
Appendix B

Amended Project description

B.1 Introduction

Hunter Valley Operations (HVO) is a well-established multi-pit open cut coal mining complex, comprising two mine sites separated by the Hunter River, HVO North and HVO South. HVO is approximately 24 kilometres (km) north-west of Singleton in the Hunter Valley of New South Wales (NSW) (refer to Figure B.1). While the two mine sites are approved under separate development consents issued under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), they operate as one complex with fully integrated environmental management systems.

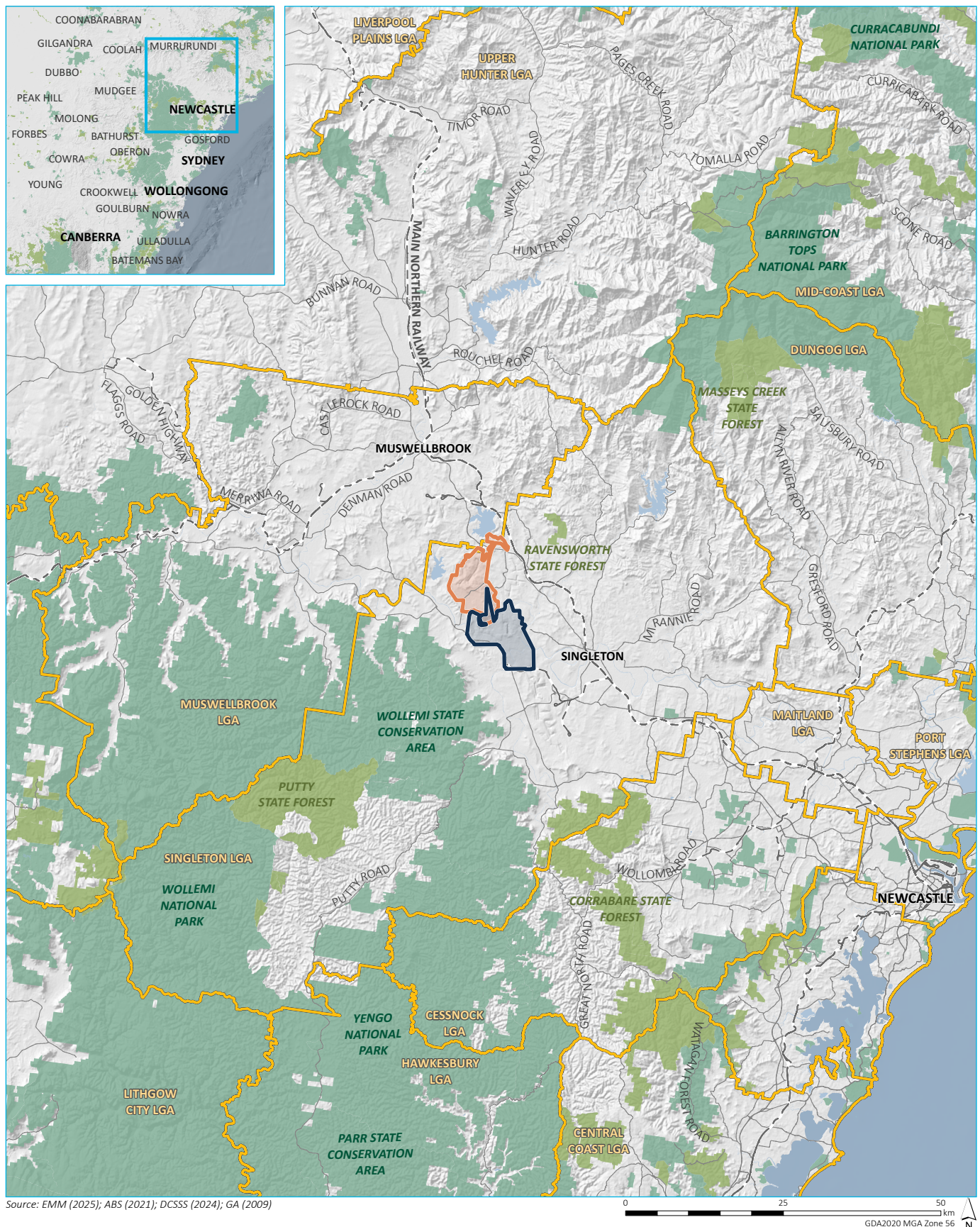
HVO North operates under Development Consent DA 450-10-2003 issued by the then NSW Minister for Infrastructure and Planning in 2004, which allows extraction of up to 22 million tonnes per annum (Mtpa) of run of-mine (ROM) coal until 31 December 2026. HVO North comprises the approved mining areas of West Pit, Mitchell Pit, Carrington Pit and North Pit, as well as the Hunter Valley (HV) and Howick Coal Preparation Plants (CPP) and the Howick and HVO North mine infrastructure area (MIA). The Newdell Load Point (LP) and Hunter Valley (HVL) train loading facilities are also at HVO North.

HVO South operates under Project Approval (PA) 06_0261 issued by the then NSW Minister for Planning in 2009 and comprises the approved mining areas of Riverview Pit, Cheshunt Pit, Riverview South East Extension and South Lemington Pits 1 and 2, as well as the MIA, and the Lemington CPP (LCPP) and rail loop (approved but not constructed). PA 06_0261 allows extraction of up to 20 Mtpa of ROM coal until 24 March 2030.

The key components and approved disturbance areas associated with the HVO Complex are illustrated in Figure B.2.

The Hunter Valley Operations (HVO) Continuation Project (the Project) proposes to extend the life of HVO primarily through the extraction of coal from within existing tenements. It seeks to continue mining operations at the HVO North to 2045 and HVO South to 2042. This is a further 19 years at HVO North and 12 years at HVO South beyond the approved mining completion dates of 2026 and 2030, respectively. Other than as described, all activities that are currently approved under the existing HVO North and HVO South approvals are intended to continue as part of the Project.

The key Project elements for the HVO Complex are shown conceptually in Figure B.3 and are described in further detail for HVO North and HVO South in Section B.2 and Section B.3, respectively.



KEY

- Existing HVO North development consent boundary (DA 450-10-2003)
- Existing HVO South project approval boundary (PA 06_0261)

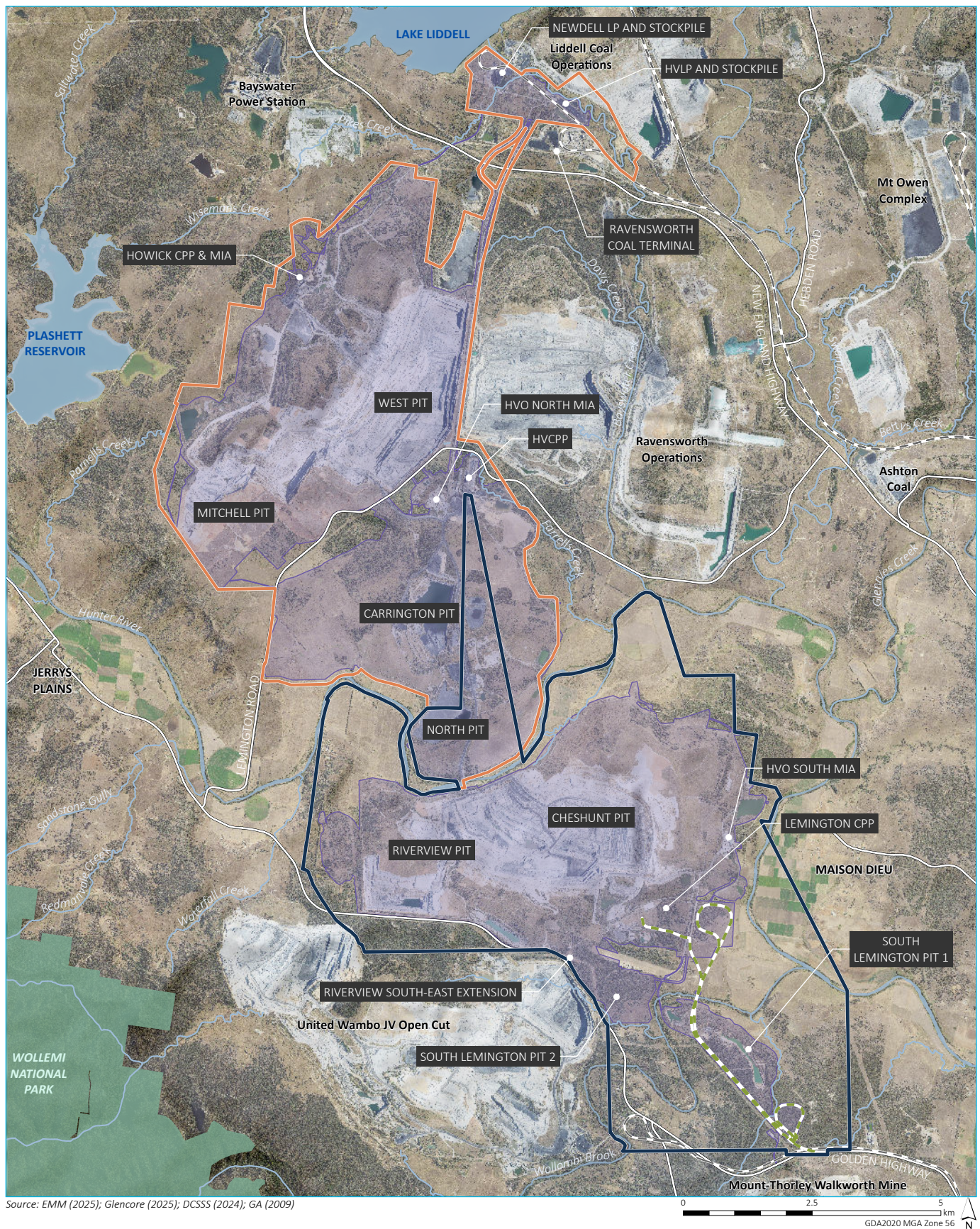
- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest
- Local government area

INSET KEY

- NPWS reserve
- State forest

Regional locality

HVO Continuation Project
Amendment Report
Figure B.1



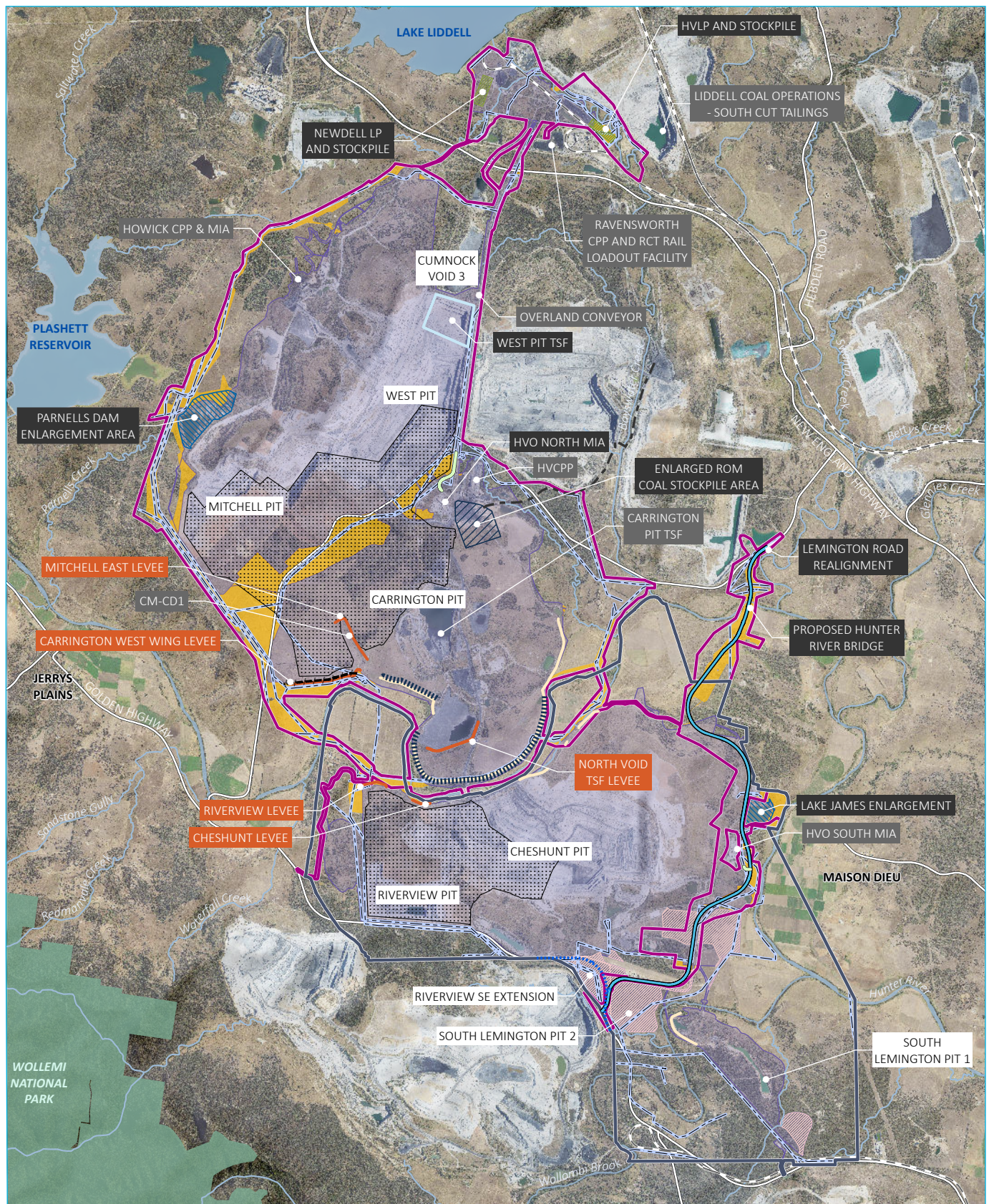
KEY

- Existing HVO North development consent boundary (DA 450-10-2003)
- Existing HVO South project approval boundary (PA 06_0261)
- Existing and approved disturbance area
- South Lemington Rail Loop and haul route (approved, not yet constructed)

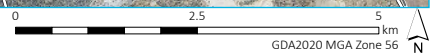
- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve

Local context

HVO Continuation Project
Amendment Report
Figure B.2



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)



KEY

- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Existing and approved disturbance area
- Additional disturbance area
- Previous approved area not retained
- Existing low permeability barrier wall
- Existing levee
- Proposed HVO continuation project element
- Approved barrier wall (not yet constructed)
- Alternative Golden Highway alignment

- Lemington Road realignment
- Levee
- Mine access road
- Proposed haul route to Ravensworth Operations
- Transmission line
- Dam enlargement
- Mining area
- Product stockpile
- ROM coal stockpile area
- West Pit TSF

- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- Label format
- Existing item
- Levee
- Project related item

Project conceptual layout

HVO Continuation Project Amendment Report Figure B.3



\\emm.local\drive\Secured\Divisions\H190408\GIS\02_Maps\2025AmendmentReport\AR006_HVONorthSouthComplexConceptualLayout_20250728_04.aprx 1/08/2025

B.2 HVO North Continuation Project

B.2.1 Summary of key elements

The key Project elements at HVO North for which approval is sought include those activities required to carry out open cut coal mining and processing and include:

- changes to the HVO North development consent boundary, as illustrated Figure B.3
- continuation of mining operations at HVO North until 31 December 2045
- production of up to 22 Mtpa with no separation of extraction limits between West Pit and Carrington Pit
- infrastructure upgrades, as listed below:
 - realignment of Lemington Road and construction of a new bridge over the Hunter River
 - relocation of the HVO North site access road off the existing Lemington Road
 - increase in the capacity of Parnells Dam from approximately 1 gigalitre (GL) to approximately 4 GL
 - realignment of transmission and telecommunication lines that are currently within the proposed mining area
 - upgrades to the HVO North MIA
 - expansion of the HVO North ROM coal stockpile to improve coal management
 - maintenance and ancillary activities as required to facilitate operations, including the replacement of plant and equipment, where required
 - construction of access roads to facilitate service provider access
 - use of demountable/temporary buildings and other ancillary temporary facilities to enable construction activities and mining operations, as required
 - access road establishment to an existing mine-owned property east of realigned Lemington Road
- transport product coal by truck or overland conveyor from all CPPs to loading points (HVLN and Newdell LP)
- receipt of ROM coal from HVO South via internal haul roads for processing at all CPP facilities approved for HVO North
- management of tailings in accordance with a Tailings Management Strategy
- upgrade of product coal infrastructure as follows:
 - establishment of a new Newdell product stockpile and upgrade of the existing Newdell train loading facility or an extension of the product coal stockpile footprint at the HVLN to increase the total stockpile capacity of the load point
 - construction of a haul road to enable ROM coal to be transported to the neighbouring Ravensworth Operations ROM pad via haul truck for processing, from where product coal is then transferred to the Ravensworth Coal Terminal for transport to market.

