakley's Drive/ John Renshaw Drive future traffic signals,
- Eastern access signalised intersection with John Renshaw Drive, and
- Western access signalised intersection with John Renshaw Drive.

Intersect Traffic conducted SIDRA modelling on all these intersections. The results of the modelling for both AM and PM peak hour traffic periods are shown in the tables below.

Table 28: Precinct - John Renshaw Drive/ Eastern Access - SIDRA Modelling - Results Summary

Model Scenario	Degree of	Average	LoS	95% back of
	Saturation (v/c)	Delay (s)	W	Queue (cars)
2018 AM +	0.893	24.2	В	30.4
Development				
2028 AM +	0.910	25.8	В	34.3
Development				
2018 PM +	0.906	45.5	D	55.8
Development				
2028 PM +	0.906	50.5	D	62.6
Development				

Table 29: John Renshaw Drive/ Western Access/ Mine Access - SIDRA Modelling - Results Summary

Model Scenario	Degree of	Average	LoS	95% back of
	Saturation (v/c)	Delay (s)	5acc	Queue (cars)
2018 AM +	0.848	24.6	В	23.0
Development				
2028 AM +	0.797	23.5	В	24.3
Development				
2018 PM +	0.912	47.1	D	56.2
Development				
2028 PM +	0.973	64.0	Е	71.4
Development				

This modelling shows that suitable intersections can be constructed at the western and eastern access points to the subdivision with average delays, LoS and 95 % back of queue lengths for all separate movements remaining at acceptable levels based on the RMS assessment criteria listed above. The intersections would therefore be deemed suitable



7.12.8 Mitigation and Management

Assessment of key issues with regard to access and road infrastructure indicates that selected road upgrades are required between the development eastern intersection and the M1 Motorway to ensure there is adequate capacity to service the development. That said, the access arrangements proposed demonstrate compliant and safe access to appropriately cater for the proposed development and the adjoining industrial development.

Intersect Traffic performed a site distance assessment for both proposed intersections. The site distance for the western intersection exceeded 300 metres, whereas the eastern intersection as measured in excess of 300 metres to the east and 220 metres to the west. As a result, both intersection locations are considered suitable in accordance with Austroads *Guide to Road Design Part 4.A – Signalised and Signalised Intersections*. No further mitigation measures are required with respect to access and infrastructure.

7.12.9 Conclusion and Recommendations

Strategic and detailed traffic analysis undertaken with respect to the catalyst precinct have considered the broader traffic environment, the road infrastructure upgrades required, the traffic likely to be generated by the development and the access, design and distribution of traffic. The analysis prepared by Intersect Traffic has demonstrated that the proposed development can address the increase traffic impacts by undertaking the proposed upgrades.

7.13 Visual and Landscape

A Landscape and Visual Impact Assessment⁷⁶ (LVIA) was prepared by Moir Landscape Architecture to support the original rezoning proposal of the subject site. The purpose of the LVIA was to provide a qualitative and quantitative assessment of the visibility and potential visual impacts of the site being utilised for an industrial use; which is consistent with this proposal.

Survey work was undertaken using key viewpoints and locations with potential views towards the site. The LVIA detailed the results of the field work, documents the assessment of the landscape character and visual setting, and potential impacts.

7.13.1 Methodology

A Landscape Assessment and Visual Impact Assessment is used to identify and determine the value, significance and sensitivity of a landscape. The method applied to this proposal involved systematically evaluating the visual environment pertaining to the site and using

⁷⁶ Moir Landscape Architecture (2013). *Landscape and Visual Impact Assessment*. Project No 0914. 17 September 2013.



value judgements based on community responses to scenery. The assessment was undertaken in stages as noted below:

- Classification of the landscape into different character types and a description of those types; referred to as Landscape Character Units (LCU),
- Objective assessment of the relative aesthetic value of the landscape, defined as
 Visual Quality and expressed as high, medium or low. This assessment generally
 relates to variety, uniqueness, prominence and naturalness of the landform,
 vegetation and water forms within each character type or LCU,
- Determination of the landscapes ability to absorb different types of development on the basis of physical and environmental character,
- An assessment of viewer sensitivity to change. This includes how different groups of people are viewing and from how far,
- The undertaking of a viewpoint analysis to identify areas likely to be affected by development of the site and a photographic survey using a digital camera and a handheld GPS unit to record position and altitude, and
- An assessment of visual impacts, and the preparation of recommendations for impact mitigation and suggestions for suitable development patterns that would maintain the areas.

