

Development Consent

Section 4.38 of the Environmental Planning and Assessment Act 1979

The Independent Planning Commission of NSW (the Commission), as the declared consent authority under clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* and section 4.5(a) of the *Environmental Planning and Assessment Act 1979*, approves the development application referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development

[Name of Commissioner]
Member of the Commission

[Name of Commissioner]
Member of the Commission

[Name of Commissioner]
Member of the Commission

Sydney

2022

SCHEDULE 1

Application Number:

SSD 9349

Applicant:

Glendell Tenements Pty Limited

Consent Authority:

The Independent Planning Commission NSW

Site:

The land defined in Appendix 1

Development:

Glendell Continued Operations Project

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DEFINITIONS

Aboriginal object	Has the same meaning as the definition of the term in section 5 of the NP&W Act
Aboriginal place	Has the same meaning as the definition of the term in section 5 of the NP&W Act
AEP	Annual Event Probability
Annual Review	The review required by condition D11
Additional Disturbance Area	Means the proposed disturbance areas outside the approved disturbance areas under development consents SSD-5850 or DA 80/952 as described in the EIS
Approved Mining Area	Means the Glendell Pit and the Glendell Pit Extension as shown in Figure 6 in Appendix 2.
Applicant	Glendell Tenements Pty Ltd, or any person carrying out any development under this consent
Approved disturbance area	The area identified as such on the Development Layout
ARI	Average Recurrence Interval
ARTC	Australian Rail Track Corporation
BAM	<i>Biodiversity Assessment Method</i>
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCD	Biodiversity & Conservation Division within the Department
BCT	NSW Biodiversity Conservation Trust
Blast misfire	The failure of one or more holes in a blast pattern to initiate
Calendar year	A period of 12 months from 1 January to 31 December
CAS	Climate and Science Branch within the NSW Department of Planning and Environment
CCC	Community Consultative Committee required by condition A16
CHPP	Coal handling and preparation plant
Conditions of this consent	Conditions contained in Schedule 2
Construction	All physical works to enable mining operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent.
Core Estate Lands	The Ravensworth Homestead complex and the land to the west between Yorks Creek and Bowmans Creek, as described in the EIS and shown on Figure 15 in Appendix 5
Council	Singleton Council
CPI	Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition A10
Day	The period from 7.00 am to 6.00 pm on Monday to Saturday, and 8.00 am to 6.00 pm on Sundays and Public Holidays
Decommissioning	The deconstruction or demolition and removal of works installed as part of the development
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Department	NSW Department of Planning and Environment
Development	The development described in the documents listed in condition A2(c), as modified by the conditions of this consent
Development Layout	The plan/s in Appendix 2 of this consent
DPE Crown Lands	Crown Lands Group within the Department
DPE Water	Water Group within the Department
Ecological Mine Rehabilitation	Means rehabilitation within the Site used to satisfy biodiversity credit requirements

EEC	Endangered ecological community, as defined under the BC Act and/or EPBC Act
EIS	The Environmental Impact Statement titled <i>Glendell Continued Operations Project Environmental Impact Statement</i> , prepared by Umwelt Australia Pty Ltd, dated November 2019, submitted with the application for consent for the development, including the Applicant's response to submissions and additional information provided by the Applicant in support of the application.
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
Feasible	Means what is possible and practical in the circumstances
Fisheries NSW	Fisheries Branch of the Primary Industries Group within the Department
GDE	Groundwater Dependent Ecosystem
GHGs	Greenhouse gas emissions
Glendell Pit Extension	Means the Glendell Pit Extension as shown in Figure 6 in Appendix 2.
GPS	Global Positioning System
Heavy vehicle	A vehicle that has a combined Gross Vehicle Mass or Aggregate Trailer Mass of more than 4.5 tonnes
Heritage NSW	Heritage NSW within the Department of Premier and Cabinet
Heritage item	<p>An Aboriginal object, an Aboriginal place, or a place, building, work, relic, moveable object, tree or precinct of heritage significance, that is listed under any of the following:</p> <ul style="list-style-type: none"> the State Heritage Register under the <i>Heritage Act 1977</i>; a state agency heritage and conservation register under section 170 of the <i>Heritage Act 1977</i>; a Local Environmental Plan under the EP&A Act; the World Heritage List; the National Heritage List or Commonwealth Heritage List under the EPBC Act; or anything identified as a heritage item under the conditions of this consent
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance
Laden trains	Trains transporting mining products or materials to or from the site
Land	Has the same meaning as the definition of the term in section 1.4 the EP&A Act, except for where the term is used in the noise and air quality conditions in PART B of this consent where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm	<p>Is harm to the environment that:</p> <ul style="list-style-type: none"> involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) <p>This definition excludes "harm" that is authorised under either this consent or any other statutory approval</p>

MEG	Regional NSW – Mining, Exploration and Geoscience	
MIA	Mine Infrastructure Area	
Mine-Owned Land	Land owned by a mining, petroleum or extractive industry company (or its subsidiary or related party)	
Mine closure	Decommissioning and final rehabilitation of the site following the cessation of mining operations	
Mine water	Water that accumulates within, or drains from, active mining and infrastructure areas and any other areas where runoff may have come into contact with carbonaceous or saline material	
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development	
Mining operations	The carrying out of mining, including the extraction, processing, stockpiling and transportation of coal on the site and the associated removal, storage and/or emplacement of vegetation, topsoil, overburden, tailings and reject material	
Minister	NSW Minister for Planning and Public Spaces, or delegate	
Minor	Not very large, important or serious	
Mount Owen Complex	Means the development regulated under this consent and SSD-5850	
Mitigation	Activities associated with reducing the impacts of the development	
Negligible	Small and unimportant, such as to be not worth considering	
NGERS	National Greenhouse and Energy Reporting scheme, established under the <i>National Greenhouse and Energy Reporting Act 2007</i>	
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays	
Noise sensitive areas	Areas where mining operations are being carried out that have potential to lead to increased noise at privately-owned residences, such as elevated areas or areas near the boundary of the site	
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent	
'Non-road' equipment	mobile	diesel Mobile equipment used in mining operations that is fitted with a diesel engine with a capacity >30 litres and that is self-propelled or transportable and primarily designed for off-road use
NP&W Act	<i>National Parks and Wildlife Act 1974</i>	
NPfl	<i>NSW Noise Policy for Industry 2017</i>	
NRAR	NSW Natural Resources Access Regulator	
Over-dimensional	Over-mass, over-size or over-length vehicles	
PA	Planning agreement within the meaning of the term in section 7.4 of the EP&A Act	
Planning Secretary	Planning Secretary under the EP&A Act, or nominee	
POEO Act	<i>Protection of the Environment Operations Act 1997</i>	
Privately-owned land	Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary or related party)	
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.	
Ravensthorpe Homestead	The Ravensworth Homestead complex, comprising the group of agricultural buildings with homestead and attached kitchen on the site. The complex also contains a barn, stables, privy, men's quarters building, yard areas, paddocks and associated site and landscape features, and is further described in the EIS	
Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements	
Registered Aboriginal Parties	Means the Registered Aboriginal Parties identified in the EIS	

Rehabilitation	The restoration of land disturbed by the development to a condition which is safe, stable and non-polluting having regard to approved post mining land uses and the rehabilitation objectives and outcomes referenced within this consent.
Remediation	Activities associated with partially or fully repairing or rehabilitating the impacts of the development or controlling the environmental consequences of this impact
Residence	Existing or approved dwelling at the date of grant of this consent
Resources Regulator	NSW Resources Regulator
RFS	NSW Rural Fire Service
ROM	Run-of-mine
SA NSW	Subsidence Advisory NSW
Site	The land defined in Appendix 1
TfNSW	Transport for NSW
Yorks Creek Diversion	Means the Yorks Creek Realignment shown conceptually in Figure 6 of Appendix 2

SCHEDULE 2

PART A ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- A1. In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

TERMS OF CONSENT

- A2. The development may only be carried out:
- (a) in compliance with the conditions of this consent;
 - (b) in accordance with all written directions of the Planning Secretary;
 - (c) generally in accordance with the EIS; and
 - (d) generally in accordance with the Development Layout in Appendix 2.
- A3. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:
- (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and
 - (b) the implementation of any actions or measures contained in any such document referred to in condition A3(a).
- A4. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and any document/s listed in condition A2(c). In the event of an inconsistency, ambiguity or conflict between any of the document/s listed in condition A2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

LIMITS OF CONSENT

Mining operations

- A5. Mining operations may be carried out on the site, within the approved disturbance area, until 31 December 2044.

Notes:

- *Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to mining operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard.*
- *Mining operations and rehabilitation are also regulated under the Mining Act 1992.*

Coal Extraction and Transportation

- A6. A maximum of 10 million tonnes of ROM coal may be extracted from the Approved Mining Area in any calendar year.
- A7. The Applicant must not transport any coal from the site using public roads.

Hours of Operation

- A8. The Applicant may undertake mining operations 24 hours a day, 7 days a week.

Notes:

- *For limitations on blasting operations see condition B12.*

Identification of Approved Disturbance Area

- A9. Within three months of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must provide to the Department a survey plan (or spatial files in a format agreed by the Planning Secretary) of the boundaries of the approved disturbance areas.

NOTIFICATION OF COMMENCEMENT

- A10. The date of commencement of each of the following phases of the development must be notified to the Department in writing, at least two weeks before that date:
- (a) commencement of development under the consent;
 - (b) commencement of construction under the consent;
 - (c) commencement of mining operations under the consent (being the commencement of mining operations in the Glendell Pit Extension);

- (d) commencement of the development in the Additional Disturbance Area;
- (e) cessation of mining operations (i.e. mine closure); and
- (f) any period of suspension of mining operations (i.e. care and maintenance).

A11. If the phases of the development are to be further staged, the Department must be notified in writing at least two weeks prior to the commencement of each stage, of the date of commencement and the development to be carried out in that stage.

SURRENDER OF EXISTING CONSENTS OR APPROVALS

A12. Within 12 months of the date of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must surrender the existing development consent for the Glendell Open Cut Coal Mine (DA 80/952) in accordance with the EP&A Regulation.

A13. Upon the commencement of development under this consent, and before the surrender of existing development consents or project approvals required under condition A12, the conditions of this consent prevail to the extent of any inconsistency with the conditions of those consents or approvals.

Note: *This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under the former Part 4A of the EP&A Act or Part 6 of the EP&A Act as applies from 1 September 2018. The surrender should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.*

PLANNING AGREEMENT

A14. Prior to relocating Hebden Road, or within 24 months of the date of the commencement of mining operations associated with the Glendell Pit Extension (whichever is sooner), the Applicant must enter into a PA with Council in accordance with Division 7.1 of Part 7 of the EP&A Act.

A15. If the Applicant and Council do not enter into a PA within the timeframe under condition A14, then within a further 3 months, the Applicant must make a Section 7.11 of the EP&A Act contribution to Council of \$5.15 million as a one off payment. Upon making this payment condition A14 ceases to apply. The amount to be paid is to be adjusted at the time of the actual payment, in accordance with the provisions of Council's *Singleton Community and Economic Development Fund, 2021*, or its latest version.

COMMUNITY CONSULTATIVE COMMITTEE

A16. Before the commencement of construction, a Community Consultative Committee (CCC) must be established for the development in accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects* (2019), unless otherwise agreed by the Planning Secretary. The CCC must continue to operate during the life of the development, or other timeframe agreed by the Planning Secretary.

Notes:

- *The CCC is an advisory committee only.*
- *In accordance with the Guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council, affected stakeholder groups and the local community.*

A17. With the approval of the Planning Secretary, the Applicant may combine the CCC required by this consent with any similar CCC required by a consent or approval for any adjoining mine subject to common, shared or related ownership or management.

EVIDENCE OF CONSULTATION

A18. Where conditions of this consent require consultation with an identified party, the Applicant must:

- (a) consult with the relevant party prior to submitting the subject document; and
- (b) provide details of the consultation undertaken, including:
 - (i) the outcome of that consultation, matters resolved and unresolved; and
 - (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

Note: *The details required to be provided under A18(b) can be provided as separate correspondence and do not need to be included in the management plan document itself.*

APPLICATION OF EXISTING STRATEGIES, PLANS OR PROGRAMS

A19. Prior to the approval of management plans under this consent, the Applicant must continue to implement any equivalent or similar management plan/s required under DA 80/952, to the satisfaction of the Planning Secretary.

STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

A20. With the approval of the Planning Secretary, the Applicant may:

- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
- (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined);
- (c) combine any strategy, plan, program or Annual Review required by this consent with any similar strategy, plan, program or Annual Review required by an adjoining mining consent or approval, in common ownership or management; and
- (d) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).

A21. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.

A22. If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.

PROTECTION OF PUBLIC INFRASTRUCTURE

A23. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:

- (a) repair, or pay the full costs associated with repairing, any public infrastructure^a that is damaged by carrying out the development; and
- (b) relocate, or pay the full costs associated with relocating, any public infrastructure^a that needs to be relocated as a result of the development.

^a This condition does not apply to any damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition A14 and A15 to damage that has been compensated under the Mining Act 1992.

DEMOLITION

A24. All demolition must be carried out in accordance with *Australian Standard AS 2601-2001 The Demolition of Structures* (Standards Australia, 2001).

STRUCTURAL ADEQUACY

A25. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

OPERATION OF PLANT AND EQUIPMENT

A26. All plant and equipment used on site, or to monitor the performance of the development must be:

- (a) maintained in a proper and efficient condition; and
- (b) operated in a proper and efficient manner.

COMPLIANCE

A27. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

APPLICABILITY OF GUIDELINES

A28. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of inclusion (or later update) in the condition.

A29. Notwithstanding Condition A28, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, in respect of ongoing monitoring and management obligations, agree to or require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

CROWN LAND

A30. The Applicant must consult with DPE – Crown Lands prior to undertaking any development on Crown Land or Crown Roads.

Notes:

- *Under section 265 of the Mining Act 1992, the Applicant is required to enter into a compensation agreement with DPE – Crown Lands prior to undertaking any mining operations or related activities on Crown land or Crown roads within a mining lease.*
- *Under section 141 of the Mining Act 1992, the Applicant is required to enter into an access arrangement with DPE – Crown Lands prior to undertaking any prospecting operations on Crown land or Crown roads within an exploration licence.*

RECOMMENDED

PART B SPECIFIC ENVIRONMENTAL CONDITIONS

NOISE

Noise Criteria

- B1. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 1.

Table 1: Noise criteria dB(A)

Noise Assessment Location ^a	Day	Evening	Night	Night
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)
Residences on Privately-Owned Land				
Areas 1, 2, 4, 5, 7 and 11	40	35	35	45
Area 8	40	40	38	47
Area 9	40	40	38	45
Area 10	40	38	37	45
Other privately-owned residences	40	35	35	45

^a The Noise Assessment Locations referred to in Table 1, are shown in Appendix 3.

Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017). The noise enhancing meteorological conditions determined by monitoring at the meteorological station required under condition B36 and as defined in Part D of the *NSW Noise Policy for Industry* (EPA, 2017) apply to the noise criteria in Table 1.

- B2. The noise criteria in Table 1 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Temporary Construction Noise Limits

- B3. With the written agreement of the Planning Secretary, the Applicant may seek temporary construction noise limits above the noise criteria in Table 1, including for construction works outside of standard hours. In order to seek a temporary construction noise limit, the Applicant must develop a Construction Noise Protocol to the satisfaction of the Planning Secretary. This protocol must:
- (a) be prepared in consultation with the EPA and any residents who may be affected by the noise generated by these works;
 - (b) specify the construction works to which the temporary construction noise limits would apply and provide justification for these limits; and
 - (c) address the relevant requirements of the *Interim Construction Noise Guideline* (DECC, 2009).
- B4. The Applicant must continue to operate in accordance with the noise criteria in Table 1 until and unless a Construction Noise Protocol for the specified construction works is approved by the Planning Secretary.
- B5. The Applicant must implement any Construction Noise Protocol approved by the Planning Secretary.

Noise Operating Conditions

- B6. The Applicant must:
- (a) take all reasonable steps to minimise noise from construction and operational activities, including low frequency noise and other audible characteristics, as well as road noise associated with the development;
 - (b) implement reasonable and feasible noise attenuation measures on all plant and equipment (other than light vehicles) that will operate in noise sensitive areas;
 - (c) take all reasonable steps to minimise the noise impacts of the development in noise sensitive areas during the evening and night;
 - (d) take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions;
 - (e) operate a comprehensive noise management system that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning of mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;

- (f) carry out regular attended noise monitoring (at least once a month, unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent; and
- (g) regularly assess the noise monitoring data and modify or stop operations on the site to ensure compliance with the relevant conditions of this consent.

Noise Management Plan

- B7. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with the EPA;
 - (c) describe the measures to be implemented to ensure:
 - (i) compliance with the noise criteria and operating conditions of this consent;
 - (ii) best practice management is being employed; and
 - (iii) noise impacts of the development are minimised during noise-enhancing meteorological conditions;
 - (d) describe the measures to minimise development related road traffic noise generated on public roads;
 - (e) describe the noise management system in detail; and
 - (f) include a monitoring program that:
 - (i) uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the development;
 - (ii) monitors noise at locations representative of the most affected residences;
 - (iii) includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time;
 - (iv) adequately supports the noise management system;
 - (v) includes a protocol for distinguishing noise emissions of the development from any neighbouring developments; and
 - (vi) includes a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of any such event.
- B8. The Applicant must not commence construction associated with the Glendell Pit Extension (as identified in Appendix 2) until the Noise Management Plan is approved by the Planning Secretary.
- B9. The Applicant must implement the Noise Management Plan as approved by the Planning Secretary.

BLASTING

Blasting Criteria

- B10. The Applicant must ensure that blasting on the site does not cause exceedances of the criteria at the locations in Table 2.

Table 2: *Blasting criteria*

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately-owned land ^a	120	10	0%
	115	5	5% of the total number of blasts over a calendar year
Heritage Features			
St Clements Church	120	5	0%
	115	2	5% of the total number of blasts over a calendar year
Ravensworth Homestead	126	5	0%

<i>Location</i>	<i>Airblast overpressure (dB(Lin Peak))</i>	<i>Ground vibration (mm/s)</i>	<i>Allowable exceedance</i>
Chain of Ponds Inn	133	10	0%
Camberwell Community Hall			
Former Ravensworth Public School	133	25	0%
Former Hebden Public School	-	16 ^b	0%
John Winter Memorial	250	-	0%
Camberwell Glennies Creek Underbridge	-	50	0%
Aboriginal Engraving Site Bowmans Creek 16			
<i>Natural Features</i>			
Bowmans Creek High Bank	-	100	0%
Yorks Creek Realignment			
<i>Infrastructure</i>			
Electricity Transmission	-	50	0%
Prescribed Dams			
Public Rail	-	25	0%
Public Roads	-	100	0%
Telecommunications			
Integra Mine Underground Workings	-	10 – occupied	0%
		250 – unoccupied	
Non-Glencore Surface Mine and Industrial Infrastructure	133	25 – occupied	0%
		100 – unoccupied	
Other public infrastructure	-	50 (or a limit determined by the structural design methodology in AS 2187.2 - 2006, or its latest version)	0%

^a The locations referred to in Table 2 are shown in Appendix 3.

^b The Department recognises that this heritage feature has been impacted by arson since the original assessment, and that alternative criteria may be applied where the Applicant demonstrates to the satisfaction of the Planning Secretary that alternative criteria will protect the heritage feature in its extant condition.

B11. The blasting criteria in Table 2 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the blasting criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Blasting Hours

B12. The Applicant must only carry out blasting for the development between 9 am and 5 pm (Monday to Saturday inclusive) with the exception of an allowable maximum of 12 blasts in a calendar year across the Mount Owen Complex which may be undertaken between 7 am and 9 am (Monday to Saturday inclusive). No blasting is allowed on Sundays, public holidays or any other time without the prior written approval of the Planning Secretary.

Blasting Frequency

- B13. The Applicant may carry out a maximum of:
- (a) 2 single blast events^a in the Approved Mining Area a day; and
 - (b) 8 single blast events^a in the Approved Mining Area a week, averaged over a calendar year.
- B14. Condition B13 does not apply to single blast events^a that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or blasts required to ensure the safety of the mine, its workers or the general public.

^a Within conditions B13 and B14, 'single blast event' means a blast which involves either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the development. Should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast event.