- ability to temporarily transport product coal by truck from the Howick CPP to the Liddell stockpile for transport to market via the Liddell coal handling and train loading facilities during upgrades of the Newdell LP
- implementation of a revised water management system including construction of levees, clean water diversions and the Carrington West Wing low permeability barrier wall
- establishment of Mitchell East Levee to provide flood protection for the final void in Mitchell Pit
- continued employment of up to 1,500 full time equivalents (FTE) across the HVO Complex.

Other than as modified above, all activities that are currently approved under the existing HVO North development consent are intended to continue. Key aspects and outcomes of the approved development at HVO North (under DA 450-10-2003 as modified) that will remain the same under the Project include:

- the maximum allowable annual ROM coal extraction and processing rate of 22 Mtpa
- receipt of ROM coal from HVO South via internal haul road for processing at all CPP facilities approved for HVO North
- approved heights of overburden emplacement areas
- continued avoidance of the Aboriginal heritage site known as Carrington Mine – Colluvial Deposit 1 (CM-CD1)
- operating hours, annual workforce numbers and associated operational traffic generation.

A summary of the proposed changes to HVO North compared to existing approved operations is provided in Table B.1 and are discussed in more detail in the sections below.

Table B.1 **HVO North – key Project elements**

Project element	Existing approved operations	Summary of the changes proposed by the Project
Project area	Development consent boundary as shown in Figure B.2.	Increase in the development consent boundary to accommodate an extension to the approved mining area, as well as the areas covered by proposed infrastructure to support the Project (including the Lemington Road and transmission and telecommunication line realignments).
Mining method	- Open cut mining operation, primarily using truck and shovel. The use of a dragline is also approved. - Blasting – 7.00 am to 6.00 pm Monday to Saturday inclusive (except public holidays) up to a maximum of 3 blasts per day and 12 blasts per week.	No change.
Mining area	- Coal extraction to the base of the Barrett seam in West Pit and Mitchell Pit. - Coal extraction to the base of Bayswater seam in the Carrington area. - Approval to extract up to 498 Mt of ROM coal, comprising 22 Mtpa over 21 years, plus 19 Mt in Carrington Pit (Mod 2) and 17 Mt in Carrington West Wing (Mod 3).	Progression of mining generally as illustrated in the indicative staged mine plans in Figure B.10 to Figure B.14. Extraction of the coal resource will comprise: - Coal extraction to the base of the Barrett seam in West, Mitchell and Carrington Pit areas. - Coal extraction to the base of the Bayswater seam in the Carrington West Wing area.
Disturbance area	- Avoidance of heritage site CM-CD1. Mining operations and associated activities are not permitted within 20 m of CM-CD1. - Existing and approved disturbance of approximately 4,965 ha.	- An assessed additional disturbance area of approximately 903 ha, noting that avoidance of CM-CD1 will be maintained. - Relinquishment of approximately 6.7 ha of currently approved disturbance area. .
Total resource recovery	Approval to extract up to 498 Mt of ROM coal.	Extraction of approximately 307 Mt of ROM coal over the life of the Project, comprising approximately 200 Mt of ROM coal beyond areas currently approved for extraction.
Annual production	- Up to 22 Mtpa of ROM coal, comprising: 12 Mtpa from West Pit 10 Mtpa from Carrington Pit.	- Up to 22 Mtpa with no separation of extraction limits between West Pit and Carrington Pit. - Propose a HVO Complex limit of 26 Mtpa ROM coal whilst maintaining limits of: - up to 22 Mtpa from HVO North - up to 13 Mtpa from HVO South.
Mine life	Operations are approved until 31 December 2026 at HVO North.	Mining operations at HVO North until 31 December 2045.

Project element	Existing approved operations	Summary of the changes proposed by the Project
General infrastructure	• HV MIA and Howick MIA. • Maintenance and ancillary infrastructure required to facilitate operations.	• Realignment of a section of Lemington Road from Comleroi Road in the south to the existing Lemington Road in the north, joining the existing road alignment approximately 2.3 km south of the existing New England Highway/Lemington Road intersection. • HVO North access road to be realigned from the existing Lemington Road. • Closure of a small section of Liddell Station Road to accommodate the HVLP product stockpile extension (if constructed), which is not currently accessible to the public. • Realignment of sections of Ausgrid's transmission lines, and AGL transmission lines. • Realignment of internal transmission lines to support mining activities. • Realignment of Telstra telecommunication lines. • HVO North MIA upgrade. • Expansion of the HVO North ROM coal stockpile. • Maintenance and ancillary activities as required to facilitate operations, including the replacement of plant and equipment where required. • Access roads to facilitate service provider access. • Use of demountable/temporary buildings and other ancillary temporary facilities to enable construction activities and mining operations as required. • Access road establishment to an existing mine-owned property east of realigned Lemington Road. • Maintenance and ancillary infrastructure required to support construction activities and mining operations within the Project disturbance area, including communication towers, installation and maintenance of water supply works and works on waterfront land, construction and use of buildings for construction or mining operations, installation of environmental monitoring equipment including piezometers, and explosives storage and transport.
Beneficiation	• ROM coal may be transported via internal haul roads to either HVCPP or Howick CPP for processing. • HVCPP is approved to process up to 20 Mtpa ROM coal (not receiving more than 16 Mtpa ROM from HVO South). • Howick CPP is approved to wash up to 6 Mtpa ROM coal. • Both HV and Howick CPP can use flotation to process ROM coal.	• Use of temporary coal stockpiles assembled in new mining areas, within the Project disturbance area prior to processing or transport. • Receipt of ROM coal from HVO South via internal haul roads for processing at all CPP facilities approved for HVO North. • Construction of a haul road to enable ROM coal to be transported to the neighbouring Ravensworth Operations ROM pad via haul truck for processing at Ravensworth CPP until the end of Ravensworth Operations approved mine life.

Project element	Existing approved operations	Summary of the changes proposed by the Project
Management of mining waste – overburden emplacement	• Ability to dispose of overburden within all pits and out-of-pit emplacement areas across HVO. • Maximum overburden emplacement area height of approximately 240 m AHD.	• No change. Overburden will continue to be emplaced across HVO within the Project disturbance area. However, the sequence of overburden emplacement has been revised to reflect the extended mine life and additional mining areas (i.e. between Mitchell/West Pit and the Carrington area).
Management of mining waste – coarse reject	• Ability to emplace coarse rejects within overburden emplacement areas across HVO.	• No change.
Management of mining waste – tailings	• Emplacement of tailings within approved TSFs at HVO and Ravensworth Operations, including Carrington Pit TSF at HVO North, and the Cumnock Void 3 TSF at Ravensworth Operations. Intermittent deposition of tailings occurs in Dam 6W TSF, Bobs Dump TSF and Central TSF as part of ongoing management towards decommissioning. • Capping and rehabilitation of TSFs following completion of emplacement activities.	• The Project includes options for: – additional tailings pipelines and pumps – removal, relocation and/or reprocessing of tailings from historic TSFs as required – emplacement of tailings within the northern extent of West Pit, as shown in Figure B.3 – emplacement of tailings at approved tailings facilities at LCO. • Over the life of HVO, the tailings and reject management strategy will continue to be refined to meet operational needs. This may also include trial or testing facilities in the Project approved disturbance area to inform the strategy.
Temporary Hunter River crossings	• Construction of temporary crossings of the Hunter River to allow the relocation of mining equipment that is too heavy for the existing bridge.	• Approval for the temporary crossing of the Hunter River for heavy equipment will not be retained.
Product transport	• Transport of product coal from HVCPP by overland conveyor and or truck to HVLP or Newdell LP. • Transport of product coal from Howick CPP by overland conveyor to power stations or by truck to HVLP or Newdell LP. • Intermittent haulage of coal between HVCPP, HVLP, Newdell LP and Ravensworth Coal Terminal (RCT). • In the event of an emergency or issue with coal conveyance infrastructure, coal can be transported via truck between noted CPPs, LPs and the RCT.	• Upgrade of product coal infrastructure as follows: – new Newdell product stockpile and upgrade of the existing Newdell train loading facility. These works will include an upgrade of the existing stockpile plus new train loading bin, conveyors and support infrastructure such as access roads, power and communication services; or – an extension of the product coal stockpile footprint at the HVLP as shown in Figure B.3, to increase the total stockpile capacity of the load point. The extension will require the relocation of Ausgrid transmission lines and communication infrastructure in this area and the closure of a portion of Liddell Station Road. – construction of a haul road to enable ROM coal to be transported to the neighbouring Ravensworth Operations ROM pad via haul truck for processing, from where product coal is then transferred to RCT for transport to market. – Ability to temporarily transport product coal by truck from the Howick CPP to the Liddell stockpile for transport to market via the Liddell coal handling and train loading facilities during upgrades of the Newdell LP.

Project element	Existing approved operations	Summary of the changes proposed by the Project
Water management	- Integrated water management with HVO South. - Water supply works including pumps, bores, diversions and dams. - Water discharges in accordance with Hunter River Salinity Trading Scheme (HRSTS). - Transfer of water between HVO South, LCO and Ravensworth Operations. - Existing and approved flood protection levees, including the Alluvial Lands, Carrington, Carrington West Wing and North Pit levees. - Construction of groundwater LPBW as follows: - LPBW across the eastern arm of the Hunter River paleochannel within 2 years of mining in the Carrington Pit Southern Extension (<i>constructed</i>). - Carrington West Wing LPBW prior to undertaking mining within 100 m of the western arm of the Hunter River paleochannel, with an applicable permeability of 1×10^{-8} m/s (<i>not yet constructed</i>). - Diversion of the Unnamed Tributary to the west of Carrington West Wing.	- Continuation of the ability to transfer water to and from other mining operations where permitted. - Improved flood protection levee for North Pit (up to 1,000 year Annual Exceedance Probability (AEP)). - Improved flood protection for Carrington West Wing levee (up to 1,000 year AEP). - Additional mine/dirty water containment dams as required, as mining progresses. - Clean water diversion as required, as mining progresses, including an extension of the Mitchell clean water diversion. - Parnells Dam enlargement from approximately 1 GL to approximately 4 GL, new spillway, and refurbishment of existing HRSTS discharge facility (no change to EPL/HRSTS approval). - Construction of the Carrington West Wing LPBW prior to mining within 100 m of the remnant connected western arm of the paleochannel, as per the existing development consent requirement will limit long-term drawdown in the Hunter River alluvium and the potential for seepage from the backfilled mine area to the alluvium. - establishment of the Mitchell East Levee to provide flood protection for the Mitchell pit final void. - Revised water management system and revised conceptual final landform, as shown in Figure B.7.
Rehabilitation	- Progressive rehabilitation, with the establishment of a mixture of pasture and native habitat areas. - Removal of levees and reinstatement of the Unnamed Tributary in the Carrington West Wing area to its original position.	- Incorporation of natural landform design elements to areas of new rehabilitation under the Project, as outlined in the rehabilitation strategy. - Progressive rehabilitation, with the post mining land use to comprise a mixture of grazing and native habitat areas. - The Alluvial Lands flood levee will be left in place in the final landform. The Carrington and North Void TSF levees will be incorporated into the rehabilitated overburden dump/tailings capping respectively and so will not be retained as levees. The Carrington West Wing levee will be removed and the Mitchell East levee will be incorporated into the final landform. - revised final land use domains illustrated on Figure B.8.
Final void	- Approved final void in Carrington Pit (evaporative sink). - Approved final void in West Pit. - Approved final void in Mitchell Pit. - Carrington West Wing void to be backfilled and returned to pasture.	- Two final voids at HVO North consisting of: - One final void associated with the Mitchell Pit - Final void in Carrington Pit (evaporative sink) as currently approved.
Operational workforce	Approximately 1,500 FTE workers (HVO Complex).	No change.

Project element	Existing approved operations	Summary of the changes proposed by the Project
Construction workforce	N/A	Construction activities associated with the Project will create approximately 600 temporary employment opportunities over an approximate five year period. These construction activities are anticipated to include: • Lemington Road realignment and associated works • transmission line and telecommunications decommissioning and realignment • upgrades to MIAs and relevant access roads • construction of the coal haulage route to Ravensworth Operations • upgrade of the existing Newdell LP train loading facility and construction of a new product coal stockpile or extension of the HVLP product stockpile • Parnells Dam capacity increase, and other water management system works such as levee construction • clean water diversion drains. Construction activities will generally be undertaken within standard construction hours (Monday to Friday 7.00 am to 6.00 pm, Saturday 8.00 am to 1.00 pm, and no work on Sundays or public holidays). However, some out of hours work may be required from time to time.
Hours of operation	• Continuous operations, 24 hours per day, seven days per week.	• No change. Continuous operations, 24 hours per day, seven days per week.

B.2.2 Project area

The Project area comprises the proposed amended development consent boundary for HVO North as shown in Figure B.3. The schedule of lands for HVO North is provided in Appendix A and includes all land with the boundaries shown in Figure B.3.

The proposed development consent boundary for HVO North is similar to the currently approved boundary, with changes proposed primarily to accommodate infrastructure relocation and upgrades, and a small change in the west to accommodate the additional mining area between the Mitchell and Carrington Pits. The key changes proposed to the existing development consent boundary at HVO North are summarised below:

- **Proposed mining area** – the progression of mining from the Mitchell Pit through to the Carrington Pit, through an area previously not approved for mining, necessitates a small increase in the HVO North development consent boundary in the vicinity of Lemington Road.
- **Lemington Road realignment** – the development consent boundary is proposed to be expanded to include the realigned Lemington Road corridor. While part of this corridor is within the existing and proposed HVO South development consent boundary, given that the realignment is required due to the progression of mining at HVO North, the works associated with the road realignment form part of the HVO North development application.
- **Transmission and telecommunication line relocations** – sections of Ausgrid’s transmission lines will be realigned as part of the Project, as well as AGL transmission lines. Sections of Telstra telecommunication lines will also be realigned, and access points to realigned infrastructure will be relocated to avoid interaction with mining activities, where possible. As a result of consultation with the infrastructure owners, these transmission lines are included as part of the Project and therefore sit within the Project area. Most of this infrastructure will need to be relocated at the same time as the construction of the Lemington Road realignment. In addition, and as a result of potential conflicts with the proposed EnergyCo Hunter Transmission Project, small areas of additional disturbance have been identified as being required across the HVO North Project area subsequently resulting in minor adjustments to the HVO North development consent boundary.

B.2.3 Mining

i Mining methods and equipment

No changes are proposed to current mining methods and equipment type at HVO. Truck and shovel will remain the primary mining method supported by ancillary equipment, with the option of also using a dragline from time to time. Retaining approval for the use of the dragline will maintain flexibility as required for extraction and rehabilitation activities to occur in an efficient manner.

The typical mining fleet that will continue to be used for operations at HVO North includes:

- excavators
- shovels
- haul trucks
- dozers
- loaders
- drills

- water carts
- graders.

Fleet numbers and types may vary from time to time throughout the life of the Project. Factors such as technological advances in mining equipment and varying geotechnical properties of the material being mined may require alterations to the composition of the fleet. Where this occurs, noise and dust generating activities will be considered and measures put in place to maintain compliance with conditions of approval and licences.