The purpose of the aforementioned methodology is to reduce the amount of subjectivity entering into visual impact assessment to provide sufficient data to allow for third party verification of results.

7.13.2 Visual Impact

Generally, due to the undulating topography and existing vegetation, which characterises the local area, there are limited opportunities to view the site. The highest visual impact is likely to be felt from John Renshaw Drive, which was to be expected. This is primarily due to the close proximity to the site. That said, land associated with John Renshaw Drive has been highly modified by large scale infrastructure including, open mines, industrial estates, transport infrastructure and transmission lines.

To the south of the Site, opportunities to view the proposal are limited. Vegetation and existing residences associated with Black Hill Road provide adequate screening. Rural residences located on cleared, elevated land south of Black Hill Road generally have expansive views across the site towards the north. Due to the gently sloping nature of the site, vegetation associated with the residences along Black Hill Road and land to the west, screen the impact and significantly reduce the potential visual impact. It is likely that the retention of vegetation along the southern boundary (within the E4 Environmental Living zoned land) would significantly screen views of the proposed development.

7.13.3 Mitigation Measures

The recommendations contained within the LVIA 77 seek to achieve a better visual integration of the future development with the existing landscape character at both local

⁷⁷ Ibid 76, page 40.



and regional scales. The mitigation measures are intended to lessen the visual impact of the future development, whilst enhancing the visual character of the surrounding bushland environment.

The primary objective is to create a landscaped development visually compatible with the surrounding environment. More information on the proposal is available since the preparation of the mitigation measures proposed in LVIA⁷⁸. As such, a detailed response to each measure has been provided in Table 30.

Table 30: Further information provided in response to each LVIA mitigation measure

Proposed Mitigation Measure

Retain a 10m wide vegetation buffer along John Renshaw Drive. Retain existing vegetation and provide supplementary planting utilising locally native plant species to reduce visual impacts for motorists travelling along John Renshaw Drive.

Further Justification

Landscaping along the John Renshaw Drive frontage should be encouraged. That said, all lots that front John Renshaw Drive will include a segment of batter to account for the grade differential. As such, all landscaping within the John Renshaw Drive frontage will need to be places within an area that will not compromise the proposed earthworks.

10m wide landscaped buffer along eastern and western boundaries. Retain existing vegetation and provide supplementary planting along to ensure any future development does not have an adverse visual impact on future development on adjoining sites.

The eastern boundary divides the proposed development site from the neighbouring lot that is also included within the Black Hill catalyst precinct area. As such, the road has been positioned to run along the 'common' boundary to provide possible egress to the adjoining development. Consequently, this design does not support the 10m buffer along the eastern boundary.

Similarly, the western boundary adjoins an allotment, which is zoned RU2 Rural Landscape and significantly vegetated. Additional landscaping along the western boundary is considered redundant due to the high level of vegetation on the adjoining allotment, which provides exemplary screening from public receptors⁷⁹.

Due to the above mentioned justification, no landscape buffer is considered necessary along the eastern and western boundary.

⁷⁹ Ibid 76, page 21.



⁷⁸ Ibid 76, page 41.

The southern boundary provides an interface between the IN2 Light Industrial zoned land (development site) and the adjoining E4 Environmental Living zoned land.

Part E.18 Black Hill Employment Area of the Cessnock DCP states that a 100m buffer is to be implemented along the southern boundary; entirely within the E4 Environmental Living zoned land. This portion of land will ensure there is adequate separation between differing land uses, as well as catering for vegetation screening between zone boundaries.

As such, this mitigation measure is supported with the implementation of the site specific DCP.

Ensure entry road off John Renshaw Drive and any internal roads are designed to minimise cut and fill and provide native street tree planting. The proposed entry and internal ring road, which provides access and circulation to all proposed lots, has been designed to minimise cut and fill – refer to Appendix C. The grade of the road will support any possible future planting of natives and should be considered appropriate to the development.