Property Inspections

- B15. If the Applicant receives a written request from the owner of any privately-owned land within 3 kilometres of any approved open cut mining pit on the site for a property inspection to establish the baseline condition of any buildings and structures on their land, or to have a previous property inspection updated, then within 2 months of receiving this request the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
 - (i) establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
 - (ii) identify measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and structures; and
 - (b) give the landowner a copy of the new or updated property inspection report.
- B16. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Planning Secretary for resolution.

Property Investigations

- B17. If the owner of any privately-owned land within 3 kilometres of any approved open cut mining pit on the site or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
 - (b) give the landowner a copy of the property investigation report.
- B18. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary.
- B19. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

Blast Operating Conditions

- B20. The Applicant must:
- (a) take all reasonable steps to:
 - (i) ensure the safety of people and livestock from blasting impacts of the development;
 - (ii) protect public and private infrastructure and property in the vicinity of the site from blasting damage associated with the development; and
 - (iii) minimise blast-related dust and fume emissions;
 - (b) ensure that blasting on the site does not damage heritage items, and develop specific measures to protect heritage items from any blasting damage associated with the development;
 - (c) minimise the frequency and duration of any public road closures for blasting, and use all reasonable efforts to avoid road closures during peak traffic periods;
 - (d) operate a comprehensive blast management system that uses a combination of meteorological forecasts and predictive blast modelling to guide the planning of blasts to minimise blasting impacts;

- (e) operate a suitable system to enable interested members of the public to get up-to-date information on the proposed blasting schedule on the site and any associated road closures, including notification via SMS message of the blasting schedule and associated road closures for that day and any variations to that schedule and closures;
 - (f) use all reasonable efforts to co-ordinate the timing of blasting at the site with any nearby mines to minimise cumulative blasting impacts; and
 - (g) carry out regular blast monitoring to determine whether the development is complying with the relevant conditions of this consent.
- B21. The Applicant must not undertake blasting on the site within 500 metres of any public road or any land outside the site not owned by the Applicant, unless the blast generates ground vibration of 0.5 mm/s or less at that location, or the Applicant has:
- (a) a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the public road or land, and the Applicant has advised the Department in writing of the terms of this agreement; or
 - (b) demonstrated, to the satisfaction of the Planning Secretary, that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or other buildings and structures, and updated the Blast Management Plan to include specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.

Blast Management Plan

- B22. The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with the EPA;
 - (c) describe the blast management system and the measures that will be implemented to ensure compliance with the blasting criteria and conditions of this consent;
 - (d) include a Blast Fume Management Strategy for:
 - (i) minimising blast fume emissions;
 - (ii) rating and recording blast fume events; and
 - (iii) reporting significant blast fume events to the Department and the EPA;
 - (e) include a Road Closure Management Plan for any blasting within 500 metres of a public road, that has been prepared in consultation with relevant roads authorities and includes provisions for:
 - (i) minimising the duration of closures, both on a per event basis and weekly basis;
 - (ii) avoiding peak traffic periods as far as reasonable; and
 - (iii) co-ordinating closures with nearby mines to minimise the cumulative effect of road closures;
 - (f) identify any agreed alternative ground vibration limits for public or private infrastructure in the vicinity of the site (if relevant);
 - (g) include a strategy to monitor, mitigate and manage the effects of blasting on heritage items, including details of baseline (i.e. pre-blasting) and ongoing risk-based dilapidation surveys (subject to landowner access arrangements);
 - (h) include an agreed strategy for the management of potential blast interactions within 500 metres of any approved and/or developed underground workings for the Integra Underground Mine, and includes details of:
 - systems for the prior and timely notification of scheduled blasting and subsidence activities;
 - personnel evacuation and safety protocols for specific blast events; and
 - procedures and protocols for managing the interaction of the two mines; and
 - (i) include a monitoring program for evaluating and reporting on compliance with the relevant conditions of this consent;
 - (j) include a protocol for identifying any blast-related exceedance, incident or non-compliance and for notifying the Department, the EPA and relevant stakeholders of these events;
 - (k) include public notification procedures to enable members of the public, particularly surrounding residents, to get up-to-date information on the proposed blasting schedule; and
 - (l) include a protocol for investigating and responding to blast-related complaints.
- B23. The Applicant must not undertake any blasting within the Glendell Pit Extension until the Blast Management Plan is approved by the Planning Secretary.
- B24. The Applicant must implement the Blast Management Plan as approved by the Planning Secretary.

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Odour

B25. The Applicant must ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.

Air Quality Criteria

B26. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Table 3 at any residence on privately-owned land, excluding the air quality-affected land referred to in Table 9.

Table 3: Air quality criteria

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³
	24 hour	^b 50 µg/m ³
Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³
	24 hour	^b 25 µg/m ³
Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³

^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

^c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.

B27. The air quality criteria in Table 3 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Mine-owned Land

B28. Particulate matter emissions generated by the development must not exceed the criteria listed in Table 3 at any occupied residence on mine-owned land (including land owned by another mining company) unless:

- the tenant and landowner (if the residence is owned by another mining company) have been notified of any health risks associated with such exceedances in accordance with the notification requirements under PART C of this consent;
- the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving 14 days' notice;
- air quality monitoring is regularly undertaken to inform the tenant and landowner (if the residence is owned by another mining company) of the likely particulate matter emissions at the residence; and
- data from this monitoring is presented to the tenant and landowner in an appropriate format for a medical practitioner to assist the tenant and landowner in making informed decisions on the health risks associated with occupying the property.

Air Quality and Greenhouse Gas Operating Conditions

B29. The Applicant must:

- take all reasonable and feasible steps to:
 - minimise odour, fume and particulate matter (including PM₁₀ and PM_{2.5}) emissions of the development, paying particular attention to minimising wheel-generated haul road emissions;
 - eliminate or minimise the risk of spontaneous combustion;
 - improve energy efficiency and minimise Scope 1 and Scope 2 GHGs generated by the development;
 - minimise any visible off-site air pollution generated by the development; and
 - minimise the extent of potential dust generating surfaces exposed on the site at any given point in time;
- ensure that all new 'non-road' mobile diesel equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology;

- (c) operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
- (d) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Table 3 above);
- (e) minimise air quality impacts of the development on air quality-affected land referred to in Table 9 for as long as the land remains privately-owned (i.e. until it is acquired);
- (f) make all reasonable efforts to co-ordinate air quality management on the site with the air quality management at nearby mines to minimise cumulative air quality impacts;
- (g) carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions of this consent; and
- (h) regularly assess meteorological and air quality monitoring data, and modify operations on the site to ensure compliance with the relevant conditions of this consent.

Air Quality and Greenhouse Gas Management Plan

B30. The Applicant must prepare an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with the CAS and EPA;
- (c) describe the measures to be implemented to ensure:
 - (i) compliance with the air quality criteria and operating conditions of this consent;
 - (ii) best practice management is being employed to:
 - minimise the development's air quality impacts;
 - minimise the development's Scope 1 and 2 greenhouse gas emissions; and
 - improve the development's energy efficiency; and
 - (iii) the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
- (d) describe the air quality management system in detail; and
- (e) include an air quality monitoring program, undertaken in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007), that:
 - (i) includes an initial baseline estimate of the emissions of PM_{2.5} from all diesel engines used for the development;
 - (ii) uses monitors to evaluate the performance of the development against the air quality criteria in this consent and to guide day to day planning of mining operations;
 - (iii) adequately supports the air quality management system;
 - (iv) includes a protocol for distinguishing the dust emissions of the development from any neighbouring developments; and
 - (v) includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.

B31. The Applicant must not commence mining operations associated with the Glendell Pit Extension (as identified in Appendix 2) until the Air Quality and Greenhouse Gas Management Plan is approved by the Planning Secretary.

B32. Within 12 months of commencing mining operations associated with the Glendell Pit Extension and then every 3 years during the life of mining operations (and any period of suspension of ROM coal extraction and/or processing), unless otherwise agreed by the Planning Secretary, the Air Quality and Greenhouse Gas Management Plan must be updated to include the following information in relation to Scope 1 and Scope 2 GHGs:

- (a) a review of abatement technologies relevant to the development's GHGs;
- (b) a detailed review of the feasibility of implementing various GHGE abatement options, and economic considerations for the development;
- (c) a 3-year action plan to investigate and implement reasonable and feasible measures to minimise GHGs; and
- (d) review the performance measures in Table 4, and revise where reasonable and feasible to minimise GHGs.

B33. The Applicant must implement the Air Quality and Greenhouse Gas Management Plan as approved by the Planning Secretary.

Minimisation of Greenhouse Gas Emissions

B34. The Applicant must comply with the performance measures in Table 4.

Table 4: Greenhouse gas performance measures

Feature	Performance Measure
Scope 1 Fugitive Emissions and Diesel Use	<ul style="list-style-type: none">• Less than 0.51 million tonnes CO₂-e emitted per calendar year, or lower emissions as determined under condition B32• Less than 0.43 million tonnes CO₂-e emitted per calendar year (5-year rolling average), or lower emissions as determined under condition B32• Less than 6.47 million tonnes CO₂-e emitted over the life of the development, or lower emissions as determined under condition B32
Scope 2 Electricity Consumption	<ul style="list-style-type: none">• Minimise CO₂-e emissions by using electricity generated by renewable or carbon neutral energy sources where reasonable and feasible

B35. In determining compliance with the performance measures in Table 4, the Planning Secretary will take into account any atypical or abnormal operating conditions which hindered or prevented mining operations, any exceedances already offset (or required to be offset or otherwise accounted for) under other applicable Commonwealth or State requirements (for example the NGERs scheme), changes in Global Warming Potential and/or any voluntary offsetting of CO₂-e emissions by the Applicant. If, following this consideration, the Planning Secretary determines that the Applicant has exceeded any of these performance measures, including revised performance measures determined under condition B32, then the Applicant must offset the excess CO₂-e emissions within 6 months of the Planning Secretary's determination, using a mechanism to the satisfaction of the Planning Secretary.

METEOROLOGICAL MONITORING

B36. Prior to the commencement of construction and for the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that:

- (a) complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007); and
- (b) is capable of measuring meteorological conditions in accordance with the *NSW Noise Policy for Industry* (EPA, 2017),

unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.

WATER

Water Supply

B37. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.

B38. The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development prior to water take occurring, including during rehabilitation and post mine closure.

Compensatory Water Supply

B39. The Applicant must provide a compensatory water supply to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a result of the development, in consultation with DPE Water, and to the satisfaction of the Planning Secretary.

B40. The compensatory water supply measures must provide an alternative long term supply of water that is equivalent, in quality and volume, to the loss attributable to the development. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable after the loss is identified, unless otherwise agreed with the landowner.

B41. If the Applicant and the landowner cannot agree on whether the loss of water is attributed to the development or the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.

- B42. If the Applicant is unable to provide an alternative long term supply of water, then the Applicant must provide compensation, to the satisfaction of the Planning Secretary.

Notes:

- The Water Management Plan (see condition B52) is required to include trigger levels for investigating potentially adverse impacts on water supplies.
- The burden of proof that any loss of surface water or groundwater access is not due to mining impacts rests with the Applicant.

- B43. In the event of any complaint relating to a privately-owned licensed groundwater bore which may, in the opinion of the Planning Secretary, have been adversely and directly impacted as a result of the development (other than an impact that is minor or negligible), the Applicant must, as soon as practicable, facilitate the provision of a temporary water supply, pending the outcome of any groundwater investigation and/or the provision of an alternative long-term supply of water as required under condition B40, to the satisfaction of the Planning Secretary.

Yorks Creek Diversion

- B44. The Applicant must design, construct, maintain, and rehabilitate the proposed diversion of Yorks Creek, in consultation with DPE Water, to the satisfaction of the Secretary.

- B45. The Applicant must prepare a Yorks Creek Diversion Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with DPE Water; and
- (c) include:
 - (i) assessment of the water quality, ecological, hydrological and geomorphic baseline conditions in the creek;
 - (ii) detailed design, construction and engineering specifications for the creek diversion, and demonstration that the design would achieve relevant performance objectives in Table 5;
 - (iii) a construction program for the creek diversion, describing how the work would be staged, and integrated with mining operations;
 - (iv) a revegetation program for the relocated creek using a range of suitable native species;
 - (v) water quality, ecological, hydrological and geomorphic performance and completion criteria for the creek diversion based on the assessment of baseline conditions; and
 - (vi) a program to monitor and maintain the water quality, ecological, hydrological and geomorphic integrity of the creek relocation.

- B46. The Applicant must implement the Yorks Creek Diversion Management Plan as approved by the Planning Secretary.

- B47. The Applicant must undertake the realignment works prior to mining within at least 12 months prior to disturbing the existing creek alignment;

- B48. Prior to removing the existing creek alignment, the Applicant must demonstrate that the Yorks Creek diversion is operating successfully, in consultation with DPE Water, and to the satisfaction of the Secretary.

- B49. Within one month of completing the construction of the Yorks Creek diversion, the Applicant must submit an asexecuted report, certified by a practising registered engineer, to the Secretary and DPE Water certifying that the realignment has been designed and constructed to the approved standards.

Notes: Conditions B44 to B49 do not apply to disturbance works and minor realignment works associated with the realignment of Hebden Road and the construction of the Heavy Vehicle Access Road.

Water Management Performance Measures

- B50. The Applicant must ensure that the development complies with the performance measures in Table 5.

Table 5: Water management performance measures

Feature	Performance Measure
Water management – General	<ul style="list-style-type: none">• Maintain separation between clean and dirty (i.e. sediment-laden) and mine water management systems• Minimise the use of clean and potable water on the site• Maximise water recycling, reuse and sharing opportunities• Minimise the use of make-up water from external sources• Design, install, operate and maintain water management systems in a proper and efficient manner• Minimise risks to the receiving environment and downstream water users

Feature	Performance Measure
	<ul style="list-style-type: none"> • Maintain a buffer between the top of the bank of Bowmans Creek and the Approved Mining Area of at least 200 metres
Alluvial aquifers	<ul style="list-style-type: none"> • Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: <ul style="list-style-type: none"> – negligible change in groundwater levels; – negligible change in groundwater quality; and – negligible impact to other groundwater users, • Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012) • Negligible impacts to GDEs as a result of the development, beyond those predicted in the documents listed in condition A2(c)
Erosion and sediment control works	<ul style="list-style-type: none"> • Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book</i> (Landcom, 2004), <i>Volume 2A: Installation of Services</i> (DECC, 2008), <i>Volume 2C: Unsealed Roads</i> (DECC, 2008), <i>Volume 2D: Main Road Construction</i> (DECC, 2008) and <i>Volume 2E: Mines and Quarries</i> (DECC, 2008) • Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) • Design, install and maintain any new infrastructure within 40 metres of watercourses in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)
Clean water diversions and storage infrastructure	<ul style="list-style-type: none"> • Design, install and maintain the clean water system to capture and convey the 100 year 24-hour ARI flood • Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site
Flood protection works	<ul style="list-style-type: none"> • Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and to ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the EIS
Sediment dams	<ul style="list-style-type: none"> • Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> (Landcom, 2004) and <i>2E Mines and Quarries</i> (DECC, 2008) and the requirements under the POEO Act
Mine water storages	<ul style="list-style-type: none"> • Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water • New mine water storages designed to contain the 1% AEP 24-hour-storm event and minimise permeability • On-site storages (including mine infrastructure dams, groundwater storage and treatment dams) are suitably designed, installed and maintained (including to minimise permeability) • Ensure adequate freeboards within all pit voids at all times to minimise the risk of discharge to surface waters
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> • Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standard
Tailings storages	<ul style="list-style-type: none"> • Design and maintain tailings storage areas to encapsulate and prevent the movement of tailings seepage/leachate offsite
Overburden emplacements	<ul style="list-style-type: none"> • Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material • Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage
Yorks Creek Diversion	<ul style="list-style-type: none"> • Diverted creek lines are hydraulically and geomorphologically stable • Incorporate erosion control measures based on vegetation and engineering revetments • Incorporate water features such as persistent pools for aquatic habitat similar to those in the section of Yorks Creek being realigned • Revegetate with suitable native species
Aquatic and riparian ecosystems	<ul style="list-style-type: none"> • Negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c) • Maintain or improve baseline channel stability

Feature	Performance Measure
	<ul style="list-style-type: none"> Develop site-specific in-stream water quality objectives in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) and Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006) or its latest version

B51. The performance measures in Table 5 apply to the entire site, including all landforms constructed under previous development consents. However, these performance measures do not require any additional earthmoving works to be undertaken for landforms that have been approved and constructed under previous consents, except where those earthworks are required for the establishment of a stable and non-polluting landform.

Water Management Plan

B52. The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with DPE Water and the EPA;
- (c) describe the measures to be implemented to ensure that the Applicant complies with the water management performance measures (see Table 5);
- (d) utilise existing data from nearby mines and build on existing monitoring programs, where practicable;
- (e) include a:
 - (i) **Site Water Balance** that includes details of:
 - predicted annual inflows to and outflows from the site;
 - sources and security of water supply for the life of the development (including authorised entitlements and licences);
 - water storage capacity;
 - water use and management on the site, including any water transfers or sharing with neighbouring mines;
 - licensed discharge points and limits;
 - reporting procedures, including the annual preparation of an updated site water balance; and
 - a program to periodically validate the water balance for the development, including an independent review of the model every 3 years (unless otherwise agreed by the Planning Secretary).
 - (ii) **Erosion and Sediment Control Plan** that:
 - is consistent with the requirements of *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book* (Landcom, 2004) and *Volume 2E: Mines and Quarries* (DECC, 2008);
 - identifies activities that could cause soil erosion, generate sediment or affect flooding;
 - includes a program to review the adequacy of existing flood protection works, and ensure they comply with the relevant performance measures listed in Table 5;
 - describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;
 - describes the location, function, and capacity of erosion and sediment control structures and flood management structures; and
 - describes what measures would be implemented to maintain (and if necessary decommission) the structures over time;
 - (iii) **Surface Water Management and Monitoring Plan** that includes:
 - detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development, including:
 - stream and riparian vegetation health;
 - channel stability (geomorphology); and
 - water supply for other surface water users;
 - a detailed description of the surface water management system;
 - details of the water licensing requirements for all water storages (i.e. exempt, harvestable rights or licenced);
 - detailed plans, design objectives and performance criteria for water management infrastructure, including:
 - any approved creek diversions or restoration works associated with the development;

- water run-off diversions and catch drains;
 - water storages and sediment dams including mine water management systems;
 - emplacement areas;
 - backfilled pits and any final voids for the development; and
 - reinstated drainage networks on rehabilitated areas of the site;
 - surface water performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development, for:
 - water supply for other water users;
 - downstream surface water flows and quality;
 - downstream flooding impacts;
 - stream and riparian vegetation health; and
 - post-mining water pollution from rehabilitated areas of the site;
 - a program to monitor and evaluate:
 - compliance with the relevant performance measures listed in Table 5 and the performance criteria in this plan;
 - controlled and uncontrolled discharges and seepage/leachate from the site;
 - impacts on water supply for other water users, including potential cumulative impacts;
 - surface water inflows, outflows and storage volumes, to inform the Site Water Balance; and
 - the effectiveness of the surface water management system and the measures in the Erosion and Sediment Control Plan;
 - reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; and
 - a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development.
- (iv) **Groundwater Management Plan** that includes:
- detailed baseline data of groundwater levels, yield and quality for groundwater resources potentially impacted by the development, including groundwater supply for other water users;
 - a detailed description of the groundwater management system;
 - groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts (or trends) associated with the development, on:
 - regional and local aquifers (alluvial and hardrock); and
 - groundwater supply for other water users such as licensed privately-owned groundwater bores;
 - a program to monitor and evaluate:
 - compliance with the relevant performance measures listed in Table 5 and the performance criteria in this plan;
 - water loss/seepage from water storages into the groundwater system, including from any final void;
 - impacts on GDEs identified outside the development footprint (including stygofauna);
 - groundwater inflows, outflows and storage volumes, to inform the Site Water Balance;
 - the hydrogeological setting of any nearby alluvial aquifers and the likelihood of any indirect impacts from the development;
 - impacts on groundwater supply for other water users, including cumulative impacts;
 - the effectiveness of the groundwater management system;
 - reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results;
 - a trigger action response plan to respond to any exceedances of the relevant performance measures and groundwater performance criteria, and repair, mitigate and/or offset any adverse groundwater impacts of the development;
 - a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years (unless otherwise agreed by the Planning Secretary), and comparison of monitoring results with modelled predictions; and
- (v) a protocol to report on the measures, monitoring results and performance criteria identified above, in the Annual Review referred to in condition D11.

B53. The Applicant must not commence construction associated with the Glendell Pit Extension (as identified in Appendix 2) until the Water Management Plan is approved by the Planning Secretary.