Ancillary equipment to support mining operations will continue to be relied upon as required, which may include but is not limited to scrapers, backhoes, service trucks, articulated trucks, mobile cranes, rollers, mulchers, front end loaders, generators, crushers, screening/batching plant, water pumps, lighting plants and light vehicles.

ii Extraction rate and mine life

The Project seeks to maintain the approved annual extraction rate of 22 Mtpa at HVO North, while extending the life of mining operations to the end of 2045. The Project seeks to remove the current separate annual extraction limits for different mining areas (i.e. 12 Mt in West/Mitchell Pit and 10 Mt in Carrington Pit).

Upon commencement of the Project, mining will continue in HVO North, generally in accordance with the indicative staged mine plans presented in Figure B.10 to Figure B.14. Mining will continue in the West and Mitchell Pit areas, progressing in a southerly direction towards the Carrington area, mining through the section currently separating these two areas including Lemington Road.

Mining through Lemington Road will result in additional land being mined that was not previously approved to be mined.

A total of approximately 307 Mt will be extracted from HVO North over the life of the Project, comprising of approximately 200 Mt beyond areas currently approved for extraction.

Year 1, or commencement of the Project, is anticipated to be in 2027, subject to timing of approval. In addition to continuation of existing mining activities at HVO North, in Year 1 the construction of the infrastructure upgrades at HVO North will commence. Those works must occur prior to mining activities progressing through the existing Lemington Road and the transmission lines in the area, i.e. the relocation of Lemington Road and transmission and telecommunication lines within the HVO North proposed mining area.

Progressive rehabilitation activities will be carried out as mining progresses; however, final rehabilitation activities will be completed following the cessation of mining operations at the end of 2045.

It is also noted that ongoing exploration drilling within tenement areas will occur throughout the mine life, to obtain further information regarding resources to be mined, as well as geological and geotechnical information relevant to the mining and construction activities that will be undertaken. Drilling may also be undertaken as required for gas and hydrogeological monitoring and investigations. Exploration drilling cuttings and drilling fluids as part of any exploration drilling program associated with a HVO mining tenement may be disposed of within approved tailings facilities.

B.2.4 Coal handling, processing and transport

ROM coal from HVO North will continue to be predominantly processed at the HV and Howick CPPs. ROM coal and product coal flow paths and volumes will generally remain as per the coal flow diagram presented in Chapter 3 of the EIS, with one addition aimed at increasing flexibility in coal processing with the neighbouring Ravensworth Operations. The Project seeks to construct a haul road from the HVCPP to the Ravensworth ROM pad, as shown in Figure B.3, to enable the transport of ROM coal from HVO North to Ravensworth Operations for processing in the Ravensworth CPP and railed through the RCT.

Following processing, product coal will continue to be predominantly transported via rail from the HVLP and Newdell LP facilities to the Port of Newcastle. Where commercial opportunities exist, coal may be transported by rail or conveyor for domestic use. Product coal is also currently hauled from Howick CPP to Newdell LP which is proposed to continue. As is also currently approved, coal may be intermittently hauled from the HVCPP to the HVLP and between HVLP, Newdell LP and RCT.

Coal handling infrastructure improvements proposed by the Project include an extension of the HVLP product coal stockpile, or the construction of a new product stockpile and train loading facilities at the Newdell LP.

The construction of a new product stockpile and train loading facilities at Newdell will require the demolition of parts of the existing Newdell LP facility. The new facility will involve the construction of a new product coal stockpile and train loading bin and an upgrade of elements of the existing stockpile.

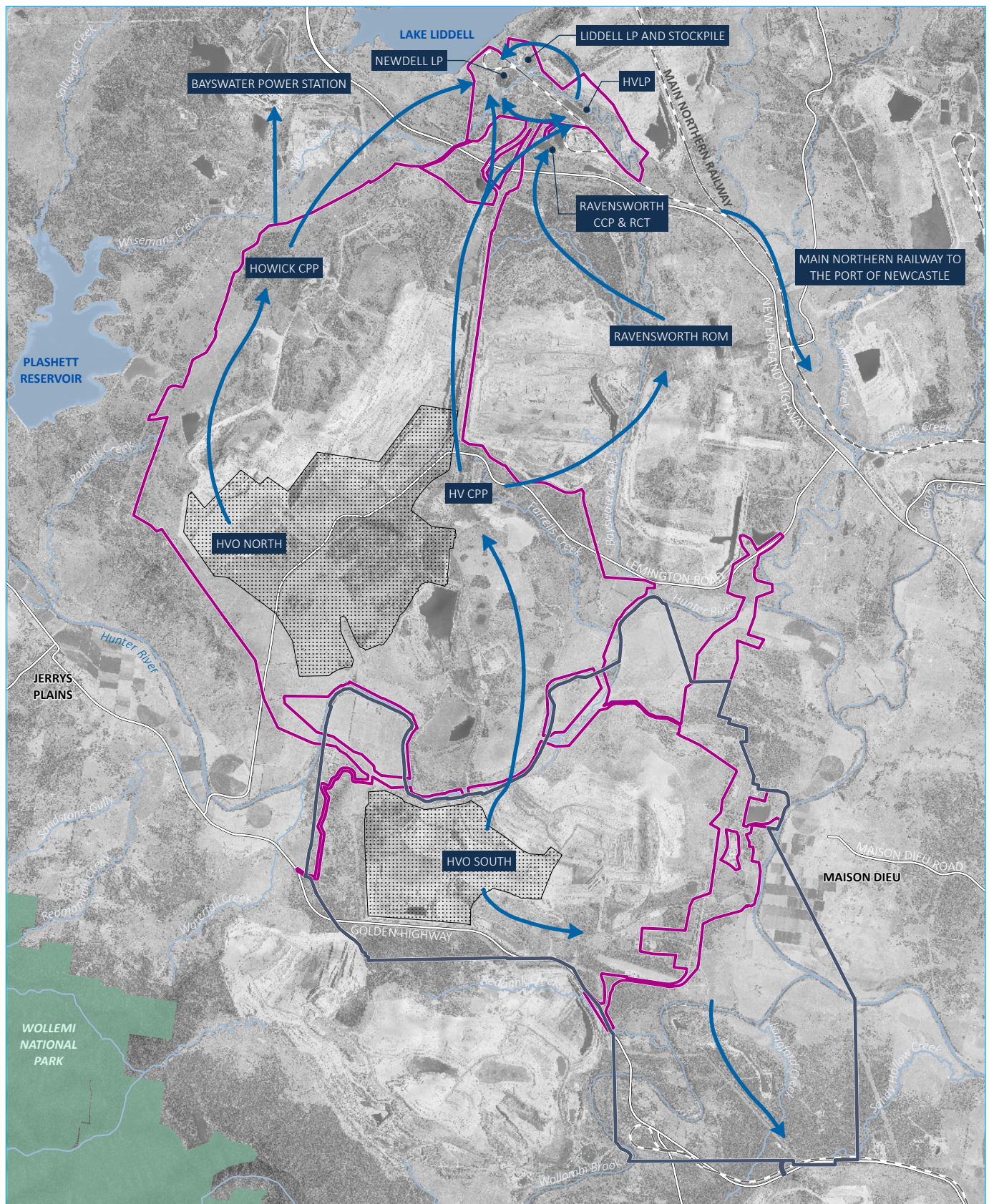
If the HVLP upgrade is proceeded with, the HVLP product stockpile will be extended as shown in Figure B.3. The extension will involve the removal of vegetation and topsoil from the extended footprint, establishment of a hard stand base and necessary infrastructure such as conveyors, stackers and reclaimers. The extension will also require the closure of a portion of Liddell Station Road. This portion of road is not currently publicly accessible. In addition, the construction of the HVLP stockpile extension requires the realignment of existing transmission lines as shown in Figure B.3. Communication lines which interact with the HVLP extension are also required to be realigned.

Upgrades to either the HVLP or the Newdell LP will improve coal handling efficiency across the HVO Complex. A coal flow diagram is presented in Figure B.4, illustrating the proposed movement, handling and transportation of coal across HVO Complex.

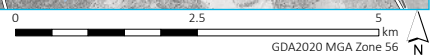
In addition to the above, the Project seeks approval for:

- the ability to temporarily transport product coal by truck from the Howick CPP to the Liddell stockpile for transport to market via the Liddell coal handling and train loading facilities during upgrades of the Newdell LP
- an expansion of ROM coal stockpile at the HVO North MIA is proposed to improve management of coal volumes over the life of the Project.

From time-to-time additional coal stockpiles may be developed in pit and at the surface facilities to manage market conditions.



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)



KEY

- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Proposed mining area
- Coal flow direction

- Existing environment
- — Rail line
- — Major road
- — Named watercourse
- — Named waterbody
- — NPWS reserve

Coal flow diagram

HVO Continuation Project
Amendment Report
Figure B.4

B.2.5 Tailings and reject management

i Overview

Coarse reject, together with overburden, is currently emplaced within active overburden emplacement areas. Tailings is pumped from CPPs to tailings storage facilities (TSFs) across HVO via a network of pipelines. This approach will generally continue for the Project.

The key aspects of the tailings and reject management strategy throughout the life of the Project at HVO North are:

- continuation of the disposal of coarse reject material with overburden across the HVO Complex
- disposal of tailings as follows:
 - emplacement of tailings in a TSF to be established in the northern extent of West Pit, as shown in Figure B.3
 - continuation of tailings emplacement in the Carrington Pit TSF and Cumnock Void 3 TSF during the early stages of the Project
 - emplacement of tailings in approved voids at Liddell Coal Operations (LCO).

The Project also involves the recovery of tailings from some existing TSFs in areas that will be mined through as part of the Project. Tailings facilities that are proposed to be mined through will be assessed prior to mining. In addition, decommissioning and rehabilitation of TSFs no longer being used will continue. This may include intermittent deposition of tailings in these TSFs as part of ongoing management towards decommissioning.

Figure B.5 illustrates the key components of the tailings and reject management strategy for the Project, including the proposed conceptual location of the pipeline to transfer tailings from HVO to LCO, the proposed TSF within the northern extent of West Pit, existing TSFs that will remain, and those in which tailings are proposed to be recovered to facilitate the progression of mining.

Over the life of HVO, the tailings and reject management strategy will continue to be refined to meet operational needs. This may also include trial or testing facilities in the Project disturbance area to inform the strategy.

ii West Pit TSF

As noted above, the Project proposes the establishment of an additional in-pit TSF in the northern extent of West Pit, where tailings will be emplaced until full. A feasibility study of the establishment of the West Pit TSF was undertaken, which included consolidation modelling.

The West Pit TSF will be bounded on two sides by the highwall and end wall which are expected to be practically impermeable. The western and southern walls will comprise overburden emplacements. Tailings will be deposited into West Pit in a manner that meets the following objectives:

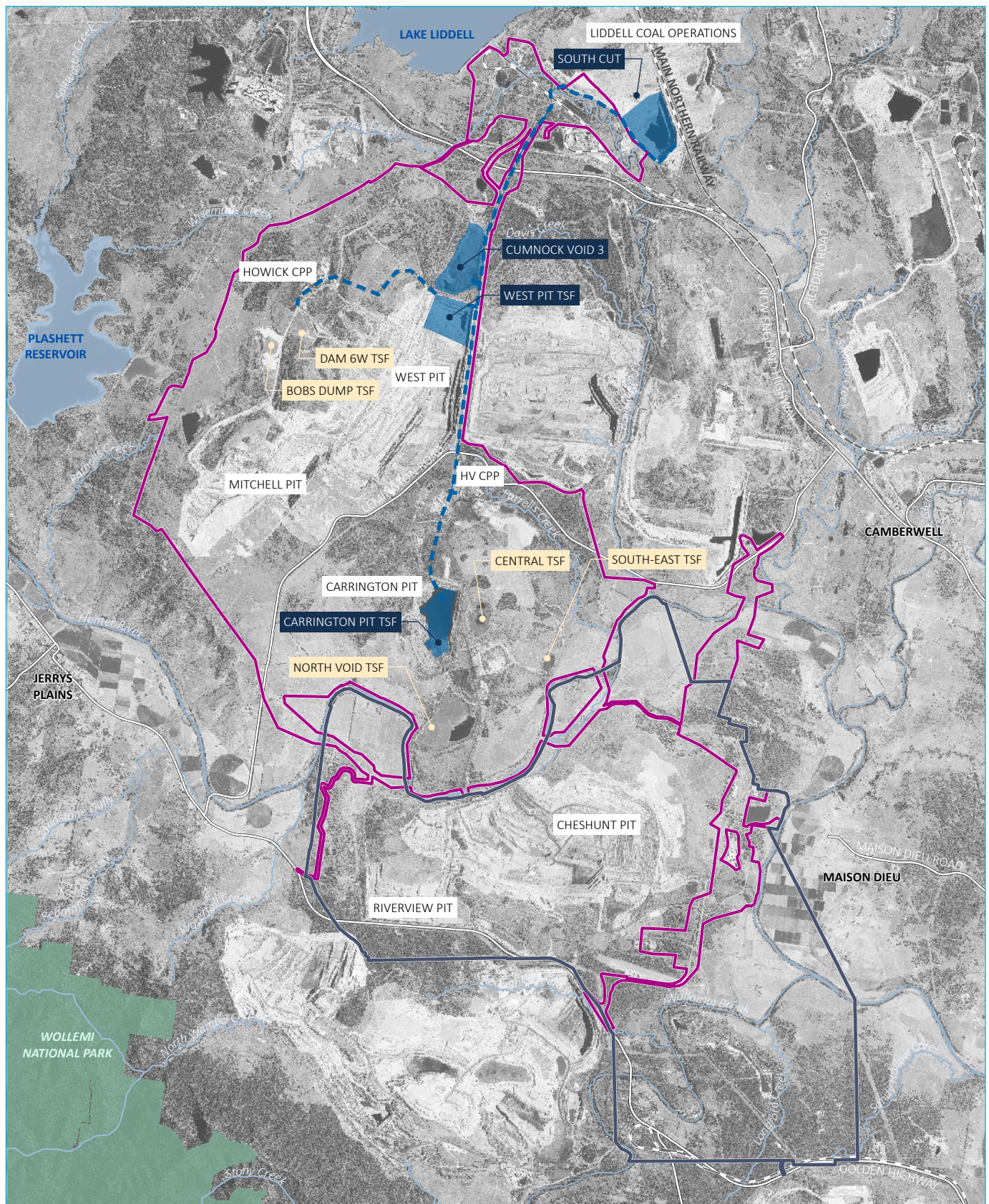
- promotes efficient water recovery from the decant
- recovers as much water as possible for reuse
- provides a seal to the mine spoil to reduce the amount of seepage from the tailings to the spoil.

The TSF in West Pit is anticipated to be relied upon for the life of the Project. The proposed capping and rehabilitation of the West Pit TSF (and other TSFs to be utilised by the Project) is described in Chapter 21 of the EIS (rehabilitation and closure).

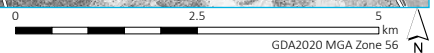
Disposal of additional tailings from the Project is proposed for approved voids in the neighbouring LCO which will initially be the South Cut void, immediately north of the New England Highway and HVO North. The commercial arrangements between HVO and LCO for this activity will be the subject of an agreement between the two mines. Approval exists (DA 305-11-01 MOD 8) which authorises the receipt of tailings at LCO from nearby mining operations and for the South Cut void to operate as a multi-user tailings facility. The emplacement of HVO tailings in the South Cut void will have a number of benefits, including the beneficial use of an existing open cut void by effectively utilising the storage capacity of this void, and avoiding the establishment of an additional TSF at HVO. A further benefit of utilising LCO's South Cut void is that it reduces the number of voids in the local area. This proposed modification is currently in progress within the NSW planning system.

The indicative pipeline route to LCO is shown in Figure B.5.

LCO's South Cut void is bounded on three side by highwalls and on the western face by dumped mine spoil. HVO will utilise the LCO void for tailings storage and Entrance Pit to support decant and return water as approved by the LCO consent conditions.