7.13.4 Discussion and Conclusion

With all visual impact assessment, the objective is not to determine whether the proposed impact is visible or not visible. It is to determine how the proposal will impact on existing visual amenity, landscape character and scenic quality. If there is a potential for a negative impact on these factors, it must then be investigated to determine how the impact can be mitigated to the extent that the impact is reduced to an acceptable level.

The locality around the development has seen a dramatic increase in commercial and industrial development. It is undeniable that development on the site would have impacts on the landscape character of the area. However, in the context of rezoning the subject site, emerging landscape and operating open cut mines in visually prominent areas within close proximity to the site, any visual impacts associated with the proposal need to be assessed in light of existing and future development.

The mitigation measures (with additional commentary) discussed in section 7.13.3 of this EIS seek to avoid, reduce and where possible, remedy adverse effects on the environment arising from the proposed development. Implementation of the mitigation measures, which propose a combination of primary mitigation measures (tree retention, site



When implemented with appropriate environmental management and employment of the recommended mitigation measures, the proposed development can be undertaken with a minimal visual impact on the surrounding environment, whilst retaining the core landscape character and values.

7.14 Waste Management

The main pieces of legislation relevant to the management of waste are the POEO Act, the *Protection of the Environmental Operations (Waste) Regulation 2014* (the Waste Regulation) made under the POEO Act, and the *Waste Avoidance and Resource Recovery Act 2011* (WARR Act).

The POEO Act establishes the procedures for environmental control, and for issuing environment protection licenses regarding matters such as waste, air, water and noise. The Waste Regulation regulates matters such as the obligations of consignors (producers and agents), transporters, and receivers of waste in relation to waste transport licensing and tracking requirements.

The WARR Act aims to ensure that waste management options are considered against the waste management hierarchy. The resource management hierarchy principles in order of priority, as outlined in the WARR Act, are:

- 1. Avoidance of unnecessary resource consumption,
- Resource recovery (including reuse, reprocessing, recycling and energy recovery), and
- 3. Disposal.

The movement of controlled waste is also regulated by the *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998,* made under the *National Environment Protection Council Act 1994* (Cth).

7.14.1 Waste Hierarchy

Waste Management for the proposed demolition will be undertaken consistent with the waste management hierarchy provided below in the following order of priority; from most desirable to least desirable:

- Avoid: Waste avoidance by reducing the quantity of waste being generated. This
 is the simplest and most cost-effective way to minimise waste. It is the most
 preferred option in the waste management hierarchy.
- Re-Use: Reuse occurs when a product is used again for the same or similar use
 with no reprocessing. Reusing a product more than once in its original form
 reduces the waste generated and the energy consumed, which would have been
 required to recycle.



 Dispose: Removing waste from worksites and dumping on a licensed landfill site, or other appropriately licensed facility.

7.14.2 Classification of Waste

The contractor commissioned for demolition will be responsible for handling waste in accordance with the waste hierarchy. All wastes generated during development will be classified in accordance with the NSW *EPA Waste Classification Guidelines (2014),* which classifies wastes into the following streams:

- Special Waste (e.g. clinical and related waste, asbestos, waste tyres);
- Liquid Waste (e.g. fuels, oils, chemicals and pesticides);
- Hazardous Waste (e.g. lead-acid cell batteries and lead paint);
- Restricted Waste (currently no wastes pre-classified as restricted by EPA);
- General Solid Waste (putrescible) (e.g. general litter and food waste); and
- General Solid Waste (non-putrescible) (e.g. glass, paper, plastic, building demolition waste, concrete).

7.14.3 Potential Waste

An Erosion and Sediment Control Plan (discussed in section 7.7) has been prepared by ADW Johnson that details the specific site controls to mitigate and minimise the impact of the proposed development with the existing locality; included as Appendix D. Table 31 below sets out proposed methods of handling and disposing of demolition and construction waste.