B54. The Applicant must implement the Water Management Plan as approved by the Planning Secretary.

BIODIVERSITY

Biodiversity Credits Required

B55. The Applicant must retire the biodiversity credits specified in Table 6 below to offset the biodiversity impacts of the development. The retirement of credits must be carried out in consultation with BCD and in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT.

Table 6: Biodiversity credit requirements

Credit Type	Stage 1 Credits	Stage 2 Credits	Stage 3 Credits	Total Credits
Ecosystem Credits				
485 - River Oak Riparian Grassy Tall Woodland of the Western Hunter Valley <i>Moderate to Good Condition</i>	43	0	0	43
1603 - Narrow-leaved Ironbark - Bull Oak - Grey Box Shrub - Grass Open Forest of the Central and Lower Hunter <i>Moderate to Good Condition</i>	65	149	288	502
1603 - Narrow-leaved Ironbark - Bull Oak - Grey Box Shrub - Grass Open Forest of the Central and Lower Hunter <i>Regeneration / Derived Native Grassland</i>	2,594	881	888	4,363
1603 - Narrow-leaved Ironbark - Bull Oak - Grey Box Shrub - Grass Open Forest of the Central and Lower Hunter <i>Plantation</i>	33	0	0	33
1603 - Narrow-leaved Ironbark - Bull Oak - Grey Box Shrub - Grass Open Forest of the Central and Lower Hunter <i>Modified derived native grassland</i>	392	12	0	404
1692 - Bull Oak Grassy Woodland of the Central Hunter Valley <i>Moderate to Good Condition</i>	125	62	20	207
1692 - Bull Oak Grassy Woodland of the Central Hunter Valley <i>Regeneration</i>	10	0	105	115
1604 - Narrow-Leaved Ironbark - Grey Box - Spotted Gum Shrub – Grass Woodland of the Central and Lower Hunter <i>Woodland Rehabilitation</i>	11	0	0	11
1731 - Swamp Oak - Weeping Grass Grassy Riparian Forest of the Hunter Valley <i>Moderate to Good Condition</i>	390	73	216	679
1731 - Swamp Oak - Weeping Grass Grassy Riparian Forest of the Hunter Valley <i>Plantation</i>	28	0	0	28
Total	3,691	1,177	1,517	6,385
Species Credits				
Tiger Orchid (<i>Cymbidium canaliculatum</i>)	2	0	0	2
Southern myotis (<i>Myotis macropus</i>)	356	149	227	732
Brush-tailed Phascogale (<i>Phascogale tapoatafa</i>)	1,209	500	850	2,559
Eastern Cave Bat (<i>Vespadelus troughtoni</i>)	17	0	0	17

Staged Retirement

B56. Within 12 months of the commencement of disturbance within the Stage 1 Disturbance Area (as shown on Figure 12 in Appendix 4), or other staged timeframe agreed by the Planning Secretary, the Applicant must retire the Stage 1 credits as specified in Table 6.

B57. Prior to the commencement of surface disturbance associated with Stage 2 or Stage 3 (as shown on Figure 12 in Appendix 4), or other timeframe agreed by the Planning Secretary, the Applicant must retire the relevant credits for these stages as specified in Table 6.

- B58. With the agreement of the Planning Secretary, the Applicant may adjust the staging of surface disturbance and the associated credit retirements in Table 6. Except in accordance with condition B59, the relevant credits must be retired, prior to the commencement of the associated surface disturbance.
- B59. With the agreement of the Planning Secretary, the Applicant may carry over surplus retired credits to satisfy the credit requirements of a later stage. This may occur, for example, where approved clearing for an earlier stage was not undertaken, but the impact has already been offset.
- B60. With the agreement of the Planning Secretary, biodiversity credits associated with any undisturbed areas agreed under condition B59 as not to be subject to any surface disturbance may be removed from the total credit obligations in Table 6.

Rehabilitation Offsets

- B61. The Applicant may use Ecological Mine Rehabilitation to satisfy up to 20% of Ecosystem Credit requirements in Table 6.
- B62. The Applicant must notify the Planning Secretary of its intention to satisfy credits for any of the Stages 1, 2 or 3 using Ecological Mine Rehabilitation and provide details of the particular ecosystem credits proposed to be satisfied in this manner prior to commencing each stage, or other staged timeframe agreed by the Planning Secretary.
- B63. Within 10 years of the cessation of mining operations, or other timeframe agreed by the Planning Secretary, the Applicant must retire the ecosystem credits generated from Ecological Mine Rehabilitation, or make suitable arrangements for the long term protection of any mine rehabilitation should the Applicant wish for it to be included as a component of the biodiversity offset strategy, to the satisfaction of the BCT. If the rehabilitation area does not meet the listing criteria of the targeted Plant Community Type or the completion criteria, then the Applicant must retire the relevant deficient biodiversity credits in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT

Bettys Creek Habitat Management Area

- B64. The Applicant must implement the biodiversity offset strategy as summarised in Table 7 and shown conceptually in Appendix 6, to the satisfaction of the Secretary.

Table 7: Bettys Creek habitat management area

Offset Area	Minimum Size
Bettys Creek Habitat Management Area	174 ha

Biodiversity Management Plan

- B65. The Applicant must prepare a Biodiversity Management Plan to the satisfaction of the Planning Secretary. This plan must:
- be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - be prepared in consultation with BCD;
 - describe the short, medium, and long-term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site;
 - describe how biodiversity management would be integrated with similar measures within other management plans, including the Rehabilitation Management Plan referred to in condition B95;
 - describe the measures to be implemented within the approved disturbance areas to:
 - minimise the amount of clearing;
 - minimise impacts on fauna, including undertaking pre-clearance surveys;
 - provide for the salvage, transplanting and/or propagation of any threatened flora found during pre-clearance surveys, in accordance with the *Guidelines for the Translocation of Threatened Plants in Australia: Third Edition* (Commander et al., 2018); and
 - maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement;
 - include detailed performance and completion criteria for evaluating the performance of the Bettys Creek Habitat Management Area and include triggers for remedial action, where these performance or completion criteria are not met;
 - describe the measures to be implemented on the site to:
 - minimise impacts to threatened ecological communities listed under the BC Act and EPBC Act, and contribute to conservation strategies for these communities;
 - minimise impacts on fauna habitat resources such as hunting and foraging areas, habitat trees, fallen timber and hollow-bearing trees;

- (iii) enhance the quality of vegetation, vegetation connectivity and wildlife corridors including through the assisted regeneration and/or targeted revegetation of appropriate canopy, sub-canopy, understorey and ground strata;
- (iv) introduce naturally scarce fauna habitat features such as nest boxes and salvaged tree hollows and promote the use of these introduced habitat features by threatened fauna species;
- (v) manage any potential conflicts with Aboriginal heritage values;
- (vi) protect vegetation and fauna habitat outside of the approved disturbance areas;
- (vii) manage the collection and propagation of seed from the local area;
- (viii) control weeds, including measures to avoid and mitigate the spread of noxious weeds;
- (ix) control feral pests with consideration of actions identified in relevant threat abatement plans;
- (x) control erosion;
- (xi) manage any grazing and agriculture;
- (xii) control access to vegetated or revegetated areas; and
- (xiii) manage bushfire hazards;
- (h) include a seasonally-based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes; and
- (i) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

B66. The Applicant must not commence construction associated with the Additional Disturbance Area until the Biodiversity Management Plan is approved by the Planning Secretary.

B67. The Applicant must implement the Biodiversity Management Plan as approved by the Planning Secretary.

Conservation Bond

B68. The Applicant must lodge a Conservation Bond with the Department to ensure that the biodiversity offset strategy (Bettys Creek Habitat Management Area) is implemented in accordance with the performance and completion criteria in the Biodiversity Management Plan. The sum of the bond shall be determined by:

- (a) calculating the full cost of implementing the offset strategy (Bettys Creek Habitat Management Area); and
- (a) employing a suitably qualified rehabilitation expert or quantity surveyor to verify the calculated costs, to the satisfaction of the Planning Secretary.

B69. The conservation bond must be reviewed and, if required, an updated bond must be lodged with the Department within 3 months of any of the following:

- (a) An approved revision of the Biodiversity Management Plan;
- (b) The completion of an Independent Environmental Audit in which recommendations relating to the implementation of the Biodiversity Management Plan have been made; or
- (c) In response to a request by the Planning Secretary.

Notes:

- *The existing bond which has been paid for the existing Bettys Creek Habitat Management Area remains current and is satisfactory to fulfil the requirements of this condition.*
- *If the offset strategy is completed generally in accordance with the performance and completion criteria of the Biodiversity Management Plan to the satisfaction of the Planning Secretary, the Department will release the conservation and biodiversity bond.*
- *If the offset strategy is not completed generally in accordance with the performance and completion criteria of the Biodiversity Management Plan to the satisfaction of the Planning Secretary, all or part of the conservation and biodiversity bond will be used to ensure the satisfactory completion of the relevant works.*

HERITAGE

Protection of Aboriginal and Historic Heritage

B70. The Applicant must ensure that the development does not cause any direct or indirect impact on any identified Aboriginal sites or heritage items located outside the approved disturbance area, beyond those predicted in the document/s listed in condition A2(c).

Note: *Identified Aboriginal sites and heritage items are shown in the figure in Appendix 5.*

B71. If suspected human remains are discovered on the site, then all work surrounding the area must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.

B72. The Applicant must ensure that all known Aboriginal objects or Aboriginal places on the site, are properly recorded and those records are kept up to date, in the Aboriginal Heritage Information Management System (AHIMS) Register.

Aboriginal Cultural Heritage Management Plan

- B73. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development. The plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with Heritage NSW and Registered Aboriginal Parties;
 - (c) describe the measures to be implemented on the site to:
 - (i) comply with the heritage-related operating conditions of this consent;
 - (ii) ensure all workers receive suitable Aboriginal cultural heritage training/inductions prior to carrying out any activities which may cause impacts to Aboriginal objects or Aboriginal places, and that suitable records are kept of these inductions;
 - (iii) protect, monitor and manage identified Aboriginal objects and Aboriginal places (including as part of any proposed archaeological investigation of potential subsurface objects and salvage of objects within the approved disturbance area) in accordance with the commitments made in the document/s listed in condition A2(c), including:
 - additional archaeological excavations in the areas identified as GN OS6, GN OS34, Bowmans Creek 7 and Bowmans/Swamp Creek Trench 1;
 - additional investigation of the Glendell North ST1 tree to determine whether its scar is of cultural origin, and if so, consider conservation strategies; and
 - protection (fencing and signage) of sites 37-3-0343, 37-3-1560 and 37-3-1513;
 - (iv) protect Aboriginal objects and Aboriginal places located outside the approved disturbance area from impacts of the development, including within the 200 metre buffer to Bowmans Creek;
 - (v) manage the discovery of suspected human remains and any new Aboriginal objects or Aboriginal places, including provisions for burials, over the life of the development;
 - (vi) maintain and manage reasonable access for relevant Aboriginal stakeholders to Aboriginal objects and Aboriginal places (outside of the approved disturbance area); and
 - (vii) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site and in the area, in accordance with the commitments made in the document/s listed in condition A2(c); and
 - (d) include a strategy for the care, control and storage of Aboriginal objects salvaged from the site, both during the life of the development and in the long term.
- B74. The Applicant must not commence any construction in the Additional Disturbance Area until the Aboriginal Cultural Heritage Management Plan is approved by the Planning Secretary.
- B75. The Applicant must implement the Aboriginal Cultural Heritage Management Plan approved by the Planning Secretary.

Ravensworth Homestead Relocation

- B76. The Applicant must relocate the Ravensworth Homestead to the Ravensworth Farm relocation site (as described in the document/s listed in condition A2(c)) prior to undertaking any mining operations within 1.2 kilometres of the existing homestead structures, in accordance with the Historic Heritage Management Plan required under condition B77 below, and to the satisfaction of the Planning Secretary.

Note: This does not include full reestablishment to be completed prior to the commencement of mining. Works associated with ancillary civil and infrastructure works and landscaping may be carried out following relocation and the timing of these works is to be detailed in the Ravensworth Homestead Relocation Plan.

Historic Heritage Management Plan

- B77. The Applicant must prepare a Historic Heritage Management Plan for the development, in respect of all non-Aboriginal cultural heritage items, to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with Heritage NSW, Council and relevant landowners and in accordance with the relevant Heritage NSW guidelines;
 - (c) describe how historic heritage values of the site would be recorded and preserved;
 - (d) identify all heritage items in the vicinity of the site and include a statement of significance for each item;
 - (e) describe the measures to be implemented on the site to:
 - (i) ensure all workers on the site receive suitable heritage inductions prior to carrying out any activities which may cause impacts to historic heritage, and that suitable records are kept of these inductions;

- (ii) protect heritage items located outside the approved disturbance area from impacts of the development, beyond those impacts predicted in the document/s listed in condition A2(c), including:
 - measures to stabilise the Hebden Public School site;
- (iii) undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance; and
- (iv) manage any new heritage items discovered during the life of the development;
- (f) include a program to monitor the effects of blasting on the heritage items;
- (g) include a strategy for the care, control and storage of heritage relics salvaged from the site; and
- (h) include a comprehensive Ravensworth Homestead Relocation Plan, in accordance with the document/s listed in condition A2(c), including:
 - (i) aims, objectives and completion criteria for the relocation, based on conserving the heritage values of the heritage item as far as reasonable and feasible;
 - (ii) a description of all necessary planning approvals and certification requirements;
 - (iii) designs, specifications and work method statements for dismantling (where required), transporting and reassembling the homestead structures;
 - (iv) designs and specifications for all associated and ancillary civil and infrastructure works;
 - (v) landscaping plans, including provisions for transplanting of landscape elements from the existing homestead site;
 - (vi) a comprehensive archaeological investigation and salvage program for the core estate lands; and
 - (vii) a protocol for preparation of a post-relocation report/s, demonstrating that the relocated structures have met the aims, objectives and completion criteria for the relocation;
- (i) include a comprehensive conservation management plan for the ongoing management of the relocated Ravensworth Homestead, including:
 - (i) operational management, use (short term and long term), treatment and maintenance measures;
 - (ii) identification of long-term use of the relocated homestead;
 - (iii) funding for ongoing conservation management measures;
 - (iv) details and specifications of building works and maintenance required to support the ongoing use;
 - (v) an interpretation strategy, including provisions for:
 - storage and display of information detailing the history of the Ravensworth Estate (Aboriginal and historical) and artefacts salvaged from the Ravensworth Estate; and
 - 3D digital recordings of the existing Ravensworth Homestead; and
 - (vi) measures for enabling and managing reasonable public access to the relocated structure, including the interpretation elements.

B78. The Applicant must not commence construction in the Additional Disturbance Area until the Historic Heritage Management Plan is approved by the Planning Secretary.

B79. The Applicant must implement the Historic Heritage Management Plan as approved by the Planning Secretary.

VISUAL

Visual Amenity and Lighting

B80. The Applicant must:

- (a) take all reasonable steps to minimise the visual and off-site lighting impacts of the development;
- (b) take all reasonable steps to shield views of mining operations and associated equipment from users of public roads and privately-owned residences;
- (c) ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure;
- (d) ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal (except where required for emergency safety purposes);
- (e) ensure that all external lighting associated with the development complies with relevant Australian Standards including the latest version of *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*; and
- (f) ensure that the visual appearance of any new buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.

Visual Impact Management Plan

- B81. The Applicant must prepare a Visual Impact Management Plan for the development to the satisfaction of the Planning Secretary. The strategy must:
- (a) be prepared in consultation with Council;
 - (b) include a landscaping strategy to reasonably shield public views of the development, including:
 - (i) a visual bund and road-side tree planting along the realigned Hebden Road adjacent to the mine infrastructure area;
 - (ii) tree planting adjacent to the heavy vehicle access road; and
 - (iii) tree planting on mine-owned land to mitigate views from the New England Highway.
 - (c) include a program to implement, monitor, maintain and report on the implementation and effectiveness of the visual impact mitigation measures; and
 - (d) if Ravensworth Homestead is relocated to the Ravensworth Farm site, provide for the removal of the visual bund and tree planting adjacent to the mine infrastructure area following the cessation of mining operations (to minimise indirect impacts on the heritage values of the Ravensworth Homestead), unless otherwise agreed by the Planning Secretary.
- B82. The Visual Impact Management Plan must be submitted for approval by the Planning Secretary within 12 months of commencement of the consent.
- B83. The Applicant must implement the Visual Impact Management Plan as approved by the Planning Secretary.

WASTE

- B84. The Applicant must:
- (a) take all reasonable steps to minimise the waste (including coal rejects and tailings) generated by the development;
 - (b) classify all waste in accordance with the *Waste Classification Guidelines* (EPA, 2014);
 - (c) dispose of all waste at appropriately licensed waste facilities or facilities otherwise permitted to receive the waste including under an applicable resource recovery order or exemption;
 - (d) manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
 - (e) monitor and report on the effectiveness of the waste minimisation and management measures in the Annual Review referred to in condition D11.
- B85. Except as expressly permitted in an applicable EPL, specific resource recovery order or exemption under the *Protection of the Environment Operations (Waste) Regulation 2014*, the Applicant must not receive waste at the Mount Owen Complex for storage, treatment, processing, reprocessing or disposal.

Notes: Conditions B84 and B85 do not prevent the transfer or disposal of overburden, tailings, coarse reject or other materials within the Mount Owen Complex.

DANGEROUS GOODS

- B86. The Applicant must ensure that the storage, handling, and transport of:
- (a) dangerous goods is carried out in accordance with the relevant Australian Standards, particularly *AS1940* and *AS1596*, and the *Dangerous Goods Code*; and
 - (b) explosives are managed in accordance with the requirements of the Resources Regulator.

BUSHFIRE MANAGEMENT

- B87. The Applicant must:
- (a) ensure that the development:
 - (i) provides for asset protection in accordance with the relevant requirements in *the Planning for Bushfire Protection* (RFS, 2006) guideline; and
 - (ii) ensure that there is suitable equipment to respond to any fires on the site; and
 - (b) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.
- B88. Prior to commencing mining operations within the Glendell Pit Extension, the Applicant must prepare a Bushfire Management Plan for the development in consultation with RFS. This plan must include a:
- (a) contact person and 24 hour contact phone number;
 - (b) schedule and description of proposed bushfire mitigation works, including:
 - (i) location of managed and unmanaged vegetation within the site;
 - (ii) location of water supply; and
 - (iii) internal access roads;

- (c) plan identifying the location and storage of bulk flammable liquids and materials;
- (d) 'hot works' management plan, including:
 - (i) circumstances when 'hot works' are limited or prohibited; and
 - (ii) safety measures to be implemented when 'hot works' are being conducted; and
- (e) emergency/evacuation plan in accordance with the *Guidelines for the Preparation of Emergency/Evacuation Plans* (RFS) and Australian Standard AS3745 *Planning for Emergencies in Facilities*.

B89. The Applicant must implement the Bushfire Management Plan in consultation with RFS.

REHABILITATION

Rehabilitation Objectives

B90. The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the *Mining Act 1992*. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the document/s listed in condition A2(c) and shown conceptually in Appendix 6, and must comply with the objectives in Table 8.