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)



KEY

- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Proposed tailings storage facility
- Conceptual tailings pipeline

- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve

Tailings storage facilities

HVO Continuation Project
Amendment Report
Figure B.5

B.2.6 Mine support infrastructure

i Summary of construction activities

A summary of the construction activities required to support the Project are listed below, generally in the order of construction (noting some will occur concurrently) and are described in more detail in the following sub-sections.

- Lemington Road realignment – Realignment of a section of Lemington Road, construction of new bridges over the Hunter River, and closure of a portion of the existing road (Figure B.3).
- Site access – Construction of a new site access road to the HVO North MIA from the road that is currently Lemington Road (Figure B.3).
- Electricity and telecommunications – Decommissioning and realignment of transmission and telecommunications lines (Figure B.3 and Figure B.6).
- MIA upgrades – HVO MIA upgrade.
- Expansion of the HVO North ROM coal stockpile at the HVO North MIA area (Figure B.3).
- Newdell LP and HVLP – Upgrade of the Newdell LP and train loading facility and construction of a new product stockpile at the facility, or an extension to the HVLP product coal stockpile (Figure B.3).
- Water management – Water management system upgrades (Figure B.3 and Figure B.7), including flood protection levees and enlargement of Parnells Dam and Lake James.
- Ravensworth Operations haul road – Haul road crossing to Ravensworth Operations including an overpass over the mine access road that is currently Lemington Road.
- Material recovery – Recovery of suitable materials from operational areas, such as gravel, and transported via HVO internal haul roads and public roads to support construction activities, as required.
- Waste disposal – Disposal or re-use of inert construction waste, such as concrete, bitumen and fill. Disposal at an appropriate depth within emplacement areas across the HVO Complex and Ravensworth Operations. Construction waste will be transported via HVO internal haul roads and public roads. Re-use on internal roads or hardstand areas.

Construction activities will also require the establishment and use of a range of temporary facilities to support construction, such as demountable buildings, car parking and laydown areas.

Further to the above, other upgrades and installation of infrastructure may be required from time to time, such as, but not limited to, upgrades to CPPs and associated infrastructure, site services (including electricity distribution), and the water management system. All works will be undertaken within the Project disturbance area.

Construction activities will generally be undertaken within standard construction hours (Monday to Friday 7.00 am to 6.00 pm, Saturday 8.00 am to 1.00 pm and no work on Sundays or public holidays). However, some out of hours work may be required from time to time. As described in the noise assessment for the Project (EMM 2022c), if this occurs, activities will be managed such that operational noise criteria are met.

The construction program proposed for the Project is scheduled to extend up to five years, and subject to approval it is expected to commence from Year 1 of the Project, which is anticipated to be in 2027, subject to timing of approval.

The peak construction activities are anticipated to occur in approximately Year 2 where several works will overlap. This period also represents the peak number of construction workers required on-site.

ii Lemington Road realignment

The current Lemington Road alignment passes between the West/Mitchell Pits and the Carrington area at HVO North. As this area is proposed to be mined, the Project seeks to realign part of Lemington Road to the east of the HVO Complex, linking the existing Comleroi Road in the south with the existing Lemington Road in the north approximately 2.3 km south of the New England Highway, as shown in Figure B.3.

The Lemington Road realignment presents an opportunity to improve the accessibility and reliability of the road as the primary access point joining the Golden Highway and New England Highway between Singleton and Muswellbrook. The realigned road includes the construction of new bridges over the Hunter River (refer to Figure B.3), which will be constructed to meet the requirements of a 1 in 10 AEP flood protection design. This design will provide improved accessibility and safety outcomes in comparison to the existing Moses Crossing, which is a low-level bridge across the Hunter River at the southern end of the existing Lemington Road. At the time the EIS was submitted (2022), river level data indicates Moses Crossing had been underwater for more than seven months since 2010; however, the proposed new bridge would have been accessible throughout the same period.

The existing Lemington Road will be kept open and serviceable until the new alignment is completed. Disruption to traffic using the existing road will be minimal and associated with the tie-in works north of the Hunter River and haulage of material over Lemington Road to Ravensworth Operations. Disruption will be scheduled to minimise travel time impacts during the morning and afternoon peak periods. The existing Comleroi Road will be upgraded and widened to the same standard as the rest of Lemington Road. There will be some temporary disruption to Comleroi Road traffic during construction to allow for these works.

Access to HVO South MIA facilities will be maintained with a new intersection from the proposed Lemington Road. Access to an existing mine-owned property east of the proposed realignment will be provided. The existing Lemington Road from the new tie-in point through to the Ravensworth Operations mine access intersection and the HVO North MIA will be maintained as a private mine access road to the two operations. The intersection with the Golden Highway, including Moses Crossing, will be maintained as service providers require access via the river crossing to their respective assets in the area.

The proposed changes to Lemington Road and the local road network are not anticipated to require changes to the existing New England Highway intersection. The realignment will provide the opportunity to upgrade the intersection at Comleroi Road with the Golden Highway. The intersection design will cater for either the current Golden Highway alignment or the realignment as approved under the United Wambo JV project as necessary.

All works undertaken to either upgrade or construct roads, including the construction of the bridge over the Hunter River, will be undertaken in accordance with contemporary Australian road design standards. The disturbance associated with the road construction includes allowances for associated construction activities required for the development of the new road and areas subject to upgrades, including but not limited to, stockpiles, erosion and sediment control, access tracks, laydown areas, administration facilities, general amenities, temporary construction river crossings, temporary river flow diversions and equipment and workforce parking. Where possible these have been located within the existing and approved disturbance area.

The proposed new alignment of Lemington Road has been carefully considered to avoid areas of environmental sensitivity, including the presence of Warkworth Sands Woodland and Central Hunter Grey Box-Ironbark Woodland (both listed under the BC Act), and to minimise the potential for changes to travel time to local road users.

South Lemington Pit 1 and the adjacent borrow pit will require backfilling and rehabilitation in two stages throughout the Project. To facilitate this some mining equipment may need to be traversed across the proposed Lemington Road to access this work area. When access is required, appropriate traffic controls will be implemented in consultation with Singleton Council.

iii Site access

The progression of mining at HVO North will mine through the existing access road to the HVO North MIA from what is currently Lemington Road. The access road will be moved east of the current location in proximity to the existing HVO North overland conveyor. The access road will be a sealed road suitable for light and heavy vehicle movements, as per the existing access road. As shown in the indicative Project stage plans (Figure B.10 to Figure B.14) the access road is required to be relocated early in the Project to avoid interaction with planned mining activities in the West Pit area.

Ravensworth Operations is currently undertaking works to relocate their mine access road in line with their development consent. Both the current access road and the future access road for Ravensworth Operations are private roads, accessed from what is currently Lemington Road but will become a private access road under the Project. Existing access arrangements to HVO mining infrastructure will be maintained, which includes occasional temporary access via existing minor entrances.

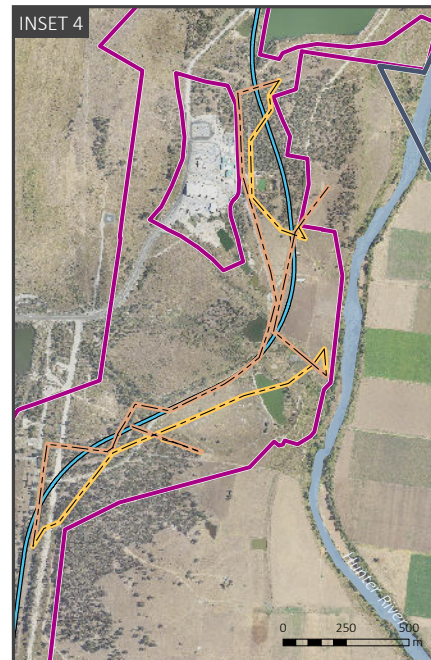
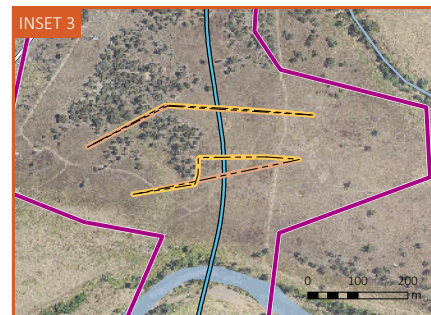
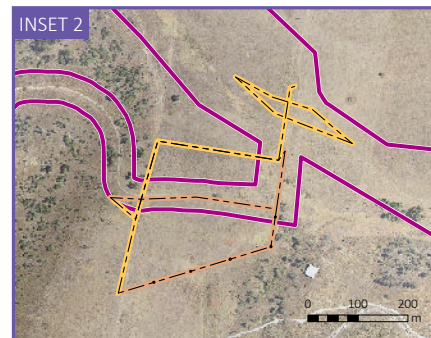
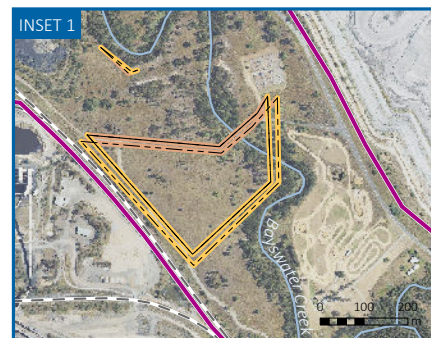
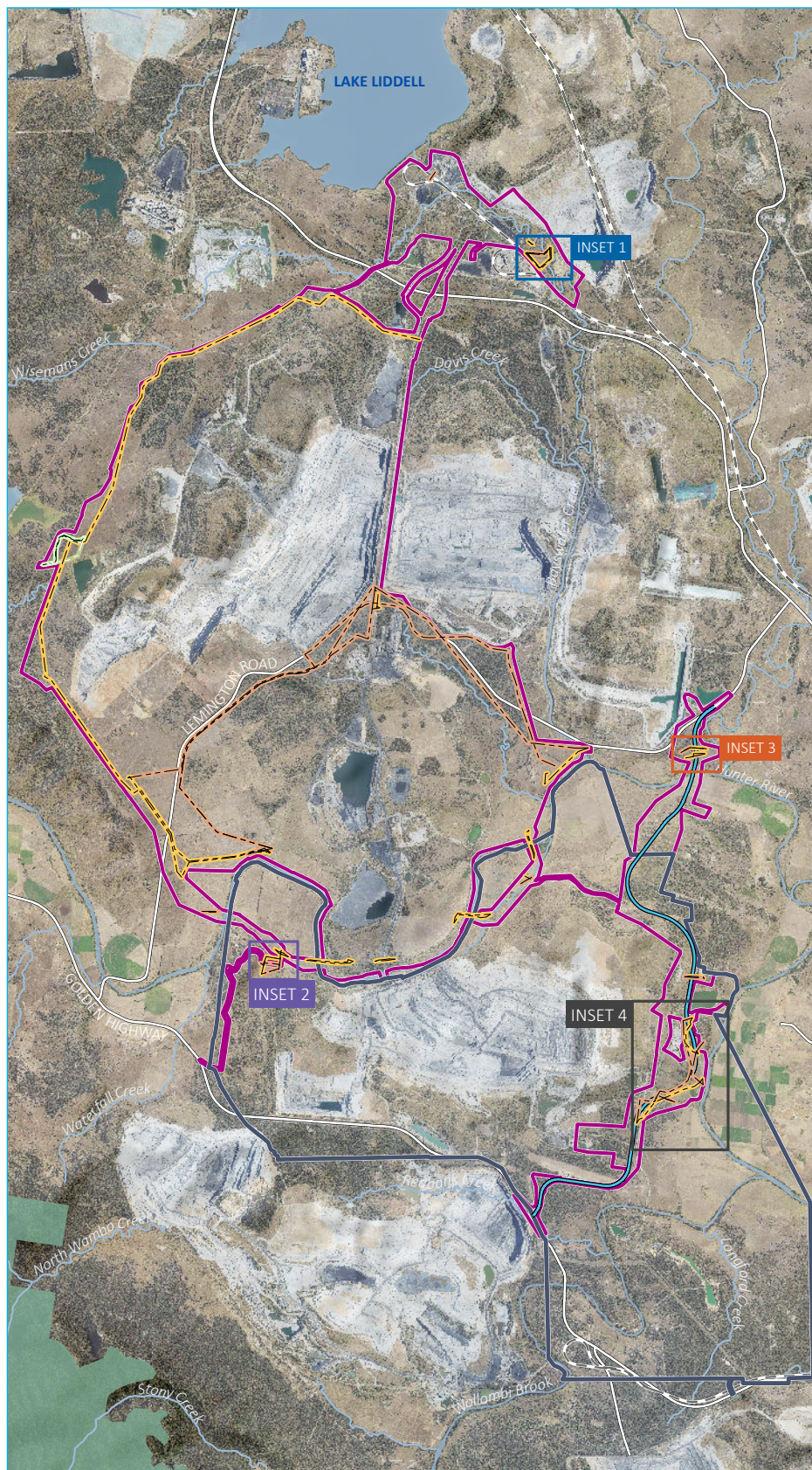
iv Electricity and telecommunications

The Project requires the realignment of a range of electrical transmission lines, communication infrastructure assets and associated services within the proposed mining area to avoid interaction with proposed activities at HVO North. Services to be relocated include, but are not limited to, sections of Ausgrid's 132 kV, 66 kV, 33k V and 11 kV transmission infrastructure, as well as 33 kV transmission lines owned by AGL, and some Telstra owned telecommunication lines. Internal HVO owned electricity and telecommunication infrastructure will also need to be relocated. New maintenance and service accesses to realigned electricity and communication infrastructure will also be established to avoid interaction with mining activities, where possible.

As a result of consultation with the infrastructure owners, the transmission and telecommunication infrastructure requiring relocation and not owned by HVO are included as part of the Project, and therefore sit within the Project disturbance area. The realignment works will be completed with agreement with the relative asset owners.

The proposed transmission line realignment paths are illustrated in Figure B.3 and Figure B.6, with disturbance for other electrical and telecommunication infrastructure included within the Project area. As outlined in Table B.1, the extent of disturbance associated with the new transmission lines and associated establishment of easements will be limited to transmission line pole pads and an access road for maintenance along the alignment, as well as vegetation management to maintain safe powerline clearance. The disturbance associated with decommissioning existing transmission line easements will be confined to existing access tracks and cleared areas.

As part of Project planning, the preferred realignments of services to be relocated has been carefully considered to avoid areas of environmental sensitivity as much as possible and to avoid disruption to electricity and communications distribution.



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)

KEY

- | | |
|--|--|
| Amended proposed HVO North development consent boundary | Existing environment |
| Proposed HVO South development consent boundary | Rail line |
| Lemington Road realignment | Major road |
| Electricity transmission line | Named watercourse |
| Ausgrid- new | Named waterbody |
| Ausgrid- to be removed | NPWS reserve |
| AGL- new | |
| AGL- to be removed | |

Transmission line and telecommunication realignment

HVO Continuation Project
Amendment Report
Figure B.6

v MIA upgrades

Upgrades are proposed to the HVO North MIA to provide the necessary support for the continuation of mining activities. Proposed improvements to the HVO North MIA include the upgrade of existing and construction of new facilities as required, including the following key items:

- an extension to the existing heavy mobile equipment workshop
- additional administration buildings
- car park extensions and associated access roads
- upgraded and additional bathhouse and washroom facilities inclusive of sewerage services
- upgraded or changed access roads, electricity, communications and water infrastructure
- expansion of the HVO North ROM coal stockpile
- use of demountable/temporary buildings in construction compounds or for ongoing use, as required.

Upgrades to existing or construction of new infrastructure at the HVO North MIA, as described above, will generally be located within the established HVO North MIA area. These upgrades and relocations are required to:

- improve existing aged facilities
- improve management of coal volumes over the life of the Project
- cater for mine progression
- enable optimisation of infrastructure relative to active mining areas.

vi Temporary Hunter River crossings

As mentioned in Table B.1, HVO has approval for temporary crossings of the Hunter River for equipment too heavy for the existing bridge. This is in accordance with Condition 29 of DA 450-10-2003 for HVO North.