Table 31: Demolition & Construction Waste

Waste Aspect	Waste Types	Classification	Proposed Reuse/ Recycle/ Disposal Method
Demolition Waste	Steel reinforcing,	General Solid	Disposed of off-site
(if any)	conduits and pipes, concrete, asphalt, bricks, timber, plastics, cardboard, metals electrical cabling, weatherboards.	Waste (non- putrescible)	at recycling facility
	Oil, grease, fuels, chemicals and other fluids	Liquid	Disposed of off-site at appropriately licensed facility by suitably qualified waste contractor.



General Solid

Waste (non-

putrescible)

Excess Cut/ Fill,

mulched

vegetation,

Recycled on-site,

where applicable.

7.14.4 Mitigation Measures

Civil Waste

Mitigation measures and responsibilities associated with waste management on the site are outlined below and have been developed to ensure consistency with industry best practice, pursuant to the ESCP include as Appendix D:

- Manage and reduce consumption and use of natural resources and promote the use of alternative environmentally friendly materials where practical;
- Licensed waste contractors will be used to collect, transport and dispose of materials at a licensed off-site facility in accordance with waste regulations;
- Waste will be appropriately contained in designated waste areas located away from drainage paths;
- No burning of waste or vegetation is allowed under any circumstances;
- General and putrescible waste and recyclables such as metals, plastic, glass, paper, cardboard will be segregated and collected in suitable waste containers positioned in convenient locations within each work area;
- Concrete, steel, timber, green waste and plasterboard will be stored in separate skip bins;
- Soil will be stored in stockpiles away from drainage lines and drip lines of trees with appropriate run-off controls;
- All waste skip bins will have secure lids in place to prevent water ingress and access for animals;
- Quantities of waste kept on-site will be kept to a minimum. Maximum volume of each waste stored will be consistent with the regulations and guidelines
- Waste concrete, timber, steel, cardboard, paper, recyclable plastics etc. removed from site will be recycled at recycling facilities; and



 Any Asbestos Containing Materials ('ACM') identified will be disposed off-site at a licensed facility in accordance with waste classification guidelines.



This section of the EIS identifies the collective measures required to mitigate the impacts associated with the proposed works. These measures, included in Table 32, have been derived from the impact assessment in section 7 and those detailed in the specialist reports.

8.1 Summary of Mitigation Measures

Table 32: Summary of Mitigation and Management Measures

Key Issue	Mitigation and Management		
Construction Man	agement		
General Construction Management	A Construction Environmental Management Plan (CEMP) is to be prepared for the proposed development, which captures standard and specific management and mitigation measures as described in this EIS and supporting technical documents.		
Operational Mana	gement		
General Operational Management	Although the future occupants of the industrial subdivision is unknown, an Operational Environmental Management Plan (OEMP) should be prepared for the proposed development, which captures standard and specific operational management and mitigation measures as described in tis EIS and supporting technical documents.		
Transport	WHO THE THE STREET STREET SHARE SHARE THE TENTON OF STREET WAS		
Construction Traffic	Preparation of a Construction Traffic Management Plan (CTMP) to form part of the CEMP addressing issues such as: Haulage routes, delivery schedules and curfews, Protocols for the management of construction traffic moving onto and off the site.		
Urban Design and	l Visual		
Site Layout and Design	Future development of the site must process in accordance with the approved development concept proposal and development control plan (DCP).		
Development Controls	Design and development controls to be established for the proposed in the form of a DCP to guide future development on the site.		
Visual Impact	Design and development controls to be established for the proposed development in the form of a DCP to guide future development on the site, and		