Table 8: Rehabilitation objectives

Feature	Objective
All areas of the site affected by the development	<ul style="list-style-type: none"> Safe, stable and non-polluting Fit for the intended post-mining land use/s Establish the final landform and post-mining land use/s as soon as practicable after cessation of mining operations Minimise post-mining environmental impacts
Areas proposed for native ecosystem re-establishment	<ul style="list-style-type: none"> Establish/restore self-sustaining native woodland ecosystems Establish local plant community types Establish: <ul style="list-style-type: none"> riparian habitat within any diverted and/or re-established creek lines and retained water features; habitat, feed and foraging resources for threatened fauna species; and vegetation connectivity and wildlife corridors, as far as is reasonable and feasible
Areas proposed for agricultural land	<ul style="list-style-type: none"> Establish/restore grassland areas to support sustainable agricultural activities Use species found in the local area that are suitable for pasture production Achieve land and soil capabilities that are equivalent or better than pre-mining, including at least 21 hectares of <i>Land and Soil Capability Class 4</i>; Locate adjacent to surrounding agricultural land, where practicable
Final Landform	<ul style="list-style-type: none"> Stable for the intended post-mining land use/s Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable Incorporate micro-relief and drainage features that mimic natural topography and mitigate erosion, to the greatest extent practicable Maximise surface water drainage to the natural environment i.e. free draining (excluding final void catchment) Minimise visual impacts, where practicable
Final void	<ul style="list-style-type: none"> Designed as long term groundwater sink to prevent the release of saline water into the surrounding environment, unless further mine planning and final landform design processes identify a more suitable outcome for the final void (see condition B92) Minimise to the greatest extent practicable: <ul style="list-style-type: none"> the size and depth; the drainage catchment; any high wall instability risk; and the risk of flood interaction Maximise potential for beneficial reuse, where practicable
Creek realignment/restoration works	<ul style="list-style-type: none"> Engineered to be hydraulically and geomorphologically stable Incorporate erosion control measures based on vegetation and engineering revetments Incorporate structures for aquatic habitat Revegetate with suitable native species
Surface infrastructure of the development	<ul style="list-style-type: none"> To be decommissioned and removed, unless the Resources Regulator agrees otherwise

Feature	Objective
Water quality	<ul style="list-style-type: none"> Water retained on the site is fit for the intended post-mining land use/s Water discharged from the site is suitable for receiving waters and fit for aquatic ecology and riparian vegetation
Community	<ul style="list-style-type: none"> Ensure public safety Minimise adverse socio-economic effects associated with mine closure

Notes:

- The rehabilitation objectives related to the establishment of native vegetation communities do not constitute an obligation for biodiversity offset purposes. Biodiversity offsets obligations in relation to development approved under this consent are regulated by conditions B55 to B69.
- The site includes areas of land which are also regulated by SSD 5850. As such, the rehabilitation works in these areas will also need to consider the rehabilitation objectives in SSD 5850.

B91. The rehabilitation objectives in Table 8 apply to the entire site, including all landforms constructed under either this consent or previous consents. However, the Applicant is not required to undertake any additional earthmoving works on landforms that have been approved and constructed under previous consents, except where those earthworks are required for the establishment of a stable, non-polluting and free-draining landform.

Rehabilitation Strategy

B92. The Applicant must prepare a Rehabilitation Strategy for all land disturbed by the development to the satisfaction of the Planning Secretary. This strategy must:

- be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- be prepared in consultation with the BCD, Resources Regulator and Council;
- build upon the Rehabilitation Objectives in Table 8, describe the overall rehabilitation outcomes for the site, and address all aspects of rehabilitation including mine closure, final landform (including final voids), post-mining land use/s and water management;
- align with strategic rehabilitation and mine closure objectives and address the principles of the *Strategic Framework for Mine Closure* (ANZMEC and MCA, 2000);
- describe how the rehabilitation measures would be integrated with the measures in the Biodiversity Management Plan referred to in condition B65 and the Visual Impact Management Plan referred to in condition B81;
- describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure;
- include indicative mine plans and scheduling for life-of-mine rehabilitation showing each rehabilitation domain;
- include details of target vegetation communities and species to be established within the proposed revegetation areas;
- investigate opportunities to refine and improve the final landform and final void outcomes over time;
- include a post-mining land use strategy to investigate and facilitate post-mining beneficial land uses for the site (including the final void), that:
 - align with regional and local strategic land use planning objectives and outcomes;
 - support a sustainable future for the local community;
 - utilise existing mining infrastructure, where practicable; and
 - avoid disturbing self-sustaining native ecosystems, where practicable;
- include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes;
- investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure; and
- include a program to periodically review and update this strategy at least every three years.

B93. The Applicant must not commence mining operations in the Glendell Pit Extension until the Rehabilitation Strategy is approved by the Planning Secretary.

B94. The Applicant must implement the Rehabilitation Strategy approved by the Planning Secretary.

Rehabilitation Management Plan

B95. The Applicant must prepare a Rehabilitation Management Plan for the development, in accordance with the conditions imposed on the mining lease(s) associated with the development under the *Mining Act 1992*.

TRANSPORT

Monitoring of Coal Transport

B96. The Applicant must:

- (a) keep accurate records of the amount of coal transported from the site (on a daily basis); and
- (b) publish these records in the Annual Review.

Road Upgrades and Closure

B97. Prior to construction of the MIA and Hebden Road relocation works, the Applicant must upgrade the Hebden Road / Glendell Access Road intersection to provide a Channelised Right Hand Short Turn, in consultation with other road users, to the satisfaction of Council.

B98. Prior to undertaking mining operations within 500 metres of the section of Hebden Road, where it intersects with the approved mining area, the Applicant must:

- (a) realign Hebden Road, including the bridge over Yorks Creek and the intersections with access roads to the MIA and ancillary pad areas (north and south) for the heavy vehicle access road;
- (b) undertake a road safety audit for the realigned Hebden Road, and implement any required improvements; and
- (c) close and remove the redundant section of Hebden Road, in consultation with other road users, to the satisfaction of Council.

Road Maintenance

B99. Unless road maintenance contributions are included in the PA under condition A14, then the Applicant must:

- (a) prepare a pre-dilapidation survey of Hebden Road (being the section of Hebden Road between the New England Highway and the Mount Owen Access Road Intersection), once the realigned road is commissioned;
- (b) prepare a post-dilapidation survey of Hebden Road every 5 years thereafter, or at intervals agreed to with the relevant roads authority, for the life of the development; and
- (c) following completion of a post-dilapidation survey prepared under condition B99(b), where development-related damage is identified and rectification works are required, the Applicant is to notify the applicable roads authority of the required works and seek an independent costing associated with repairs. Upon acceptance of the independent costings and receipt of invoice from Council, the Applicant is to pay the amount required to undertake the repairs associated only with the development-related damage and Council is to complete the repairs.

to the satisfaction of the applicable roads authority.

B100. If there is a dispute about the scope of any remedial works or the implementation of the works, then either party may refer the matter to the Planning Secretary for resolution.

Note: Any attribution of road maintenance costs associated with other road users is to be identified in the Dilapidation Report(s) prepared under condition B99.

Traffic Management Plan

B101. The Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with TfNSW and Council;
- (c) include details of all transport routes and traffic types to be used for development-related traffic;
- (d) include details of flood warning signage, including flood depth indicators, in the vicinity of the haul road overpass;
- (e) include a protocol for undertaking pre and post-dilapidation surveys and repairing any roads identified in the dilapidation surveys to have been damaged during construction and/or decommissioning works;
- (f) include details of the measures to be implemented to minimise traffic safety issues and disruption to local road users during construction, operation and decommissioning phases of the development, including:
 - (i) temporary traffic controls, including detours and signage (where relevant);
 - (ii) notifying the local community about development-related traffic impacts;
 - (iii) minimising potential for conflict with school buses and stock movements;
 - (iv) access and car parking arrangements;

- (v) staggering shift changes with other mining operations in the locality, where practicable, to minimise impacts during AM and PM peak traffic periods;
- (vi) responding to any emergency repair requirements or maintenance during construction and/or decommissioning; and
- (vii) a traffic management system for managing over-dimensional vehicles; and
- (g) include a Drivers' Code of Conduct that includes procedures to ensure that drivers:
 - (i) adhere to posted speed limits or other required travelling speeds;
 - (ii) adhere to the designated transport routes; and
 - (iii) implement safe driving practices.

B102. If the construction and/or decommissioning of the development is to be staged, the obligations in condition B101 apply to each stage of construction and/or decommissioning.

B103. The Applicant must not commence construction activities associated with the Glendell Pit Extension until the Traffic Management Plan is approved by the Planning Secretary.

B104. The Applicant must implement the Traffic Management Plan as approved by the Planning Secretary.

PART C ADDITIONAL PROCEDURES

ACQUISITION UPON REQUEST

- C1. Upon receiving a written request for acquisition from the owner of the privately-owned land^a listed in Table 9, the Applicant must acquire the land in accordance with the procedures in conditions C12 to C19 inclusive.

Where the land is identified in Table 9 as having existing acquisition rights under other approvals, then the Applicant is only required to acquire the land if acquisition is no longer reasonably achievable under these existing approvals (as may be modified or replaced from time to time).

However, where acquisition rights are/were available under the Glendell Consent (DA80/952) as identified in Table 9, then acquisition should occur under this approval in priority to acquisition under existing approvals for other mines.

Table 9: Land subject to acquisition upon request

Acquisition Basis	Land	Existing Acquisition and Mitigation Rights
Air Quality	111	Rixs Creek North Project (08_0102) Rix's Creek South Project (SSD 6300) ^M
Air Quality	114	Mount Owen Continued Operations Project (SSD 5850)
Air Quality	127	Glendell Consent (DA 80/952) Rix's Creek North Project (08_0102) Ashton South East Open Cut Project (08_0182)
Air Quality	143	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	147	Ashton South East Open Cut Project (08_0182) Rix's Creek North Project (08_0102) Ashton Underground Project (DA 309-11-2001) Rix's Creek South Project (SSD 6300) ^M
Air Quality	150	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	152	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	154	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	155	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	156	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300)

Acquisition Basis	Land	Existing Acquisition and Mitigation Rights
		Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 1 DP 600327	Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 4 DP 851867	Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 8 DP 851867	Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 4 DP 1166047	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 5 DP 1166047	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 175 DP 1002770	Ashton South East Open Cut Project (08_0182) Mount Owen Continued Operations Project (SSD 5850)
Air Quality	Lot 106 DP 855187	Ashton South East Open Cut Project (08_0182) Rix's Creek South Project (SSD 6300) Mount Owen Continued Operations Project (SSD 5850)

^a The location of the land referred to in Table 9 is shown in Appendix 3.

^M Mitigation rights only

ADDITIONAL MITIGATION UPON REQUEST

- C2. Upon receiving a written request for mitigation from the owner of any residence on the privately-owned land^a listed in Table 9, the Applicant must implement additional mitigation measures at or in the vicinity of the residence in consultation with the landowner. These measures must be consistent with the measures outlined in the *Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Development* (NSW Government, 2018). They must also be reasonable and feasible, proportionate to the level of predicted impact and directed towards reducing the air quality impacts of the development. The Applicant must also be responsible for the reasonable costs of ongoing maintenance of these additional mitigation measures until the cessation of mining operations.

Where the land is identified in Table 9 as having existing mitigation rights under other approvals, then the Applicant is only required to implement additional mitigation measures if such measures are no longer reasonably achievable under these existing approvals (as may be modified or replaced from time to time).

However, where mitigation rights are/were available under the Glendell Consent (DA80/952) as identified in Table 9, then mitigation should occur under this approval in priority to acquisition under existing approvals for other mines.

- C3. If within 3 months of receiving a request for additional mitigation from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.
- C4. For the life of the development, the Applicant must continue to contribute to reasonable maintenance and recurrent operating costs associated with the mitigation measures installed at privately-owned residences under the development and as described in the documents listed in condition A2(c). The contribution to ongoing maintenance and recurrent operating costs must be consistent with any existing agreement between the Applicant and the relevant landowner.

NOTIFICATION OF LANDOWNERS/TENANTS

- C5. Within one month of the date of this consent, the Applicant must:
- (a) notify in writing the owner of:
 - (i) the land listed in Table 9 that they have the right to require the Applicant to acquire their land at any stage during the development;

- (ii) the residences on the land listed in Table 9 that they are entitled to ask the Applicant to install additional mitigation measures at the residence; and
 - (iii) any privately-owned land within 3 kilometres of the approved open cut mining pit/s that they are entitled to ask the Applicant for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
 - (b) notify the tenants of any mine-owned land of their rights under this consent; and
 - (c) send a copy of the fact sheet entitled *"Mine Dust and You"* (NSW Health, 2017) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the document/s listed in condition A2(c) identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria identified in condition B26 at any time during the life of the development.
- C6. Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:
- (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled *"Mine Dust and You"* (NSW Health, 2017); and
 - (b) advise the prospective tenants of the rights they would have under this consent,
- to the satisfaction of the Planning Secretary.

NOTIFICATION OF EXCEEDANCES

- C7. As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise, blasting or air quality criterion in PART B of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC.
- C8. For any exceedance of any air quality criterion in PART B of this consent, the Applicant must also provide to any affected land owners and/or tenants a copy of the fact sheet entitled *"Mine Dust and You"* (NSW Health, 2017).

INDEPENDENT REVIEW

- C9. If a landowner considers the development to be exceeding any relevant noise, blasting or air quality criterion in PART B of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land.
- C10. If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.
- C11. If the Planning Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary's decision, the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to:
 - (i) consult with the landowner to determine their concerns;
 - (ii) conduct monitoring to determine whether the development is complying with the relevant criterion in PART B of this consent; and
 - (iii) if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and
 - (b) give the Planning Secretary and landowner a copy of the independent review; and
 - (c) comply with any written requests made by the Planning Secretary to implement any findings of the review.

LAND ACQUISITION

- C12. Within 3 months of receiving a written request for acquisition from a landowner with acquisition rights, the Applicant must make a binding written offer to the landowner based on:
- (a) the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the development, having regard to the:
 - (i) existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
 - (ii) presence of improvements on the land and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the additional noise and/or air quality mitigation measures in condition C2;
 - (b) the reasonable costs associated with:
 - (i) relocating within the Singleton local government area, or to any other local government area determined by the Planning Secretary; and

- (ii) obtaining independent legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and
- (c) reasonable compensation for any disturbance caused by the land acquisition process.
- C13. If, within two months of the binding written offer being made under condition C12, the Applicant and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Planning Secretary for resolution.
- C14. Upon receiving a request, under condition C13, the Planning Secretary will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:
 - (a) consider submissions from both parties;
 - (b) determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in condition C12;
 - (c) prepare a detailed report setting out the reasons for any determination; and
 - (d) provide a copy of the report to both parties.
- C15. Within 14 days of receiving the independent valuer's report, the Applicant must make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.
- C16. However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, either party may refer the matter to the Planning Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Planning Secretary will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in condition C12, the independent valuer's report, the detailed report of the party that disputes the independent valuer's determination and any other relevant submissions.
- C17. Within 14 days of this determination, the Applicant must make a binding written offer to the landowner to purchase the land at a price not less than the Planning Secretary's determination.
- C18. If the landowner refuses to accept the Applicant's binding written offer under this condition within 6 months of the offer being made, then the Applicant's obligations to acquire the land shall cease, unless the Planning Secretary determines otherwise.
- C19. The Applicant must pay all reasonable costs associated with the land acquisition process described in conditions C12 to C18 inclusive, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.

PART D ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

- D1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:
- (a) provide the strategic framework for environmental management of the development;
 - (b) identify the statutory approvals that apply to the development;
 - (c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (d) set out the procedures to be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - (ii) receive record, handle and respond to complaints;
 - (iii) resolve any disputes that may arise during the course of the development;
 - (iv) respond to any non-compliance and any incident;
 - (v) respond to emergencies; and
 - (e) include:
 - (i) references to any strategies, plans and programs approved under the conditions of this consent; and
 - (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.
- D2. The Applicant must not commence mining operations until the Environmental Management Strategy is approved by the Planning Secretary.
- D3. The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.

Adaptive Management

- D4. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement reasonable remediation measures as directed by the Planning Secretary.

Management Plan Requirements

- D5. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (a) summary of relevant background or baseline data;
 - (b) details of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures and criteria; and
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c);
 - (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
 - (e) a program to monitor and report on the:
 - (i) impacts and environmental performance of the development; and
 - (ii) effectiveness of the management measures set out pursuant to condition D4(c);
 - (f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (g) a program to investigate and implement ways to improve the environmental performance of the development over time;

- (h) a protocol for managing and reporting any:
 - (i) incident, non-compliance or exceedance of any impact assessment criterion or performance criterion;
 - (ii) complaint; or
 - (iii) failure to comply with other statutory requirements;
- (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and
- (j) a protocol for periodic review of the plan.

Note: *The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

- D6. The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.

REVISION OF STRATEGIES, PLANS AND PROGRAMS

- D7. Within three months of:
- (a) the submission of an incident report under condition D9 or D10;
 - (b) the submission of an Annual Review under condition D11;
 - (c) the submission of an Independent Environmental Audit under condition D12;
 - (d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or
 - (e) notification of a change in development phase under condition A10;
- the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.
- D8. If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.

Note: *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.*

REPORTING AND AUDITING

Incident Notification

- D9. The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing via the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

Non-Compliance Notification

- D10. Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing via the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

Note: *A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*

Annual Review

- D11. By the end of March each year, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:
- (a) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:
 - (i) relevant statutory requirements, limits or performance measures/criteria;
 - (ii) requirements of any plan or program required under this consent;
 - (iii) monitoring results of previous years; and
 - (iv) relevant predictions in the document/s listed in condition A2(c);
 - (c) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;

- (d) evaluate and report on:
 - (i) the effectiveness of the noise and air quality management systems; and
 - (ii) compliance with the performance measures, criteria and operating conditions of this consent;
- (e) include an addendum report on Scope 1 and Scope 2 GHGE, which reports:
 - (i) annual methane and annual total CO_{2-e} emissions (both categorised by source);
 - (ii) overall emissions benchmarked against representative industry sectors and the predictions in the EIS, and performance measures set in condition B34 and/or under condition B32; and
 - (iii) measures undertaken to minimise Scope 1 and Scope 2 GHGE, including actions taken under condition B32 and estimated reductions in CO_{2-e} as a result of measures implemented;
- (f) identify any trends in the monitoring data over the life of the development;
- (g) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- (h) describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.

D12. Copies of the Annual Review must be submitted to Council and made available to the CCC and any interested person upon request.

Independent Environmental Audit

- D13. Within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:
- (a) be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary;
 - (b) be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary;
 - (c) be carried out in consultation with the relevant agencies and the CCC;
 - (d) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);
 - (e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;
 - (f) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and
 - (g) be conducted and reported to the satisfaction of the Planning Secretary.
- D14. Within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

Monitoring and Environmental Audits

- D15. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.
- D16. For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development. Noise, blast and/or air quality monitoring under this consent may be undertaken at suitable representative monitoring locations instead of at privately-owned residences or other locations listed in Part B, providing that these representative monitoring locations are set out in the respective management plan/s.

ACCESS TO INFORMATION

- D17. Before the commencement of construction of the development until the completion of all rehabilitation required under this consent, the Applicant must:

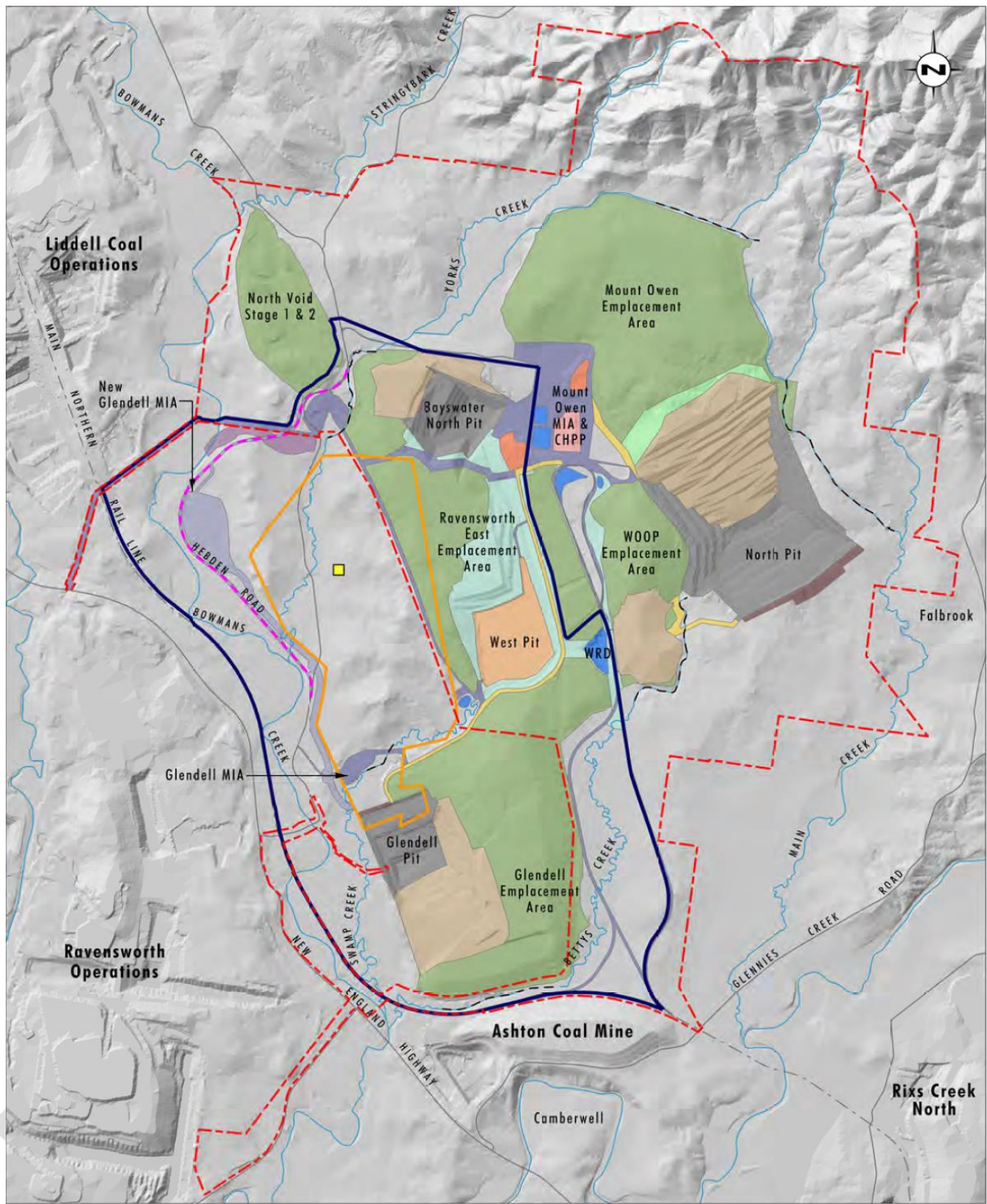
- (a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website:
- (i) the documents listed in condition A2(c) of this consent;
 - (ii) all current statutory approvals for the development;
 - (iii) all approved strategies, plans and programs required under the conditions of this consent;
 - (iv) the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;
 - (v) minutes of CCC meetings;
 - (vi) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
 - (vii) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - (viii) a summary of the current phase and progress of the development;
 - (ix) contact details to enquire about the development or to make a complaint;
 - (x) a complaints register, updated monthly;
 - (xi) the Annual Reviews of the development;
 - (xii) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report;
 - (xiii) any other matter required by the Planning Secretary; and
- (b) keep such information up to date, to the satisfaction of the Planning Secretary.

