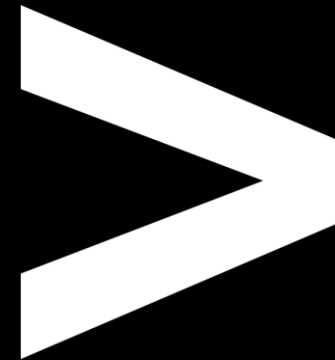




HUNTER VALLEY
OPERATIONS

Continuation Project

Independent Planning Commission

Applicant Meeting
3 July 2026

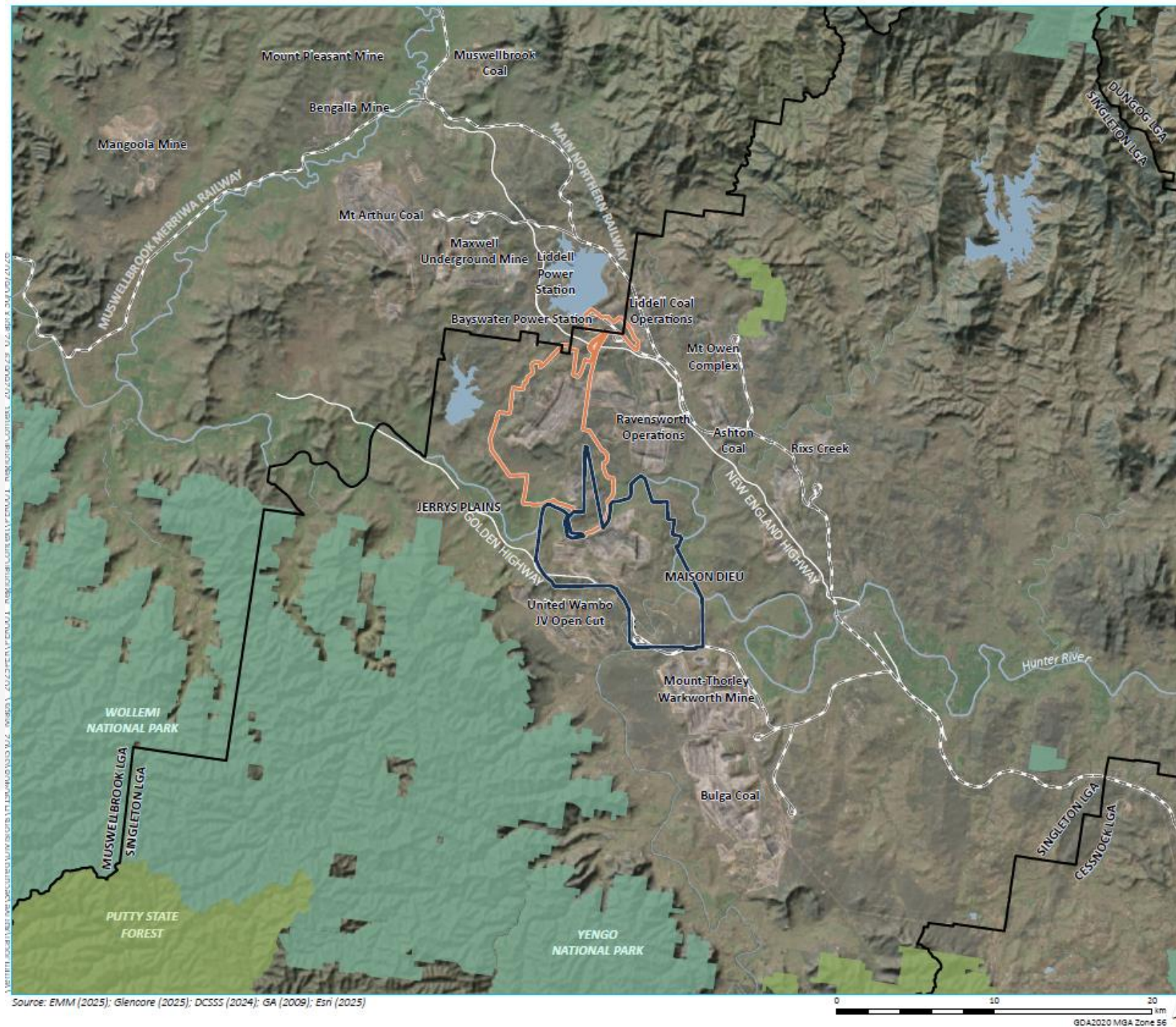
Agenda

1. Opening Statement
2. Introductions
3. Overview of HVO
4. Project Scope and Approval Framework
5. GHG Assessment
6. Biodiversity
7. Environmental Controls
8. Final Voids, Levee and Closure
9. Evaluation & Recommended Conditions
10. Questions



Overview of HVO

Project setting



- 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

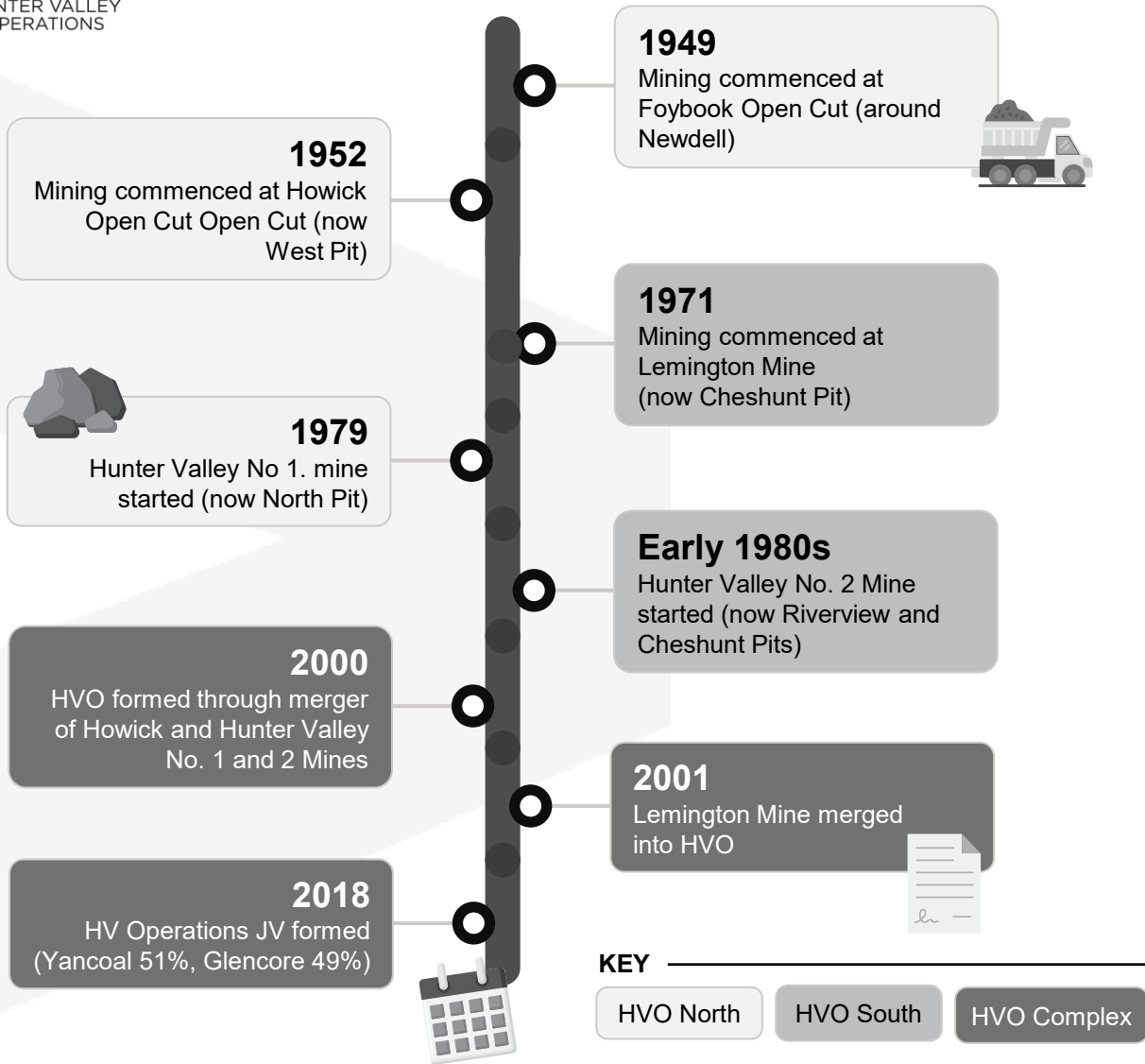
Regional context

HVO Continuation Project
HVO North Public Environment Report
Figure 1.2



PROJECT
HUNTER VALLEY
OPERATIONS

History of HVO



HUNTER VALLEY OPERATIONS



HVO'S DIRECT ECONOMIC CONTRIBUTION IN 2025

1,551

Direct jobs

\$1.1 billion

Spend on Australian goods & services

793

Suppliers

\$238 million

Wages and salaries

\$302 million

Taxes, royalties and rates paid (Local council, state government and federal government payments)



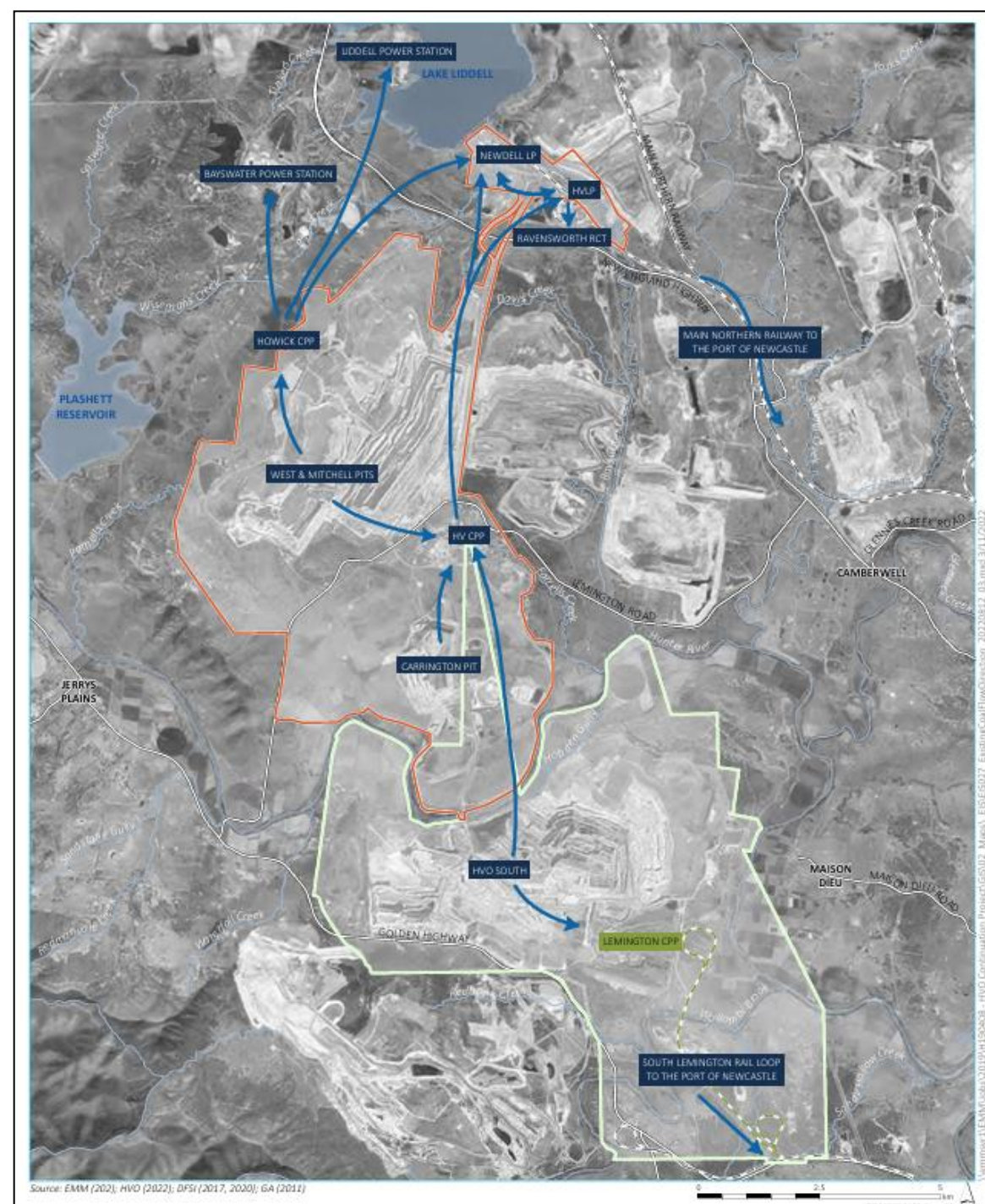
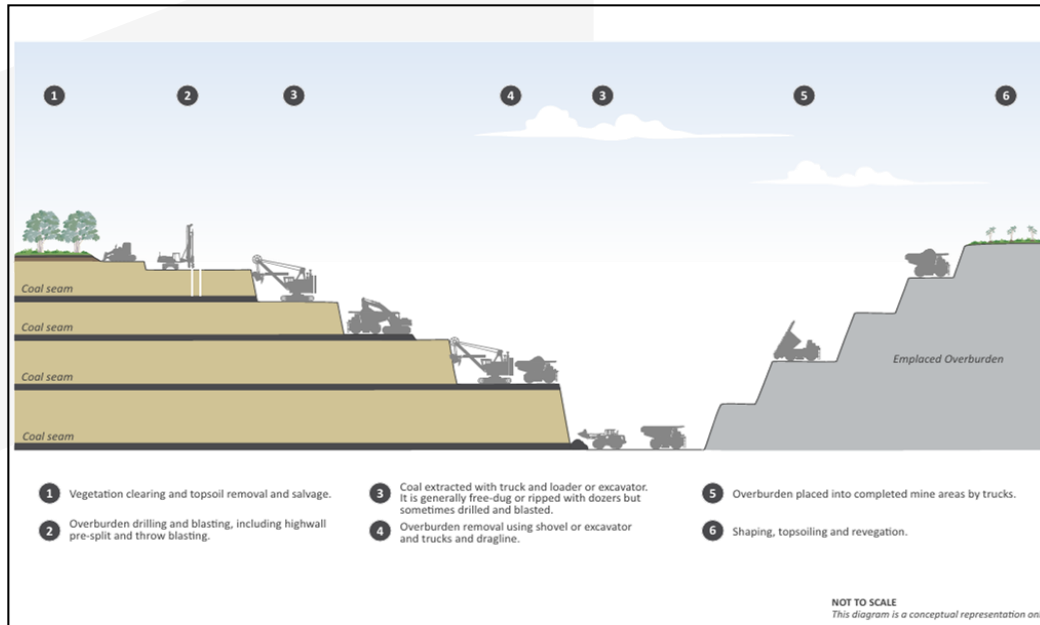
\$6.9 billion

Total contribution to the Australian economy from 2022-2025

HVO Complex

HVO North and HVO South operate as a fully integrated mining operation known as the HVO Complex and include the following:

- One Environment Protection Licence (EPL 640)
- Operated as a single Safeguard Facility
- Integrated Environmental Management System (EMS) and water management system
- One Community Consultative Committee
- Operational efficiencies include shared workforce, maintenance and equipment and common CHPP and rail load out facilities



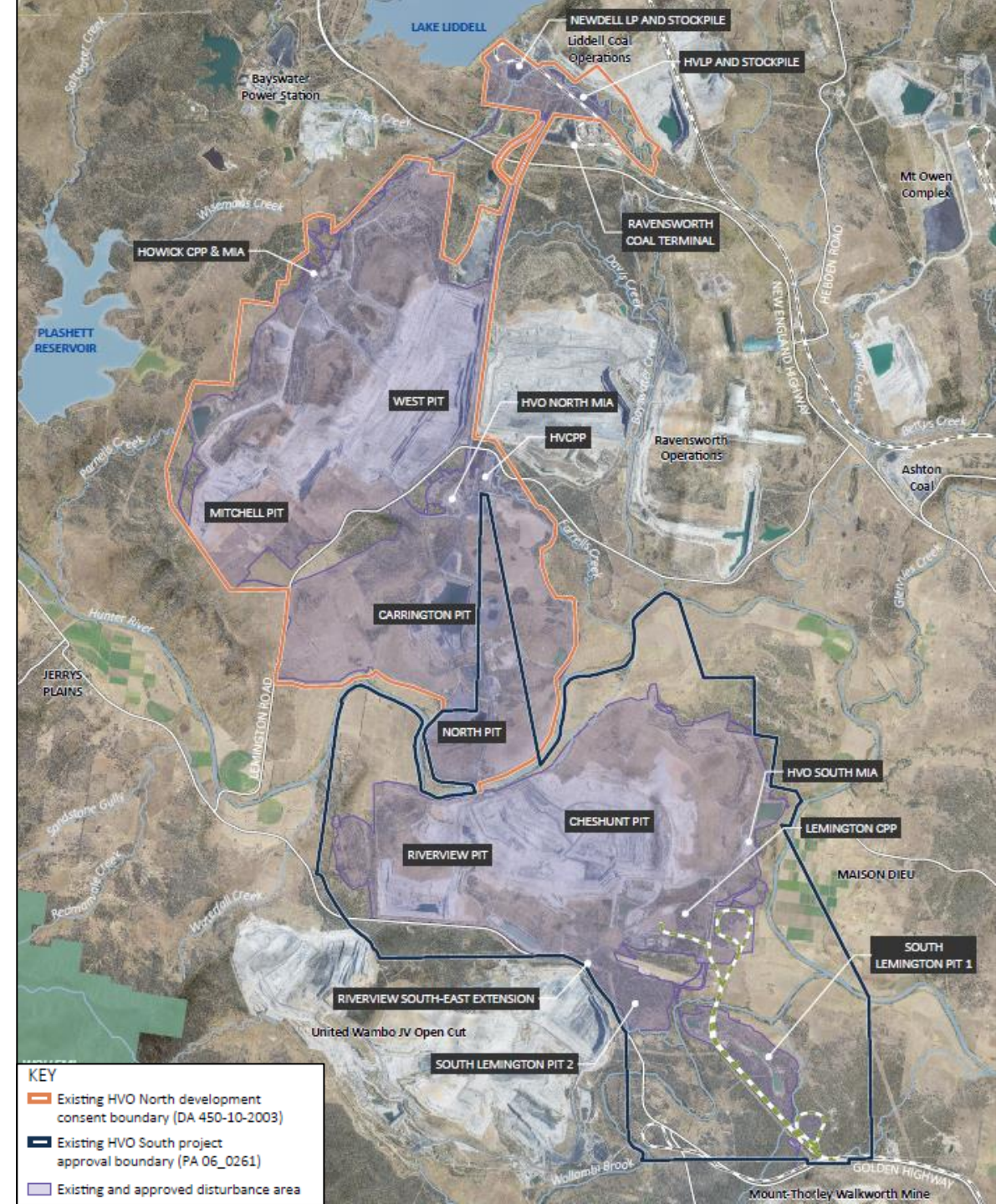


PROJECT
HUNTER VALLEY
OPERATIONS

Existing operations

- HVO North
 - Approval to extract and process up to 22 Mtpa of ROM coal under DA 450-10-2003 until **31 December 2026**
- HVO South
 - Approval to extract and process up to 20 Mtpa of ROM coal under PA 06_0261 until **24 March 2030**
 - Note: HVOS requires HVON to process and rail its product.