Key Issue	Mitigation and Management	
	Landscaping of key interfaces including John Renshaw Drive (where possible).	
Soils and Water	2000	
Water Usage	 Rainwater tanks or detention basins to be provided for each development site with size determined in accordance with Cessnock City Council's DCP requirements, Irrigation and toilet flushing for development should be plumbed to rainwater tanks, Consideration to be given to other possible rainwater reuse opportunities such as for truck washing, and Measures and considerations for the minimisation of water use during construction and operation to be incorporated into CEMP and OEMP as relevant. 	
Soils	 Mitigation measures inherent to civil design of the proposal, and Erosion and sedimentation measures to be implemented in accordance with the supplied plan in Appendix D. 	
Contamination	Identified Areas of Environmental Concern (AEC) to be subject to further investigation prior to the development of affected land.	
Earthworks	 Civil design achieves appropriate site levels within minimal impact on existing hydrology, and All site earthworks (cut & fill) to be managed in accordance with CEMP. 	
Surface Water	 Stormwater issues addressed through design measures incorporated into proposed development (Appendix D), and Stormwater management system designed to meet the requirements of Cessnock City Council's Engineering Works and Water Sensitive Urban Design (WSUD) Guidelines. 	
Groundwater	Methods and management of any required dewatering required during construction works to be detailed in the CEMP.	
Flooding	 Onsite Detention (OSD) designed to ensure that development does not increase stormwater peak flows in downstream areas for events up to and including 1% AEP, OSD designed to mitigate post-development flows to predevelopment flows for peak 1% AEP events, and Finished floor levels to have a minimum 500mm freeboard to 100 year overland flows. 	



Mitigation and Management

Key Issue





heritage

in the presence of relevant Aboriginal

undertaken

Key Issue	Mitigation and Management	
	 stakeholders prior to ground disturbance and excavation work in identified areas, and Results of detailed archaeological excavation and any suitable salvaged materials to be managed in accordance with the <i>National parks and Wildlife Act 1994</i> and direction from relevant Aboriginal stakeholders. 	
Greenhouse Gas and Energy Efficiency	Future stages of development within the proposed development would be subject to assessment in relation to energy efficiency and greenhouse gas emissions.	
Waste Management	Detailed construction & operational waste minimisation and management measures to be included in the CEMP	

8.2 Construction Environmental Management Plan

The proposed development would proceed in accordance with a detailed CEMP to be prepared for the site to capture both standard construction methodology, mitigation and management measures, as well as, specific measures recommended for the proposal by technical assessments and studies.

The standard construction methodology is to be followed in respect of the proposed development, including:

- Diversion of 'clean' water away from the disturbed areas and discharge via suitable scour protection,
- Provision of hay bale type flow diverters to catch drainage and divert to 'clean' water drains.
- Diversion of sediment laden water into temporary sediment control basins to capture the design storm volume and undertake flocculation (if required),
- Provision of construction traffic shaker grids and wash-down to prevent vehicles carrying soils beyond the site, and
- Provision of catch drains to carry sediment-laden water to sediment basins,
- Provision of silt fences to filter and retain sediments at source.

The above measures would remain in place for the duration each stage of construction, until such time as the individual development lots are completed. Regular inspections of erosion and sediment control measures and other construction mitigations would be undertaken by the site contractor in accordance with the protocols established under the CEMP.

The CEMP would be prepared prior to the commencement of construction works on the site.



In general, investment in major projects can only be justified if the benefits of doing so exceed the cost. Such an assessment must consider all cost and benefits, and not simply those than can be easily quantified. As a result, the *Environmental Planning and Assessment Act 1979* specifies that such a justification must be made having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.

9.1 Ecologically Sustainable Development

9.1.1 The Precautionary Principle

The precautionary principle states 'if there are threats of serious or irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation'.

Evaluation and assessment of alternative remediation options (section 7.6) has aimed to reduce the risk of serious and irreversible impacts on the environment. Stakeholder consultation considered issues raised by stakeholders and a range of specialist studies were undertaken for key issues to provide accurate and impartial information to assist in the environmental assessment process. Through its detailed assessment of potential environmental impacts in the development of the remediation strategy, the applicant has sought to properly understand the potential environmental impacts of the proposal and minimise the impacts while maintaining feasibility and safety. As detailed in section 7.5, investigations into the extent of contamination onsite have been ongoing and the development of the preferred remediation strategy for the proposal has been undertaken in consultation with relevant stakeholders. It is considered that the proposed remediation works represent measures to prevent further environmental degradation. Undertaking the proposed remediation works therefore represents application of the precautionary principle.

The assessment of the potential impacts of the proposal is considered to be consistent with the precautionary principle. It is considered that the assessments that have been undertaken are consistent with accepted scientific and assessment methodologies, and have taken into account relevant statutory and agency requirements. Threats of serious or irreversible damage arising from the proposal are avoided by the adoption of appropriate mitigative measures, as outlined above.