APPENDIX 1 SCHEDULE OF LAND

Lot	DP
71	625171
58	752499
8	6830
1	1180252
5	859544
1	48490
2	859544
32	535087
2	823167
1	865784
2	865784
6	859544
3	859544
4	1072124
2	1180252
3	1180252
232	752470
13	665120
228	752470
1	135027
354	867083
1	135026
32	545601
310	848411
3	232149
2	534889
11	592404
7	1077004
Various Crown Roads	

Lot	DP
2	549723
25	841160
26	841160
9	6842
11	6842
355	867083
352	867083
4	232149
1	1089438
2	1089438
1	303843
1	303842
1	375485
1	375486
A	380246
311	848411
10	1077004
9	1077004
3	662944
8	1077004
2	6842
2A	6842
1	561235
3	561235
6	1077004
5	1077004
1	940619
1	534889

APPENDIX 2 DEVELOPMENT LAYOUT PLANS



Data Source: Glencore (2019)

Note: Mount Owen Consent Boundary assumes Narama Pipeline Modification is approved

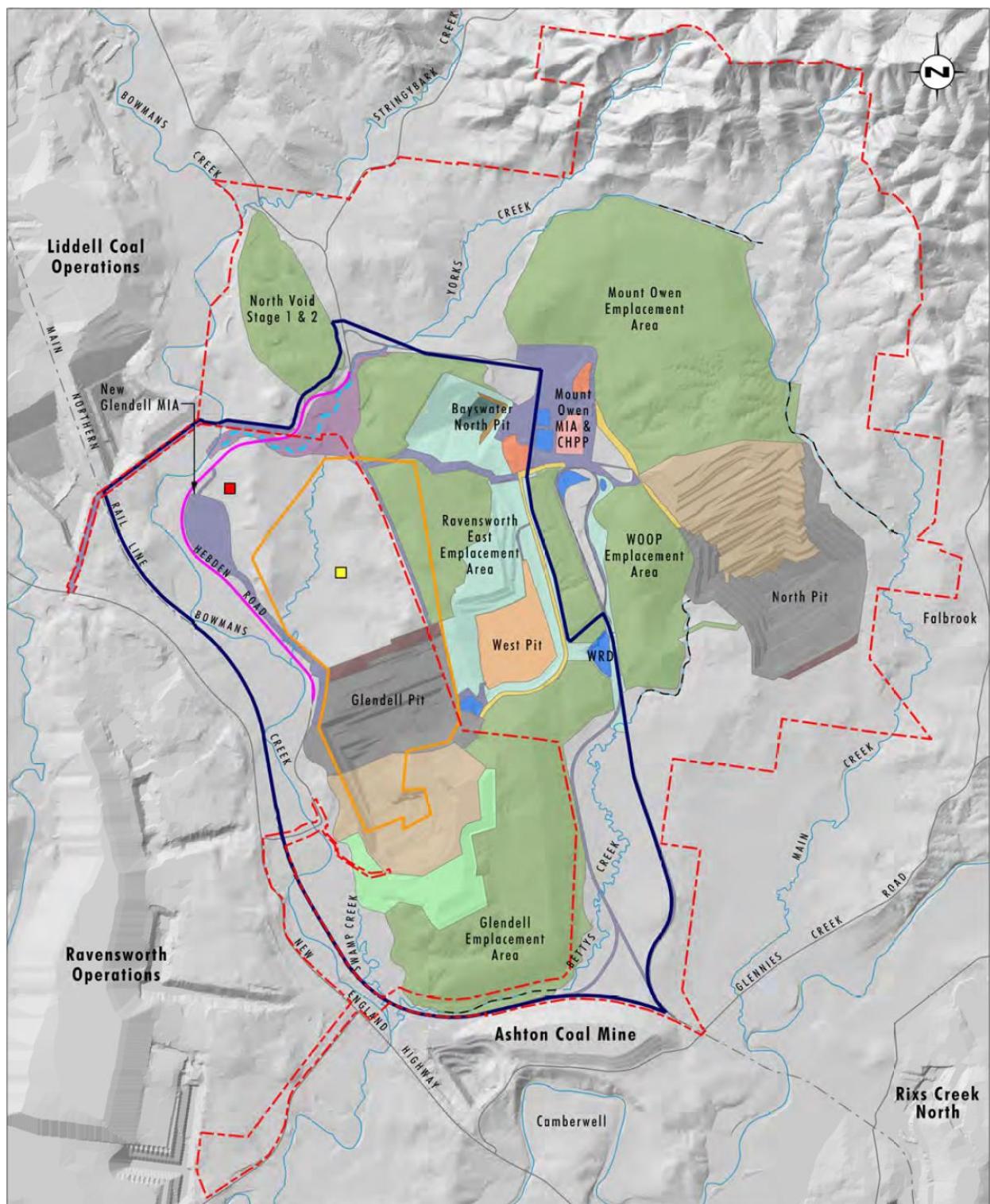
Legend

Project Area	Topsail Removal Strip	Coal Stockpile ROM
Glendell Pit Extension	Shaping for Final Landform	Coal Stockpile Product
Mount Owen Consent Boundary	Temporary Rehabilitation	Tailings Emplacement Area
Existing Creek Diversion	Rehabilitation	Water Storage
Hebden Road Realignment (Construction)	Creek Realignment (Construction)	
Ravensworth Homestead	Infrastructure/Internal Access	
Active Pit/Working Area	Infrastructure (Construction)	
Active Overburden Emplacement Area	Haul Road	

FIGURE 3.2

Mount Owen Complex
Conceptual Mine
Plan - Year 1

Figure 1: Conceptual Mine Plan – Year 1



Data Source: Glencore (2019)

Note: Mount Owen Consent Boundary assumes Narama Pipeline Modification is approved

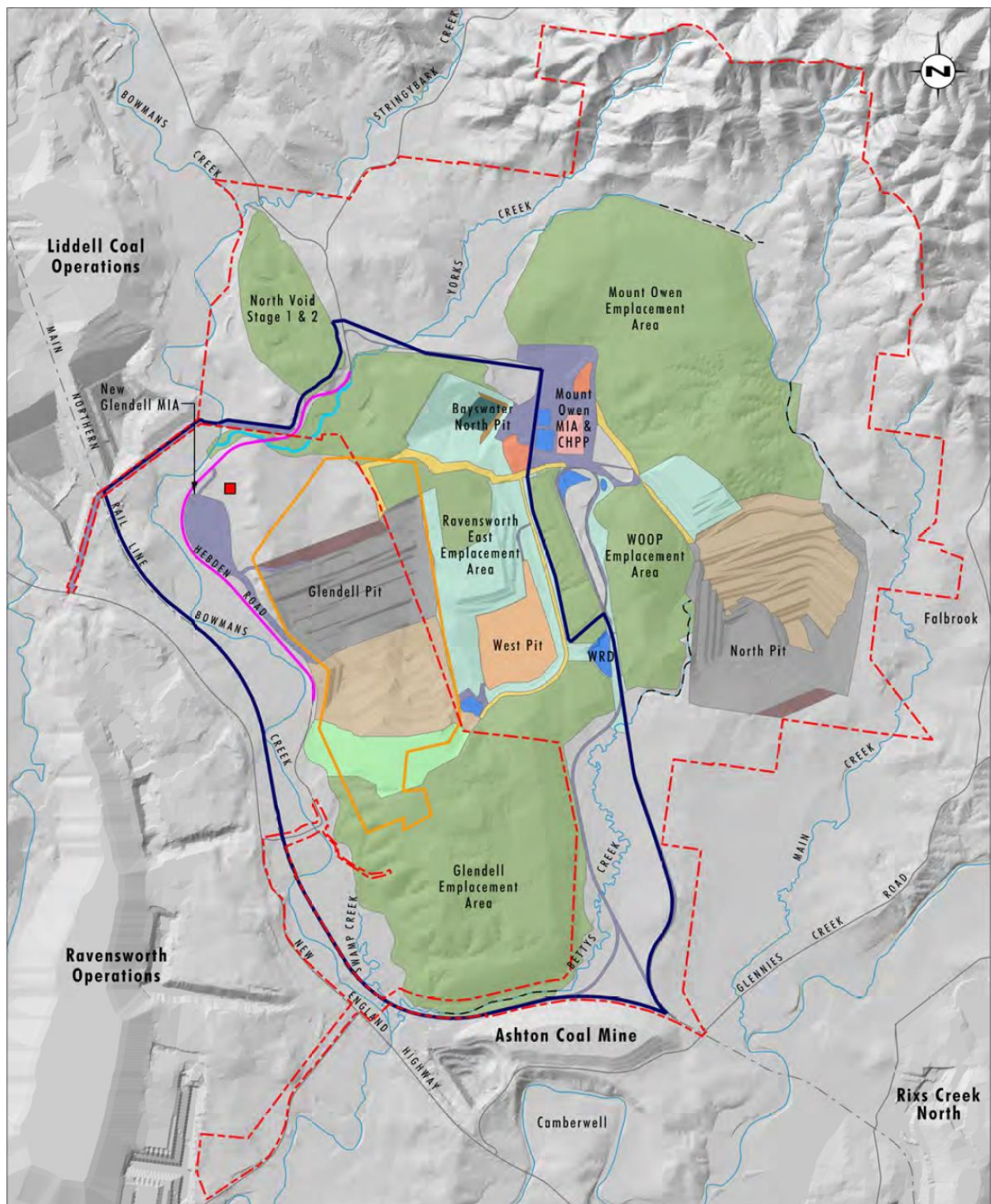
Legend

 Project Area	 Active Pit/Working Area	 Haul Road
 Glendell Pit Extension	 Active Overburden Emplacement Area	 Coal Stockpile ROM
 Mount Owen Consent Boundary	 Topsoil Removal Strip	 Coal Stockpile Product
 Existing Creek Diversion	 Shaping for Final Landform	 Tailings Emplacement Area
 Yorks Creek Realignment (Establishment)	 Temporary Rehabilitation	 Water Storage
 Herden Road Realignment	 Rehabilitation	 Water Storage/Tailings Emplacement Area
 Ravensworth Homestead	 Creek Realignment (Establishment)	 Highwall
 Ravensworth Farm Relocation Option	 Infrastructure/Internal Access	

FIGURE 3.3

Mount Owen Complex
Conceptual Mine
Plan - Year 6

Figure 2: Conceptual Mine Plan – Year 6



Data Source: Glencore (2019)
 Note: Mount Owen Consent Boundary assumes Narama Pipeline Modification is approved

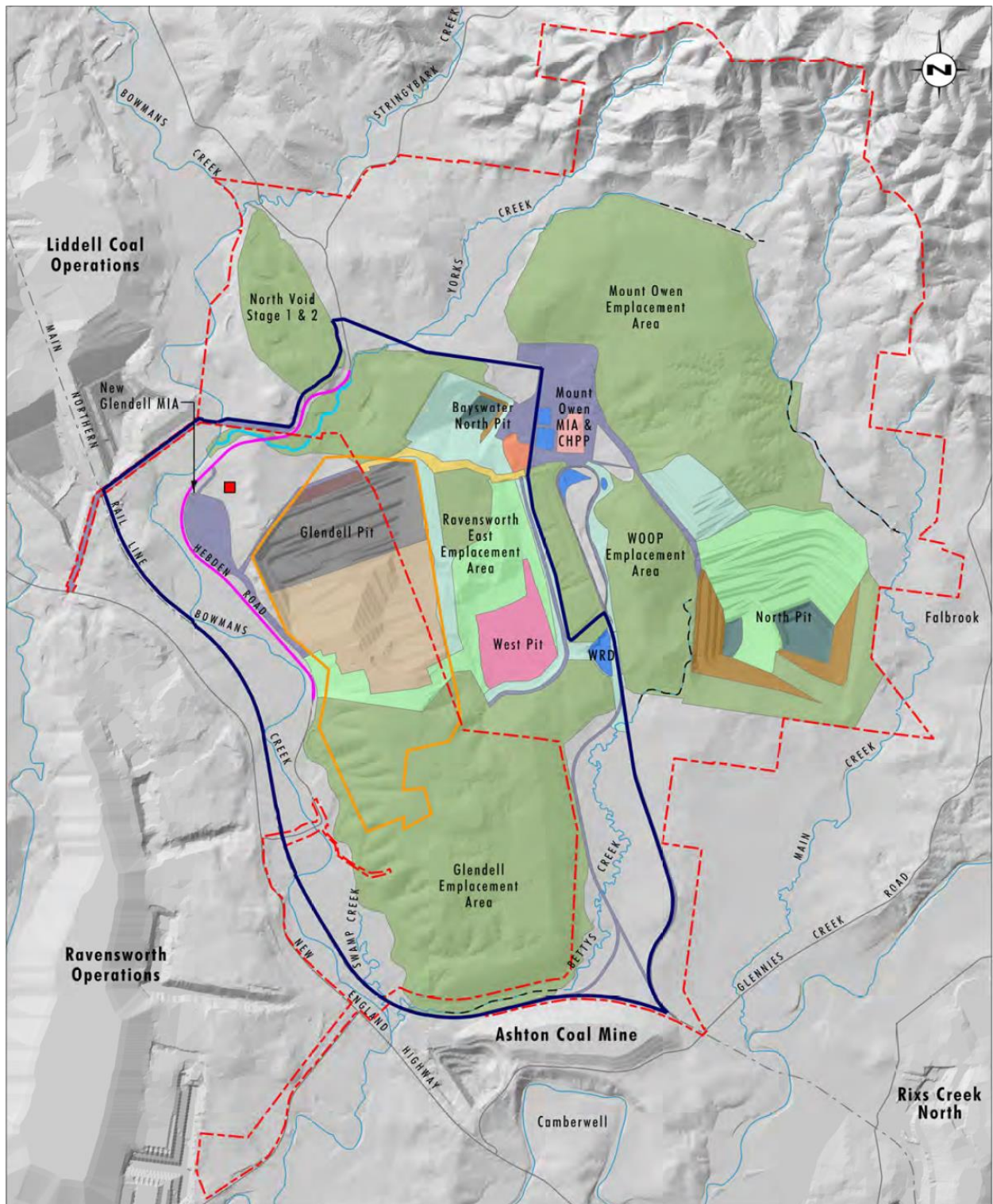
Legend

- | | | |
|--|---|--|
| Project Area | Active Overburden Emplacement Area | Coal Stockpile Product |
| Glendell Pit Extension | Topsoil Removal Strip | Tailings Emplacement Area |
| Mount Owen Consent Boundary | Shaping for Final Landform | Water Storage |
| Existing Creek Diversion | Temporary Rehabilitation | Water Storage/Tailings Emplacement Area |
| Yorks Creek Realignment (Commissioned) | Rehabilitation | Highwall |
| Hebden Road Realignment | Infrastructure/Internal Access | |
| ■ Ravensworth Farm Relocation Option | Haul Road | |
| Active Pit/Working Area | Coal Stockpile ROM | |

FIGURE 3.4

Mount Owen Complex
 Conceptual Mine
 Plan - Year 13

Figure 3: Conceptual Mine Plan – Year 13



Data Source: Glencore (2019)
 Note: Mount Owen Consent Boundary assumes Narama Pipeline Modification is approved

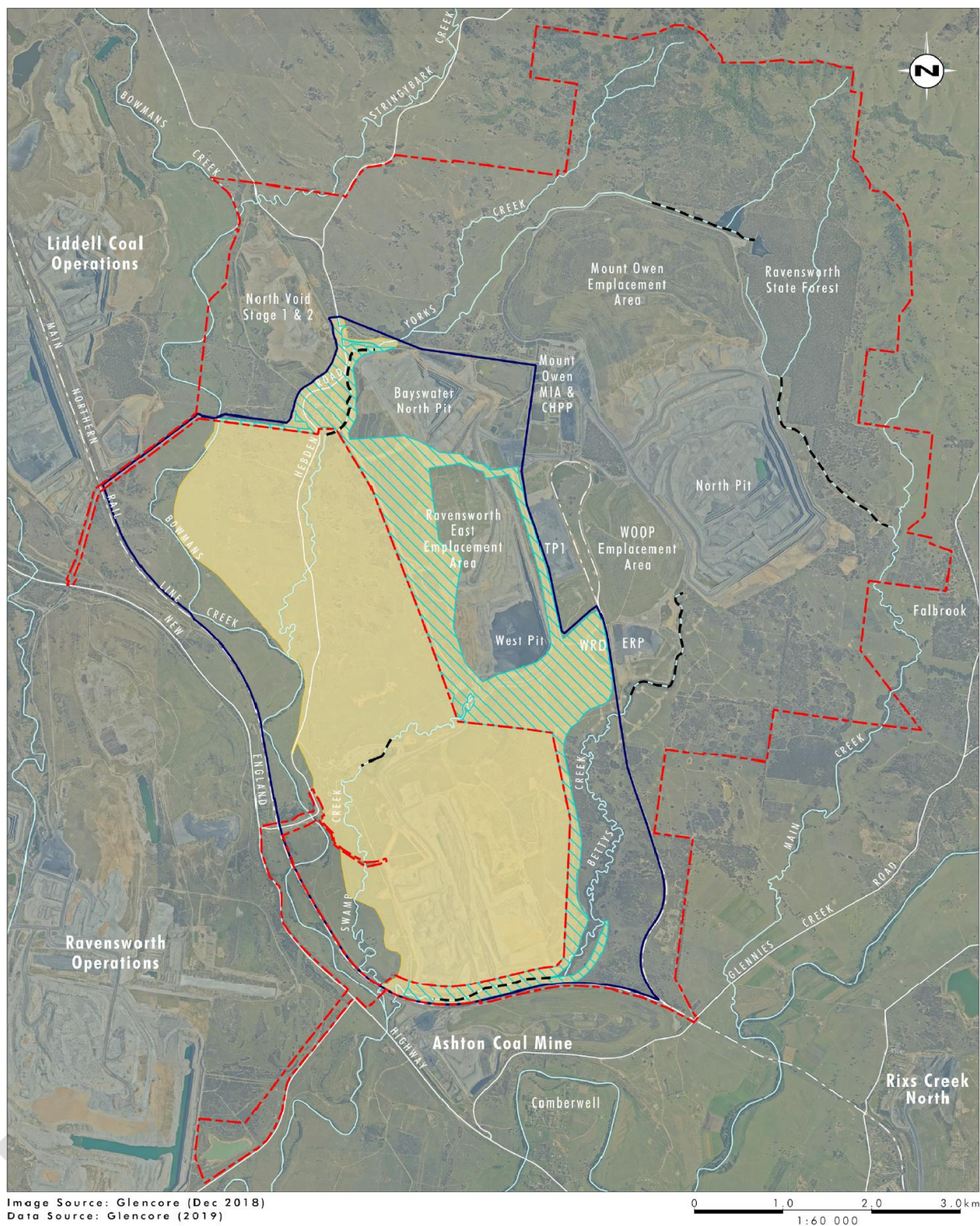
Legend

- | | | |
|--|------------------------------------|---|
| Project Area | Active Overburden Emplacement Area | Coal Stockpile Product |
| Glendell Pit Extension | Topsoil Removal Strip | Water Storage |
| Mount Owen Consent Boundary | Shaping for Final Landform | Water Storage/Tailings Emplacement Area |
| Existing Creek Diversion | Temporary Rehabilitation | Highwall |
| Yorks Creek Realignment (Commissioned) | Rehabilitation | Tailings Capping in Progress |
| Herd Road Realignment | Infrastructure/Internal Access | |
| Ravensworth Farm Relocation Option | Haul Road | |
| Active Pit/Working Area | Coal Stockpile ROM | |