HUNTER VALLEY OPERATIONS

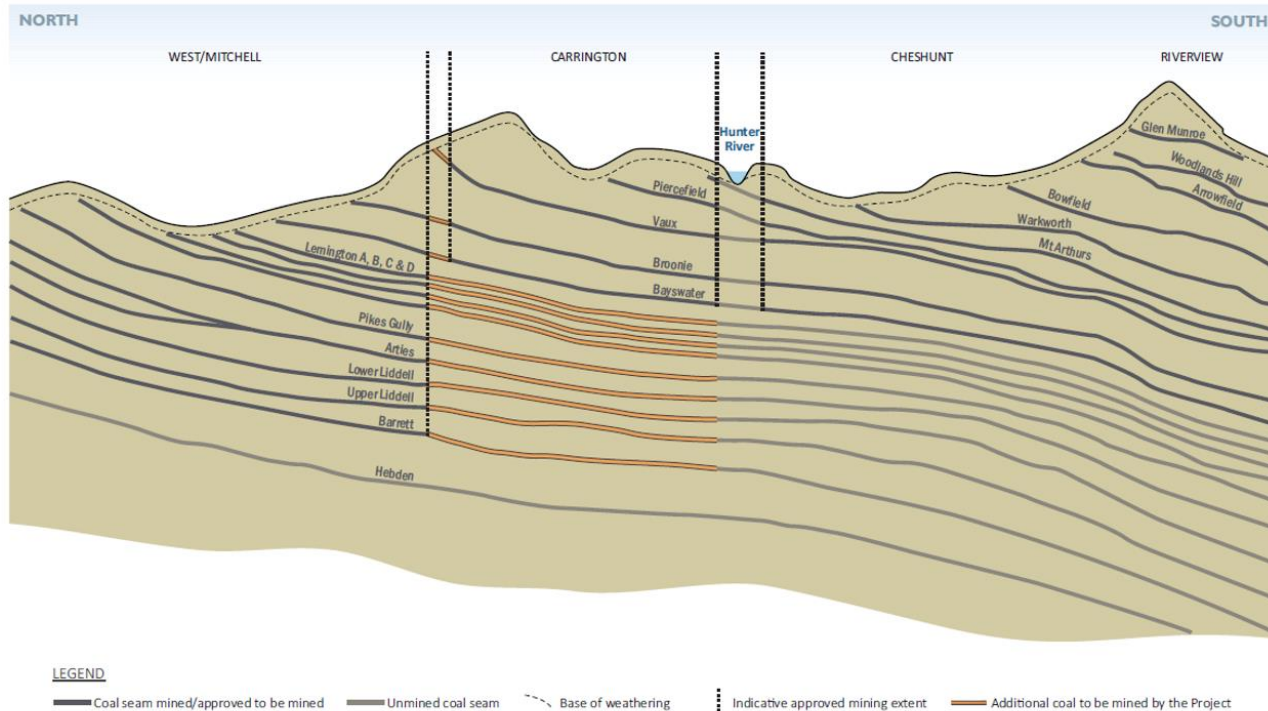




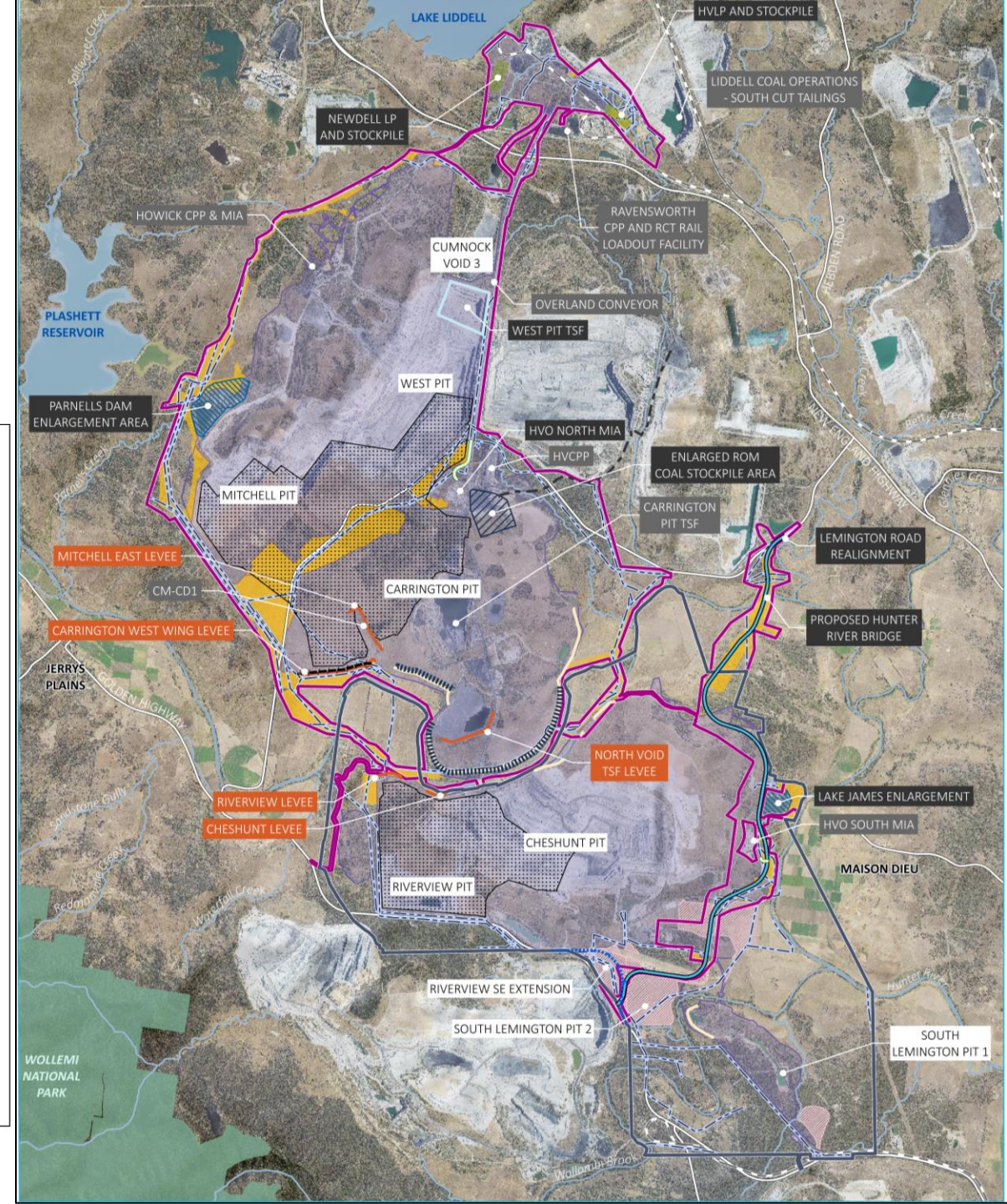
PROJECT
HUNTER VALLEY
OPERATIONS

The Project

The Project extends the life of HVO by predominantly mining through areas that have already been mined by mining deeper seams.



HUNTER VALLEY OPERATIONS





The Project has strong local support

	EIS 2023	Amendment 2025
Support	963 (90%)	1,097 (92%)
Objections	67 (6%)	83 (7%)
Comments	11 (1%)	7 (1%)
Total	1,041	1,187

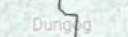
Upper Hunter



Mid-Coast

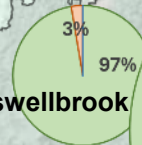


Dungog

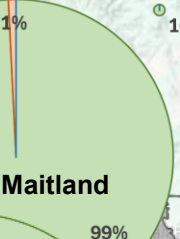


Mid-Western

Muswellbrook



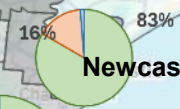
Maitland



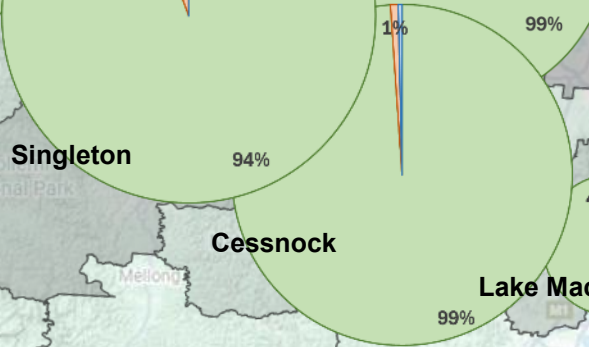
Port Stephens



Newcastle

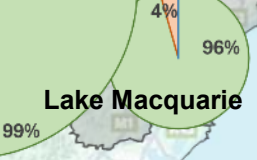


Singleton

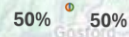


Cessnock

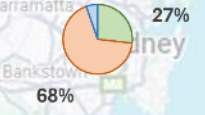
Lake Macquarie



Central Coast



Sydney Area



Remaining NSW

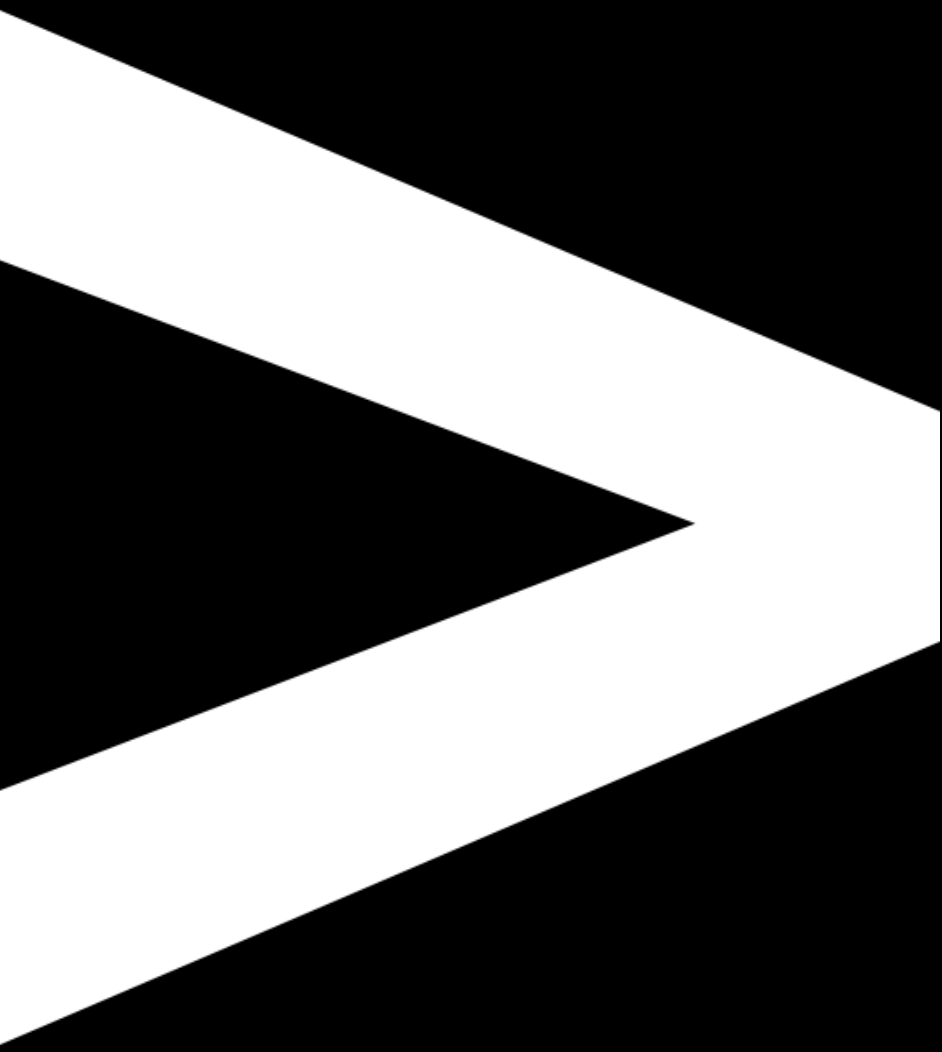


Interstate



- Support
- Object
- Comment

Graphic illustrates Amendment submissions as assessed by the Project.

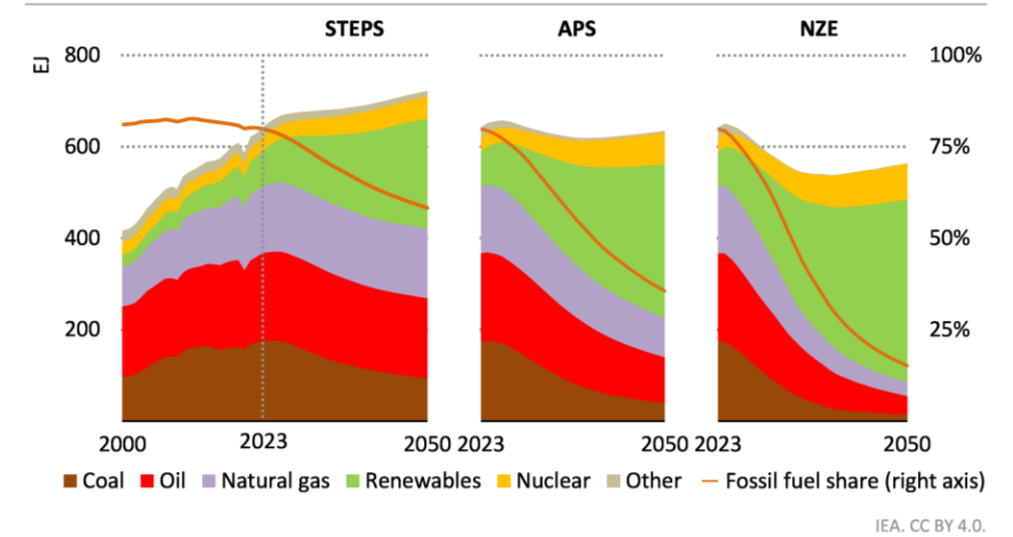


Project Scope & Approval Framework

Project need – strong coal demand throughout Project life

- International context
 - International Energy Agency (in *Coal Mid-Year Update 2025*) stated that "Global coal demand rose by 1.5% in 2024 to reach 8.79 billion tonnes (Bt), a new record", and that, "Coal demand grew by 7.7% in 2021, 4.4% in 2022 and 2.3% in 2023. Despite slowing demand growth on an annual basis, the cumulative increase since 2020 amounts to more than 16%."
 - International Energy Agency (in *2024 World Energy Outlook*) forecasts that while global demand for coal is set to fall, demand for coal remains in power sector until 2050
 - US Energy Information Administration (in *International Energy Outlook 2023*) identifies that while renewable energy is growing the fastest as a share of primary energy consumption, demand for coal in 2050 is predicted to be the same as today
- National context
 - Commonwealth Office of the Chief Economist (in *December 2024 Resources and Energy Quarterly*) notes that despite record breaking renewable rollouts, spikes in demand and weather-related shocks have sustained demand for coal in 2024 and this pattern could continue

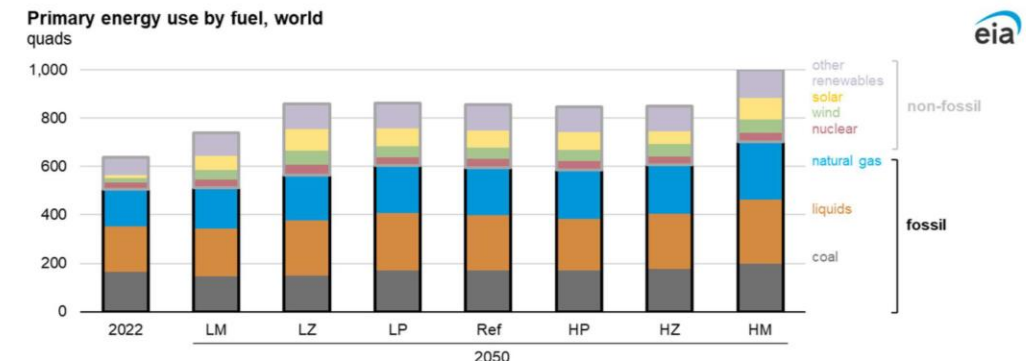
Figure 3.1 ▶ Global total energy supply by source and fossil fuel share by scenario, 2000-2050



Each fossil fuel peaks by 2030 in all scenarios and then declines over time as renewables and other low-emissions sources of energy increase strongly

Notes: EJ = exajoules; STEPS = Stated Policies Scenario; APS = Announced Pledges Scenario; NZE = Net Zero Emissions by 2050 Scenario. Renewables includes modern bioenergy. Other includes the traditional use of biomass and non-renewable waste.