9.1.2 Intergenerational Equity

The intergenerational equity principle states, 'the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations'.

It is recognised that the proposal has the potential to lead to some short-term environmental impacts. This includes some temporary disturbance during remediation activities and earthworks, with the resultant potential for erosion, sedimentation of the watercourse, and disturbance of large areas of soil. However, the potential for environmental disturbance as a result of remediation and earthworks is considered to be



The health, diversity and productivity of the environment would be enhanced for the benefit of future generations by the proposal via remediation of a contaminated area. Should the project not proceed, the principle of intergenerational equity may not be compromised as future generations would inherit a contaminated site, which is likely to reduce ecological, visual amenity and socio-economic values.

9.1.3 Conservation of biological diversity and ecological activity

This principle states that the 'diversity of genes, species, populations and communities, as well as the ecosystems and habitats to which they belong, must be maintained and improved to ensure their survival'.

A thorough assessment of the existing local environment has been undertaken (section 7.3) in order to identify and manage any potential impacts of the proposal on local biodiversity. The proposal is considered to have a positive impact on biological diversity and ecological integrity through the reduction in onsite contamination exposure pathways to ecological receivers. The potential impacts on biodiversity will also be offset by investment in the Biodiversity Offset Scheme.

9.1.4 Improved valuation, pricing and incentive mechanisms

This principle requires that 'costs to the environment should be factored into the economic costs of a project'.

This EIS has examined the likely environmental consequences of the proposal and identified management and mitigation measures to manage potentially adverse impacts of the proposal on the community and environment. The remediation design presented in the RAP (Appendix H) has been developed with an environmental objective in mind. The Biodiversity Offset Scheme represents the incorporation of ecological impacts as economic costs, and their full valuation and reparation through the implementation of that scheme on the site. Environmental costs of the proposal have been considered weighed, and appropriately valued as a part of the overall costs of the proposal, throughout the environmental assessment of the proposal within this EIS.

9.2 Social and Economic Impacts

9.2.1 Likely Social Impacts

Negative social impacts of the proposal could potentially arise from amenity impacts on nearby residents, from sources such as noise, vibration, dust, shadowing and the like. However, due to the separation and vegetated buffer between the development and nearby residents, amenity impacts are considered minor.

Further social impacts may arise due to the potential for aboriginal relics to be identified and disturbed during the course of development on the site. As stated above, the process



of identifying, recording and protecting relics will be carefully managed in association with local Aboriginal stakeholders and the OEH. The careful management of this process in accordance with established procedures is expected to mitigate against the potential for negative social impact arising from the disturbance of Aboriginal cultural heritage.

Negative social impacts could also potentially arise from increased traffic on John Renshaw Drive, and resultant delays to the travelling public. As outlined above and within Appendix F, the proposed development will be accompanied by intersection improvements that will more than offset the likely increase in traffic, resulting in improvements to traffic flow.

Social benefits are likely to arise from the employment generated by the proposal and the increase to investment in the local area, considered below.

The development is placed within an industrial precinct, on a site that has been identified for industrial development. The established public expectation of development on the site assists in reducing potential social impact. It is unlikely that public submissions will raise concerns linked to negative social impacts. Should these arise in the course of public exhibition, the proponent will welcome the opportunity to address issues raised in submissions.

9.2.2 Likely Economic Impacts

The proposal will facilitate the future development of the site for light industrial development. This represents the subdivision of 178ha of industrial land into 38 lots, targeted at regionally significant warehousing, freight transport and logistics operations. The release of land within this industrial precinct has been projected by the Department of Planning and Environment to result in an anticipated 1,000 jobs⁸⁰.

Estimates of the number of jobs arising from the release of this industrial land will vary depending on the assumptions made regarding future warehousing, logistical and freight developments on the allotments. However, it is acknowledged that the large lots represent a unique offering in the region. They are also ideally located to make use of regional road transport links to national freight routes, including rail, road, port and airport facilities. The ease of access to these routes provides a significant locational advantage for regionally significant transport-based industry. It is anticipated that the take-up of these opportunities will contribute significantly to employment-generating development within the region.