FIGURE 3.5

Mount Owen Complex
 Conceptual Mine
 Plan - Year 18

Figure 4: Conceptual Mine Plan – Year 18

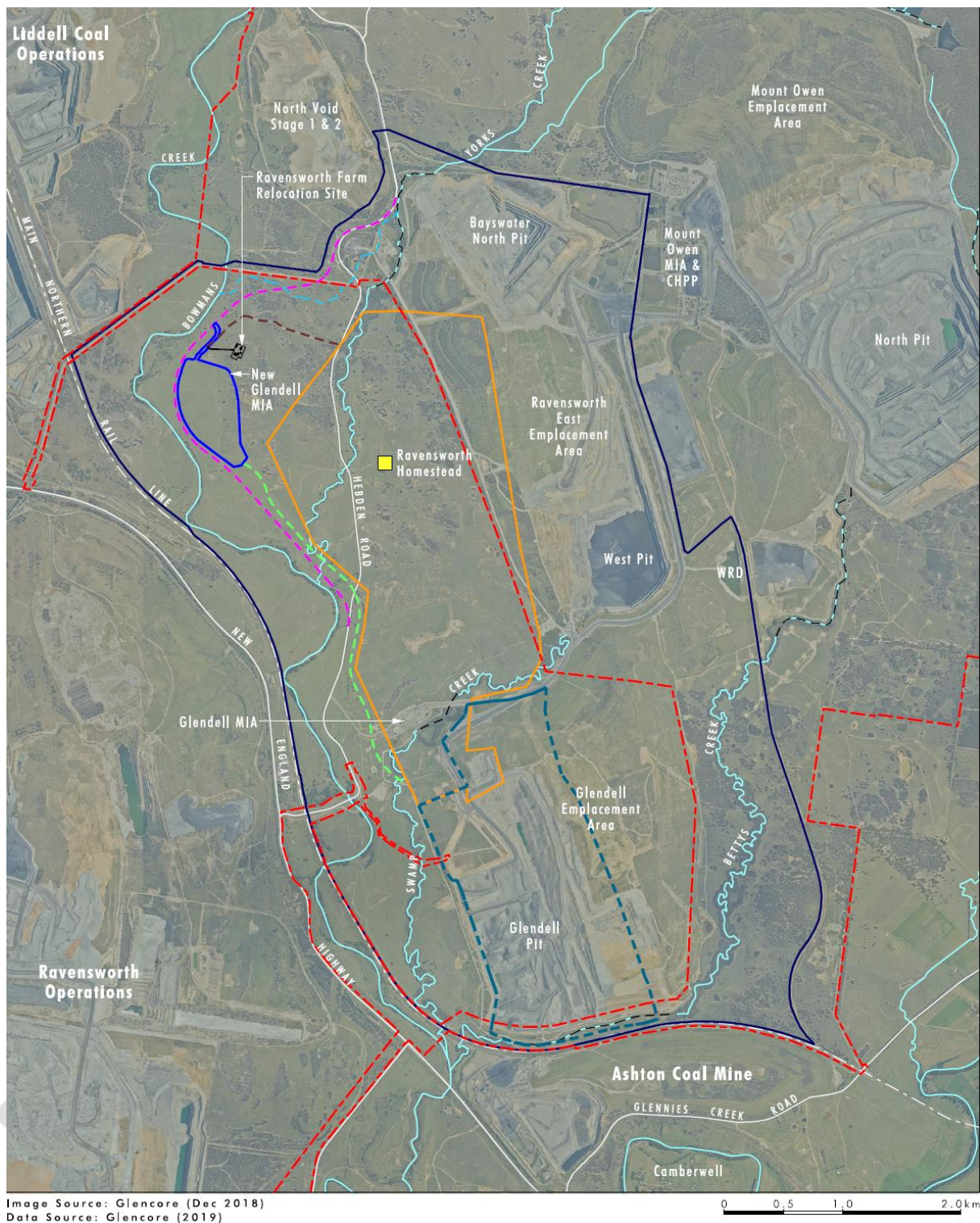


Legend

- Project Area
- Mount Owen Consent Boundary
- Glendell Project Disturbance Area
- Overlap with Approved Mount Owen Operational Area
- Existing Creek Diversion

Glendell Project Disturbance Area

Figure 5: Glendell Disturbance Area



Legend

- | | |
|---|--|
| Project Area | Project Features: |
| Glendell Pit Extension | New Glendell MIA |
| Mount Owen Consent Boundary | Heavy Vehicle Access Road |
| Approved Glendell Pit Area | Yorks Creek Realignment |
| Ravensworth Homestead | Hebden Road Realignment |
| Existing Creek Diversion | |
| Construction Access Road | |

Glendell Continued Operations Project Key Project Features

Figure 6: Key Project Features

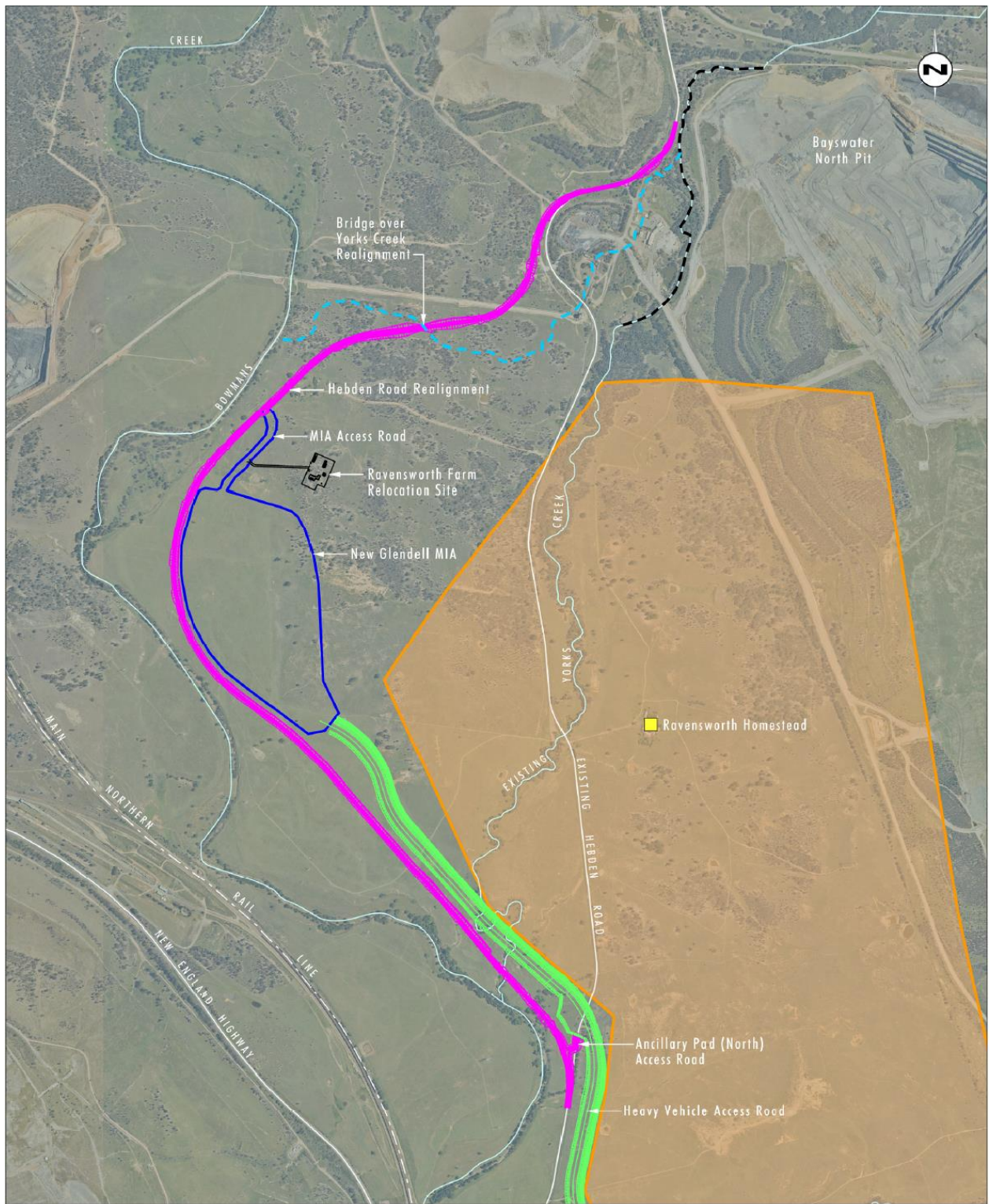


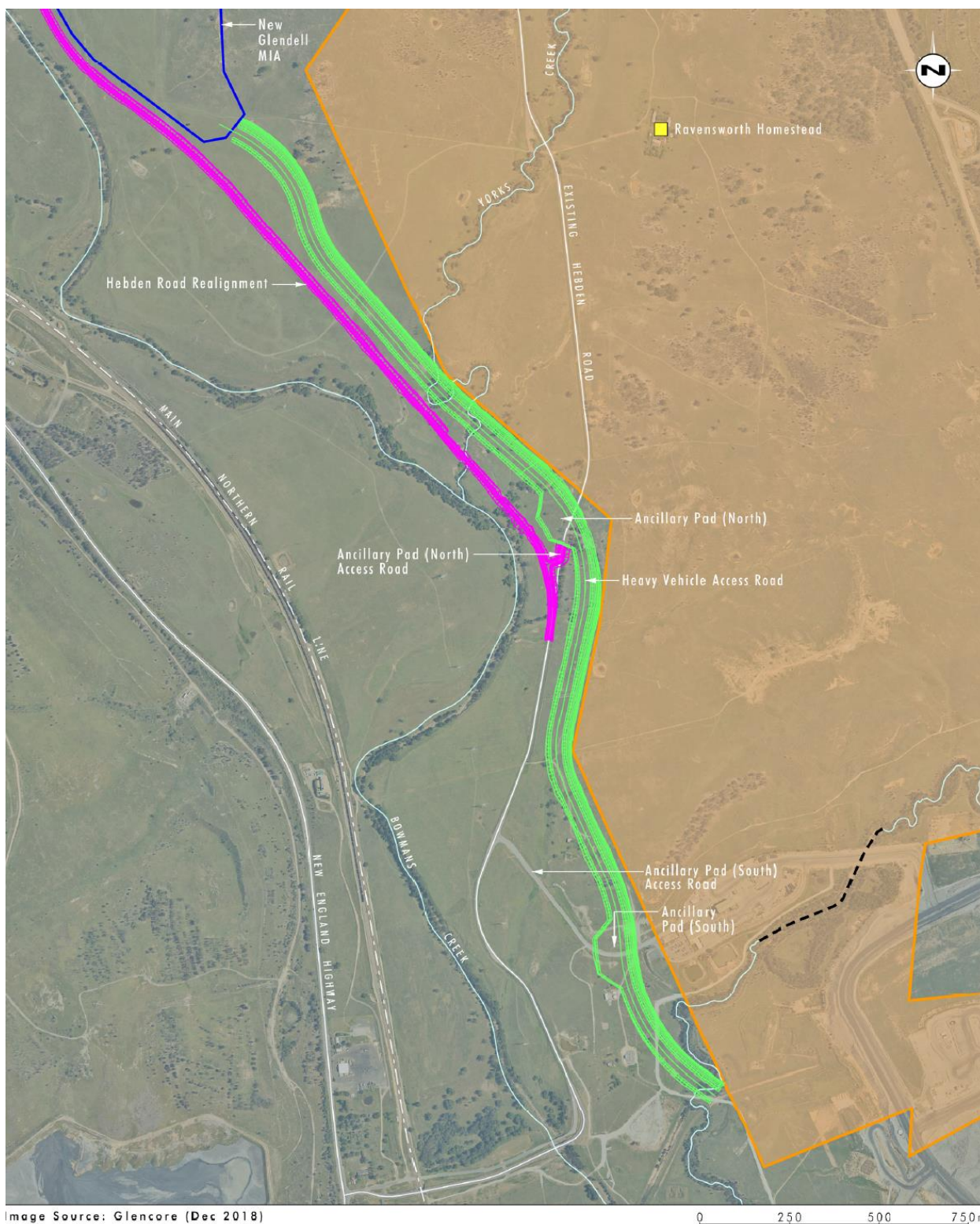
Image Source: Glencore (Dec 2018)
 Data Source: Glencore (2019)
 Note: Ravensworth Homestead to be relocated

Legend

- Glendell Pit Extension
- Ravensworth Homestead
- Existing Creek Diversion
- New Glendell MIA
- Yorks Creek Realignment
- Hebden Road Realignment
- Heavy Vehicle Access Road

**Hebden Road Realignment
 and New Glendell MIA
 - Conceptual Alignment and Footprint**

Figure 7: Proposed MIA and Conceptual Hebden Road Realignment (Northern Section)



Legend

- Glendell Pit Extension
- Ravensworth Homestead
- Existing Creek Diversion
- New Glendell MIA
- Hebden Road Realignment
- Heavy Vehicle Access Road

Heavy Vehicle Access Road
- Conceptual Design

Figure 8: Proposed MIA and Conceptual Hebden Road Realignment (Southern Section)