Figure 6



Data source: U.S. Energy Information Administration, *International Energy Outlook 2023* (IEO2023)
Note: Biofuels are included in the "other renewables" category. Quads=quadrillion British thermal units; HZ=High Zero-Carbon Technology Cost case; LZ=Low Zero-Carbon Technology Cost case; HM=High Economic Growth case; LM=Low Economic Growth case; HP=High Oil Price case; LP=Low Oil Price case; Ref=Reference case.

Policy context – NSW Coal Industry 2026 - 50

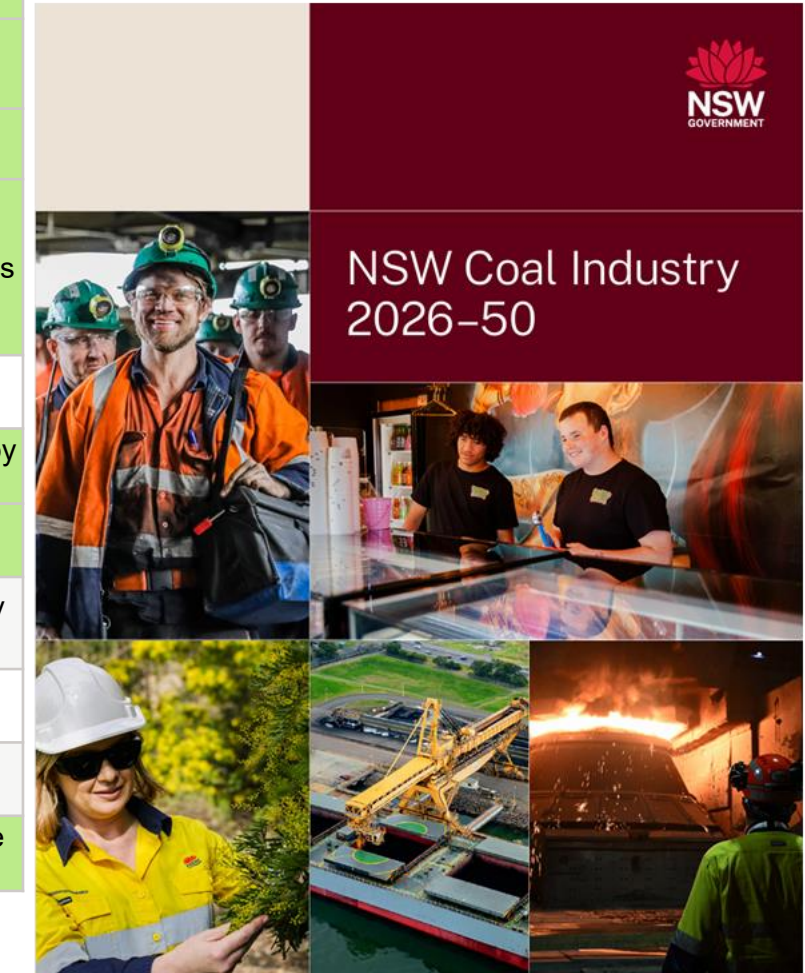
Theme	Statements
Policy support for extensions	“The NSW Government will: continue to allow approvals for mining operations other than new standalone greenfield coal mines where it can be demonstrated that environmental impacts of the project can be managed, to support ongoing job and energy security.”
Jobs & regional security	“The NSW Government will consider applications for extensions of existing coal mines and recognises that extensions will contribute to industry job security in the short to medium term.”
Avoiding greenfield development	“By leveraging coal reserves through extensions at existing sites, NSW can maintain a reliable supply for local needs and trading partners without the need for new greenfield development.”
Demand for coal	“The IEA forecasts that global demand for coal will plateau in 2026 ahead of a gradual decline. In the longer term, global coal consumption is expected to decline between 8–60% by 2035 and 20–92% by 2050.” “There is significant variability and uncertainty on the trajectory of this decline, as it is highly dependent on the implementation of other countries’ energy policies in the context of rising energy demand overall”.
Offsets when abatement is infeasible	“Offsets will continue to support sector emissions with a preference for NSW-based offsets when abatement is not feasible.”
Offsets as complement to abatement	“The application of abatement technology and initiatives by mine operators will be complemented by the use of offsets where abatement is not feasible.”
Residual emissions	“...proposals required to demonstrate a clear commitment to avoiding or reducing onsite emissions and offsetting any residual emissions.”
Safeguard Mechanism applies	“Emissions are regulated by the Safeguard Mechanism and NSW Environment Protection Authority (EPA), including new state-based requirements for onsite abatement and monitoring.”
Declining baseline	“The Safeguard Mechanism will help to drive emissions reduction efforts in the NSW coal mining sector... in line with a declining emissions baseline.”
Limits to abatement	“It is more difficult to mitigate or abate emissions in certain types of mines, owing to differences within coal seams and methane concentrations.”
Technical feasibility principle	“The coal sector... should not be expected to commit to deeper reductions than other sectors of the economy, or anything that is not technically feasible.”

Ministerial media release

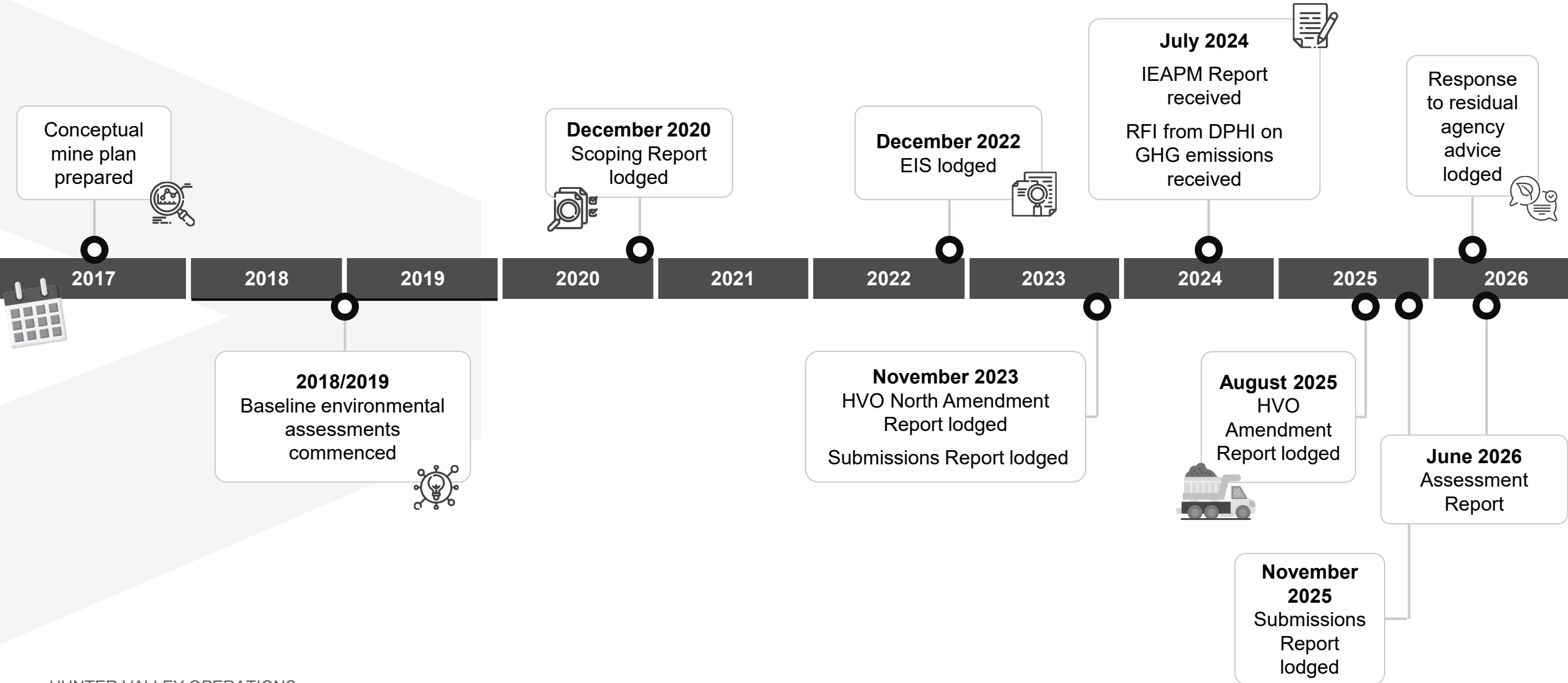
NSW’s Coal Industry 2026-50 supports mining, workers and regional communities

Published: 19 March 2026

Released by: Minister for the Hunter, Minister for the Illawarra and the South Coast, Minister for Natural Resources, Minister for Planning and Public Spaces



Background to the Project





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HUNTER VALLEY
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The Project

Existing operations → EIS → Amended Project

Aspect	Existing	EIS - Exhibited	Amended Project
Mining operations	HVO North - 31 December 2026 HVO South - 24 March 2030	HVO North – Extend to end of 2050 HVO South – Extend to end of 2045	HVO North – Extend to end of 2045 (<i>reduced by 5 yrs</i>) HVO South – Extend to end of 2042 (<i>reduced by 3 yrs</i>)
Operational workforce	~1,500 FTE workers (HVO Complex)	No change	No change
Construction workforce	N/A	~600 temporary construction workers over ~5-year period	As per EIS
Annual ROM extraction	HVO Complex – 42 Mtpa - HVO North – up to 22 Mtpa - HVO South – up to 20 Mtpa	HVO Complex – 40 Mtpa - HVO North – No change: up to 22 Mtpa - HVO South – Reduced: up to 18 Mtpa	HVO Complex – 26 Mtpa (<i>reduced by 14 Mtpa</i>) - HVO North – up to 22 Mtpa (<i>no change</i>) - HVO South – up to 13 Mtpa (<i>reduced by 5 Mtpa</i>)
Approved mining areas	HVO North - West Pit, Mitchell Pit, North Pit and Carrington Area, including Carrington West Wing. HVO South - Riverview Pit, Cheshunt Pit, South Lemington Pit 1, South Lemington Pit 2, and Riverview South East Extension area.	HVO North - Progression from Mitchell Pit through Lemington Road into the Carrington Pit area. - A reduction in the Carrington West Wing area HVO South - Continuation in Riverview and Cheshunt Pits in same footprint as approved. - Coal extraction no longer proposed in South Lemington Pit 1, South Lemington Pit 2 and Riverview South East Extension area.	HVO North - Largely as per EIS, PLUS removal of coal extraction in gas Domain 1 for HVO North. HVO South - Largely as per EIS, small reduction in mining area
Resource recovery	Extraction of approved coal resources	Extraction of up to 695 Mt ROM coal (2025-2050) - Includes 649 Mt (2027-2050)	Extraction of up to 430 Mt ROM coal (2027-2045) - A reduction of approx. 220 Mt ROM coal (2027-2050)
Mining method	Open cut mining operation, primarily using truck and shovel. Dragline is also approved.	No change	No change



The Project

Aspect	Existing	EIS - Exhibited	Amended Project
Key infrastructure		HVO North • Realignment of Lemington Road • Realignment of transmission & telecommunication lines • Increase capacity of Parnells Dam • Upgrade of Newdell LP or Hunter Valley LP • Construction of additional flood protection levees and clean a water diversion drain HVO South • Removal of LCPP short loop option • Realignment of transmission lines • Increase capacity of Lake James • Construction of additional flood protection levees	As per EIS + HVO North • Further realignment of Lemington Rd – avoid WSW • Expanded ROM stockpile to improve coal management • Temporary use of Liddell coal handling and train loading facilities during Load Point upgrades • Mitchell East Levee for flood protection for Mitchell Pit final void HVO South • Removed approval for the LCPP and associated rail infrastructure – avoid WSW
Final voids	HVO North - 3 final voids: • Carrington Pit • West Pit • Mitchell Pit HVO South: • 1 final void in Riverview Pit	• HVO North - 1 final void • HVO South - 1 final void	• HVO North - 2 final voids: Mitchell Pit, and Carrington Pit (as approved) • HVO South - No change from EIS

Mining : Already mined - 2018

2018

West Pit / Wilton Pit

Carrington

Cheshunt / Riverview

South Lemington Pit 1

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

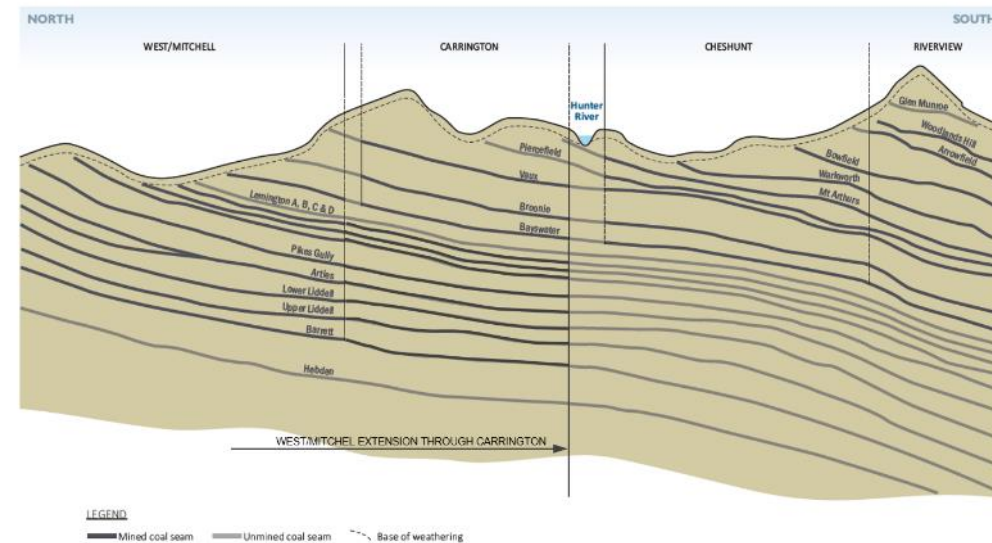
Mining : Approved future mining - 2018



Mining : Approved future mining - 2018

Geology review identified opportunity to mine through previously mined areas to access deeper seams.