HVO proposes to relinquish this approval as part of the Project. This will avoid re-disturbance of approximately 1 ha of land immediately upstream of the existing Hunter River bridge which has been rehabilitated following previous temporary crossing use. The permanent bridge across the Hunter River, which is integral to operations across the HVO Complex, will remain and be maintained throughout the life of the Project.

vii Ravensworth Operations haul road

The Project seeks to construct a haul road from the HVCPP to the Ravensworth Operations ROM pad, as shown in Figure B.3, to enable the transport of ROM coal from HVO North to Ravensworth Operations for processing in the Ravensworth CPP.

The haul road includes an overpass over the existing Lemington Road alignment and will be appropriate for both road registered and off-highway vehicles.

Suitable material to support construction activities is known to occur within the mining area of the Project, gravels and other materials are regularly intersected by existing operations. To maximise the beneficial use of these materials, approval is sought to recover and utilise suitable construction materials where available. Materials are proposed to be used in relevant construction activities or as required by ongoing operations.

Material sourced is proposed to be transported where required via internal haul road and public roads.

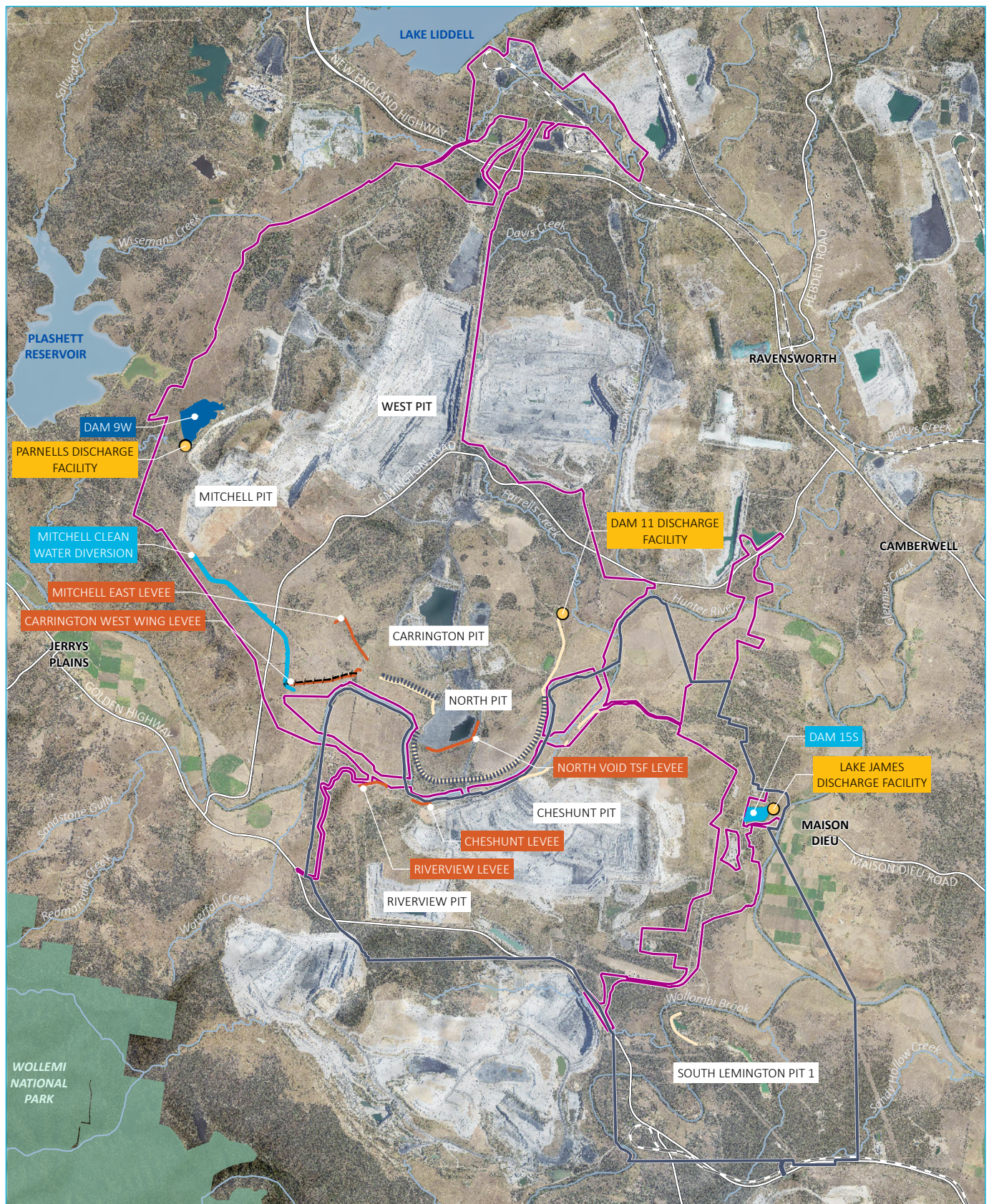
ix Water management

An integrated water management system is in place across HVO North and South. The Project will continue the use of the existing integrated water management system, which includes water transfers to and from surrounding operations, while incorporating the following upgrades to facilitate the Project:

- construction of the North Void TSF flood protection levee up to 1,000 year AEP
- additional mine water/sediment dams as required for progression of mining operations and construction activities
- installation of new groundwater monitoring bores as required to inform ongoing mining operations
- clean water diversions as required, as mining progresses, including the Mitchell clean water diversion
- increase in the capacity of Parnells Dam from approximately 1.0 GL to approximately 4.0 GL, including construction of a new spillway and refurbishment of the existing HRSTS discharge facility (noting that changes to the EPL or HRSTS approvals and associated limits are not proposed)
- Carrington West Wing flood protection levee construction (up to 1,000 year AEP)
- construction of Mitchell East levee as part of the final landform establishment and prior to removal of the Carrington West Wing levee to provide flood protection to the Mitchell Pit void for the probable maximum flood (PMF) level.

The installation and maintenance of water supply works and works on waterfront land will also continue as required to maintain the water management system and associated infrastructure, such as works associated with debris removal around bridge and other instream structures, erosion and sediment control works and monitoring equipment installation and maintenance.

The existing HVO water management system and proposed Project upgrades are illustrated in Figure B.7.



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)

KEY

- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- HRSTS discharge facility
- Existing levee
- Existing low permeability barrier wall

- Water management infrastructure upgrade
- Approved barrier wall (not yet constructed)
- Clean water diversion
- Levee
- Lake James capacity increase
- Parnells Dam capacity increase

- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve

Water management infrastructure upgrades

HVO Continuation Project
Amendment Report
Figure B.7

Inert waste produced by HVO, for which a beneficial use or reuse has not been identified, is proposed to be disposed of within appropriate emplacement areas across the complex. Potential waste is anticipated to include concrete, bitumen and inert materials produced by Project construction and operational activities. Waste will be managed appropriately, by means of being buried at an appropriate depth to minimise interaction with future potential land uses, and relevant approvals under the POEO Act will be sought prior to disposal. Where a use is identified for inert waste, the waste will be stockpiled within the Project disturbance area prior to re-use onsite as required.

Waste material is proposed to be transported where required via internal haul roads and public roads.

As is currently approved, the disposal of tyres within overburden emplacement areas is proposed to continue for the Project. In addition to the disposal of tyres, the Project seeks to include conveyor belt as an approved waste item. In the event it cannot be re-used or recycled, conveyor belt will be disposed of within emplacement areas as required in accordance with current tyre disposal management practices. Drilling waste will also be disposed of within TSFs or voids if required. All other waste streams will be disposed of as required at appropriately licensed facilities.

B.2.7 Rehabilitation and closure

i Rehabilitation and final landform

Advances in rehabilitation techniques and landform technology provide an opportunity for the Project to incorporate improved contemporary natural landform design principles into the proposed final landform of areas to be disturbed by the Project.

Progressive rehabilitation is undertaken at HVO as areas disturbed by mining activities become available, with a mixture of pasture and native habitat (woodland) areas established across mined areas. Topsoils will be stripped ahead of mining activities and either placed directly for rehabilitation or temporarily stockpiled within the Project disturbance areas for future use in rehabilitation activities as required.

In accordance with the existing development consent and Rehabilitation Management Plan, traditional engineering landform design principles are applied in the construction of final landforms at HVO North. As such, areas of HVO North which have been shaped to the approved final landform include engineered structures to drain water off the landform via contour drains and rock lined chutes.

For the Project, contemporary natural landform design principles will be applied. Areas disturbed by mining activities as a result of the Project will reflect a landform sympathetic to the surrounding landscape and incorporates micro-relief features. The conceptual landform has been designed using landform design software which produces stable final landforms that are relatively 'natural' looking.

Areas which are rehabilitated and do not require disturbance for the Project, or where rehabilitation is largely progressed or currently underway, will be rehabilitated consistent with existing approvals, as re-disturbance of these areas would cause more impacts than benefits relating to bulk material movement. Ongoing monitoring of these areas against established completion criteria will continue under the Project. The proposed final landform for the Project reflects the currently approved final landform in these areas.

Consistent with existing operations, progressive rehabilitation of mined areas will continue throughout the mine life, generally consistent with the indicative staged mine plans presented in Figure B.10 to Figure B.14.

Rehabilitation will include the decommissioning and removal of infrastructure not required to support the final land use (anticipated to be a mixture of agriculture and native ecosystem), and the reshaping and revegetation of disturbed areas to establish a mixture of native vegetation and open grassland areas with pit lakes associated with the HVO North final voids.

Material required to rehabilitate the Cumnock Void 3 TSF is proposed to be sourced from HVO North also in accordance with the indicative stage plans. Further, it is noted temporary stabilisation activities may occur throughout the mine life in discrete areas which may not be subject to final rehabilitation for extended periods of time due to operational constraints.

The proposed HVO North final landform is shown in Figure B.8.

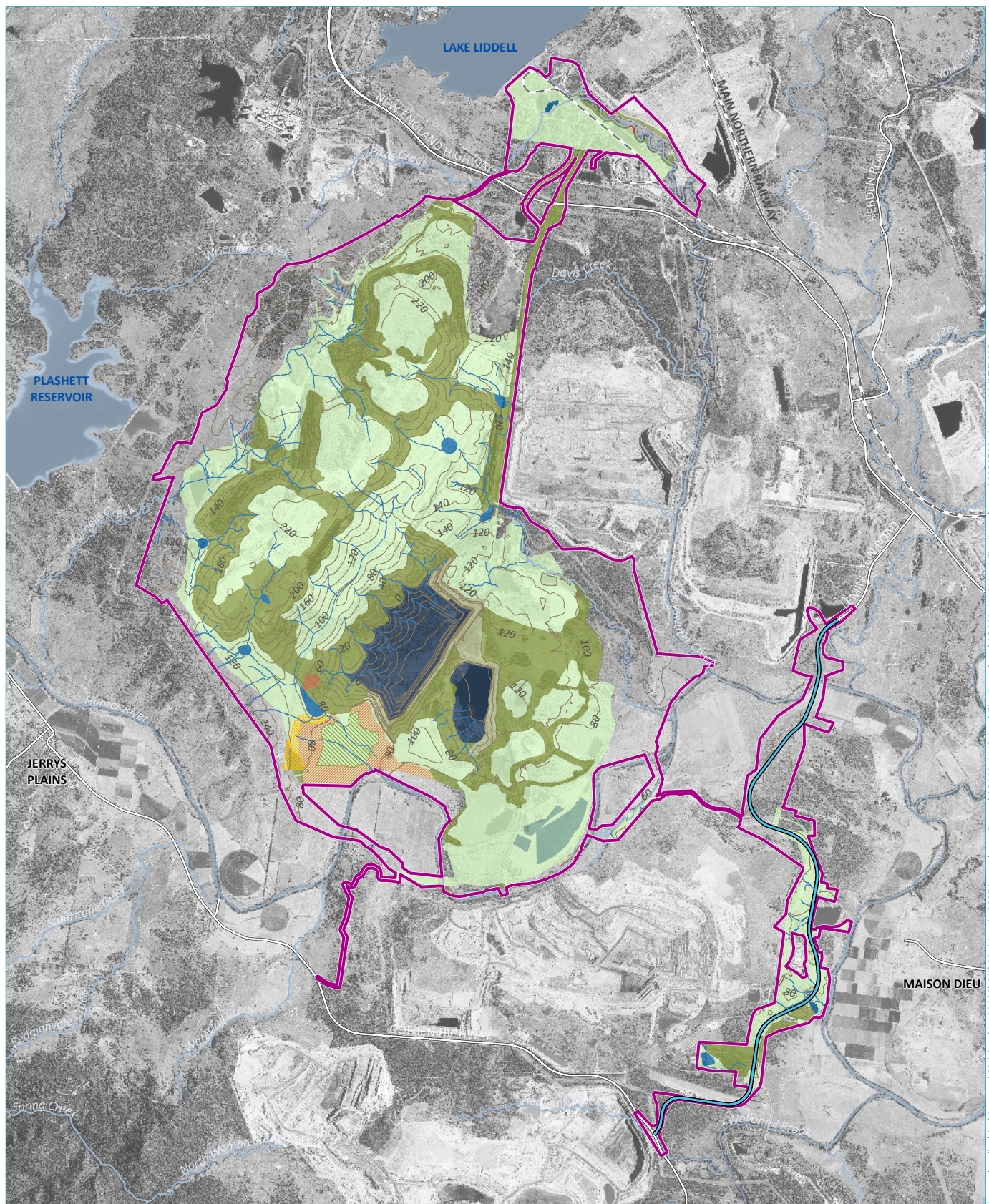
Final rehabilitation and Project closure requirements will ultimately be developed as part of a detailed closure plan, which will be produced prior to planned closure in consideration of input from key government agencies and relevant stakeholders at the time. Further, rehabilitation objectives will be reviewed throughout the life of the Project in response to stakeholder consultation and to maintain consistency with final land use objectives of the regional area as may change over time, for example as currently identified within the *Hunter Regional Plan 2041* (DPE 2022).

ii Final void

The final landform that is currently approved at HVO North includes three final voids, one in West Pit, one in Mitchell Pit and one in Carrington Pit.

The Project will reduce the number of final voids that will remain post-mining at HVO North, from the three approved to two voids being the Mitchell Pit void and the Carrington void, as shown in Figure B.8. The final voids are predicted to be long-term sinks in which no water is expected to be released from the void to the receiving environment.

In terms of use, the conceptual rehabilitation and closure strategy for the Project identifies the final voids as a pit lake; however, the voids have been designed so that other potential beneficial uses of the voids have not been precluded, as discussed further in Chapter 21 of the EIS and in detail in Appendix T to the EIS.



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)

- KEY**
- Amended proposed HVO North development consent boundary
 - Predicted drainage
 - Predicted 20 m contour
 - Lemington Road realignment
 - Existing environment**
 - Rail line
 - Major road
 - Named watercourse
 - Named waterbody

- Final landform land use domain**
- Domain A | Native ecosystem
 - Domain A- Sub domain Ka | Other- Native ecosystem- partial vegetation on highwall benches
 - Domain B | Agriculture- grazing
 - Domain B- Sub domain Kb | Other- Agriculture- alluvial land
 - Domain G | Water storage
 - Domain J | Pit Lake

- Existing commitments maintained by the Project (indicative location)**
- Rural land capability**
- Class 2- DA 450-10-2003 MOD3
 - Class 3- DA 450-10-2003 MOD3
 - Class 4- DA 450-10-2003 MOD3
- Native ecosystem**
- Central Hunter Box-Ironbark Woodland - DA 450-10-2003 MOD3
 - Swamp Oak Floodplain Forest - DA 450-10-2003 MOD5

HVO North conceptual final landform

HVO Continuation Project
Amendment Report
Figure B.8

B.3 HVO South Continuation Project

B.3.1 Summary of key elements

The key Project elements at HVO South for which approval is sought include those activities required to carry out open cut coal mining and processing and include:

- changes to the HVO South development consent boundary, as illustrated in Figure B.3
- continuation of mining operations at HVO South until 31 December 2042
- a reduction in the approved maximum extraction rate from 20 Mtpa to 13 Mtpa
- removal of coal extraction from the mine plan for the Riverview South East Extension, and South Lemington Pit 1 and 2
- infrastructure upgrades including:
 - relocation of some 11 kV and 66 kV Ausgrid transmission lines
 - realignment of internal transmission lines to support mining activities
 - HVO South access road relocation to join the realigned Lemington Road
 - access roads to facilitate service provider access
 - use of demountable/temporary buildings and other ancillary temporary facilities including laydown areas to enable construction activities and mining operations, as required.
 - removal of the approval for the construction and operation of the LCPP and rail facilities
 - removal of the construction and operation of the approved conveyor from HVO South to the HVCPP at HVO North (the conveyor has not been constructed)
- continuation of integrated water management with HVO North and water transfers with other mining operations (where permitted under the development consents that apply to those other mining operations)
- construction of the Cheshunt and Riverview flood protection levees
- enlargement of Lake James from approximately 0.7 GL to 1.9 GL
- continued employment of up to 1,500 FTE across the HVO Complex.