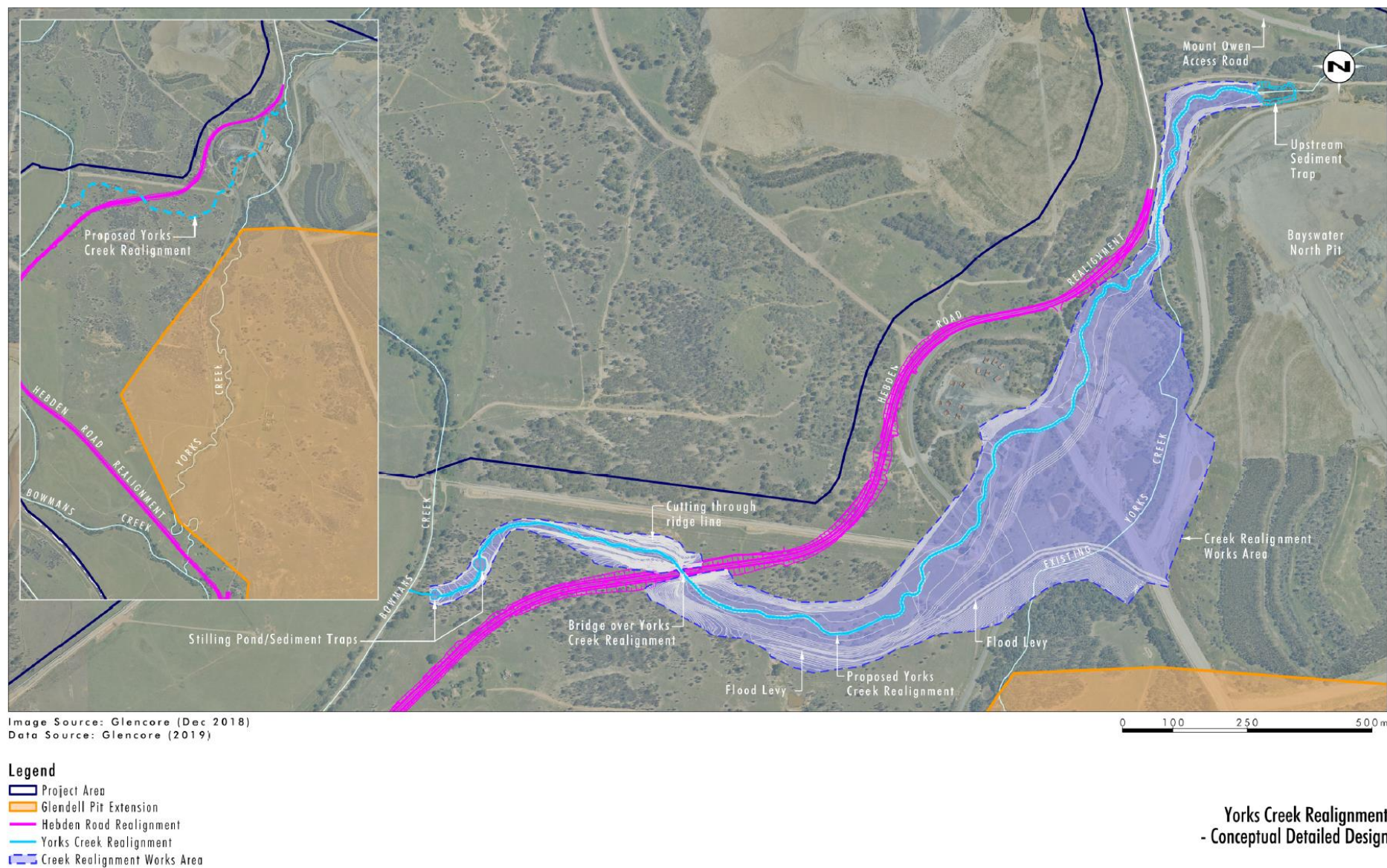


Figure 9: Yorks Creek Realignment Conceptual Design

APPENDIX 3 RECEIVER ZONES AND LOCATIONS

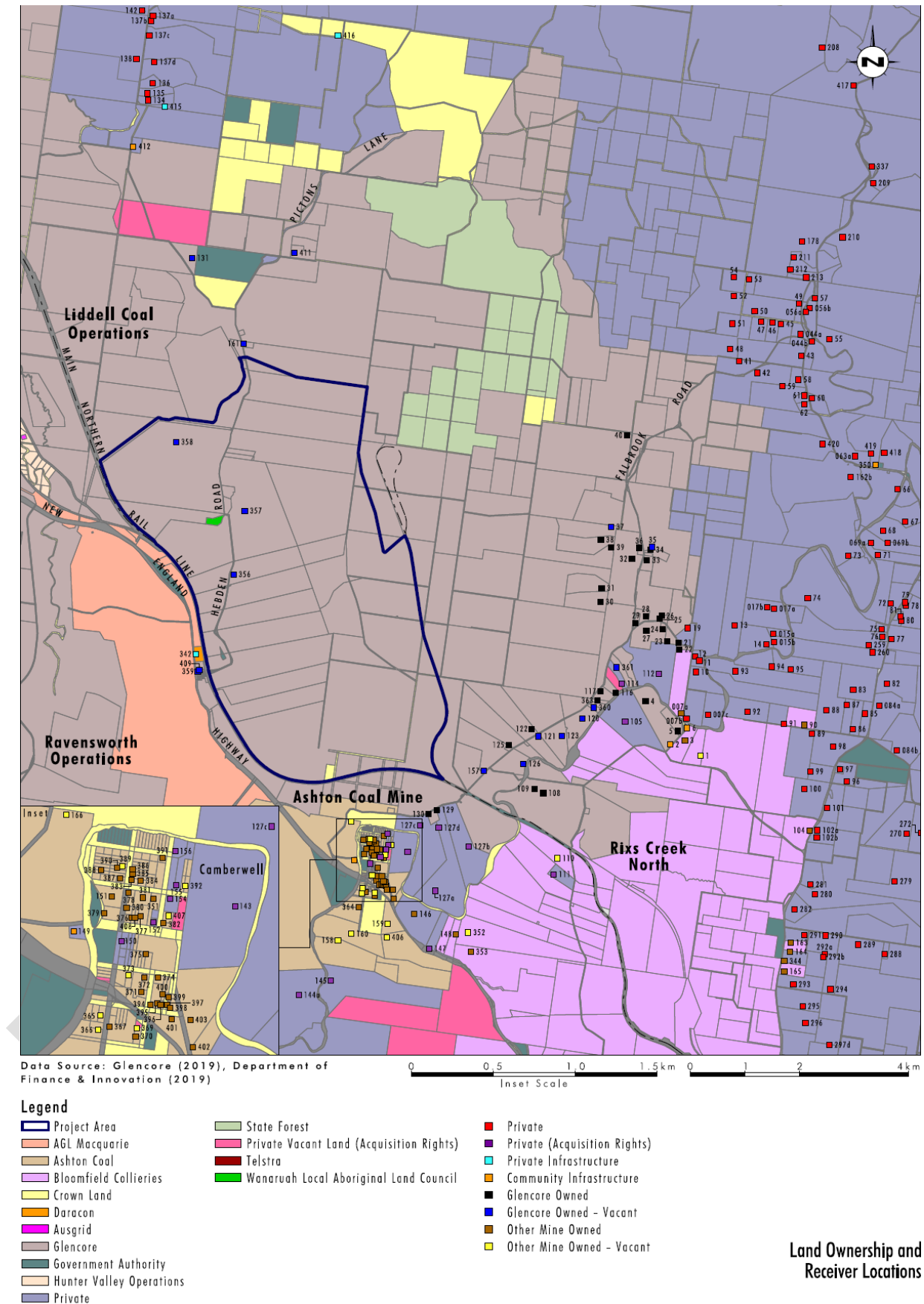


Figure 10: Receiver Locations

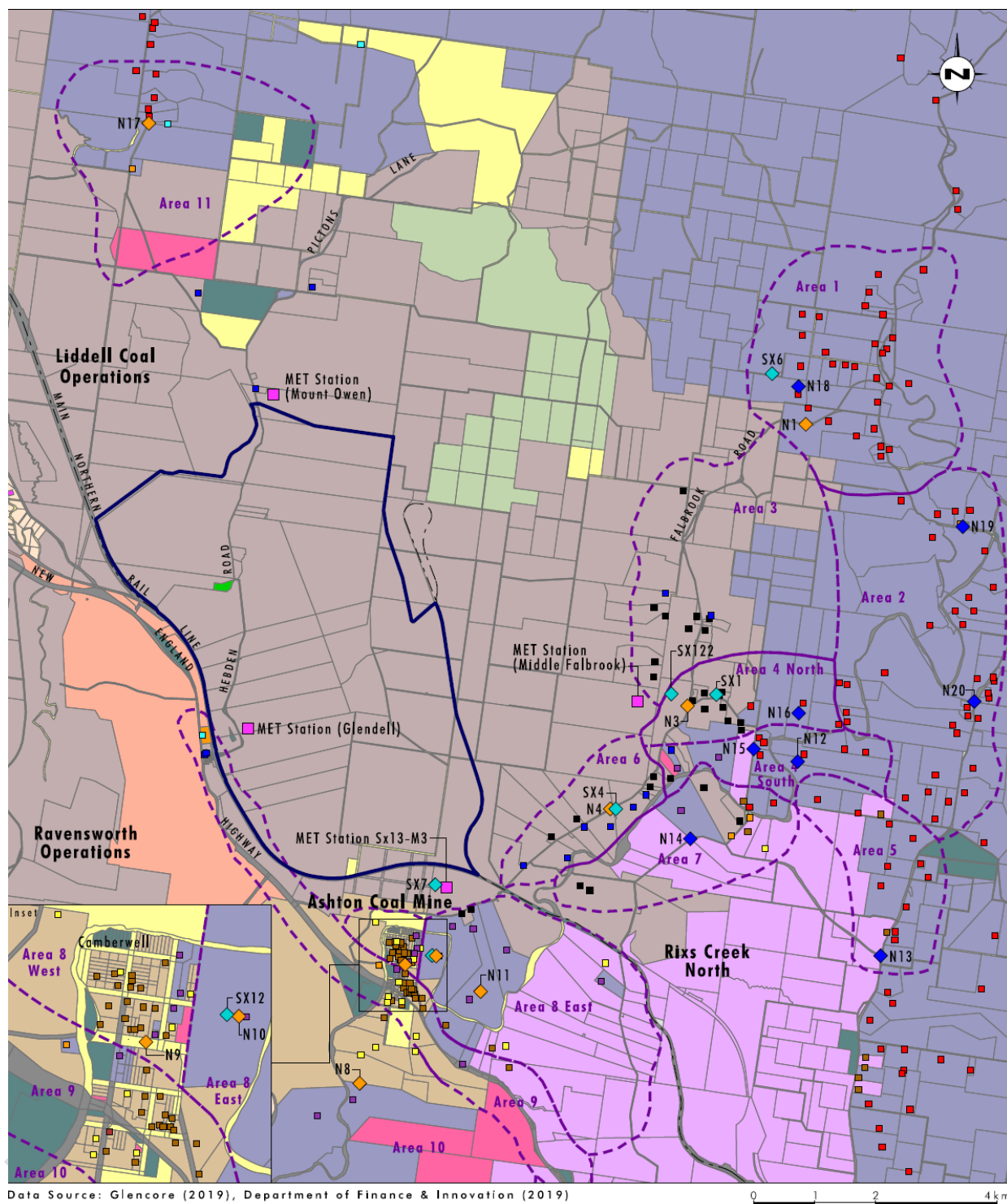


Figure 11: Noise Receiver Areas

APPENDIX 4 BIODIVERSITY OFFSET STAGES

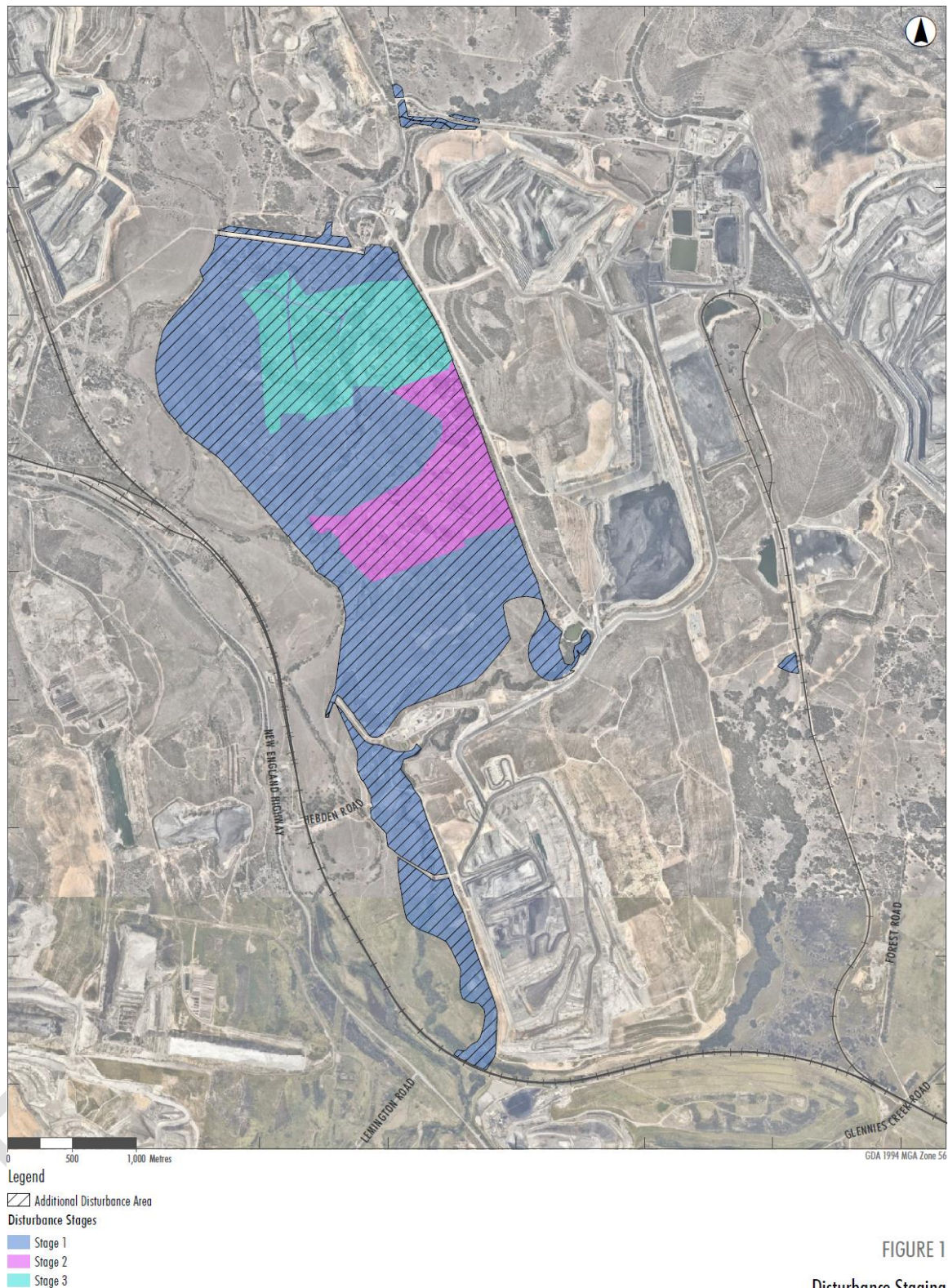


FIGURE 1
Disturbance Staging

Figure 12: Biodiversity Offset Stages

APPENDIX 5 HERITAGE SITES

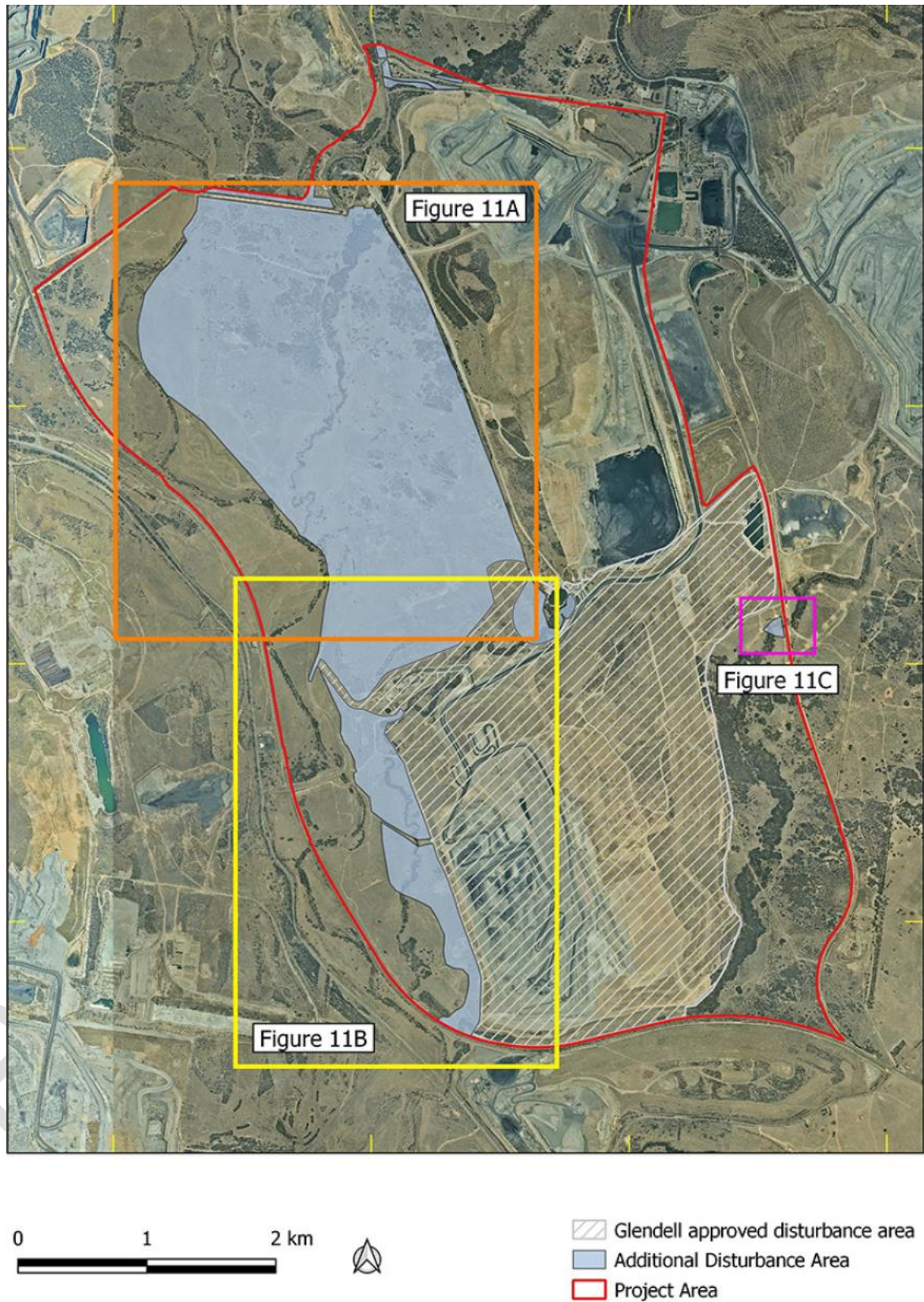


Figure 13: Aboriginal Cultural Heritage Sites

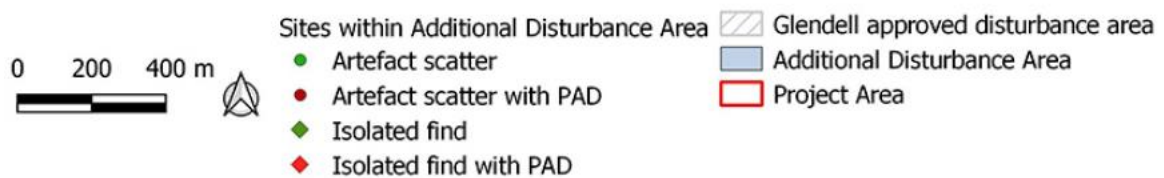
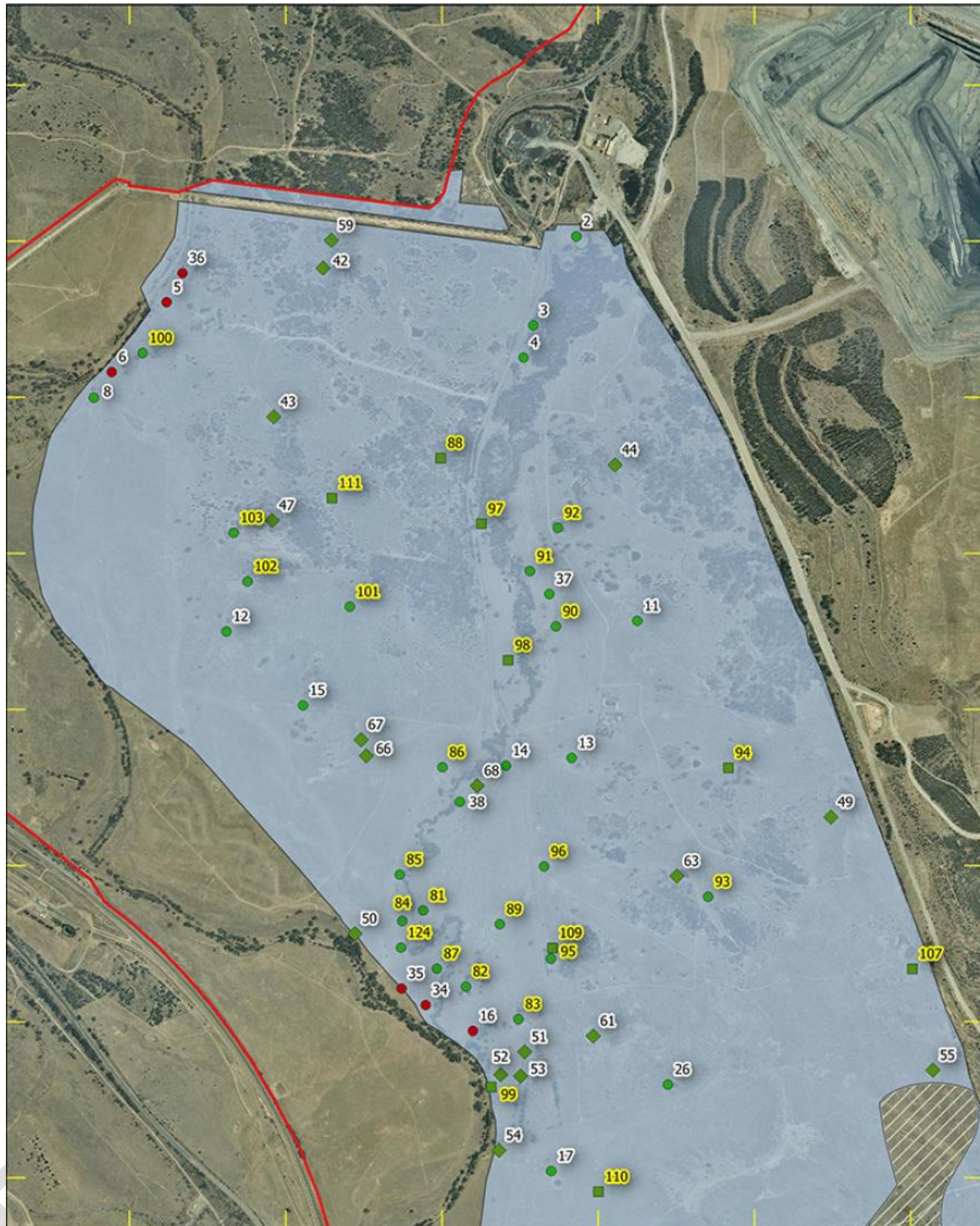


Figure 12A: Aboriginal Cultural Heritage Sites (Inset A)

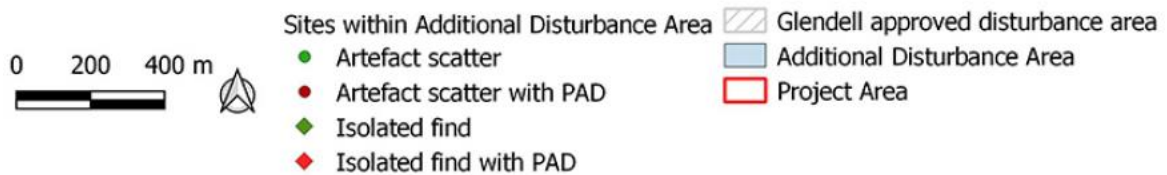
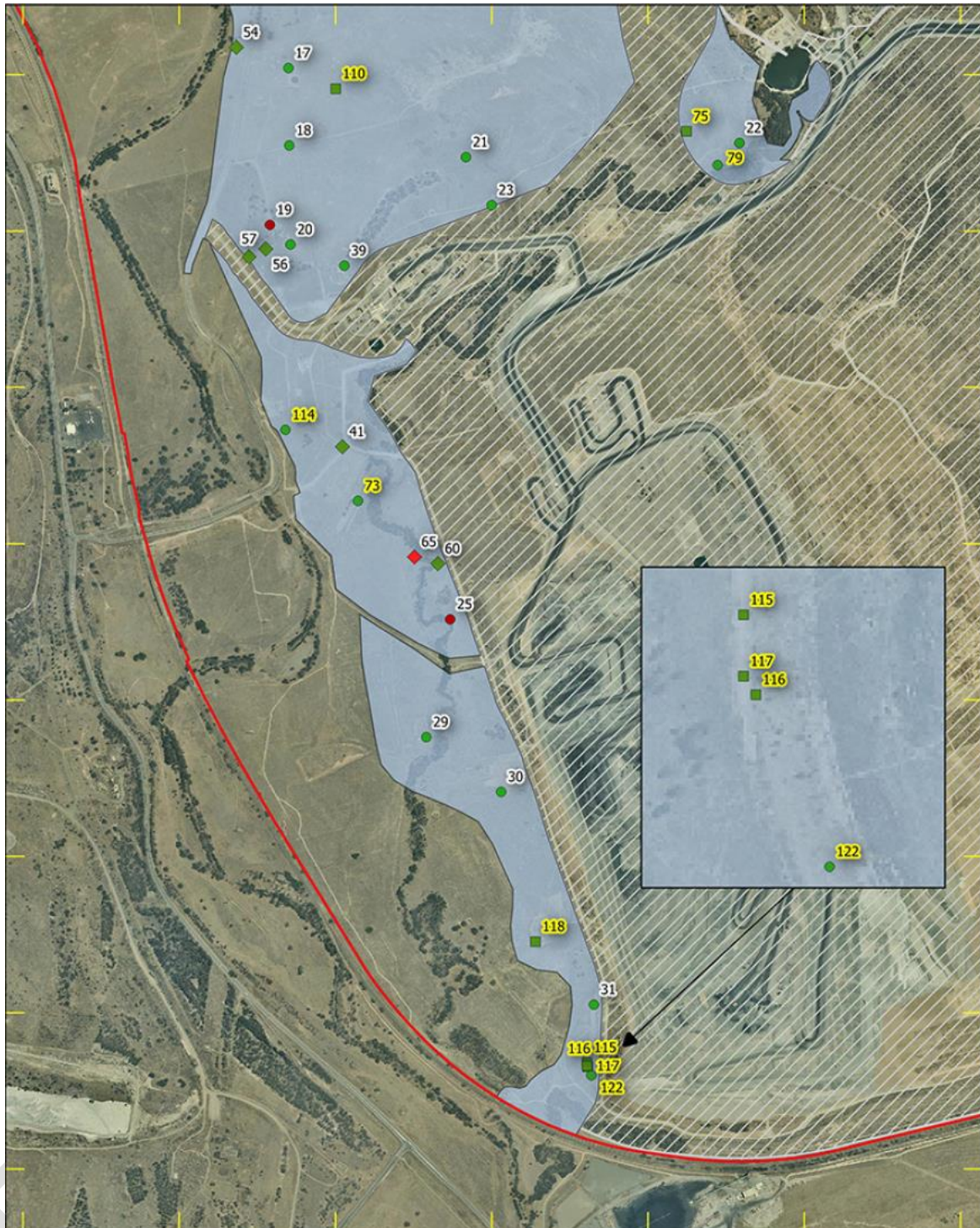