Mining Stratigraphy – Cross Section



2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

Mining : Initial Consultation 2019



2019

West Pit extension beyond 2060

Cheshunt unchanged

Remove SLP 2 & Riverview SE

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

Mining : Scoping Report 2020



2020

West Pit limited to 2050

Cheshunt unchanged

Remove SLP 1 Pit

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

Mining : EIS as Lodged 2022

2022

West Pit limited to 2050

Avoided CM-CD1

Cheshunt unchanged

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

Mining : Amended EIS as Lodged 2025



Lemington Road – Current Roads

New England Highway

Lemington Road

Moses Crossing

Golden Highway

2018

2017

2018

2019

2020

2021

2022

2023

2024

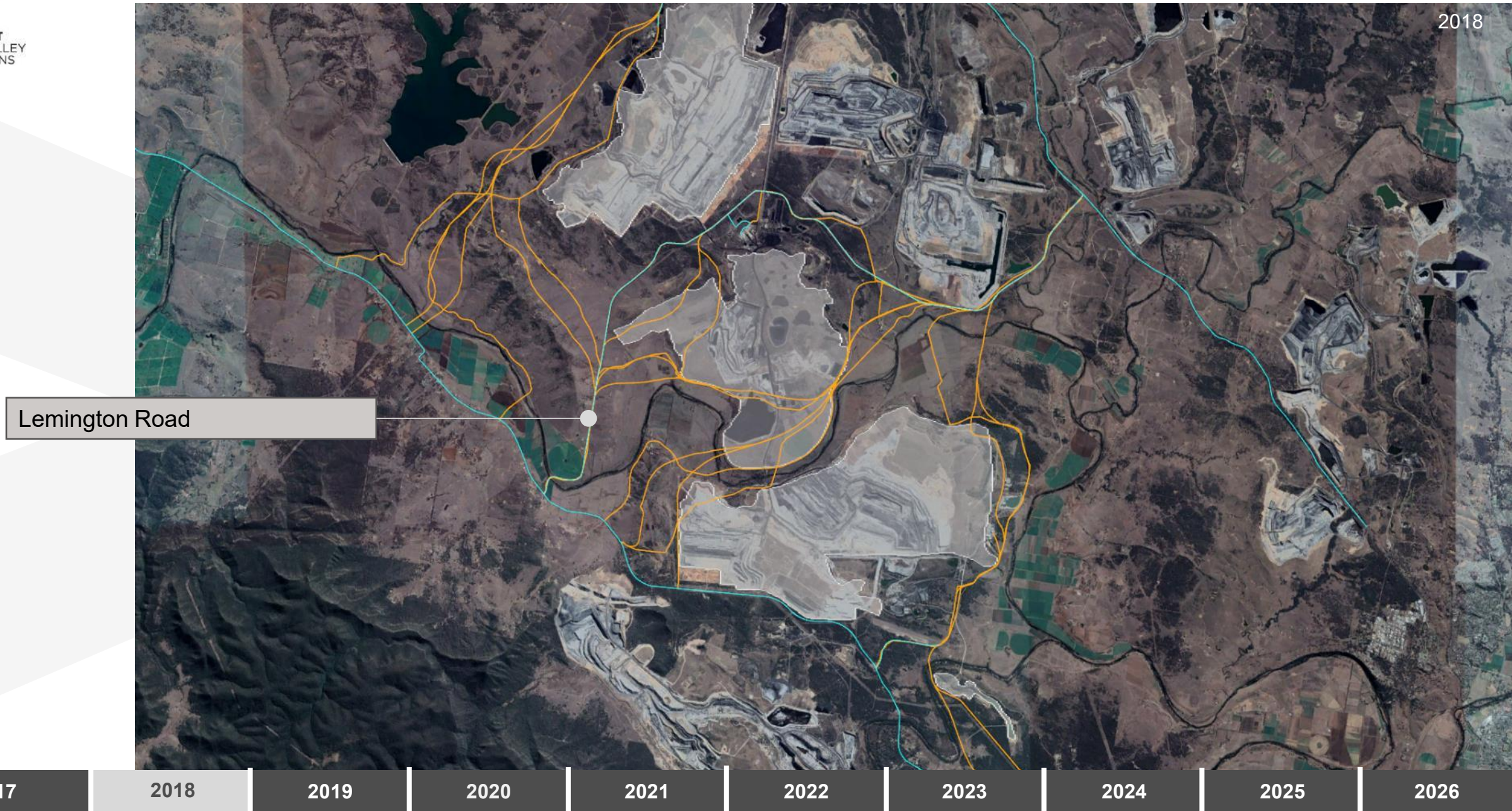
2025

2026

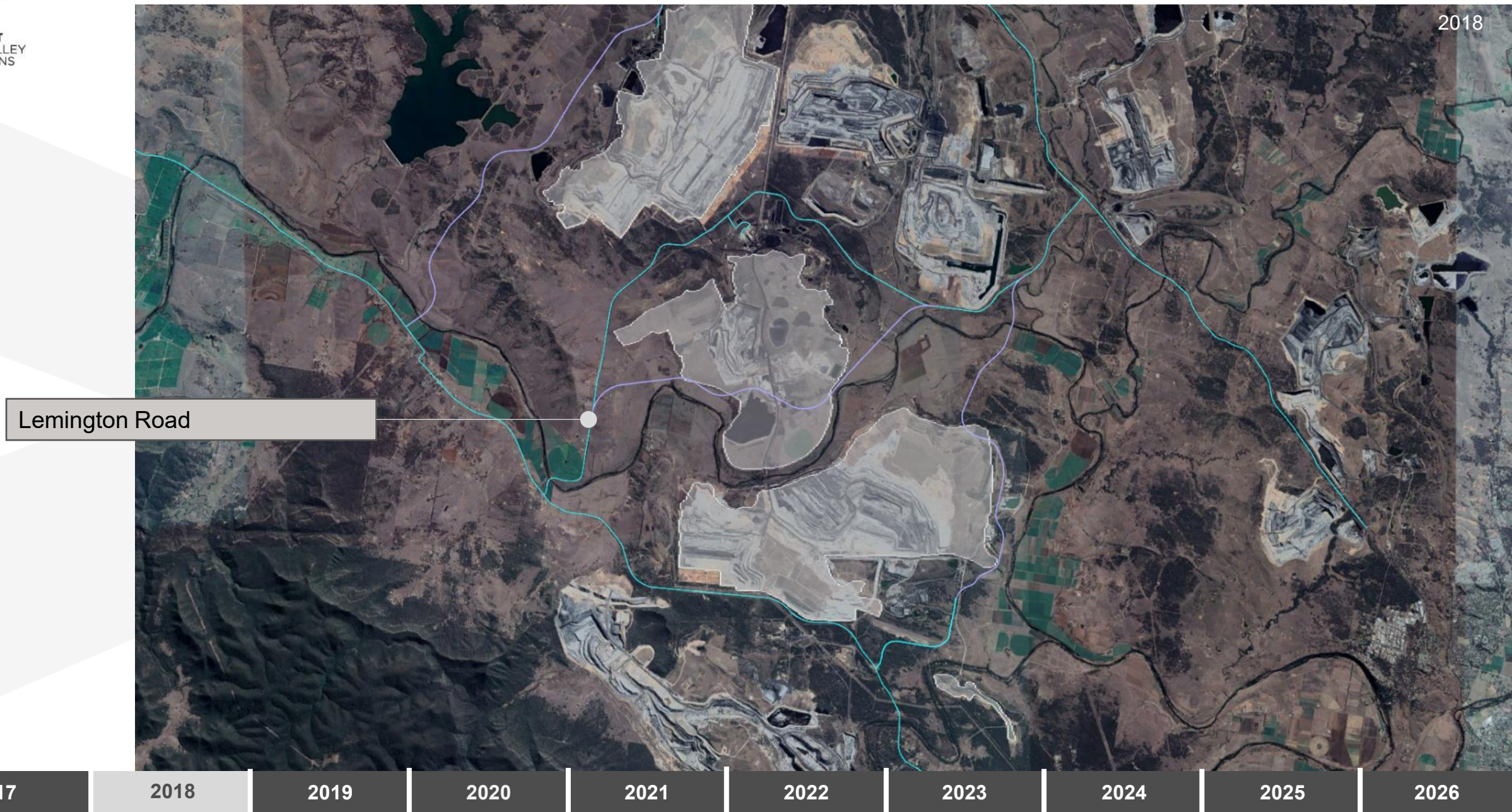
2022



Lemington Road – Concept Designs



Lemington Road – Preferred Concept Designs



Lemington Road : Scoping Report 2020 – Preferred Alignment

2020

Existing Lemington Road

Realigned Lemington Road

Comleroi Road

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

Lemington Road – EIS Route as Lodged

2022

Existing Lemington Road Closed

Realigned Lemington Road

Comleroi Road Upgraded

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

Lemington Road – Amended EIS Route as Lodged

2025

Existing Lemington Road Closed

Warkworth Sands Woodland Avoided

Realigned Lemington Road

Comleroi Road Upgraded

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026



Lemington CHPP & Rail Connection – As Currently Approved





PROJECT
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Lemington CHPP & Rail Connection – EIS as Lodged