Other than as modified above, all activities that are currently approved under the existing HVO South development consent are intended to continue. Key aspects of the currently approved development at HVO South (under PA 06_0261 as modified) that will remain the same for the Project include:

- no change to the receipt of HVO South coal at all CPPs approved for HVO North via internal haul road for processing
- no change to operating hours
- no change in annual workforce numbers or associated operational traffic generation

- no increase to approved heights of overburden emplacement areas.

A summary of the proposed changes to HVO South compared to existing approved operations is provided in Table B.2 and are discussed in more detail in the sections below.

Table B.2 **HVO South – key Project elements**

Project element	Existing approved operations	Summary of the changes proposed by the Project
Project area	Project approval boundary as shown in Figure B.2.	Changes to the development consent boundary are proposed, primarily on the northern side of the Hunter River to reflect removal of the approval to construct a conveyor from HVO South to the HVCPP. Other small changes are proposed to the consent boundary, primarily to align with cadastral boundaries inclusive of neighbouring MTW offset areas.
Mining method	- Open cut mining operation, primarily using truck and shovel. - Highwall mining, including auger mining and dragline, is also approved. - Blasting – 7.00 am to 6.00 pm Monday to Saturday inclusive (except public holidays) to a maximum of 3 blasts per day and 15 blasts per week.	No change.
Mining area	- Extraction to base of the Bayswater Seam in Riverview and Cheshunt Pits. - Extraction to the base of the Bowfield Seam in South Lemington Pit 1. - Extraction to base of Vaux Seam in South Lemington Pit 2. - Extraction to base of Vaux Seam in Riverview South East Extension area.	Progression of mining generally as illustrated in the indicative staged mine plans in Figure B.10 to Figure B.14. Extraction of the coal resource will comprise: - Continuation of coal extraction to base of the Bayswater Seam in Riverview and Cheshunt Pits. - Coal extraction in South Lemington Pit 1, South Lemington Pit 2 and the Riverview South East Extension area is no longer proposed.
Disturbance area	Existing and approved disturbance of approximately 3,242 ha.	- Net reduction in current approved disturbance area of approximately 173 ha associated with coal extraction in South Lemington Pit 1, South Lemington Pit 2 and the Riverview South East Extension area. - Removal of the disturbance area associated with the construction of the LCPP and associated rail facilities resulting in a further reduction in the current approved disturbance area of approximately 94 ha. - A total additional disturbance area of approximately 47 ha to that current approved disturbance areas as illustrated on Figure B.3.
Total resource recovery	16 Mtpa ROM coal approved in 2008 for 20 years – total of 320 Mt.	- Extraction of approximately 122 Mt of ROM coal, from areas currently approved for extraction, over the Project life. - Propose a HVO Complex limit of 26 Mtpa ROM coal whilst maintaining limits of: - up to 22 Mtpa from HVO North - up to 13 Mtpa from HVO South.

Project element	Existing approved operations	Summary of the changes proposed by the Project
Annual production	Up to 20 Mtpa of ROM coal.	Reduction in the annual ROM coal extraction rate. Approval is sought for the extraction of up to 13 Mtpa of ROM coal.
Mine life	Operations are approved until 24 March 2030.	Mining operations at HVO South until to 31 December 2042.
General infrastructure	- HVO South MIA. - Maintenance and ancillary infrastructure required to facilitate operations. - Wollombi Brook bridge and low level crossing. - Operation of an Ammonium Nitrate Emulsion Plant (ANEP).	- As approved with: - Relocation of some 11 kilovolt (kV) and 66 kV Ausgrid transmission lines. - Realignment of internal transmission lines to support mining activities. - HVO South access road relocation to join the realigned Lemington Road. - Access roads to facilitate service provider access. - Use of demountable/temporary buildings and other ancillary temporary facilities including laydown areas to enable construction activities and mining operations as required. Construction of the LCPP and associated rail facilities no longer proposed.
Beneficiation	- Construction and use of the LCPP (up to 16 Mtpa). - ROM/product coal may be transported from all HVO South pits via internal haul road to all CPPs within HVO (HVCPP, Howick CPP, Newdell CPP and LCPP) for processing (up to 20 Mtpa). - ROM coal from HVO South can also be transported via overland conveyor to HVCPP.	- No transport of ROM coal from HVO South via overland conveyor to HVCPP (i.e. approval for this conveyor will not be retained). - Construction of the LCPP and associated rail facilities no longer proposed. - Ongoing use of temporary coal stockpiles assembled within the Project disturbance footprint prior to processing or transport. - No change to processing limits.
Management of mining waste – overburden emplacement	- Ability to dispose of overburden within all pits and out-of-pit emplacement areas across HVO. - Maximum overburden emplacement area height of approximately 240 m AHD.	No change.
Management of mining waste – coarse reject	Ability to emplace coarse rejects within overburden emplacement areas across HVO.	No change.
Management of mining waste – tailings	Integrated tailings management with HVO North with emplacement of tailings within approved tailings storage facilities at HVO.	- Removal, relocation and/or reprocessing of tailings from historic TSFs, as required. - Construction of the LCPP no longer proposed and no tailings management from the LCPP will be required.

Project element	Existing approved operations	Summary of the changes proposed by the Project
Product transport	- Transport product coal by truck or overland conveyor from all CPPs to all loading points (HVL, Newdell LP and Lemington LP and adjacent to the short rail loop south of South Lemington Pit 1). - Transfer of product coal to Wambo rail spur via either a rail spur and loop, overland conveyor, trucks or any combination. - Construction of a coal loader and new rail loop adjacent to the LCPP. The loop and associated rail line would connect to the Wambo rail spur. - Construction of a conveyor that would be utilised to transport coal via a new loop as described above. The conveyor would be constructed adjacent to the existing haul road described above.	- Construction of the LCPP and associated rail facilities no longer proposed. - Transport product coal by truck or overland conveyor from all CPPs to loading points (HVL, Newdell LP, RCT and Liddell LP).
Rehabilitation	- Progressive rehabilitation. - Final landform as approved, including some areas incorporating natural landform designs principles supporting final land use objectives including agriculture and native habitat.	- Progressive rehabilitation, with the post mining land use to comprise a mixture of grazing and native habitat areas incorporating natural landform designs principles. - Final land use domains illustrated on Figure B.9.
Final void	- One final void in Riverview Pit. - South Lemington Pit 1 void, South Lemington Pit 2 void and the Ravensworth South East Extension to be filled in and rehabilitated.	- No change to final voids - one void to remain in Riverview Pit. - South Lemington Pit 1 void and neighbouring strip 1 and strip 2 borrow pit to be filled with overburden material sourced from adjacent out of pit dump.
Water management	- Water supply works including pumps and bores. - Integrated water management with HVO North. - Water discharges in accordance with HRSTs. - Transfer of water between HVO North, MTW and Wambo. - Existing and approved flood protection levees. - Construct additional bores (and associated infrastructure) at three transfer sites and adjacent to the existing LUG Bore to facilitate transfer of water into the former Lemington Underground Mine void and/or extraction of water from the void.	- Continuation of integrated water management with HVO North and water transfers with other mining operations (where permitted under the development consents that apply to those other mining operations). - Construction of Cheshunt and Riverview flood protection levees. - Lake James enlargement (from approximately 0.7 GL to 2.0 GL).
Operational workforce	Approximately 1,500 FTE workers (HVO Complex).	No change.

Project element	Existing approved operations	Summary of the changes proposed by the Project
Construction workforce	Workforce associated with the construction of the LCPP and associated rail infrastructure facilities.	- LCPP and associated rail facilities no longer to be constructed. - Construction activities associated with the Project will create approximately 600 temporary employment opportunities over an approximate five year period. - For HVO South construction activities requiring a construction workforce are anticipated to include the below. - transmission line and telecommunications decommissioning and realignment - Lake James capacity increase, and other water management system works such as levee construction - clean water diversion drains.
Hours of operation	Continuous operations, 24 hours per day, seven days per week	No change.

B.3.2 Project area

The Project area comprises the proposed development consent boundary for HVO South, as shown in Figure B.3. The schedule of lands for HVO South is provided in Appendix A and includes all land with the boundaries shown in Figure B.3.

At HVO South, while the development consent boundary will remain largely the same as the existing Project Approval boundary, the area in which coal extraction will take place for the Project will be reduced, as coal extraction in the South Lemington Pits 1 and 2 and the Riverview South East Extension is no longer proposed. Rehabilitation activities will be required in these areas and form part of the Project, as illustrated in the staged mine plans (refer to Figure B.10 to Figure B.14).

The proposed changes to the development consent boundary at HVO South primarily relate to alignment with cadastral boundaries and the removal from the Project of:

- the approved but not yet constructed conveyor from HVO South to the HVO North mine infrastructure area (MIA)
- the exclusion of the Warkworth Northern Biodiversity Area offset.

B.3.3 Mining

i Mining methods and equipment

No changes are proposed to current mining methods and equipment at HVO South. Truck and shovel will remain the primary mining method supported by ancillary equipment, with the option of also using a dragline from time to time. Retaining approval for the use of the dragline will maintain flexibility as required for extraction and rehabilitation activities to occur in an efficient manner where required. The ability to recover coal by highwall or auger mining methods will also be retained.

The typical mining fleet that will continue to be used for operations at HVO South includes:

- excavators
- shovels
- haul trucks
- dozers
- loaders
- graders
- drills
- water carts.

Fleet numbers and types may vary from time to time throughout the life of the Project. Factors such as technological advances in mining equipment and varying geotechnical properties of the material being mined may require alterations to the composition of the fleet. Where this occurs, noise and dust generating activities will be considered and measures put in place to maintain compliance with conditions of approval and licences.

Ancillary equipment to support mining operations will continue to be relied upon as approved, which may include but is not limited to scrapers, backhoes, service trucks, articulated trucks, mobile cranes, rollers, mulchers, front end loaders, generators, screening/batching plant, water pumps, lighting plants and light vehicles.

ii Extraction rate and mine life

The Project will reduce the currently approved maximum annual ROM coal extraction rate of up to 20 Mtpa of ROM coal to up to 13 Mtpa of ROM coal. The life of mining activities at HVO South is proposed to be increased by an additional 12 years, from 2030 to the end of 2042.

Further to the reduction in extraction rate, the Project will reduce the footprint of approved coal extraction activities at HVO South, including not proceeding further with the approved Riverview South East Extension, South Lemington Pit 1 and South Lemington Pit 2 mining areas. Limited mining activities have previously been undertaken in the South Lemington Pit 1 and the Riverview South East Extension area; however the South Lemington Pit 2 area remains undisturbed by mining. The changes to the area now proposed to be mined compared to that approved, is outlined in Table B.2. Noting that highwall mining activities as currently approved are proposed to be maintained by the Project.

A total of approximately 122 Mt of ROM coal will be extracted over the life of the Project, from areas currently approved for extraction.

Reflective of changes to the extent of mining and extraction rate, some variations to the approved mine sequencing are proposed. The HVO South proposed mining area is shown in Figure B.3, with the proposed mine sequencing (reflective of the reduced extraction rate) presented in the indicative Project staged mine plans in Figure B.10 to Figure B.14.

Progressive rehabilitation activities will be carried out as mining progresses; however, final rehabilitation activities will be completed following cessation of mining activities at the end of 2042. As per HVO North, it is also noted that ongoing exploration drilling within tenement areas will occur throughout the mine life, to obtain further information regarding resources to be mined, as well as geological and geotechnical information relevant to the mining and construction activities that will be undertaken. Drilling may also be undertaken as required for gas and hydrogeological monitoring and investigations. Exploration drilling cuttings and drilling fluids as part of any exploration drilling program associated with a HVO mining tenement may be disposed of within approved tailings facilities.

B.3.4 Coal handling and processing

Consistent with the existing Project Approval, ROM coal extracted at HVO South will continue to be transported to HVO North via haul truck for processing and transport to customers. Notably, approved activities allow for ROM coal to be transported from all HVO South pits via internal haul roads to all CPP's at HVO (HVCPP, Howick CPP, Newdell CPP and LCPP) for processing (up to 20 Mtpa). The current approval also allows the construction of a conveyor to transport ROM coal from HVO South to the HVCPP; however, this conveyor will no longer be constructed as part of the Project as the proposed HVO North mining extension precludes a cost-effective conveyor alignment.

The construction and operation of the LCPP and rail loop connecting to the Wambo rail spur, is also approved although market conditions to date have not necessitated the construction of this infrastructure. HVO no longer requires the LCPP and associated rail facilities, and therefore has removed them from the Project.

However, the Project now seeks the ability to temporarily transport product coal from the Howick CPP by truck to Liddell Stockpile and use the Liddell coal handling and train loading facilities during the period of time the Newdell LP is being upgraded. Product coal will be transported along a small section (~300 m) of private road between the Newdell LP and the Liddell coal handling and train loading facilities.

A separate modification to the Liddell Coal development consent (DA 305-11-01) will be sought to enable the receipt of this coal at the Liddell coal handling and train loading facilities.

B.3.5 Tailings and reject management

HVO South will maintain an integrated tailings management strategy with HVO North.

B.3.6 Mine support infrastructure

i Summary of construction activities

A summary of the construction activities required to support the Project are listed below, generally in the order of construction (noting some will occur concurrently):

- decommissioning and realignment of transmission and telecommunications lines, as required
- water management system upgrades (refer to Figure B.7)
- new HVO South MIA access road.

Further to the above, other upgrades and installation of infrastructure may be required from time to time, such as, but not limited to, upgrades to CPPs and associated infrastructure, site services (including electricity distribution), and the water management system. All works will be undertaken within the Project disturbance footprint.

Construction activities will generally be undertaken within standard construction hours (Monday to Friday 7.00 am to 6.00 pm, Saturday 8.00 am to 1.00 pm and no work on Sundays or public holidays). However, some out of hours work may be required from time to time. As described in the noise assessment for the Project (EMM 2022c), if this occurs, activities will be managed such that operational noise criteria are met.

Construction and operation of the currently approved LCPP and rail loop are no longer proposed.

ii Electricity and telecommunications

The Project requires the relocation of transmission lines located within the HVO South proposed development consent boundary, including Ausgrid owned 66 kV and 11 kV transmission lines, to avoid interaction with planned infrastructure development. The existing location of the Ausgrid 66 kV and 11 kV transmission lines and proposed relocation paths are displayed in Figure B.3 and Figure B.6.

Consistent with HVO North, maintenance and service easements to relocated infrastructure will also be relocated to avoid interaction with mining activities where possible. Appropriate easements have been included within the HVO South Project additional disturbance area.

iii Ammonium nitrate emulsion facility

HVO currently operates an ammonium nitrate emulsion facility (ANEF) for the purposes of manufacturing ammonium nitrate emulsion (ANE) to support blasting activities, which will continue for the Project. This facility provides for manufacturing and storage facilities to a scale required by operations, such that the facility meets all the required industry and regulatory standards. The location of this facility may change from time to time, provided that it is within the Project disturbance area, and meets all the required industry and regulatory requirements.

iv Water management

As described in Section 6.5, an integrated water management system is operated across HVO North and South.