Figure 12B: Aboriginal Cultural Heritage Sites (Inset B)

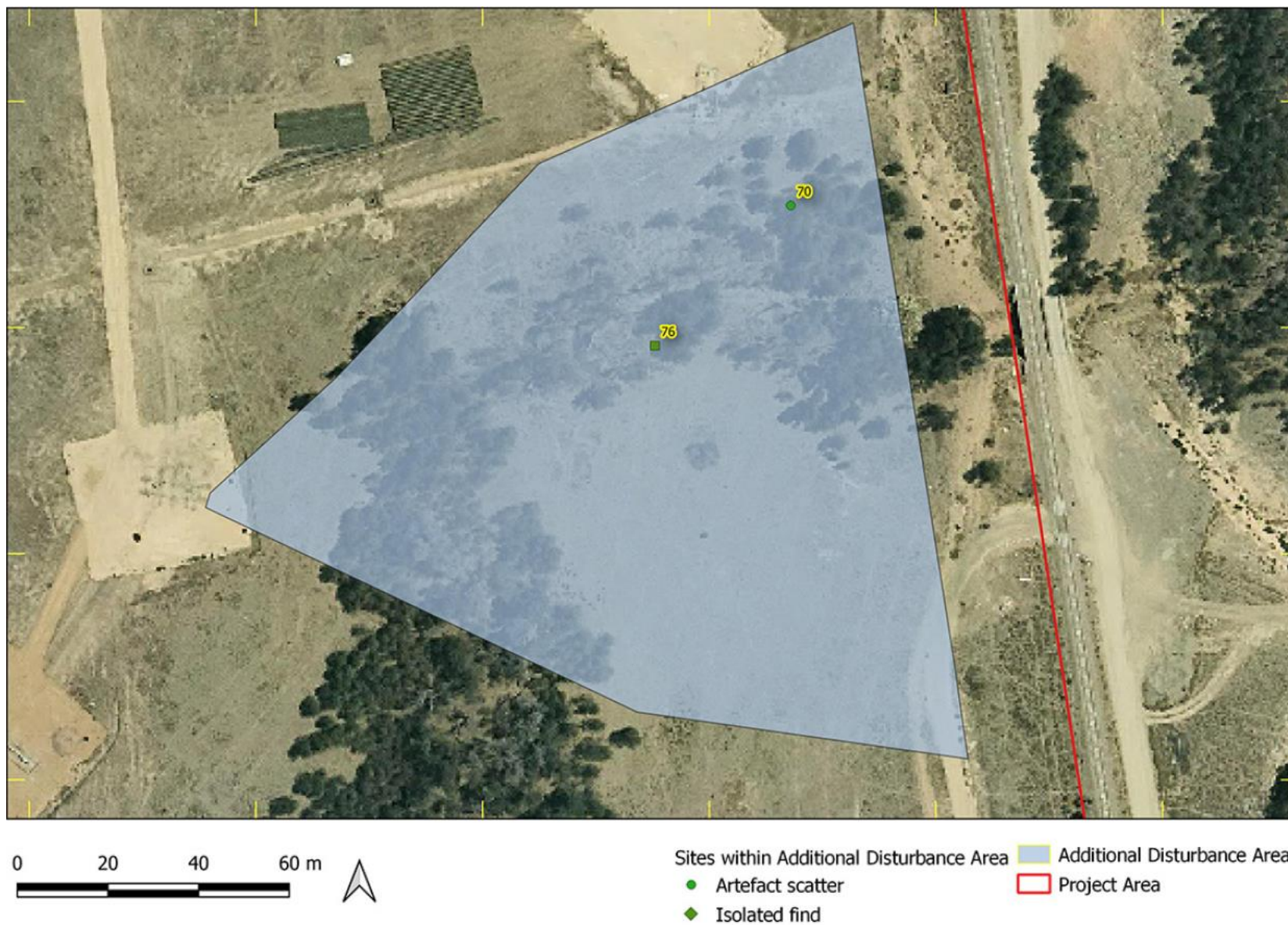


Figure 12C: Aboriginal Cultural Heritage Sites (Inset C)

Table 5-1 Aboriginal Heritage Sites within the Additional Disturbance Area.

ID	AHIMS ID	Site type
2	37-3-1559	Artefact scatter
3	37-3-1558	Artefact scatter
4	37-3-1557	Artefact scatter
5	37-3-1569	Artefact scatter with PAD
6	37-3-1571	Artefact scatter with PAD
8	37-3-1549	Artefact scatter
11	37-3-1554	Artefact scatter
12	37-3-1553	Artefact scatter
13	37-3-1552	Artefact scatter
14	37-3-1551	Artefact scatter
15	37-3-1550	Artefact scatter
16	37-3-1573	Artefact scatter with PAD
17	37-3-1542	Artefact scatter
18	37-3-1541	Artefact scatter
19	37-3-1572	Artefact scatter with PAD
20	37-3-1540	Artefact scatter
21	37-3-1539	Artefact scatter
22	37-3-1538	Artefact scatter
23	37-3-1537	Artefact scatter
25	37-3-1570	Artefact scatter with PAD
26	37-3-1548	Artefact scatter
29	37-3-1547	Artefact scatter
30	37-3-1546	Artefact scatter
31	37-3-1545	Artefact scatter
34	37-3-1574	Artefact scatter with PAD
35	37-3-1567	Artefact scatter with PAD
36	37-3-1568	Artefact scatter with PAD
37	37-3-1562	Artefact scatter
38	37-3-1565	Artefact scatter
39	37-3-1576	Artefact scatter
41	37-3-1534	Isolated find
42	37-3-1533	Isolated find
43	37-3-1532	Isolated find
44	37-3-1531	Isolated find
47	37-3-1528	Isolated find
49	37-3-1526	Isolated find
50	37-3-1525	Isolated find
51	37-3-1524	Isolated find
52	37-3-1523	Isolated find
53	37-3-1522	Isolated find
54	37-3-1521	Isolated find
55	37-3-1520	Isolated find
56	37-3-1519	Isolated find
57	37-3-1518	Isolated find
59	37-3-1515	Isolated find
60	37-3-1514	Isolated find

ID	AHIMS ID	Site type
61	37-3-1516	Isolated find
63	37-3-1512	Isolated find
65	37-3-1566	Isolated find with PAD
66	37-3-1564	Isolated find
67	37-3-1563	Isolated find
68	37-3-1575	Isolated find
70	37-3-0294	Artefact scatter
73	37-3-0469	Artefact scatter with PAD
75	37-3-0521	Isolated find
76	37-3-0612	Isolated find
79	37-3-0689	Artefact scatter with PAD
81	37-3-0744	Artefact scatter
82	37-3-0745	Artefact scatter
83	37-3-0746	Artefact scatter
84	37-3-0747	Artefact scatter
85	37-3-0748	Artefact scatter
86	37-3-0749	Artefact scatter
87	37-3-0750	Artefact scatter with PAD
88	37-3-0751	Isolated find
89	37-3-0752	Artefact scatter
90	37-3-0753	Artefact scatter
91	37-3-0754	Artefact scatter with PAD
92	37-3-0755	Artefact scatter
93	37-3-0756	Artefact scatter
94	37-3-0757	Isolated find
95	37-3-0758	Artefact scatter
96	37-3-0759	Artefact scatter
97	37-3-0760	Isolated find
98	37-3-0761	Isolated find with PAD
99	37-3-0762	Artefact scatter
100	37-3-0763	Artefact scatter with PAD
101	37-3-0764	Artefact scatter
102	37-3-0765	Artefact scatter
103	37-3-0766	Artefact scatter
107	37-3-0773	Isolated find
109	37-3-1155	Isolated find
110	37-3-1156	Isolated find
111	37-3-1158	Isolated find
114	37-3-1198	Artefact scatter
115	37-3-1490	Isolated find
116	37-3-1492	Isolated find
117	37-3-1493	Isolated find
118	37-3-1494	Isolated find
122	37-3-1499	Artefact scatter
124	37-3-1503	Artefact scatter with PAD

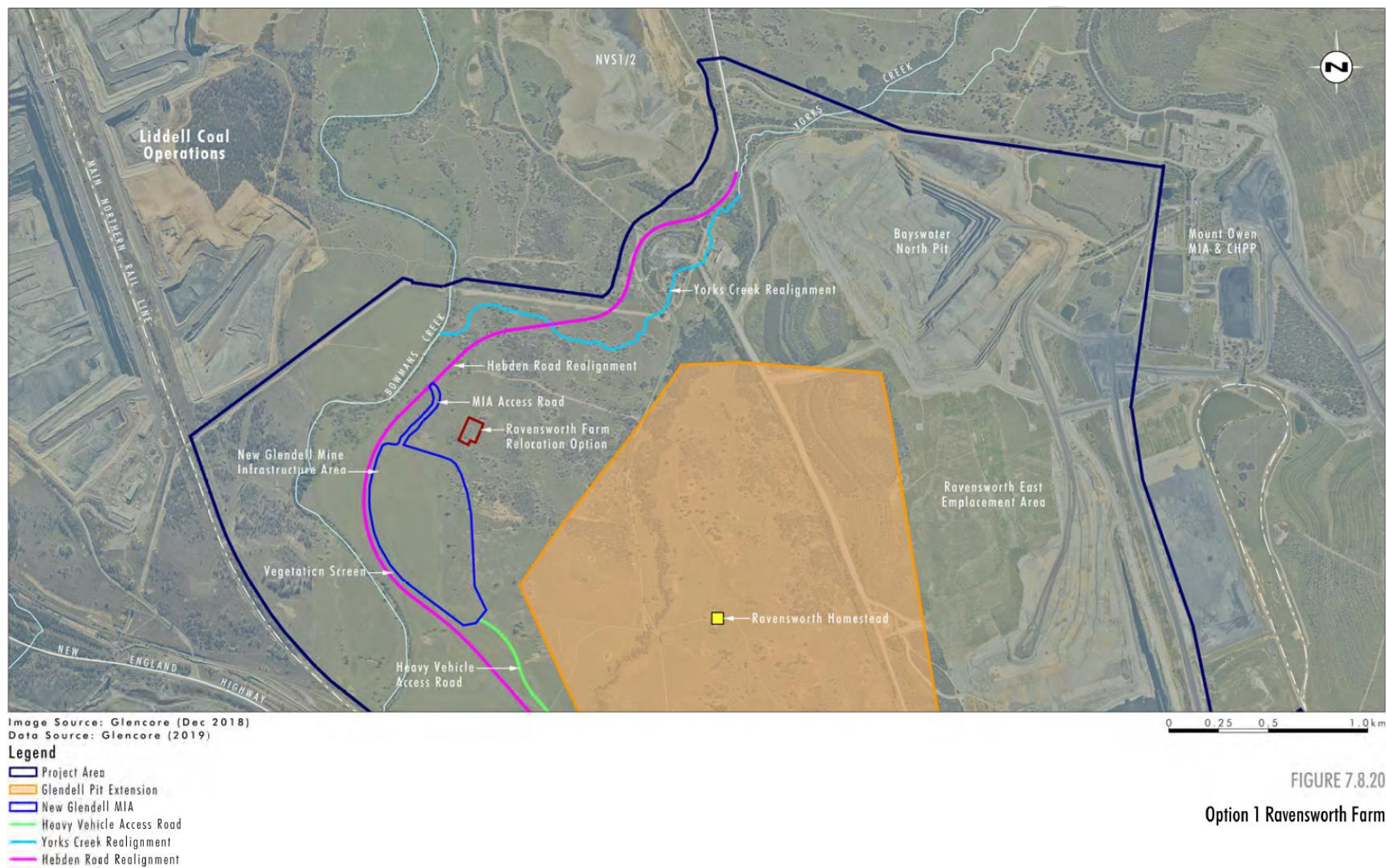
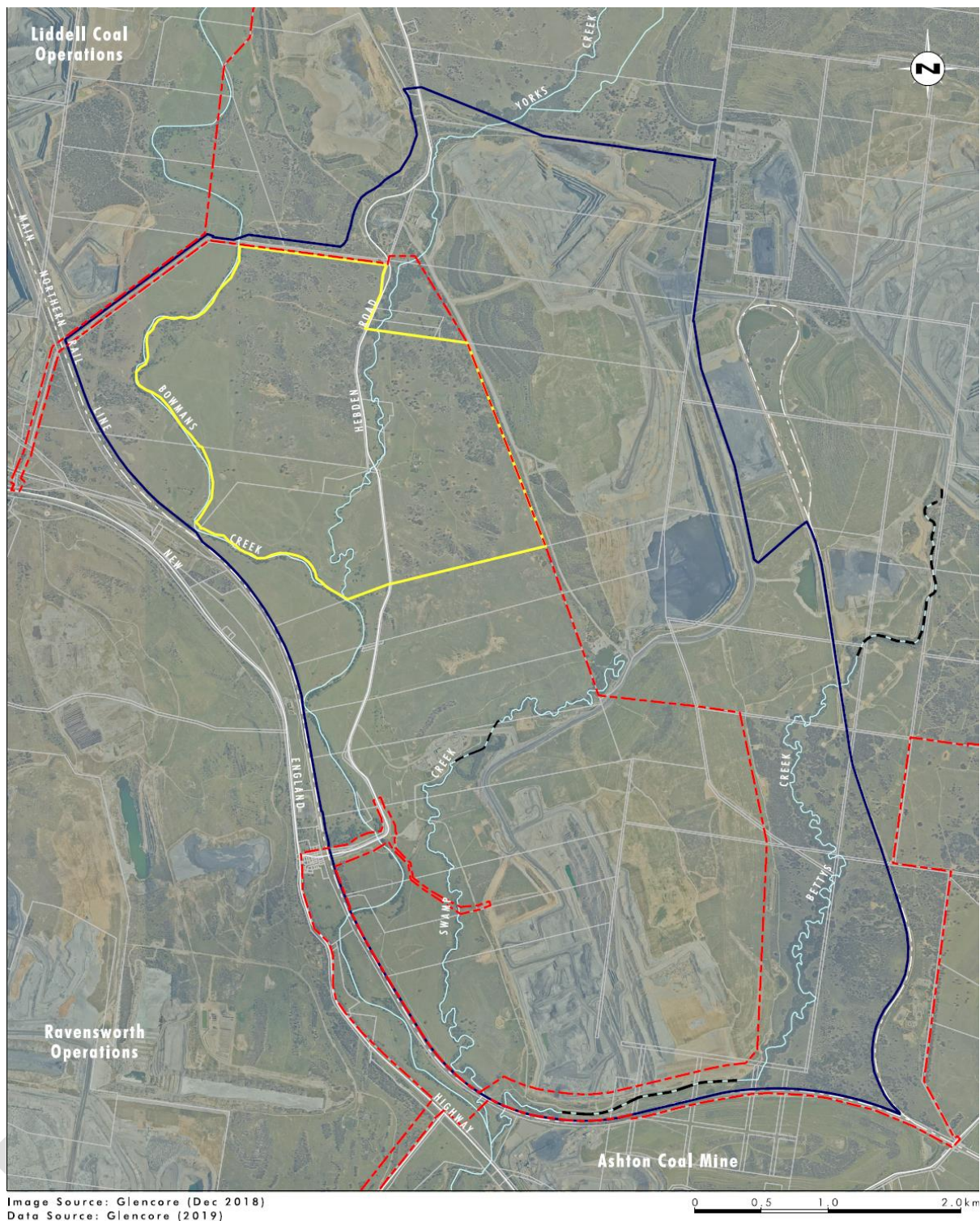


Figure 14: Ravensworth Homestead Location and Ravensworth Farm Relocation Site



Core Estate Lands

Figure 15: Core Estate Lands

APPENDIX 6 REHABILITATION PLANS

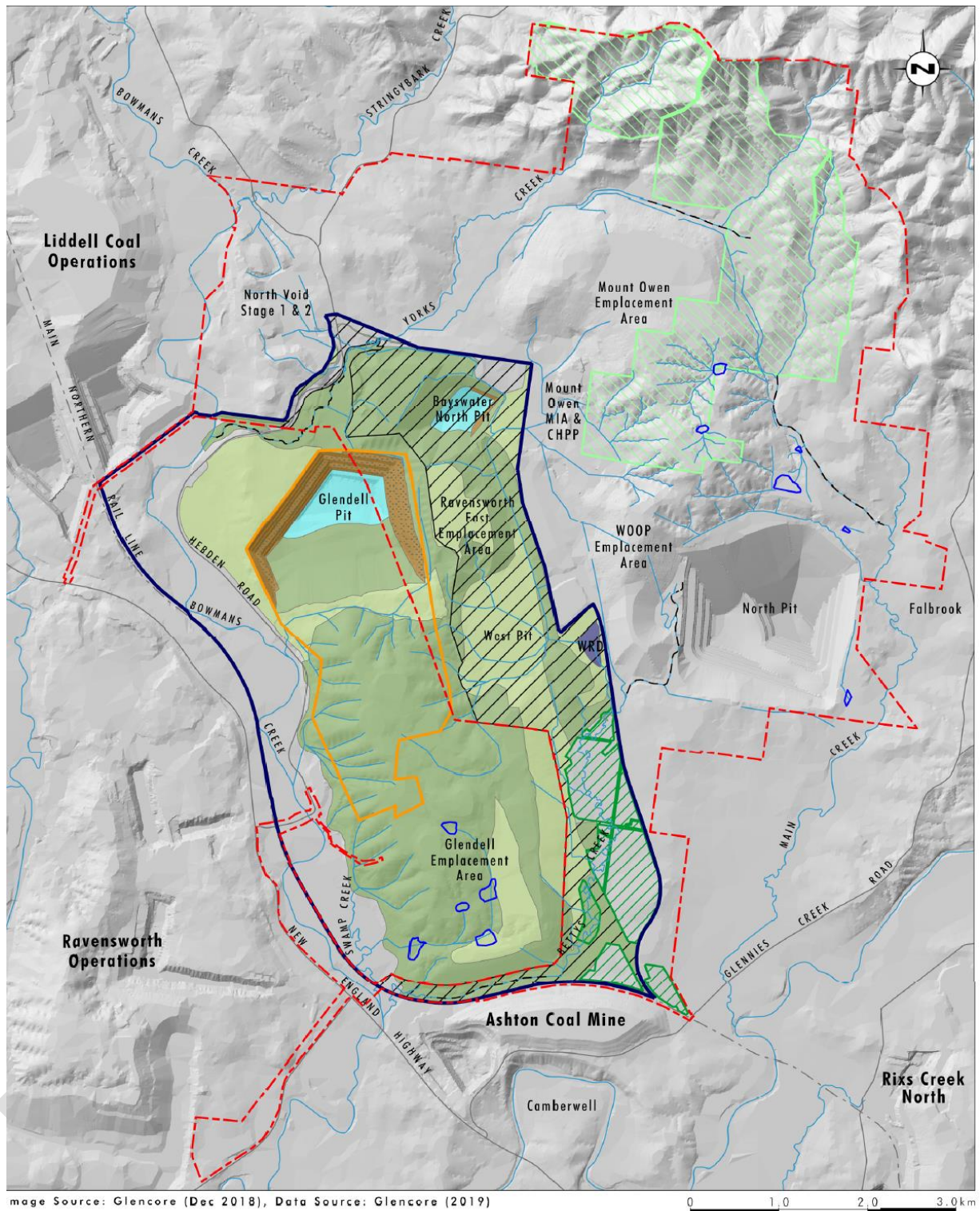


Figure 16: Conceptual Final Landform