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

2022

Northern Rail Loop

Lemington CHPP

Rail link

Lemington CHPP & Rail Connection – Amended EIS as Lodged



Disturbance : Approved

Current Approved Disturbance

2018

2017

2018

2019

2020

2021

2022

2023

2024

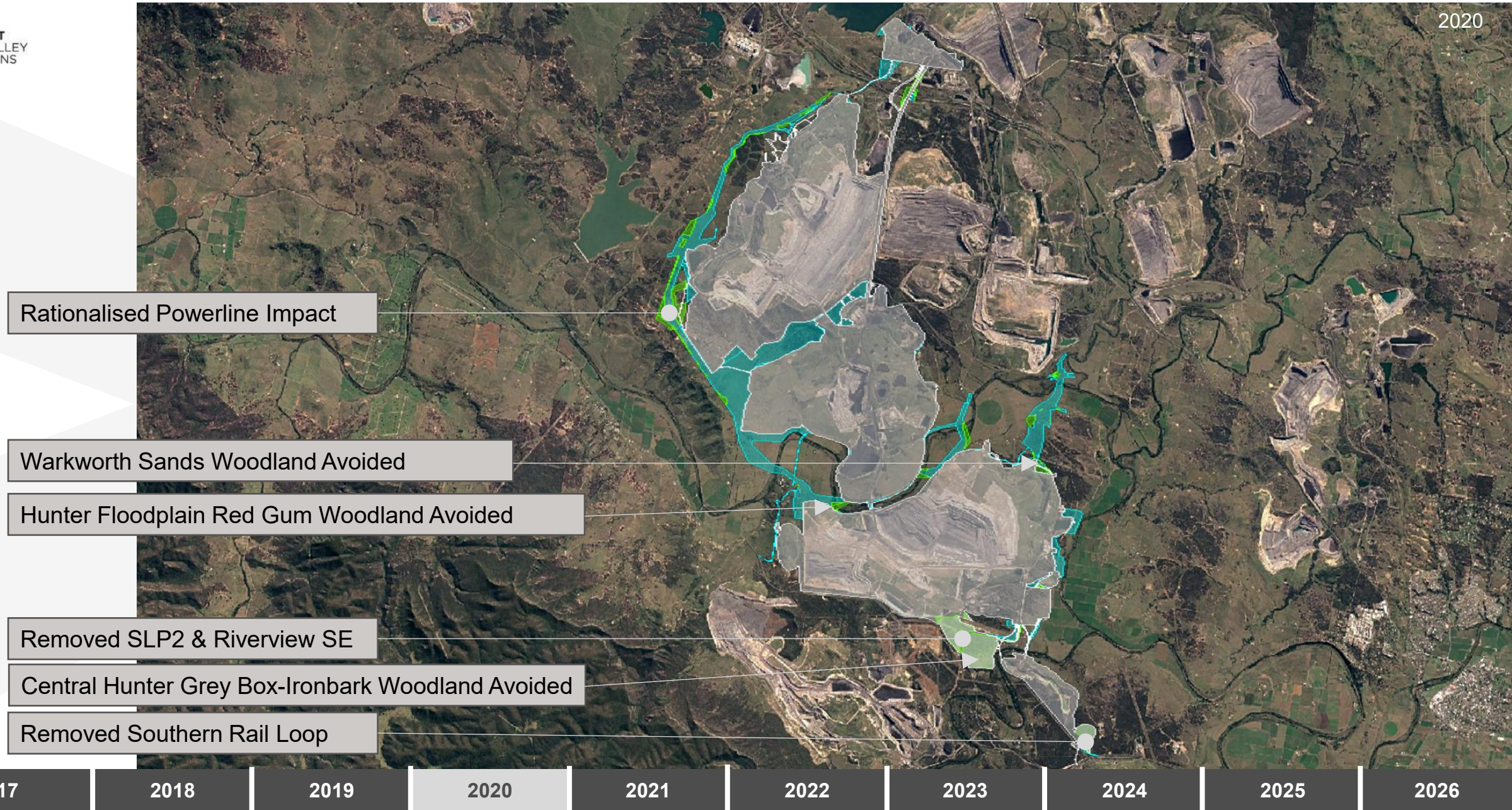
2025

2026

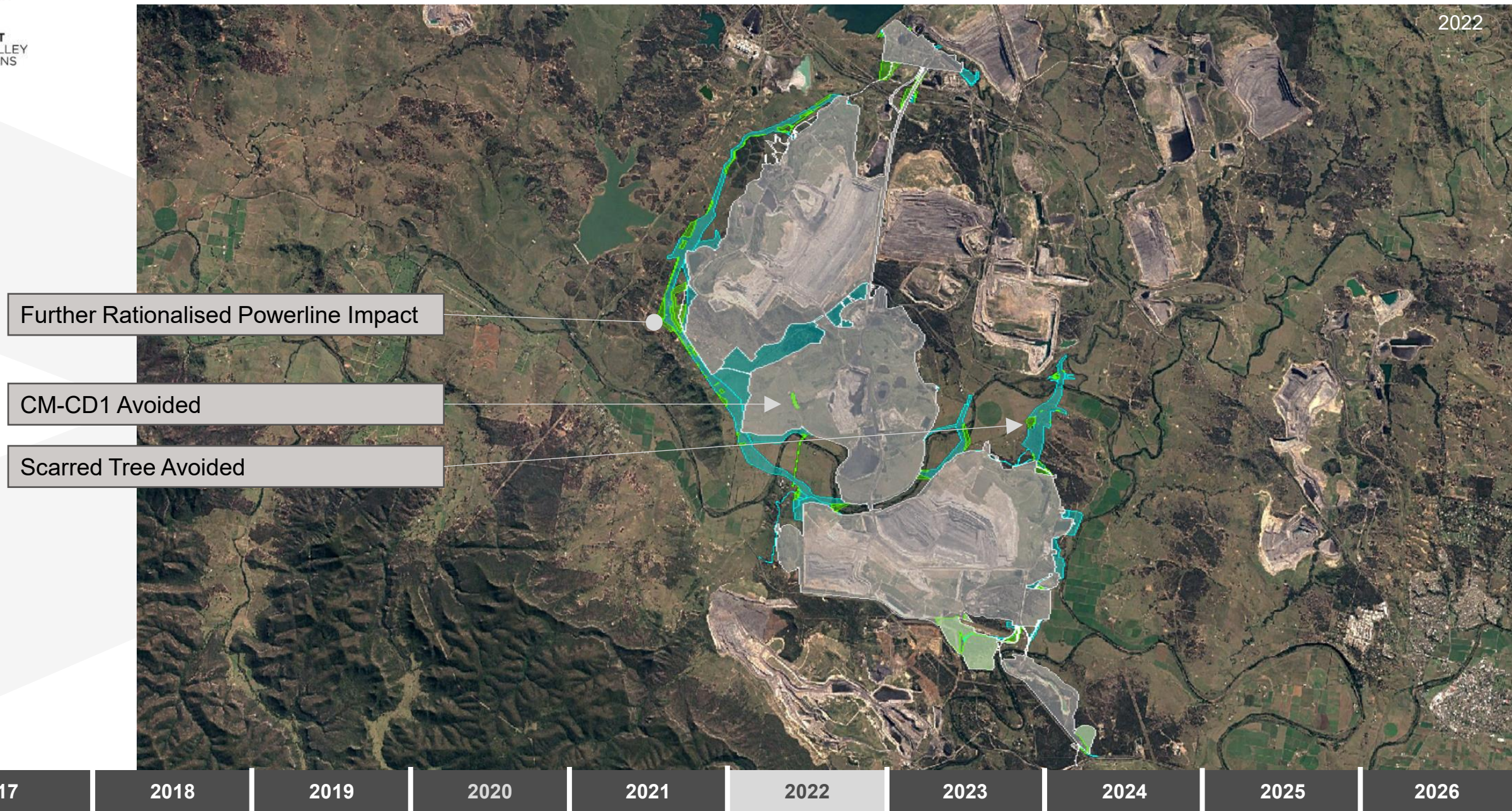
Disturbance : Initial Consultation 2019



Disturbance : Scoping Report 2020



Disturbance : EIS as Lodged 2022



Disturbance : North Amendment as Lodged 2023



2017

2018

2019

2020

2021

2022

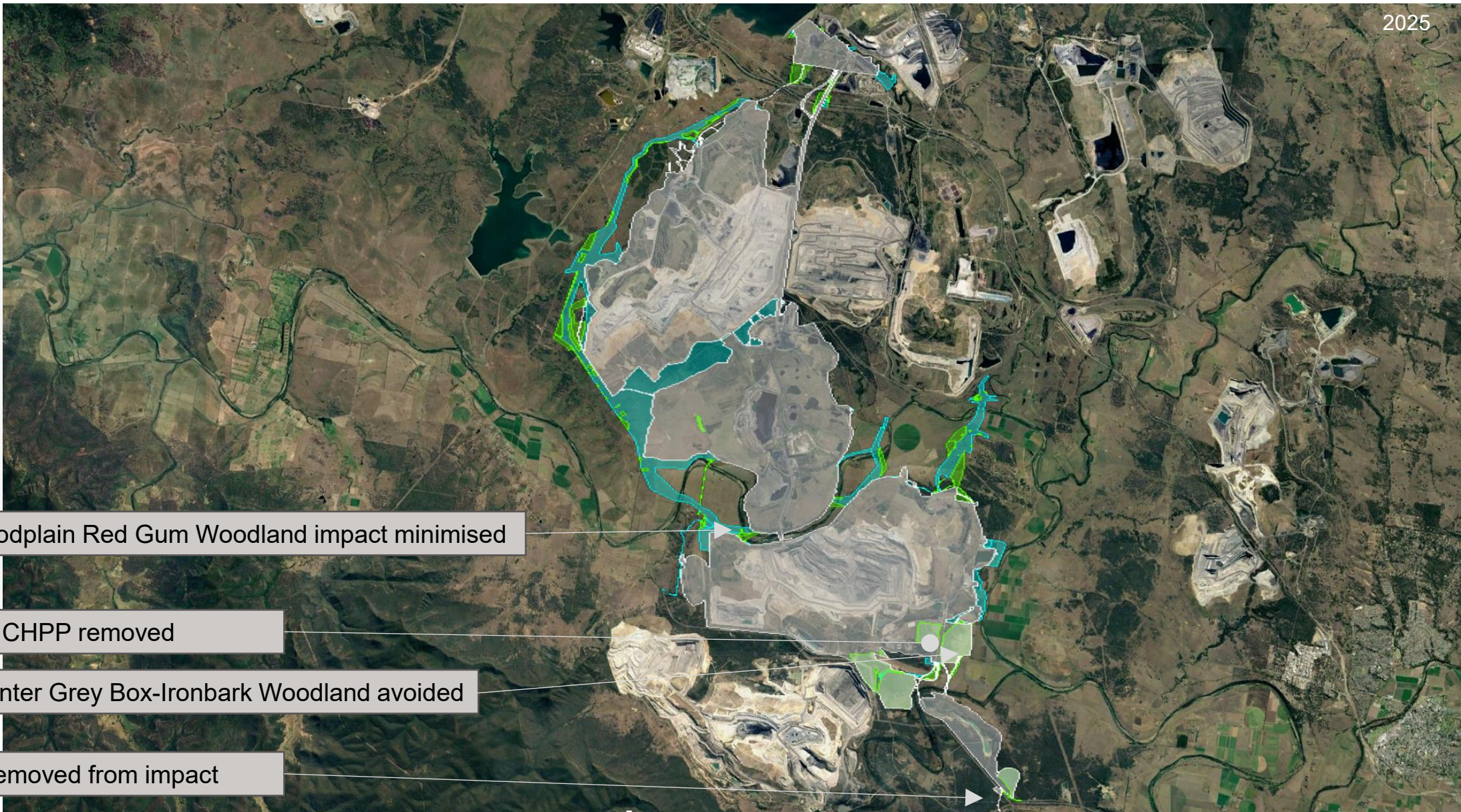
2023

2024

2025

2026

Mining : Amended EIS as Lodged 2025



2017

2018

2019

2020

2021

2022

2023

2024

2025

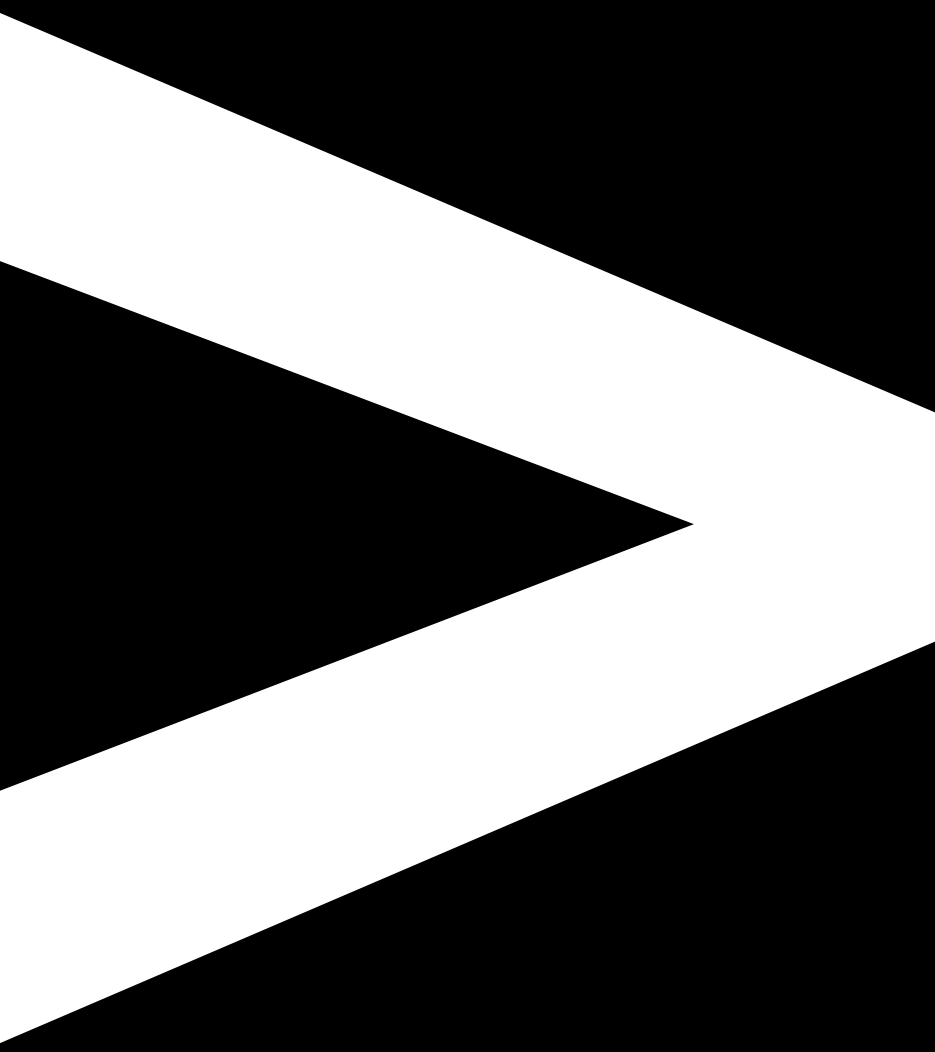
2026



HVO Continuation Project

PROJECT
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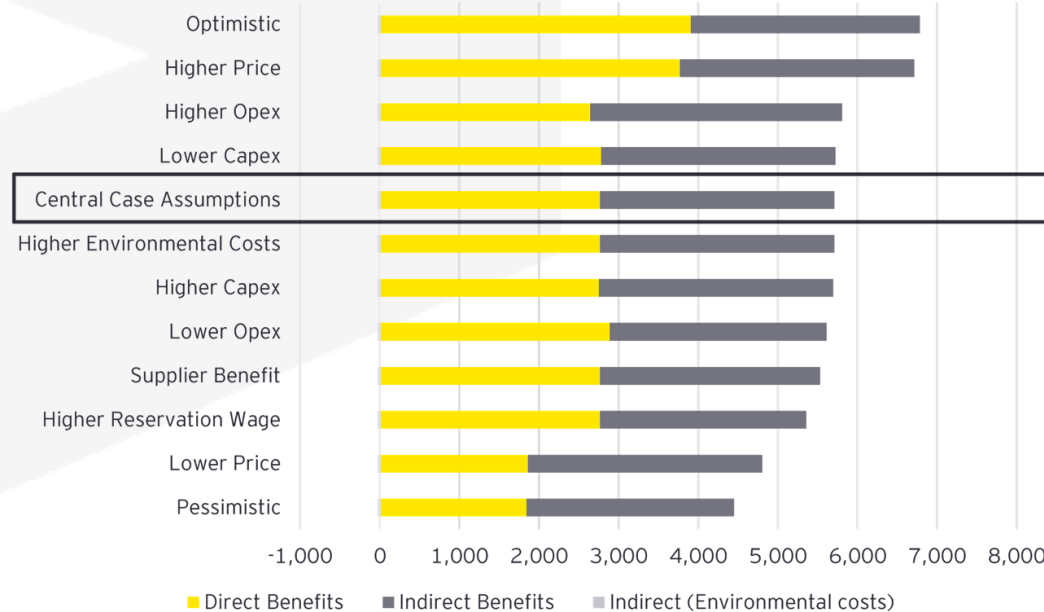




Key Assessment Outcomes Economics, Greenhouse Gas & Biodiversity

Economics

- Economic assessment included a CBA and LEA
- CBA:
 - Estimate of the net benefits of the Project to NSW
 - Based on the central case, HVO is estimated to produce a **net benefit of \$5,692.4 million to NSW** in NPV terms
 - Direct benefits – \$2,768.1 million
 - Indirect benefits - \$2,941.9 million
 - Incremental indirect costs - \$17.6 million



Source: EY estimated based on information from various sources.* NPV in real 2025 Australian dollars based on a 7 per cent real discount rate. Indirect costs of NPV \$17.6 million have been included in the figure.

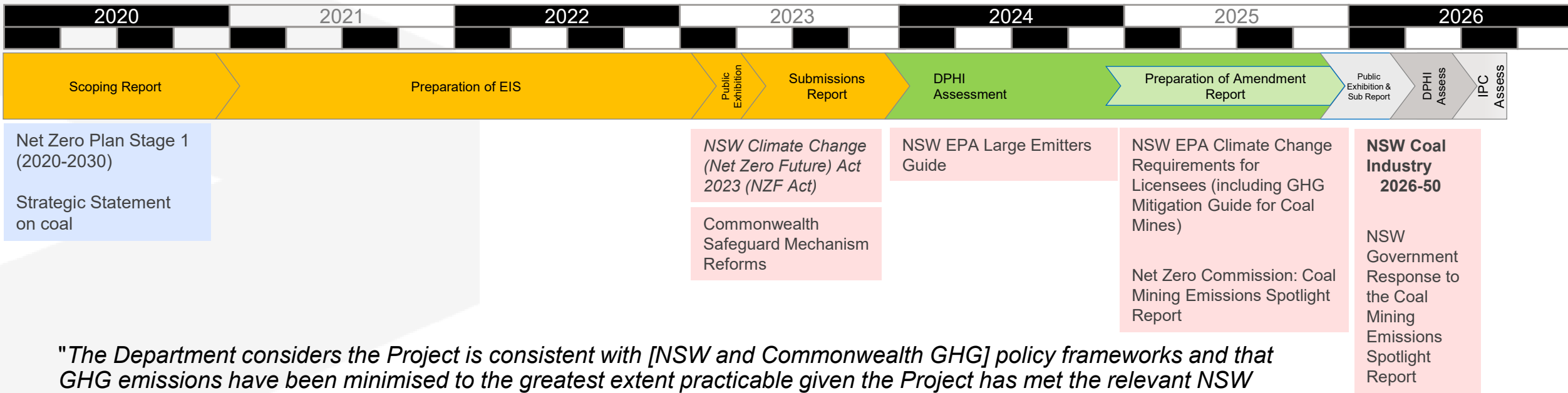
- Sensitivity testing found the Project continues to generate substantial net benefits under wide range of assumptions
 - most sensitive to coal price assumptions
 - Coal prices ↓ 25% - the net benefit to NSW is **\$4,785.7 million** (reduction of approx. 5.9%)
 - Lower bound estimate, based on the most pessimistic assumptions on coal prices, capex opex, worker and supplier benefits, and indirect costs, provides benefits of **\$4,432.2 million**
 - Upper bound estimate, based on the most optimistic assumptions, provides benefits of **\$6,768.9 million**
 - The Project generates a positive net economic benefit under all scenarios assessed.
- NSW Resources note EY coal price forecast is lower than CBA and Consensus Economics.
 - EY forecast royalties attributable to NSW at **\$2,186 million**
 - NSW Resources estimate royalties attributable to NSW approximately **\$4,200 million**

Economics

- Local Effects Analysis (LEA):
 - Provides estimate of the net benefits of the Project to the Lower Hunter region (as defined by the ABS SA3 10601 region)
 - Project estimated to produce a net benefit of **\$1,778.1 million** (NPV) to the Lower Hunter region
 - Benefits to local workers – \$990.9 million
 - Benefits to local suppliers - \$790.3 million
 - Payment to local councils - \$72.1 million
 - Sensitivity testing indicates that regional economic benefits remain substantial under a wide range of assumptions
 - The lower bound estimate (pessimistic assumptions) - benefits of \$1,636.3 million
 - The upper bound estimate (optimistic assumptions) - benefits of \$1,810.0 million
 - The Project would continue to support approximately 1,500 direct jobs and substantial indirect employment throughout the supply chain
 - The Project would continue to support economic activity, business expenditure and investment across Singleton, Muswellbrook and the broader Hunter region
- DPHI concluded that the Project would deliver substantial and enduring economic benefits to NSW and the Hunter region

GHG Assessment

NSW and Commonwealth GHG policy frameworks have evolved significantly over the Project's 6-year assessment period, and the Project has adapted in response



"The Department considers the Project is consistent with [NSW and Commonwealth GHG] policy frameworks and that GHG emissions have been minimised to the greatest extent practicable given the Project has met the relevant NSW Government guidance for emissions avoidance, mitigation, and offsetting" (DPHI Assessment Report, June 2026).

GHG emissions and mitigation measures have been comprehensively assessed & conditions have been recommended to ensure impacts are managed.

NSW and Commonwealth GHG policy frameworks are outcomes-based and underpinned by net emissions

Paris Agreement	Commonwealth Safeguard Mechanism	NSW NZF Act	NSW Coal Industry 2026-50	NSW EPA Large Emitters Guide	NSW EPA Climate Change Licensee Requirements
- Country NDCs are based on net emissions (based on sources and sinks) - Australia's NDCs: 43% reduction by 2030, 62-70% reduction by 2035, net zero by 2050	- Calibrated to Australia's NDCs Net emissions facility limits - Technology neutral - Recognition of hard-to-abate emissions - Safeguard Mechanism Credits (SMCs) - Cost-containment measure	Net emissions targets: 50% reduction by 2030, 70% reduction by 2035, net zero by 2050	- Recognition of Safeguard Mechanism (net emissions) - Recognition of EPA requirements (net emissions goals) - Offsets complement abatement	Focus on emissions quantification, application of mitigation hierarchy, offset strategy, goal setting which considers Safeguard (net emissions), and independent expert review	Focus on increased licensee reporting requirements (CCMAP), including goal setting (net emissions), understanding of abatement feasibility, and application of GHG Mitigation Guide

Net emissions from the coal sector follow a downward trajectory that is consistent with the NSW emissions trajectory

"With the application of the Safeguard Mechanism, **the trajectory of the coal mining sector is generally consistent with the required trajectory for NSW to decrease emissions towards its targets in 2030, 2035 and 2050.** The scenario (Scenario 2) included was modelled based on the assumption that eight coal mining applications under assessment in the planning system would proceed. **This scenario included emissions from the original application, prior to the August 2025 amendment**" (DPHI Assessment Report, June 2026) (HVO emphasis)

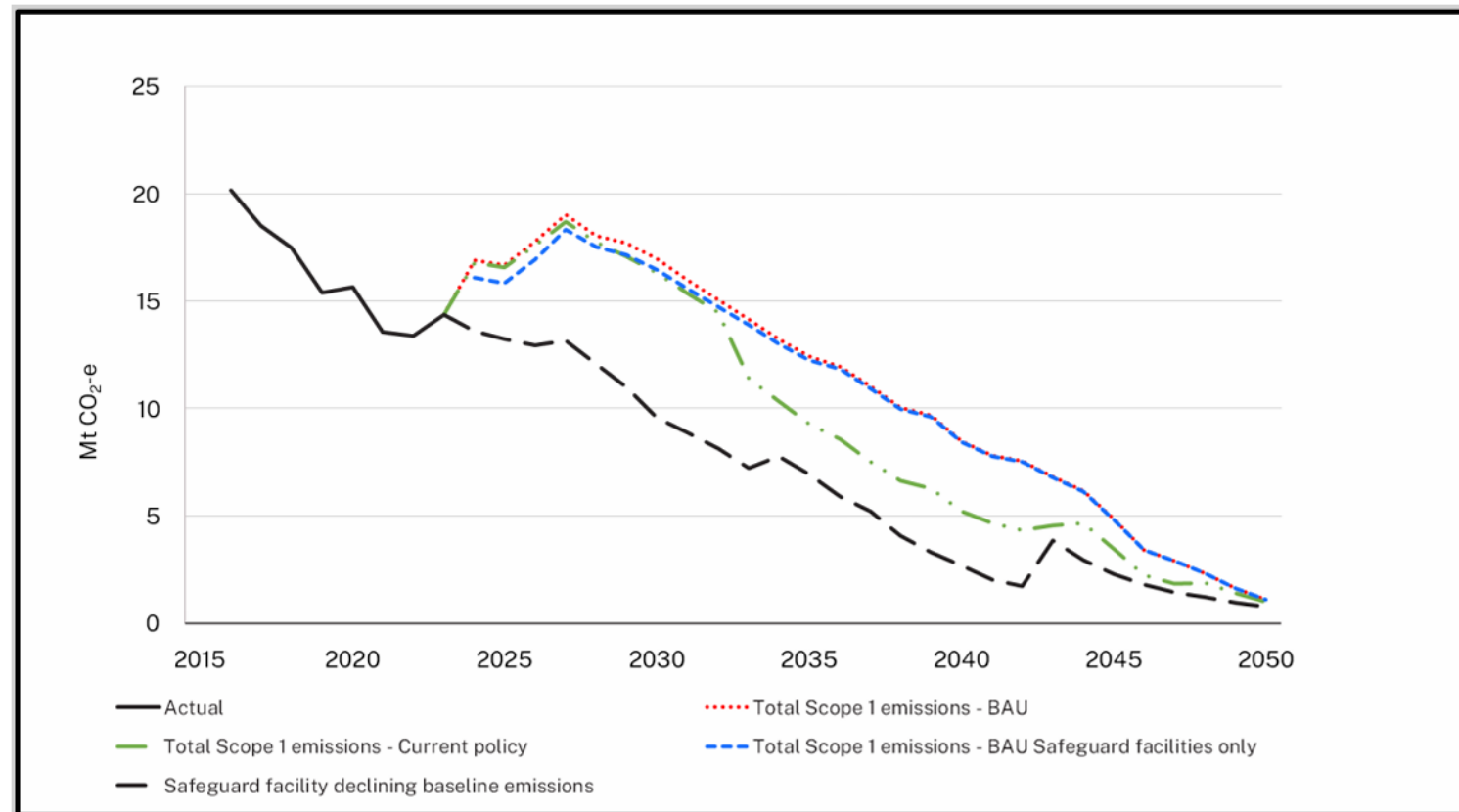


Figure 7 | Projected Scope 1 emissions for coal mining (Source: 2024 Methods paper, DCCEEW)