The Project seeks to rely on the existing integrated water management systems, which includes water transfers to and from surrounding operations, while incorporating the following upgrades to facilitate proposed activities:

- construction of the Cheshunt flood protection levee to 1,000 year AEP and the Riverview flood protection levee to provide protection for an extreme flood event
- increase in the capacity of the Lake James, from 0.7 GL to 2.0 GL
- additional mine/dirty water containment dams as required as mining progresses.

The proposed water management structures at HVO South are illustrated on the staged mine plans (Figure B.10 to Figure B.14), and proposed upgrades to the HVO water management system are identified in Figure B.7.

v Material recovery and waste disposal

Material recovery and waste disposal is proposed at HVO South as per HVO North and described in Section 6.10.

B.3.7 Rehabilitation and closure

i Rehabilitation and final landform

As described in Section 6.9, the Project provides an opportunity to incorporate improved contemporary natural landform design principles into the proposed final landform at the HVO Complex.

Mined areas of HVO South have generally been rehabilitated in accordance with traditional engineering landform design principles, which have been shaped to the approved final landform as per the Rehabilitation Management Plan and PA 06_0261, including contour banks and rock lined drains to facilitate a free draining landform. Modification 5 also included micro-relief into new areas of the final landform at HVO South.

The proposed final landform of areas to be disturbed by the Project has been designed using landform design software which produces stable final landforms that are relatively 'natural' looking. As such, areas disturbed by mining activities by the Project will reflect a sympathetic landform to the surrounding landscape and incorporate micro-relief features.

Areas previously disturbed and not subject of Project activities will be rehabilitated consistent with existing approvals, as rehabilitation activities within these areas are largely complete or currently underway. The final landform for the Project reflects the currently approved final landform in these areas.

Consistent with existing operations, progressive rehabilitation of mined areas will continue throughout the mine life, generally consistent with the indicative staged mine plans presented in Figure B.10 to Figure B.14. Topsoils will be stripped ahead of mining activities and either placed directly for rehabilitation or temporarily stockpiled within the Project disturbance areas for future use in rehabilitation activities as required. It is noted that the Project does not seek to change the approved maximum overburden emplacement area height of 240 mAHD. Rehabilitation will include the decommissioning and removal of infrastructure not required to support the final land use (anticipated to be a mixture of grazing/pasture and native woodland areas), and the reshaping and revegetation of disturbed areas to establish a mixture of native vegetation and open grassland areas with a pit lake associated with the HVO South final void. The proposed HVO South final landform is shown in Figure B.9.

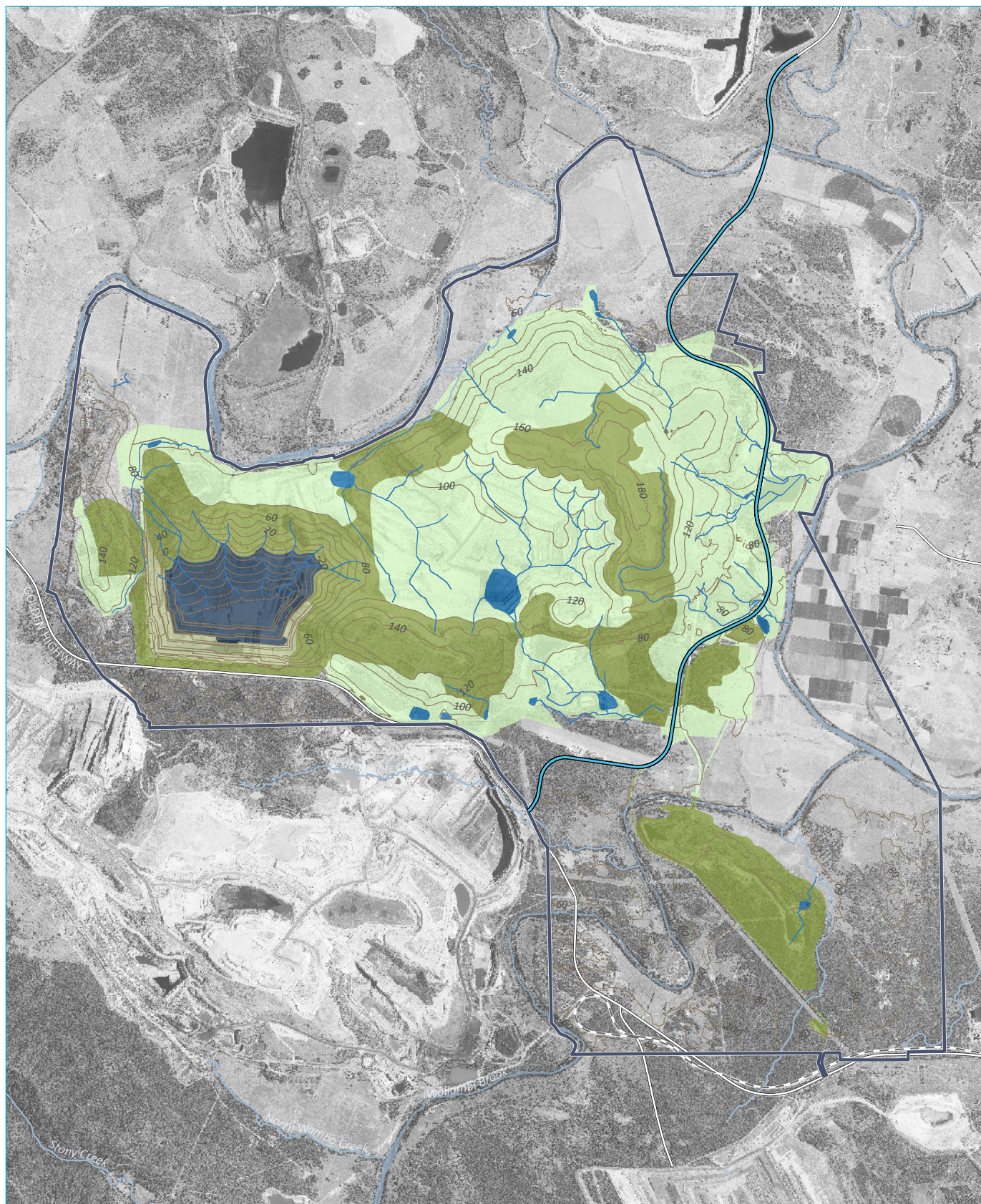
Although the currently approved Riverview South East Extension, South Lemington Pits 1 and 2 are no longer proposed to be mined at HVO South, some disturbance has previously occurred in South Lemington Pit 1 as per the existing Project Approval. Rehabilitation of this area will therefore be undertaken as part of the Project, as described further in the rehabilitation and closure strategy. Both the South Lemington Pit 1 void, and the strip 1 and strip 2 borrow pit located to the west of South Lemington Pit 1, will be filled with overburden from the adjacent material.

Final rehabilitation and Project closure requirements will ultimately be developed as part of a detailed closure plan, which will be produced within five years of closure in consideration of input from key government agencies and relevant stakeholders at the time. Further, rehabilitation objectives will be reviewed throughout the life of the Project in response to stakeholder consultation and to maintain consistency with final land use objectives of the regional area as may change over time, for example as currently identified within the *Hunter Regional Plan 2041* (DPE 2022).

ii Final void

Consistent with the current Project Approval, one final void will remain at HVO South, in the south-western corner of Riverview Pit, as illustrated on Figure B.9. The proposed final void dimensions will be smaller than currently approved due to mine sequencing refinement and infrastructure relocation.

In terms of use, the conceptual rehabilitation and closure strategy for the Project identifies the final void as a pit lake; however, the void has been designed so that other potential beneficial uses of the void have not been precluded, as discussed further in Chapter 21 of the EIS and in detail in Appendix T to the EIS.



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)

KEY

- Proposed HVO South development consent boundary
- Predicted drainage
- Predicted 20 m contour
- Lemington Road realignment

Final landform land use domain

- Domain A | Native ecosystem
- Domain A- Sub domain Ka | Other- Native ecosystem- partial vegetation on highwall benches
- Domain B | Agriculture- grazing
- Domain G | Water storage
- Domain J | Pit Lake

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody

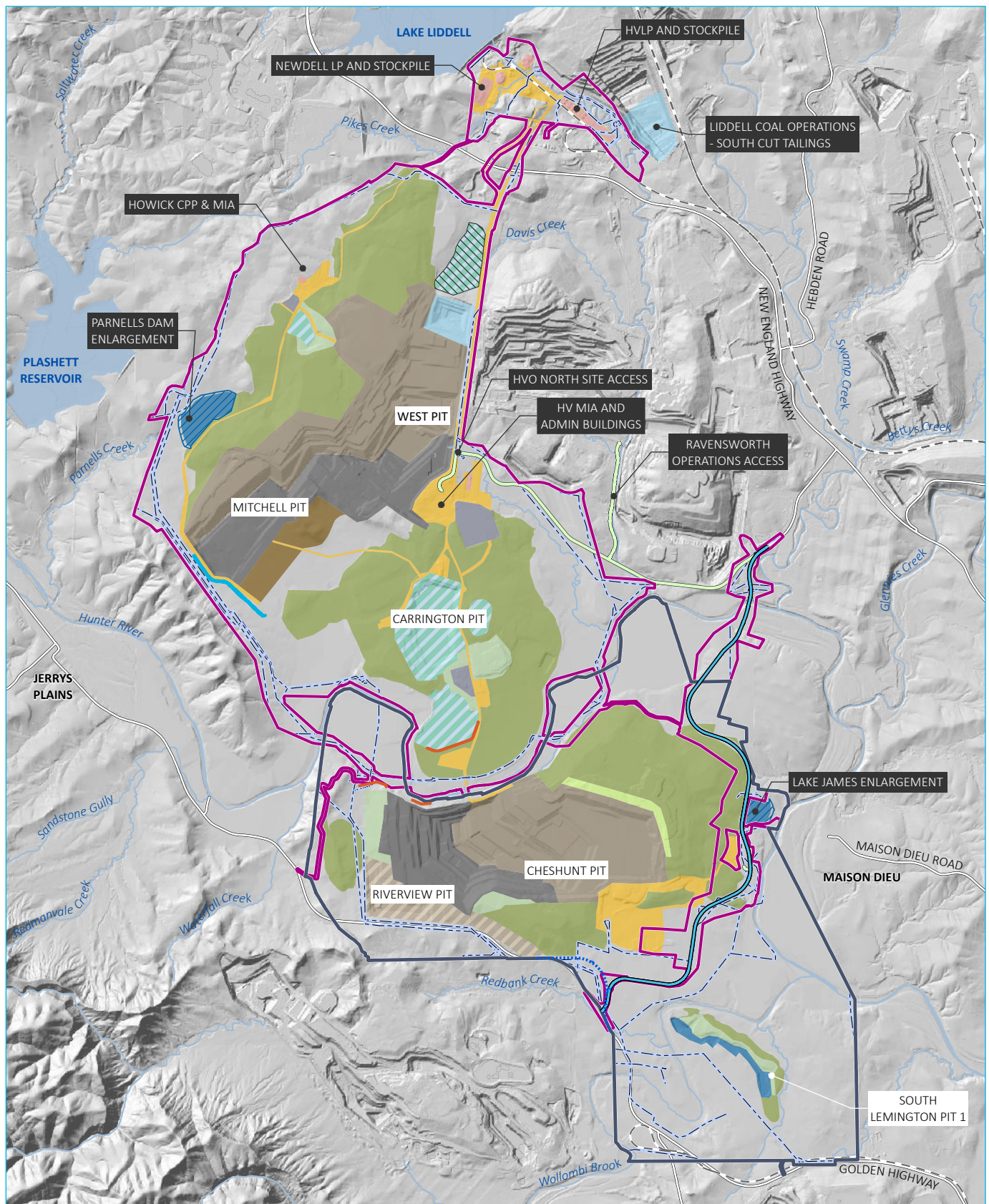
HVO South conceptual final landform

HVO Continuation Project
Amendment Report
Figure B.9

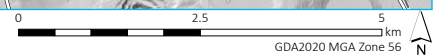
B.3.8 Conceptual Project stages and schedule

Conceptual staged mine plans for the life of the Project are provided for indicative years 3, 6, 8, 12 and 15 in Figure B.10 to Figure B.14. For the purposes of relevant technical assessments, Year 1 is assumed to be 2027, pending the timeframe for approval of the Project. Year 1, or commencement of the Project, will start when any of the construction activities related to the establishment of the required mine support infrastructure commence. For HVO South, initial activities will include enlargement works of Lake James.

The conceptual mine years presented in Figure B.10 to Figure B.14 were chosen as they are considered representative of key mining stages for the Project and to capture the most conservative scenarios (such as maximum material movement and closest proximity of activity) for assessment in terms of potential impacts to neighbouring properties with respect to air quality, noise and visual amenity. The conceptual stage plans illustrate the different activities being undertaken during that indicative year, including coal extraction, overburden and tailings emplacement, infrastructure construction and rehabilitation. It should be noted that these conceptual mine stages are indicative only and may be subject to change (due to aspects such as mining rate, market conditions, geology and impacts of weather) within defined production limits identified.



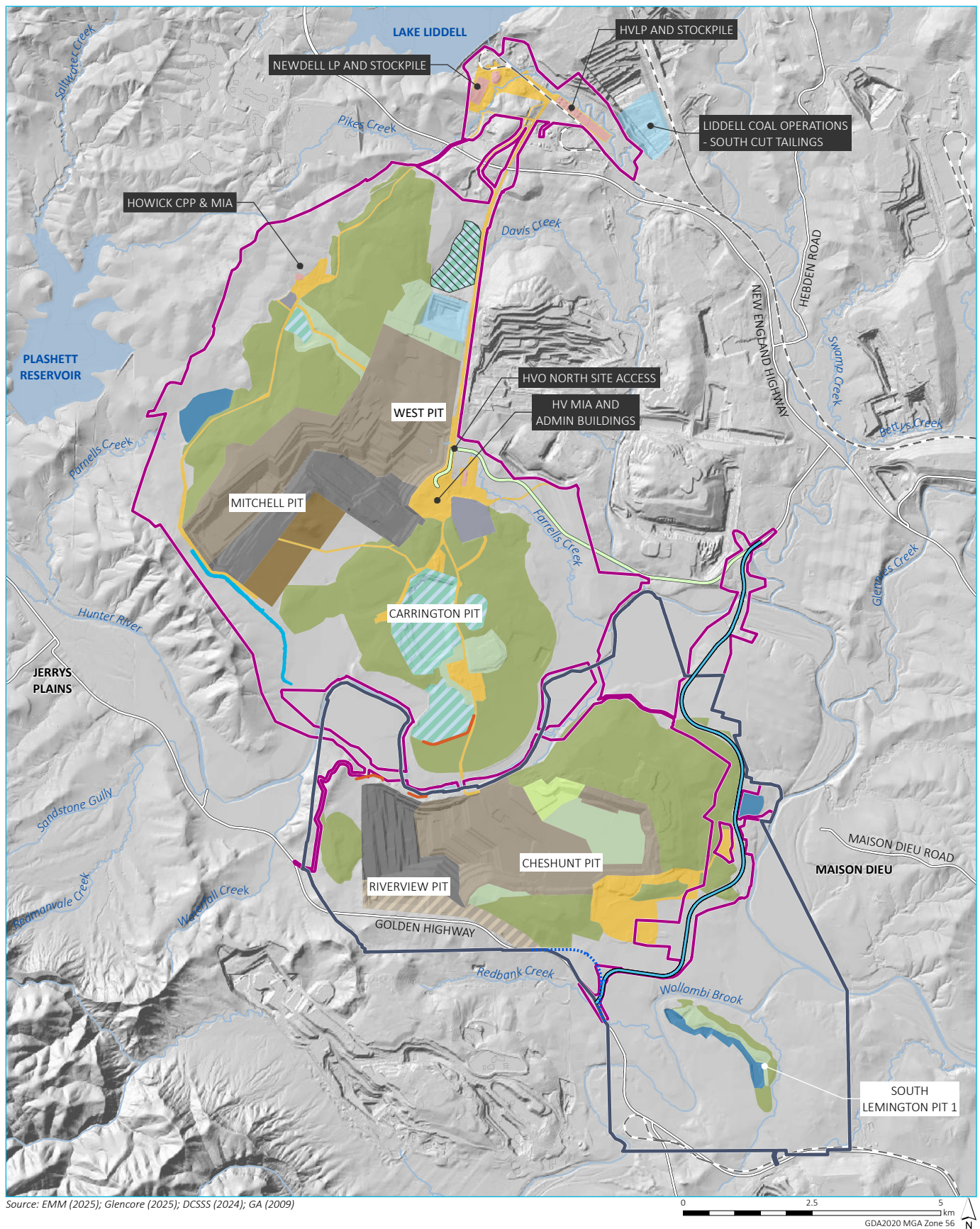
Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)