In addition, the proposed development has a CIV of approximately \$77 million, representing direct capital investment in infrastructure including traffic intersections, remediation of a contaminated site, an electricity substation, extension of servicing, new roads and associated landscaping. This significant investment in improvements to the site and surrounding lands represents a direct economic benefit through capital investment.

⁸⁰ Department of Planning, Media Release, 18/4/2017



Further positive economic impacts are considered likely to arise from the flow-on impacts of investment in the region. These include the future industrial development of the allotments, and the investments likely to be made by future occupants in local goods and services. In particular, this is expected to result in direct benefits to local construction and development services, as well as services for future tenancies.

The potential for negative economic impacts should also be considered. This would potentially be caused by the introduction of direct competition to existing local industrial sites. However, due to the unique nature of the development, chiefly due to the size of allotments, it is considered highly unlikely that the proposed development will be a direct competitor to any existing industrial subdivision within the region. It is more likely that it will offer opportunities for existing local industry to expand, allowing space to accommodate growth.

The proposed development will increase the provision of useable industrial land within an identified growth area (refer to section 5.2 & 5.4). This will provide more direct investment and employment opportunities, with additional flow-on benefits arising from construction and operation phases of the development. The proposed development is consistent with Direction 24 of the Regional Plan; to provide additional opportunities within an employment precinct that does not conflict with adjoining land uses⁸¹. Overall it is considered to have positive social and economic impacts, representing a net benefit to the local community and to the region.

9.3 Submissions

The consent authority must ensure that a development application is publicly notified in accordance with the relevant requirements and that any accompanying information is available for inspection during the relevant submission period at the place or places specified in the public notice. During the relevant submission period, as stated in s.91 of the Regulations:

- a) any person may inspect the development application and any accompanying information and make extracts from or copies of them, and
- b) any person may make written submission to the consent authority with respect to the development application.

The consent authority (section 6.3) will need to consider any submissions that are lodged within the notification period. Any relevant representations will need to be considered by the consent authority in the determination of the development application.

⁸¹ Ibid 24. page 59.



Section 4.15(1)(e) of the EPA Act requires the consent authority to consider:

The public interest

The public interest is best served by the orderly and economic use of land for purposes permissible under the relevant planning regime and predominantly in accordance with the prevailing planning controls. The proposed development will facilitate the future development of the site for industrial purposes. It is compatible with the desired future character of development in the area, as anticipated by approved planning proposal, Hunter Regional Plan 203682 and the Draft Greater Newcastle Metro Plan83.

The proposed subdivision and site remediation will facilitate future industrial development to provide a quantum of industrial land uses in the Cessnock LGA. The proposal is consistent with the presiding LEP and is consistent with the relevant DCP chapters, except as identified within this Statement.

The development is considered to be in the public interest as it:

- Is a permissible form of development.
- Is consistent with the applicable planning instruments and controls, except as indicated within this Statement,
- Represents the achievement of the strategic outcome for the Black Hill Industrial Precinct and Catalyst Area,
- Will provide greater employment opportunities within the Cessnock LGA, where
 the expressed need for freight and logistics has been made clear by the
 Department of Planning and Environment⁸⁴, and
- Is buffered from existing rural and rural residential land, reducing the potential for negative environmental and amenity impacts.

The proposal represents a positive redevelopment of the site and is considered to be in the public interest.

9.5 Suitability of the Site

The proposed site clearing will provide additional land for industrial purposes, in alignment with the directions and outcomes of the Regional (section 5.2) and GNMP (section 5.4). The proposal will facilitate the renewal of the site with considerable social and economic impacts to the local and broader community (section 9.2).

The site should be considered suitable for the proposed development in that:

⁸⁴ Ibid 27



⁸² Ibid 24.

⁸³ Ibid 3

- Facilitate the remediation of a contaminated site,
- The site is in close proximity to major transport links. These links provide access
 to key economic centres such as Sydney and Brisbane. As well as, the Greater
 Newcastle 'global gateway', through the Port of Newcastle and Newcastle Airport.
- The site has been identified in the Regional Plan as an employment precinct.
 Industry clusters close to the Hunter's inter-regional transport networks and global gateways will improve efficiencies and stimulate the regional economy⁸⁵.
- This proposal will provide growth opportunities for freight, logistics and industrial sectors to help connect Greater Newcastle and the Hunter to global markets. As a result, the proposal should be considered in alignment with strategy 1.6 & 4.3 to facilitate Outcomes 1 and 4 of the Metro Plan⁸⁶.