The amended Project

Domain 1
avoided

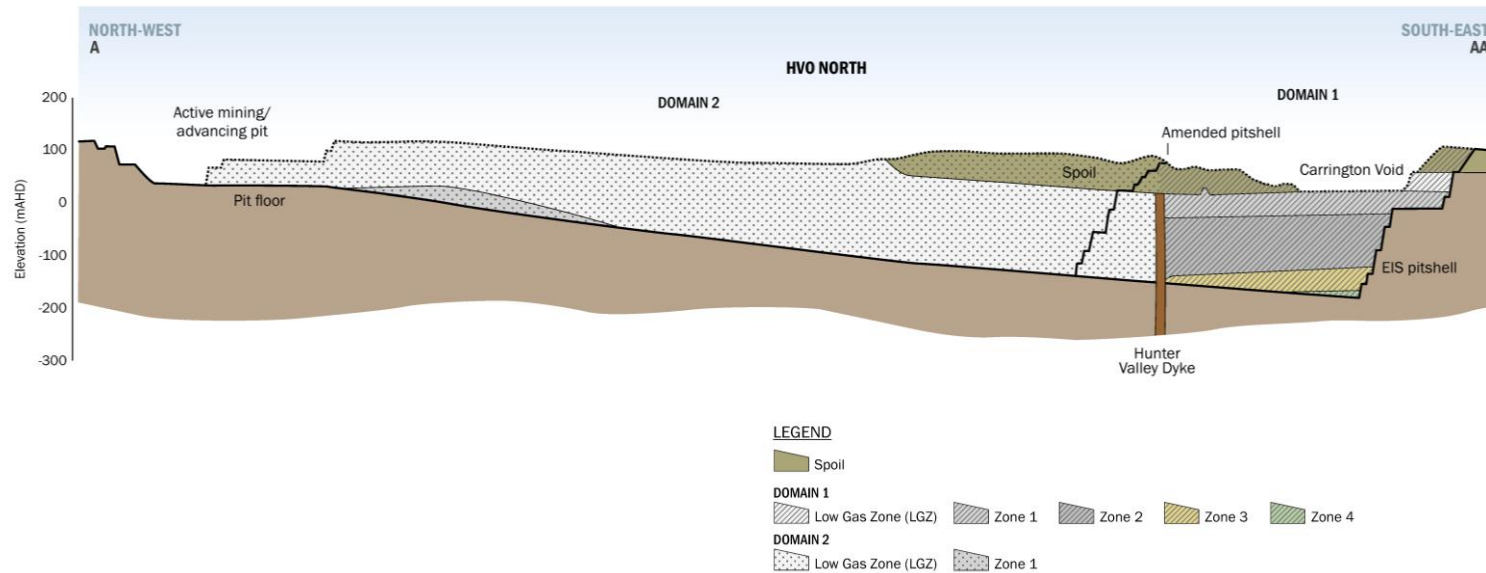
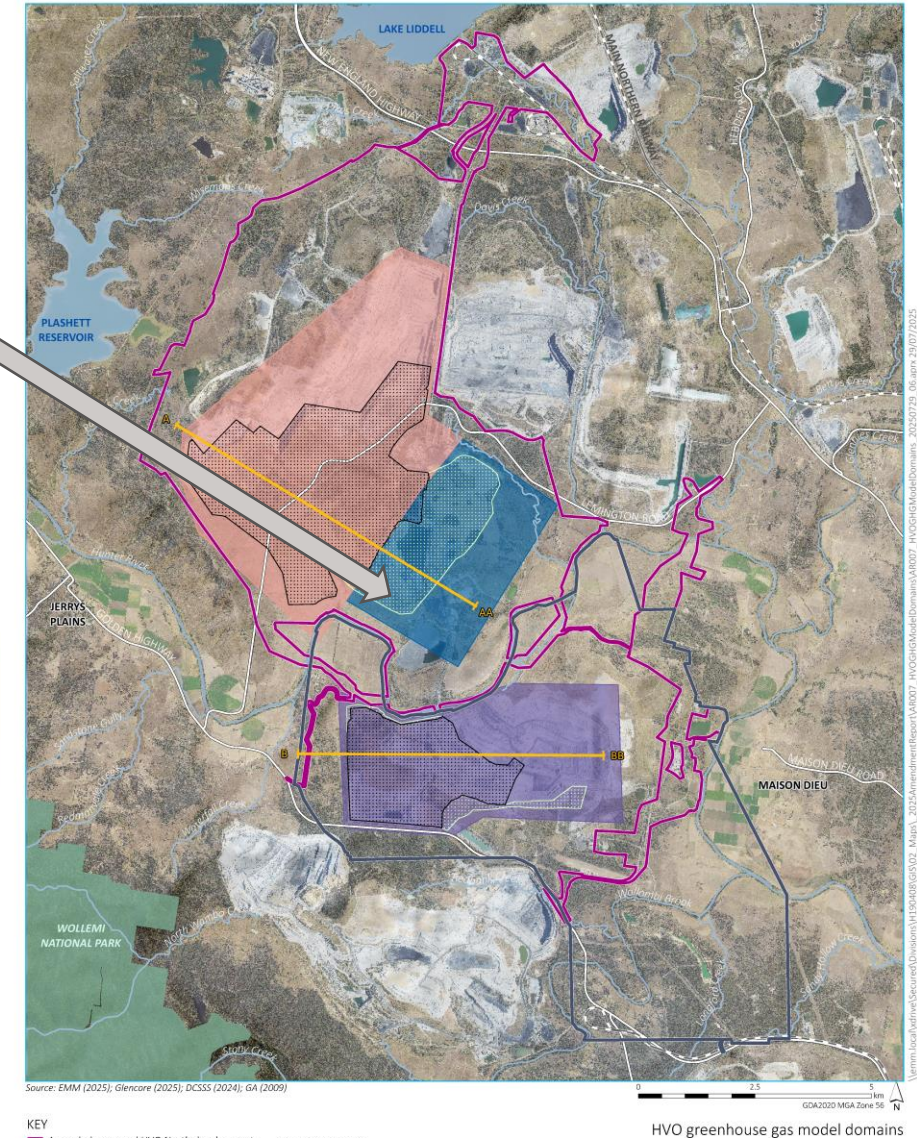


Figure 3.3 Conceptual gas domains and zones across the HVO Complex



GHG Assessment is consistent with NSW Large Emitters Guide & the mitigation measures meet the principles of the Guide (EPA, Dec 2025)

Avoidance of gas Domain 1 has contributed to significant reductions to emissions
(43% Scope 1 reduction, 23% Scope 3 reduction)

Avoid

Avoiding the generation of GHG emissions through best-practice design (the most effective control).

- Avoidance of excess diesel use and electricity consumption through mine design and operational measures
- Avoidance of coal extraction from “domain 1”

Reduce

Reduce emissions, e.g. by using more efficient technologies/processes or using waste methane that would otherwise be released or flared – to generate electricity.

- Reduced annual production rate from 40 Mtpa to 26 Mtpa
- Reduced mining rate and tonnage for HVO South
- **Pre-drainage trial at HVO South**

Substitute

Use lower-emission raw materials and energy sources, e.g. renewable energy.

- Benefit from decarbonisation of NSW electricity grid
- **3-yearly reviews of decarbonisation technologies**

Offset

Purchase verified high-integrity carbon offsets to reduce residual emissions (as a last resort).

- **For the emissions not feasible to avoid, reduce or substitute we will source and surrender offsets to meet:**
 - **Safeguard Mechanism obligations**
 - **Additional voluntary commitments to align with NSW Net Zero Future Act decline rates**

Recommended condition

Required to be included in GHG Mitigation Plan, which is a recommended condition

GHG - Scope 1, 2 and 3 emissions

Avoidance of gas Domain 1 has contributed to significant reductions to emissions

	Original Project	Amended Project	GHG Emissions Reductions
ROM Coal	695 Mt ROM coal (2025-2050)	429 Mt ROM coal (2027-2045)	>220 Mt ROM coal (comparison over 2027-2050)
Mine Life	2050 mining completion	2045 mining completion	5 years (20% reduction)
Scope 1 Emissions	26.6 Mt CO ₂ -e	15.1 Mt CO ₂ -e With Safeguard Mechanism: 9.51 Mt CO ₂ -e (net) With Safeguard Mechanism plus NSW decline rate: 7.97 Mt CO₂-e (net)	11.5 Mt CO ₂ -e (43% reduction)
Scope 2 Emissions	0.2 Mt CO ₂ -e	0.2 Mt CO ₂ -e	Negligible difference
Scope 3 Emissions	1,034.8 Mt CO ₂ -e	793.8 Mt CO ₂ -e	241.0 Mt CO ₂ -e (23% reduction)

GHG – Scope 1, 2 and 3 emissions

For scope 1 and 2 emissions, the most significant sources would be diesel consumption (58%) and fugitive emissions (39%)

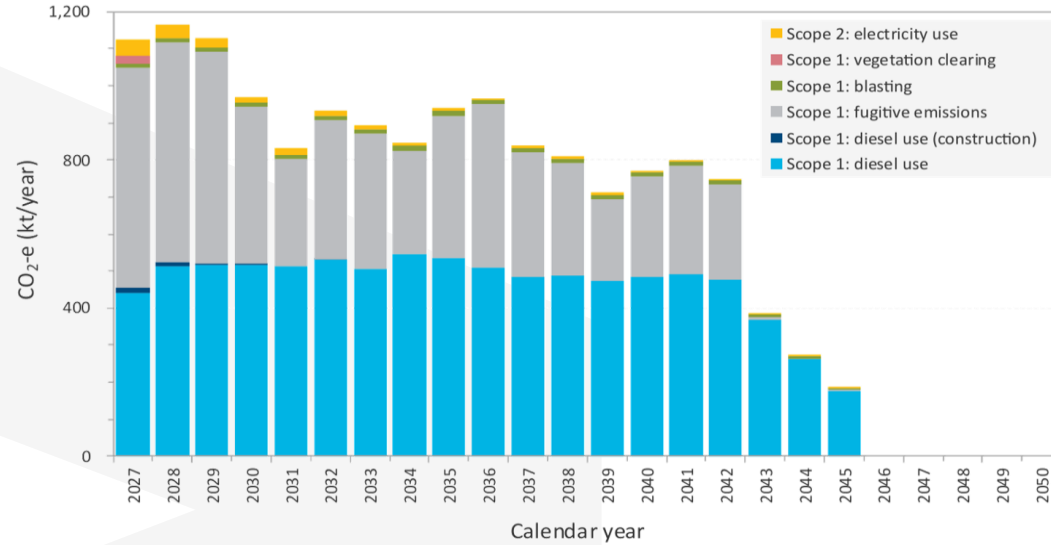


Figure 3.4 Contributions to scope 1 and scope 2 emissions (Scenario 3)

Table 3.7 Ranking of scope 1 and scope 2 sources based on project life emissions (Scenario 3)

Ranking	Source	Scope	Life of mine emissions (kt CO ₂ -e)	Contribution (%)
1	Diesel consumption	Scope 1	8,860.2	57.8%
2	Fugitive emissions from coal extraction	Scope 1	6,019.5	39.3%
3	Electricity consumption	Scope 2	214.9	1.4%
4	Blasting	Scope 1	200.7	1.3%
5	Vegetation clearing (loss of carbon sink)	Scope 1	23.8	0.2%

For scope 3 emissions, the most significant source would be from customers' use of product coal (98%)

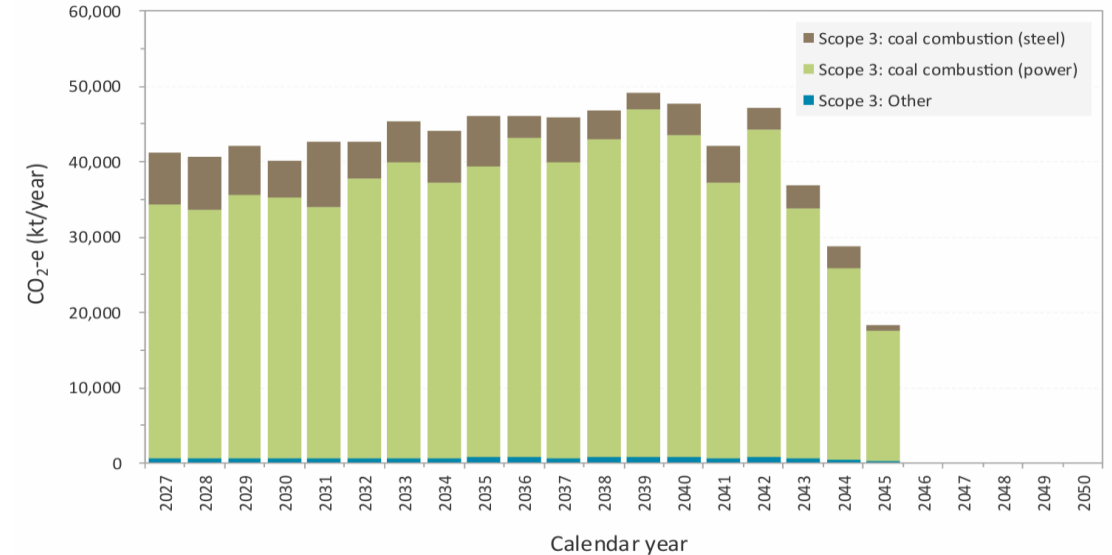


Figure 3.5 Contributions to scope 3 emissions (Scenario 3)

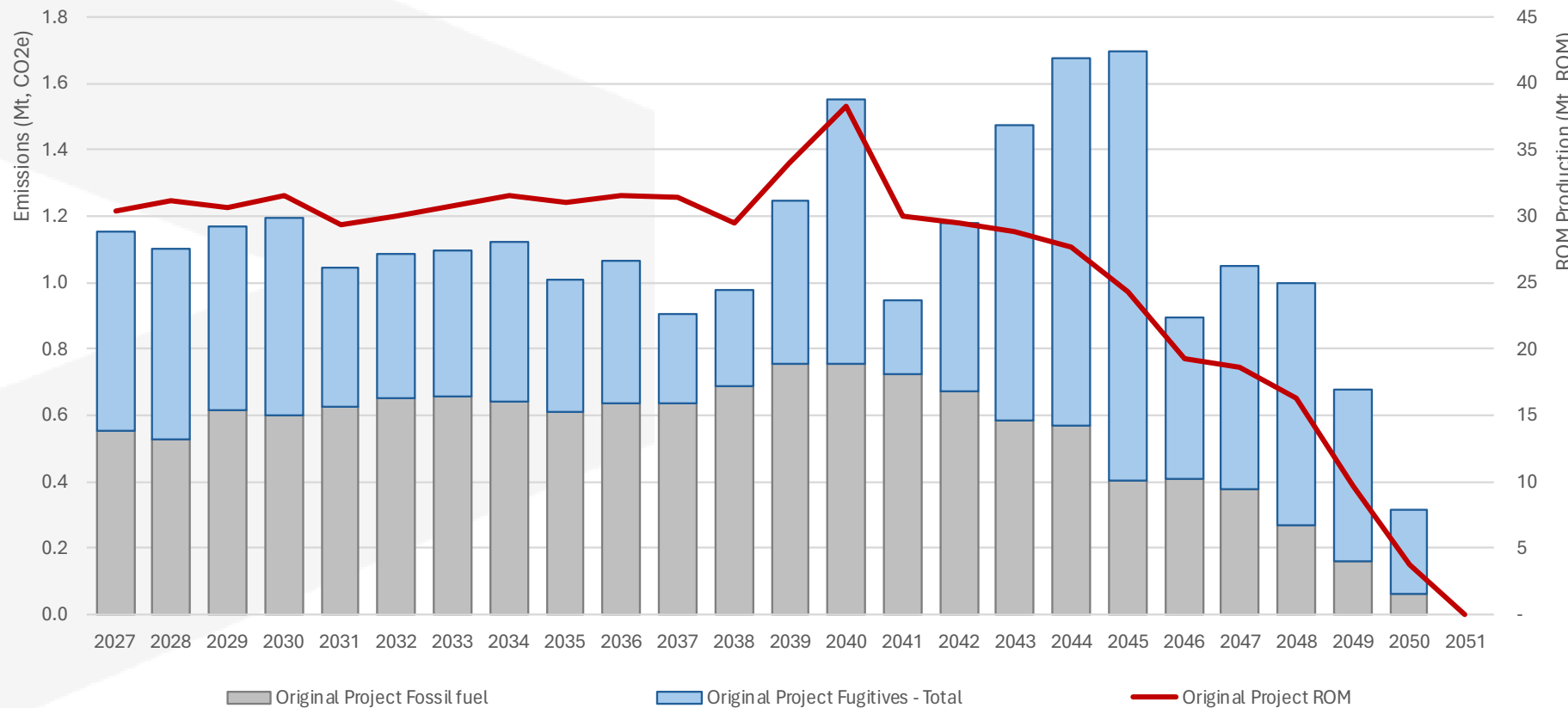
Table 3.8 Ranking of scope 3 sources based on project life emissions (Scenario 3)

Ranking	Source	Scope	Life of mine emissions (kt CO ₂ -e)	Contribution (%)
1	Product coal combustion (power generation)	Scope 3	690,050	86.9%
2	Product coal combustion (steel production)	Scope 3	91,245	11.5%
3	Product coal transport by sea (Port of Newcastle to Japan)	Scope 3	8,931	1.1%
4	Extraction, production & transport of liquid fuels: diesel	Scope 3	2,184	0.3%
5	Product coal transport by rail (HVO to Port of Newcastle)	Scope 3	1,318	0.2%
6	Embodied emissions	Scope 3	20.7	<0.1%
7	Electricity consumption	Scope 3	13.8	<0.1%

Original Project

Original Project Scope 1 Emissions : 26.64 Mt CO₂-e

Original Project : Scope 1 Emissions



Amended Project: Reduction by Avoidance (Mine re-design)