KEY - Amended proposed HVO North development consent boundary - Proposed HVO South development consent boundary - Alternative Golden Highway alignment - Lemington Road realignment - Mine access road - Proposed transmission line relocation - Water infrastructure - Clean water drain - Levee - Cummock Void 3 (managed by Ravensworth Operations) - Dam enlargement	- Year 3 indicative mine plan - Active emplacement area - Inactive emplacement area - Active mining area - Active tailings emplacement area - Inactive tailings emplacement/capping in progress - Infrastructure/access - Preparation area - Product coal stockpile - ROM coal stockpile - Rehabilitation - Shaping for final landform	- Temporary stabilisation - Water storage - Existing environment - Rail line - Major road - Named watercourse - Named waterbody
--	---	---

Conceptual mine plan- year 3

HVO Continuation Project
Amendment Report
Figure B.10



KEY

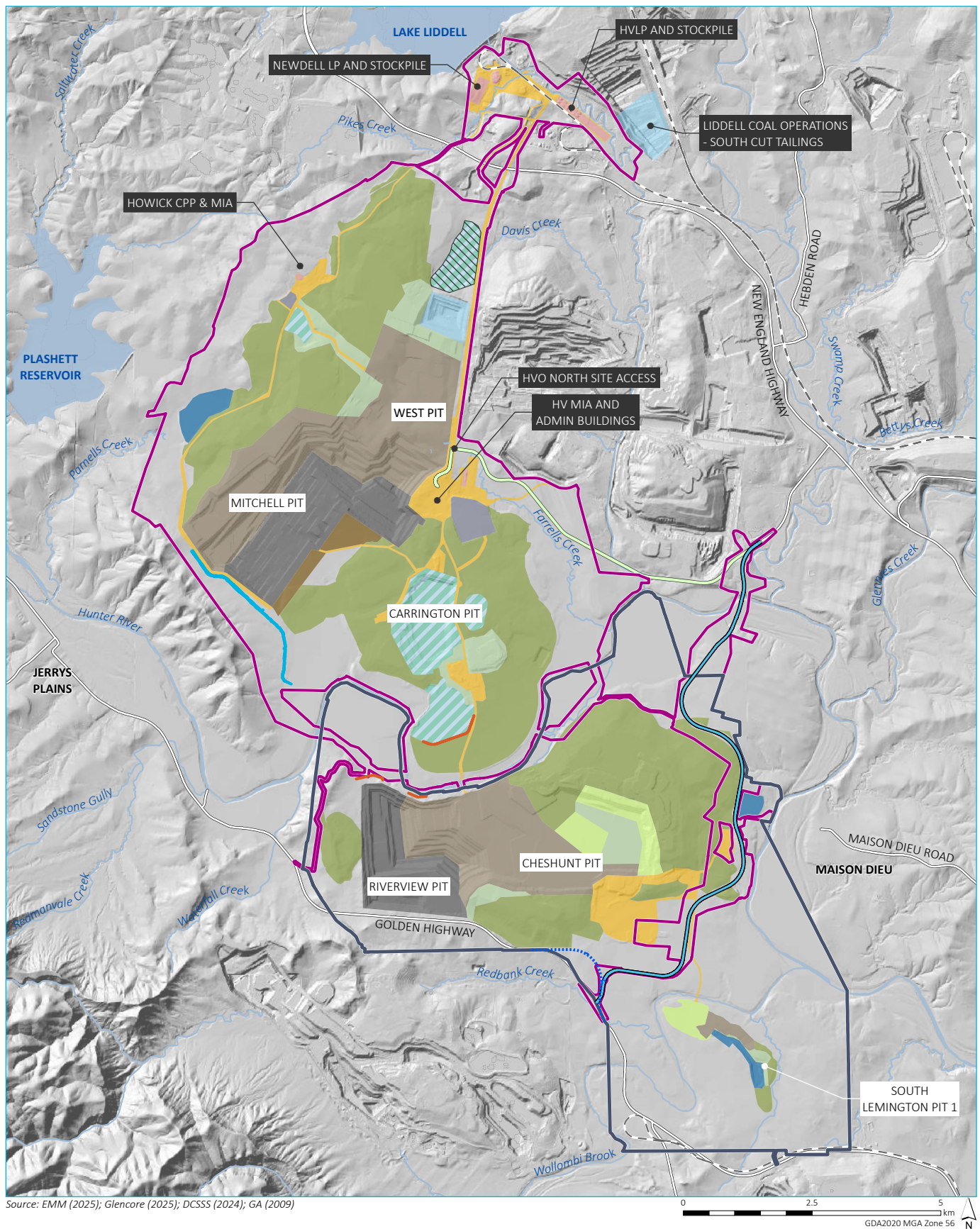
- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Alternative Golden Highway alignment
- Lemington Road realignment
- Mine access road
- Water infrastructure
- Clean water drain
- Levee
- Cumnock Void 3 (managed by Ravensworth Operations)

- Year 6 indicative mine plan
- Active emplacement area
 - Inactive emplacement area
 - Active mining area
 - Active tailings emplacement area
 - Inactive tailings emplacement/capping in progress
 - Infrastructure/access
 - Preparation area
 - Product coal stockpile
 - ROM coal stockpile
 - Rehabilitation

- Shaping for final landform
- Temporary stabilisation
- Water storage
- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody

Conceptual mine plan- year 6

HVO Continuation Project
Amendment Report
Figure B.11



KEY

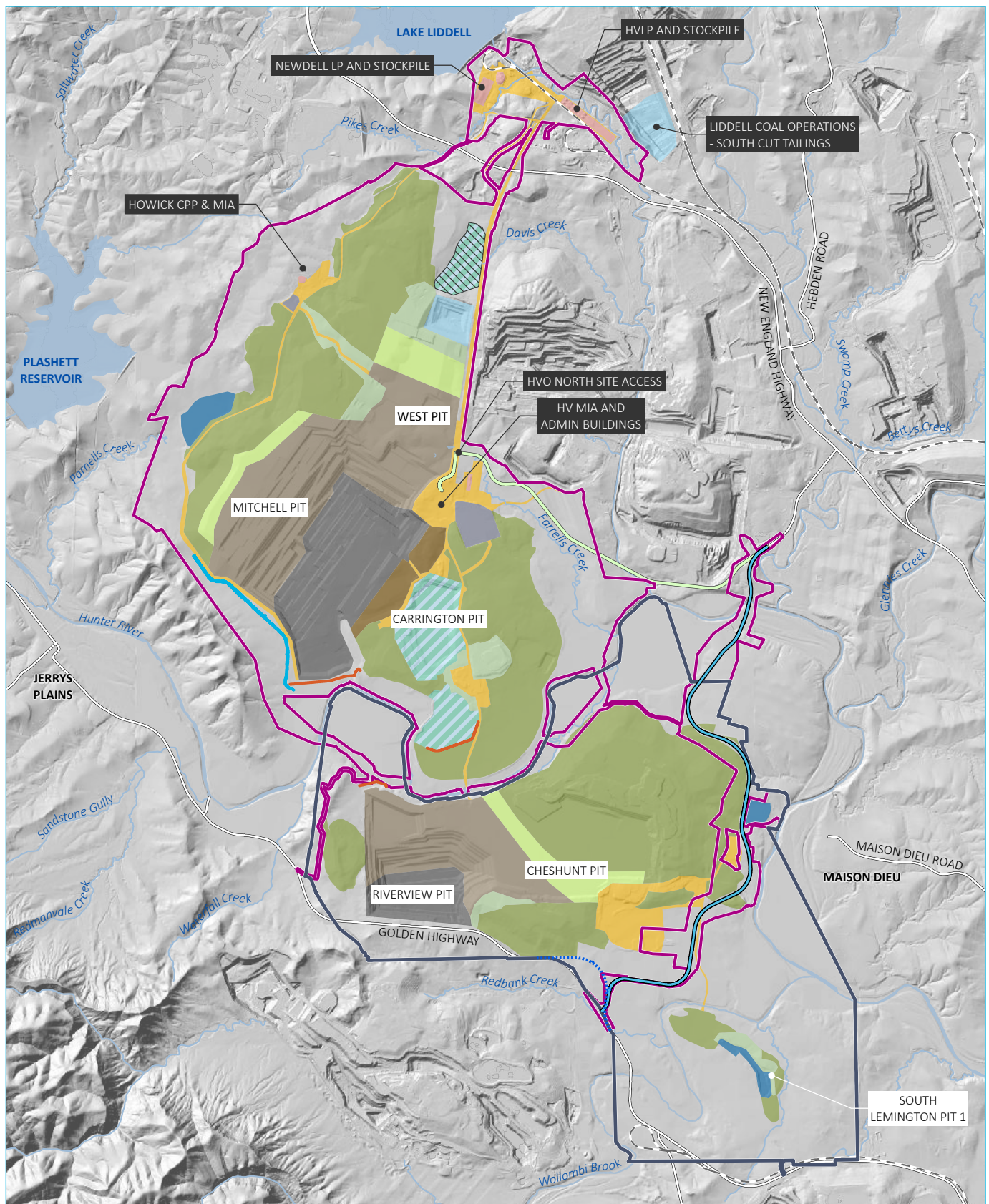
- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Alternative Golden Highway alignment
- Lemington Road realignment
- Mine access road
- Water infrastructure
- Clean water drain
- Levee
- Cumnock Void 3 (managed by Ravensworth Operations)

- Year 8 indicative mine plan
- Active emplacement area
 - Active mining area
 - Active tailings emplacement area
 - Inactive tailings emplacement/capping in progress
 - Infrastructure/access
 - Preparation area
 - Product coal stockpile
 - ROM coal stockpile
 - Rehabilitation
 - Shaping for final landform

- Temporary stabilisation
- Water storage
- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody

Conceptual mine plan- year 8

HVO Continuation Project
Amendment Report
Figure B.12



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)

KEY

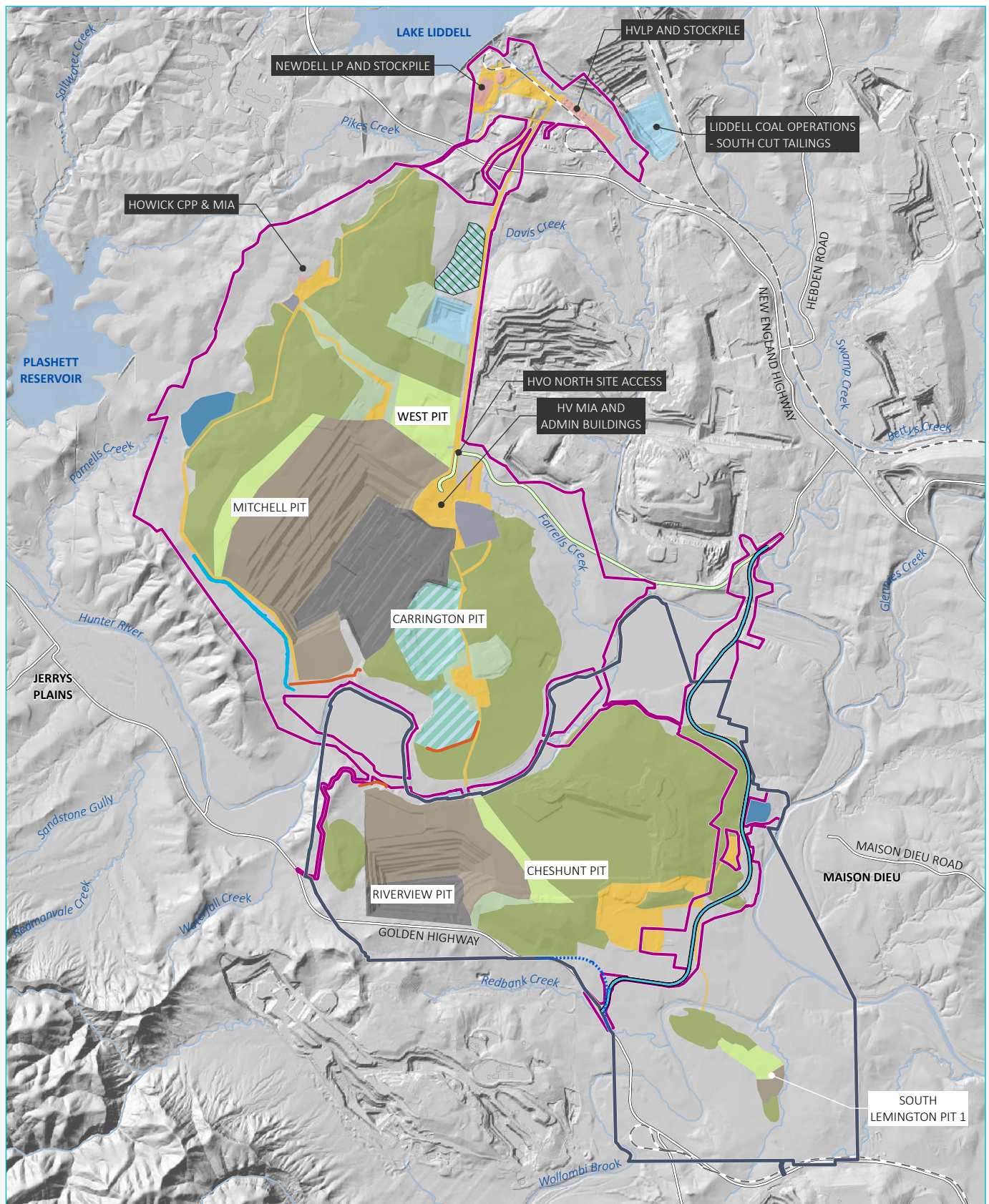
- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Alternative Golden Highway alignment
- Lemington Road realignment
- Mine access road
- Water infrastructure
- Clean water drain
- Levee
- Cumnock Void 3 (managed by Ravensworth Operations)

- Year 12 indicative mine plan
- Active emplacement area
- Active mining area
- Active tailings emplacement area
- Inactive tailings emplacement/capping in progress
- Infrastructure/access
- Preparation area
- Product coal stockpile
- ROM coal stockpile
- Rehabilitation
- Shaping for final landform

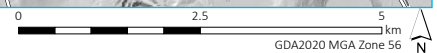
- Temporary stabilisation
- Water storage
- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody

Conceptual mine plan- year 12

HVO Continuation Project
Amendment Report
Figure B.13



Source: EMM (2025); Glencore (2025); DCSSS (2024); GA (2009)



KEY

- Amended proposed HVO North development consent boundary
- Proposed HVO South development consent boundary
- Alternative Golden Highway alignment
- Lemington Road realignment
- Mine access road
- Water infrastructure
- Clean water drain
- Levee
- Cumnock Void 3 (managed by Ravensworth Operations)

- Year 15 indicative mine plan
- Active emplacement area
- Active mining area
- Active tailings emplacement area
- Inactive tailings emplacement/capping in progress
- Infrastructure/access
- Product coal stockpile
- ROM coal stockpile
- Rehabilitation
- Shaping for final landform
- Temporary stabilisation

- Water storage
- Existing environment
- Rail line
- Major road
- Named watercourse
- Named waterbody

Conceptual mine plan- year 15

HVO Continuation Project
Amendment Report
Figure B.14