The proposed development is consistent with key development standards and planning controls. The development will provide a favourable option for future industrial development to support the increasing demand for the future occupants. The site should be considered suitable to support this development for the reasons outlined above and detailed throughout this report.

9.6 Approvals and Licenses

The approvals and licenses required for the proposed development are listed in Table 33.

Table 33: Approvals and Licenses

Required Approval/ License	Relevant Legislation	Approval Authority
Development Consent	s.4.15, EPA Act	Joint Regional Planning Panel (JRPP)
Environmental Protection License (EPL)	s.48, POEO Act	Environment Protection Authority (EPA)
Controlled Activity Approval	s.91, WM Act	Natural Resource Access Regulator (NRAR)

⁸⁶ Ibid 3, page 31 & 64.



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⁸⁵ Ibid 3, page 59.

10 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed industrial subdivision and site remediation. The EIS has addressed the issues outlined in the Secretary's Environmental Assessment Requirements (section 1.4 & Appendix B) and accords with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* with regard to the consideration of the relevant environmental planning instruments, proposed built form and environmental impacts including: heritage, biodiversity, visual, and traffic, noise, construction and infrastructure impacts.

The development site constitutes half of the Black Hill Catalyst Precinct Area, which is identified to have strategic importance under the Draft Greater Newcastle Metropolitan Plan (section 5.4). According to the Department of Planning and Environment, the subject site is to create approximately 1,000 new employment opportunities within the Cessnock Local Government Area⁸⁷.

The site comprises approximately 178 hectares of land zoned for industrial purposes, which could adequately accommodate land uses such as: freight transport facilities, warehousing and distribution centres. This should be considered consistent with Direction 4 & 24 of the Regional Plan; to enhance inter-regional linkages to support economic growth and to provide additional opportunities within an employment precinct that does not conflict with adjoining land uses 88. In addition, the proposal will retain approximately 40 hectares for E2 Environmental Conservation zoned land. This land will be reserved to offset the ecological impact of the development; enforced under the existing biodiversity offset agreement between the applicant and the Minister for Planning and Environment (section 6.8.10.1).

Having regard to the biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The proposal is permissible with consent and meets the requirements of the relevant statutory planning controls (section 6.2),
- The proposal is consistent with the principles of ecologically sustainable development, as defined by Schedule 2 Clause 7(4) of the EPA Regulations (section 9.1),
- The proposal contributes to the vision and objectives of the Hunter Regional Plan 2036, and will not result in any unacceptable adverse impacts on existing and future surrounding development (section 5.2),
- The proposed development will not result in any significant adverse impacts on local flora and fauna that cannot be appropriately mitigated (section 7.3),
- The existing traffic network has sufficient capacity to cater for the proposed development, subject to the nominated upgrades,

⁸⁸ Ibid 26, pages 21-24 & 59.



⁸⁷ Ibid 27

- The proposal is capable of being adequately serviced with potable water, sewer, stormwater infrastructure, electrical and communication services (section 2.4),
 and
- The site can be adequately remediated to the satisfaction of a NSW EPA Accredited Site Auditor, to be made suitable for the purposes of 'commercial/ industrial' land use for the area zoned as IN2 Light Industrial and 'recreation/ areas of ecological significance' for the area zoned E2 Environmental Conservation, if remediation in accordance with the following remedial action plan included in Appendix H.

This EIS in association with the prepared subconsultant reports demonstrates that the proposed development will not give rise to any significant adverse environment, social or economic impacts, which cannot be appropriately managed or mitigated. The proposed development will facilitate an increased industrial land supply in the Cessnock LGA, consistent with the statutory (section 6) and Strategic (section 5) planning framework.

In light of the above, and the detailed assessment of the proposal herein, we have no hesitation in recommending this development application for approval.



Appendices



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Appendix C: Civil Engineering Plans







































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