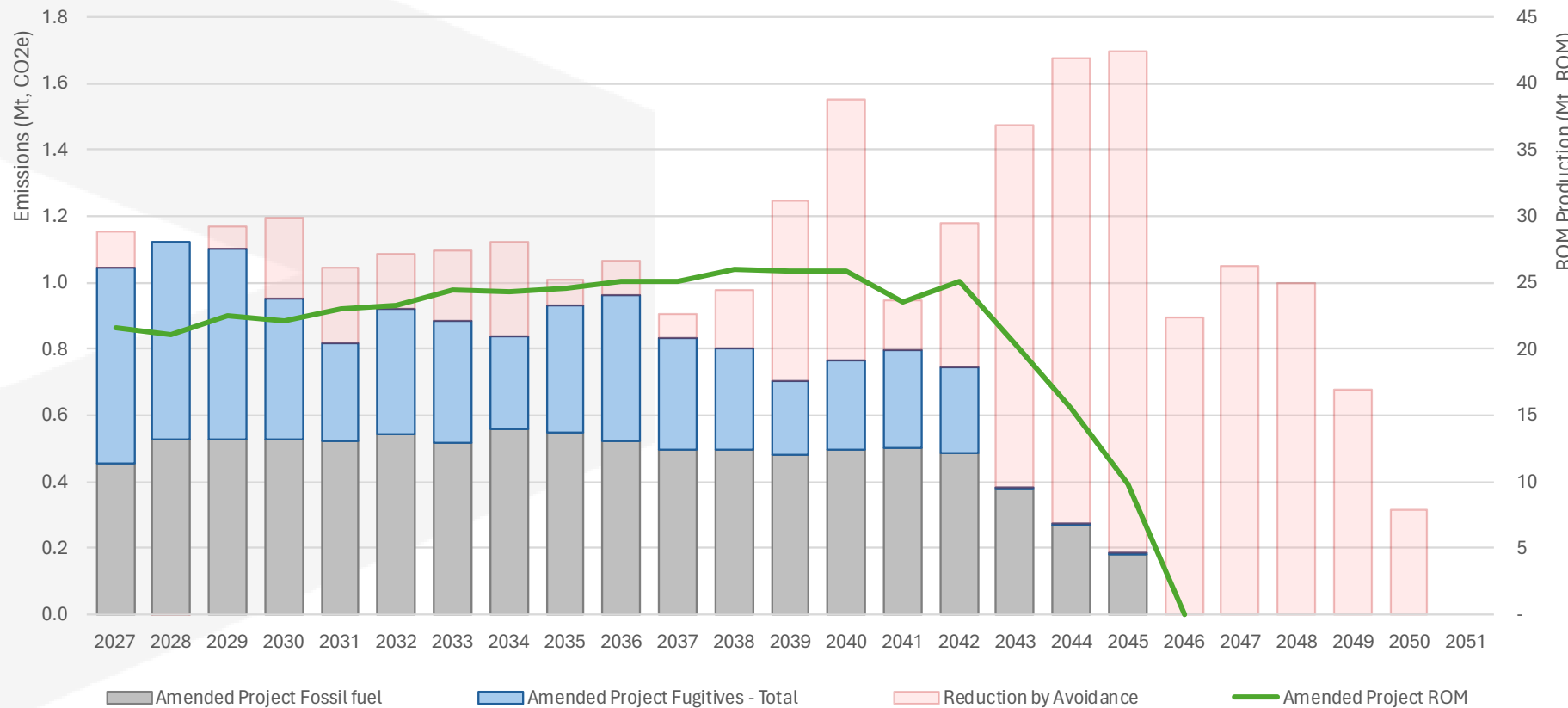
Original Project Scope 1 Emissions : 26.64 Mt CO₂-e

Amendment Reductions

Avoidance : -11.59 Mt CO₂-e

Total Scope 1 Emissions : 15.05 Mt CO₂-e

Amended Project : Scope 1 Emissions



Avoidance of gas Domain 1 has resulted in significant reductions to emissions:

- **34% reduction** in production (220 Mt ROM removed from mine plan).
- **20% reduction** in mine life
- **43% reduction** in total Scope 1 emissions.
- **55% reduction** in fugitive emissions including 89% reduction in fugitives from 2040 onwards.
- **31% reduction** in diesel emissions.

Amended Project: Reduction due to Safeguard

The mitigation hierarchy will continue to be applied to determine how to avoid, reduce, substitute or offset emissions, depending on the relative feasibility of these options

Original Project Scope 1 Emissions : 26.64 Mt CO₂-e

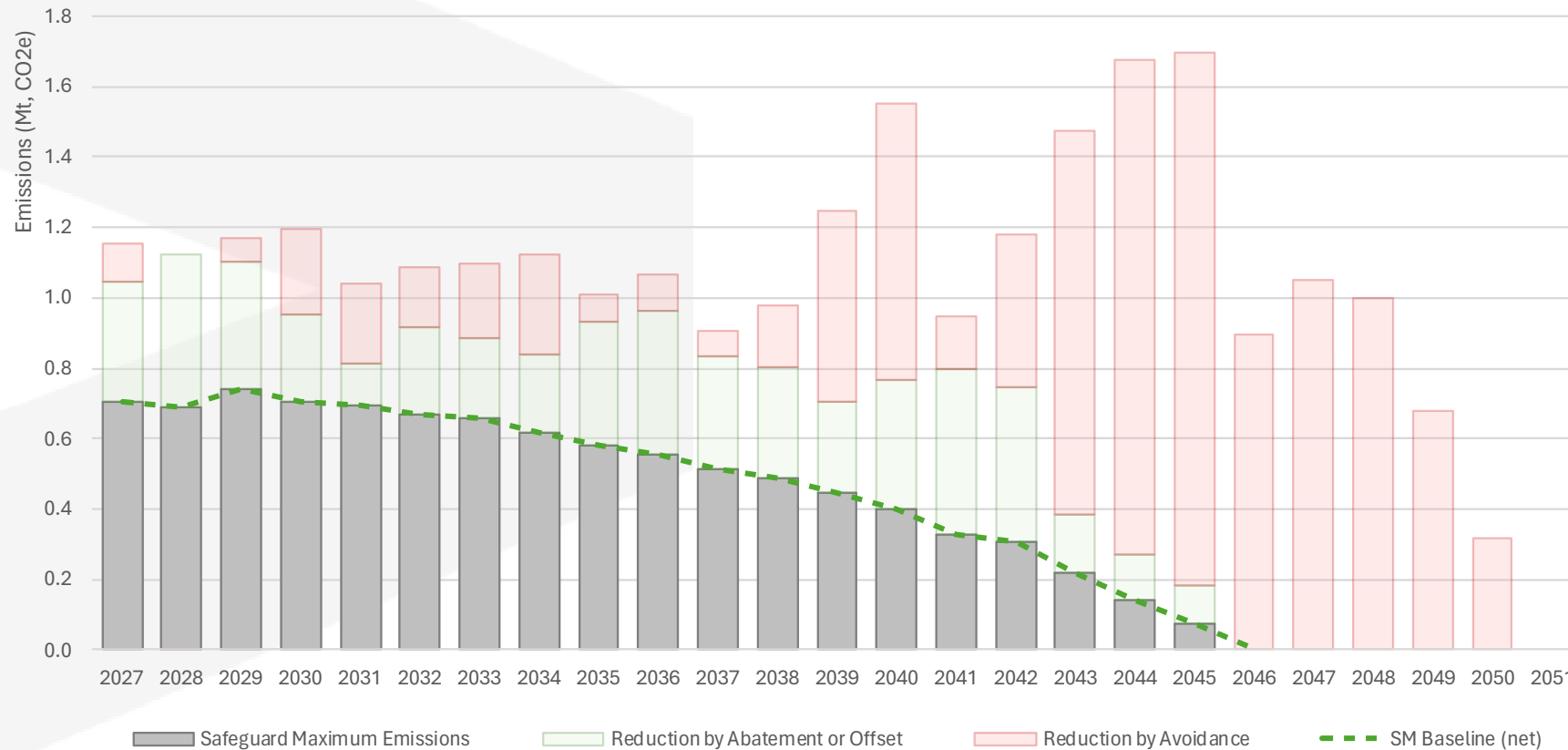
Amendment Reductions

Avoidance : -11.59 Mt CO₂-e

Abatement or Offset : -5.54 MtCO₂-e

Total Net Scope 1 Emissions with SGM : 9.51 Mt CO₂-e

Amended Project : Safeguard Scope 1 Emissions



The Safeguard Mechanism represents the Commonwealth's enforceable annual emissions limits for the Project

The Safeguard Mechanism has legislated decline rates of:

- a reduction of 4.9% per year from 1 July 2023 to 1 July 2029
- a reduction of 3.285% per year thereafter

Amended Project: Additional Reduction Commitment (beyond Safeguard) → Decline consistent with the NSW emissions trajectory

The mitigation hierarchy will continue to be applied to determine how to avoid, reduce, substitute or offset emissions, depending on the relative feasibility of these options

Original Project Scope 1 Emissions : 26.64 Mt CO₂-e

Amendment Reductions

Avoidance : -11.59 Mt CO₂-e

Abatement or Offset : -5.54 MtCO₂-e

NSW Commitments (Abate or Offset) : -1.54MtCO₂-e

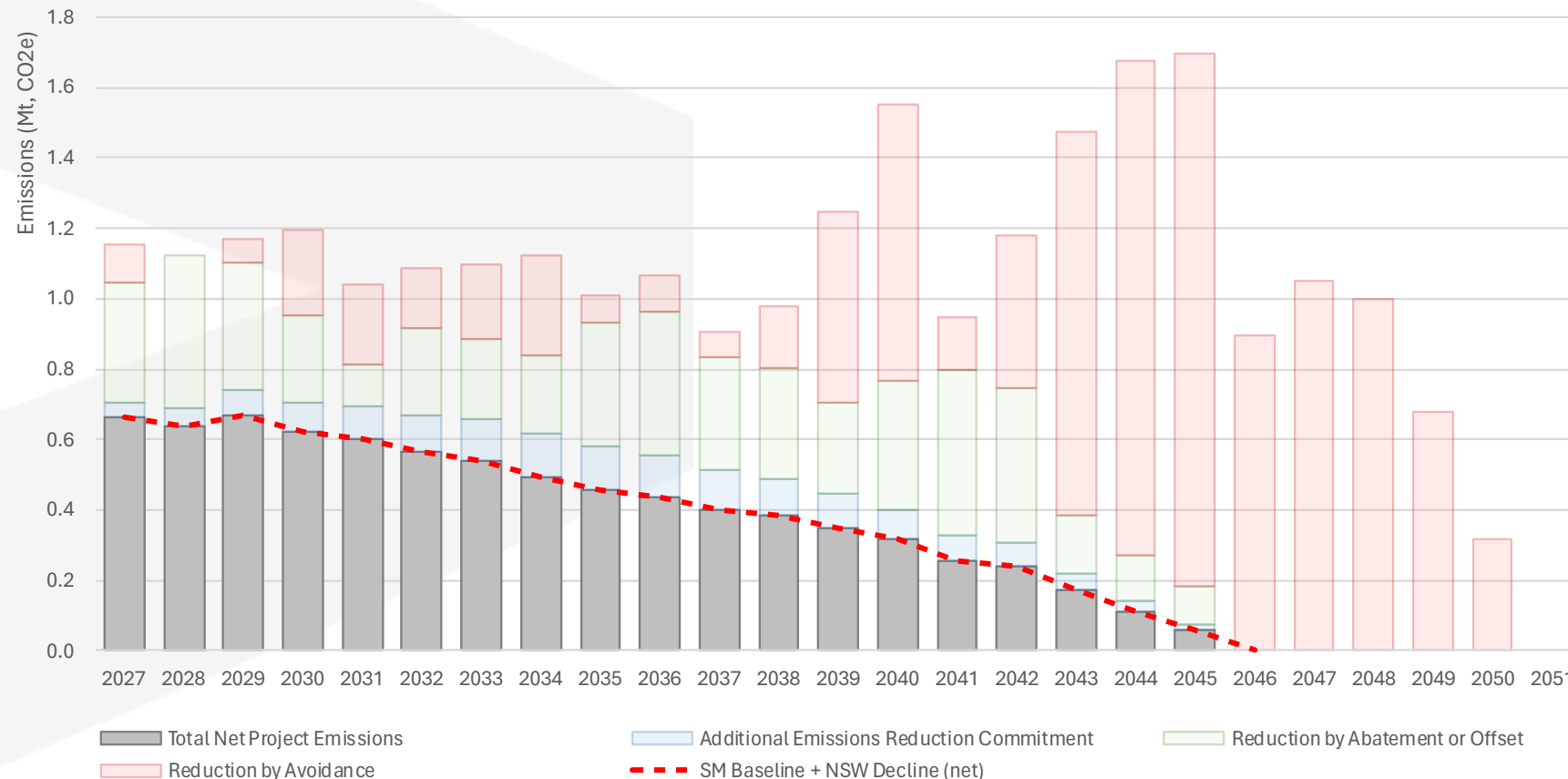
Total Net Scope 1 Emissions : 7.97 Mt CO₂-e
(SGM & NSW)

The net emissions trajectory (SGM + NSW decline) is proposed as the enforceable annual emissions limit for the Project

HVO will voluntarily implement a net emissions decline rate for the amended Project that is more ambitious than the Safeguard Mechanism requirements, involving:

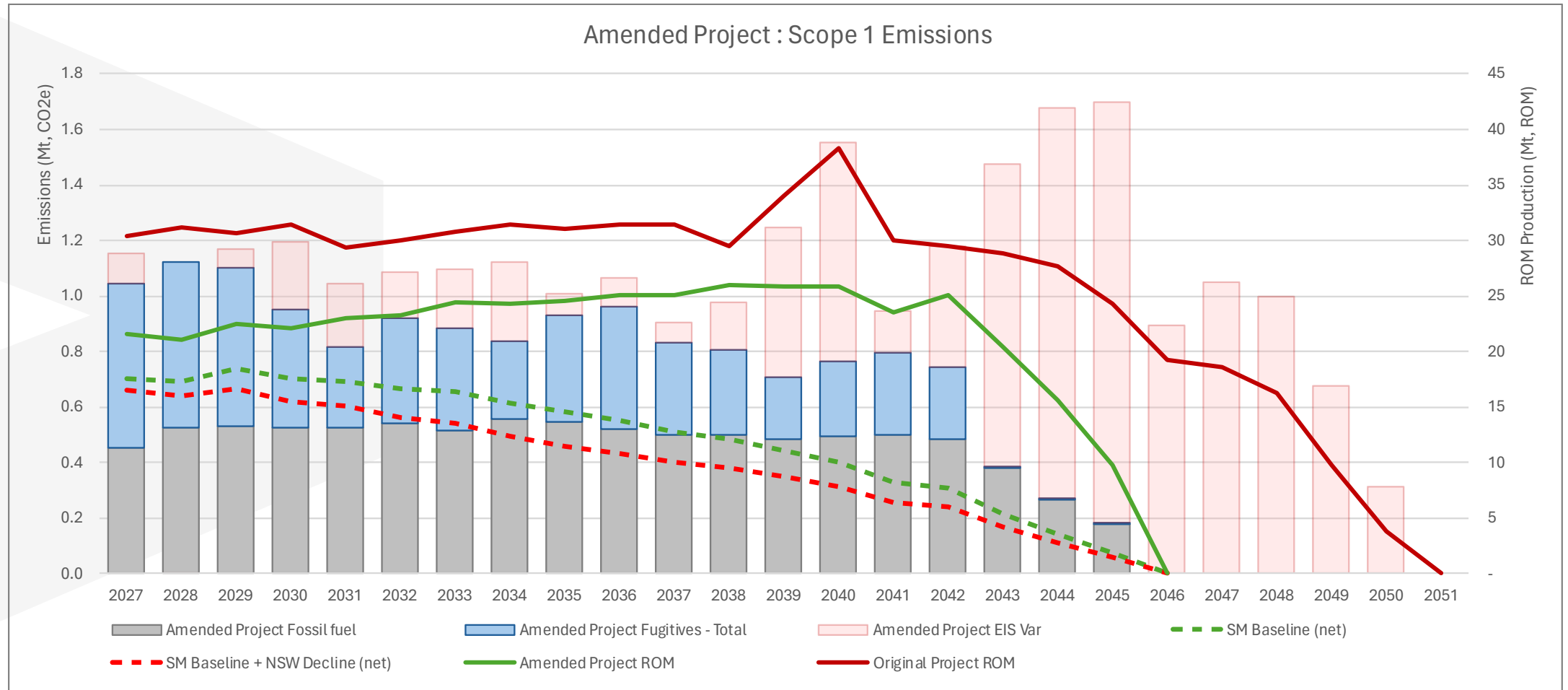
- a reduction of 5.9% per year from 1 July 2023 to 1 July 2029
- a reduction of 4.0% per year from 1 July 2030 to 1 July 2034
- a reduction of 2.58% per year thereafter

Amended Project : Total Net Scope 1 Emissions



Net emissions from the Project follow a downward trajectory that is consistent with the NSW emissions trajectory

The net emissions trajectory (SGM + NSW decline) is proposed as the enforceable annual emissions limit for the Project



GHG – Scope 1 emission intensity

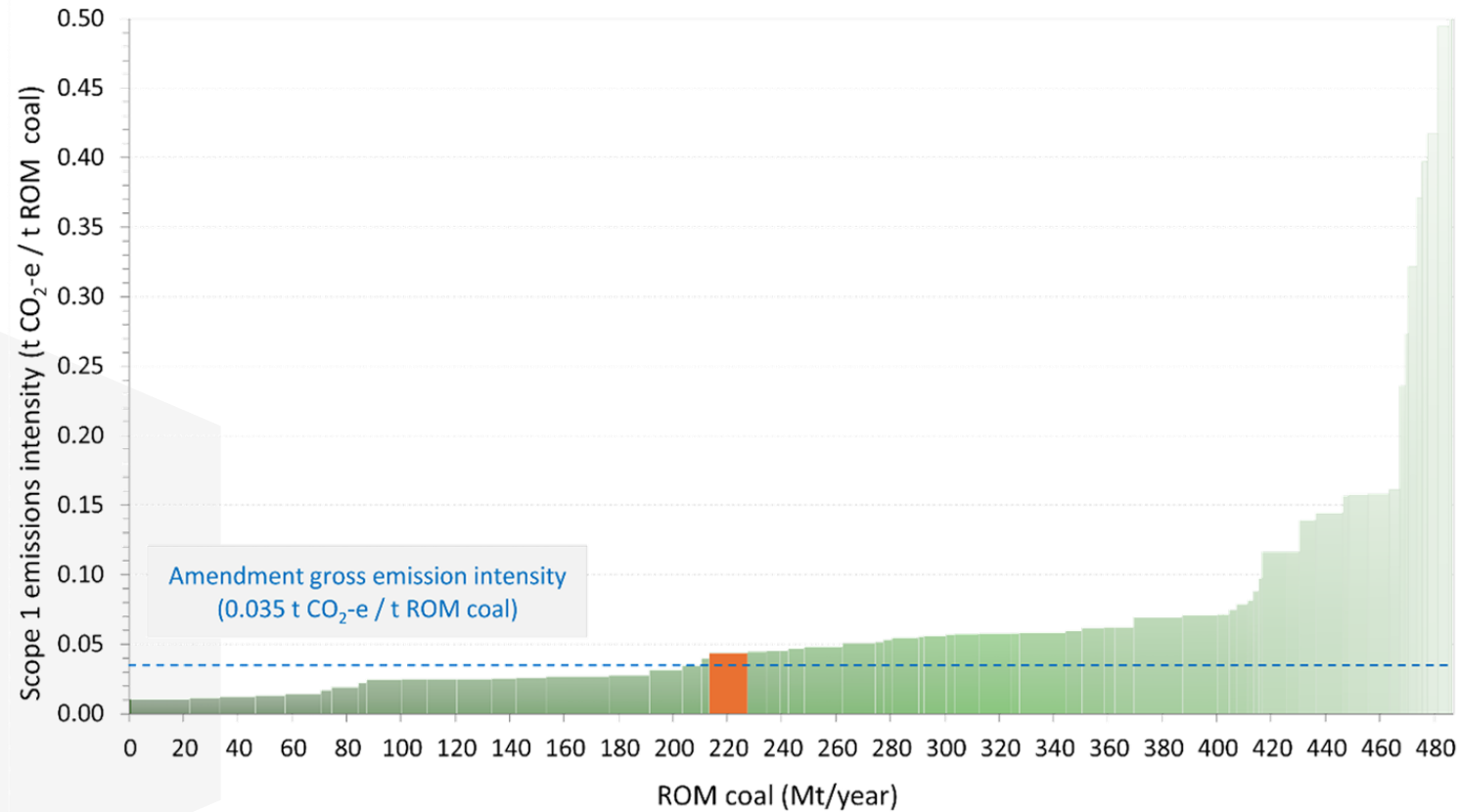


Figure 3.16 Scope 1 emissions intensity for the Amendment compared with all Australian coal operations in 2023-2024

- The HVO existing mine and Project's gross emission intensity is low relative to other Australian coal operations
- The Project's gross emission intensity is significantly lower than the coal industry average of 0.0653 t CO₂-e per ROM tonne (from Safeguard)

GHG – Potential future initiatives for mitigation

- Use of Australian Renewable Energy Agency (ARENA)'s Technology Readiness Level (TRL) and Commercial Readiness Index (CRI) to assess options for fleet decarbonisation
- A number of these measures were investigated and found not yet ready for implementation.
- **HVO has committed to reviews of technologies and abatement measures every three years.**

Table 3.11 Potential future initiatives for mitigation

Mitigation measure	Status	Comments	Effects on GHG emissions
Scope 1			
Fleet decarbonisation technologies	Review	Consideration of the use of alternatives to diesel fuel, including biofuels (e.g. renewable diesel) and hydrogen, and the transition to an electric-powered mine fleet as these technologies advance and more information becomes available. A review will be undertaken every three years.	Not quantifiable at this stage, due to the inherent uncertainty in both technical and economic outcomes.
Pre-drainage of coal seam to reduce fugitive emissions during coal extraction	Proposed trial	Trial of gas pre-drainage in areas with higher potential, to investigate feasibility and effectiveness. The design of the trial will be developed in consultation with relevant stakeholders to the satisfaction of the Planning Secretary and be provided within two years of commencement of the Project.	Not quantifiable at this stage due to the inherent uncertainty in both technical and economic outcomes.
Scope 2			
Use of renewable energy	Review	Whilst this is currently not a significant source of emissions, HVO will continue to consider the use of renewable energy.	Not quantifiable at this stage, due to the inherent uncertainty in both technical and economic outcomes.

GHG – Proposed Gas Drainage Trial

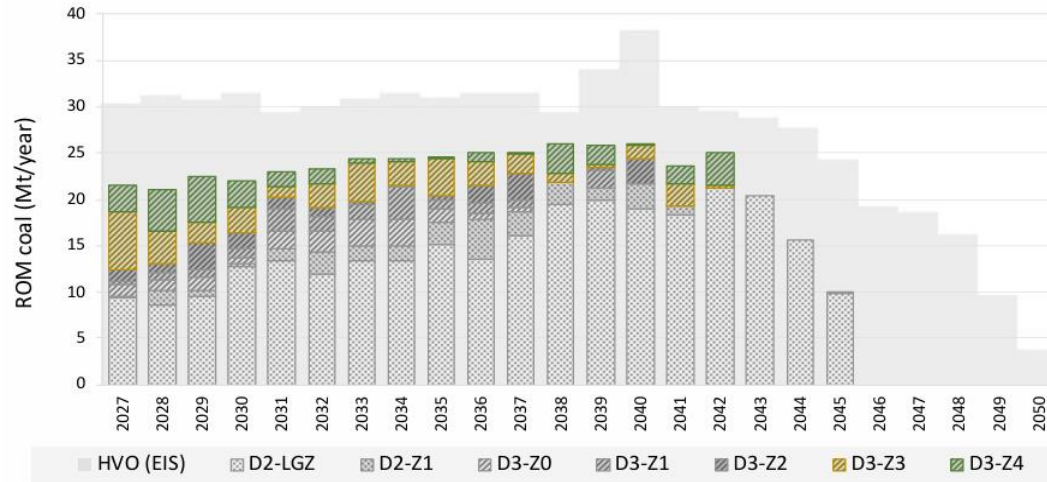


Figure 3.11 ROM coal production by zone

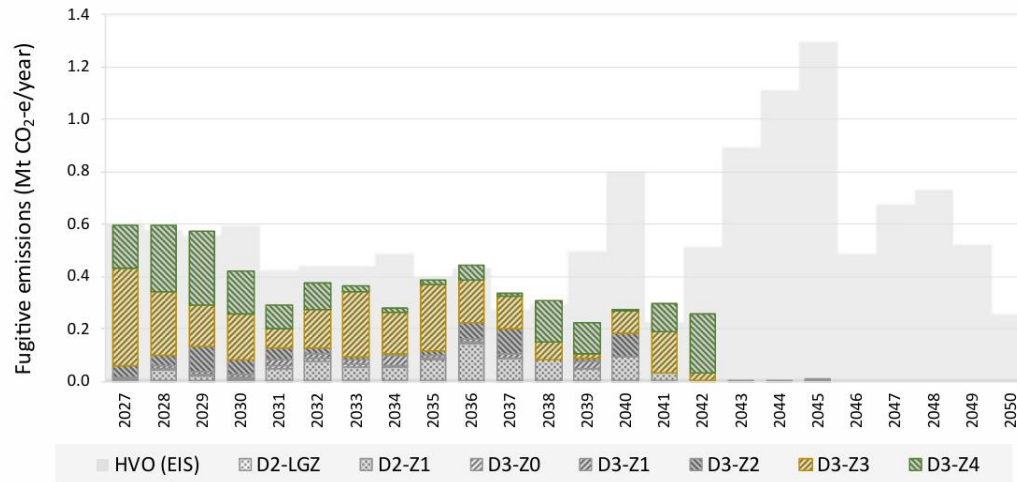


Figure 3.12 Fugitive emissions by zone

Table 3.10 HVO fugitive gas assignment model

	Domain 2 - HVO North				Domain 3 - HVO South			
	ROM (Mt)	Gas (m ³ /t)	CH ₄ (%)	CO ₂ (%)	ROM (Mt)	Gas (m ³ /t)	CH ₄ (%)	CO ₂ (%)
LGZ/Z0**	280.5	0.25	0%	50%	16.5	0.57	32.6%	24.6%
Z1	26.5	2.08	84%	10%	17.1	1.11	55.6%	34.2%
Z2					18.1	2.47	76.6%	22.0%
Z3					39.0	5.73	57.3%	42.3%
Z4					31.4	6.57	45.5%	54.5%
20 m below floor	-	0.20	3.8%	22.2%	-	3.29	45.5%	54.5%

The outcomes of the trial will not impact the project's net emissions trajectory that we have committed to.

The effectiveness of pre-drainage at open cut mines is as yet unproven (IEAPM, July 2024).

Zones 3 and 4 in Domain 3:

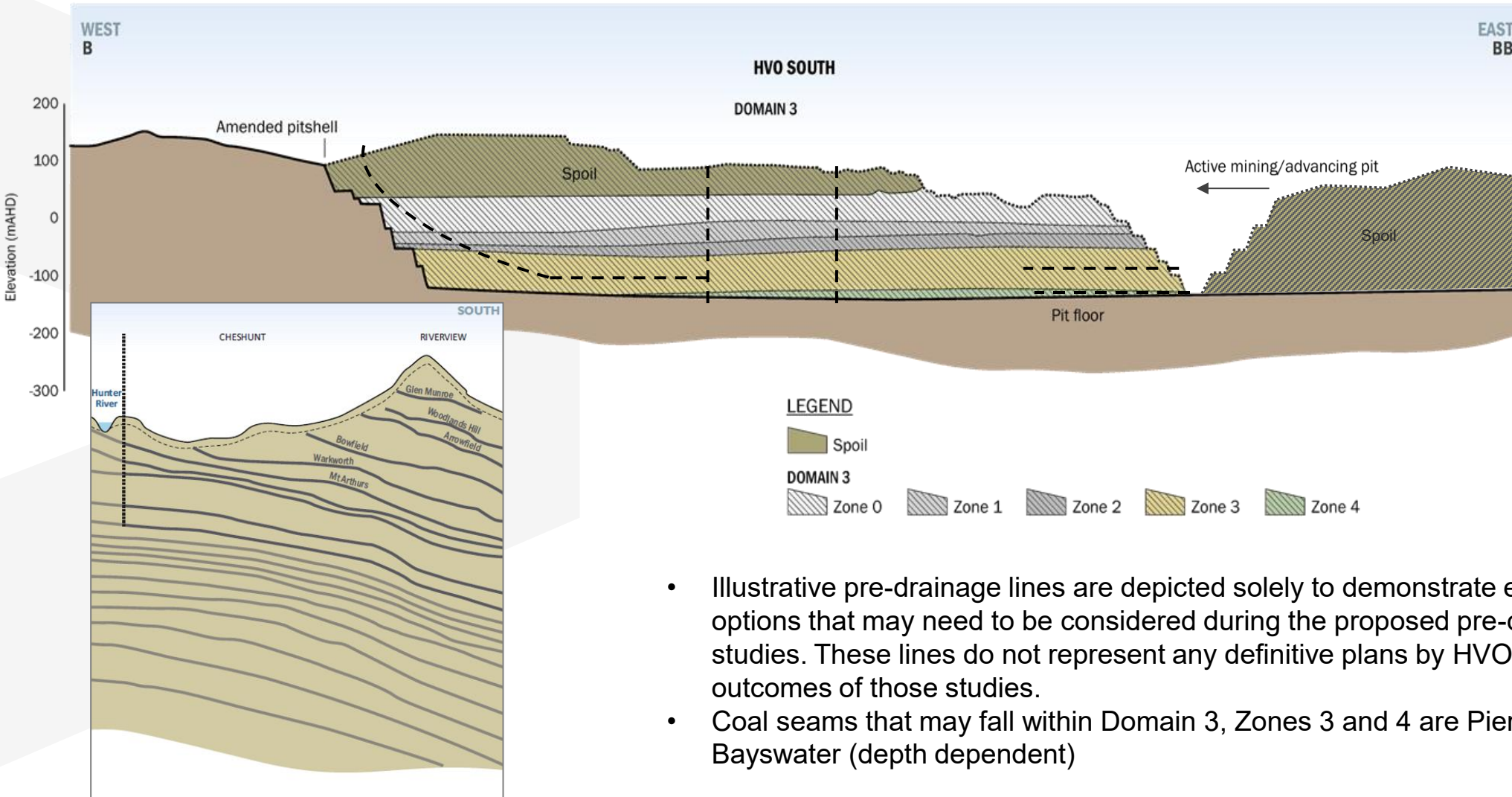
- Are zones which are currently being mined at HVO, with emissions managed as per the Safeguard Mechanism
- Have comparatively higher gas content than other areas of HVO, but are still low emission intensity areas relative to many other coal operations
- Contain mixed gas, which means the methane component is quite low

Complexities to examine in feasibility studies include:

- Practicability in an existing, active open-cut
- Technical and economic feasibility
- NGER framework for pre-drainage

Hence HVO's commitment to conduct a trial is appropriate.

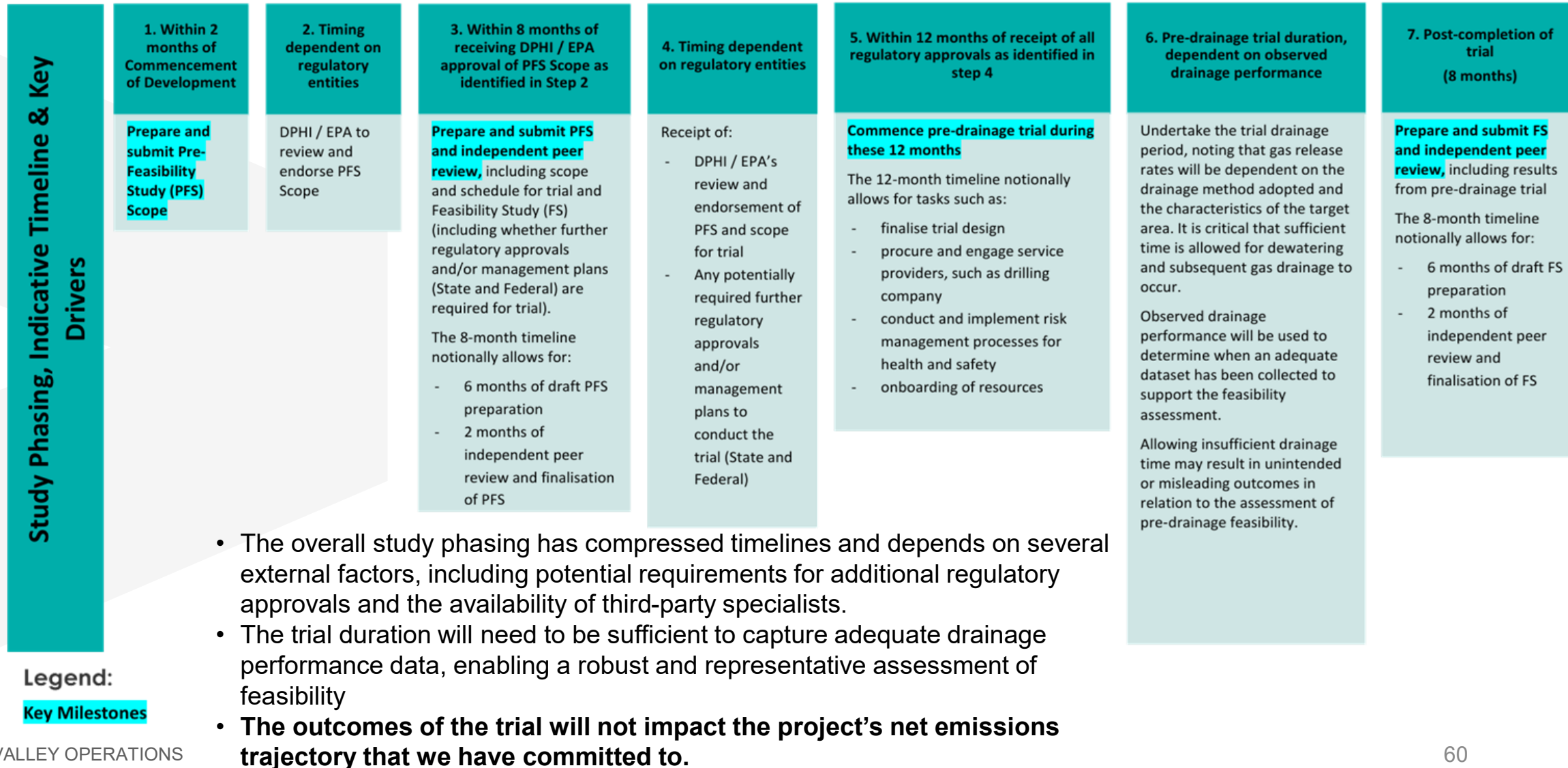
Illustrative examples of pre-drainage (noting that seam/ply definition is not illustrated)



- Illustrative pre-drainage lines are depicted solely to demonstrate examples of the types of options that may need to be considered during the proposed pre-drainage feasibility studies. These lines do not represent any definitive plans by HVO or pre-empt the outcomes of those studies.
- Coal seams that may fall within Domain 3, Zones 3 and 4 are Piercefield, Vaux, Broonie, Bayswater (depth dependent)

GHG – Proposed Gas Drainage Trial – Study Phasing

Study Phasing, Indicative Timeline & Key Drivers



GHG – Potential future initiatives for diesel mitigation

HVO's commitment to 3-yearly reviews of decarbonisation technologies will allow potential future options for fleet decarbonisation to be identified

- Assessment of diesel fleet decarbonisation TRL/CRI, independently peer reviewed by Hatch
- IEAPM reviewed this assessment and concluded that it, "...is a fair and balanced appraisal of the current status of these options and their potential for application at HVO. HVOPL is positioned to stay abreast of developments in technology to avoid diesel fuel usage and their implementation."
- The review considered various fuel and energy sources
- While technologies such as hybrid, fuel cell or battery power are developing and being adopted in smaller, non-mining equipment (such as road vehicles), they are not yet adequately developed for use in large-scale mining equipment.

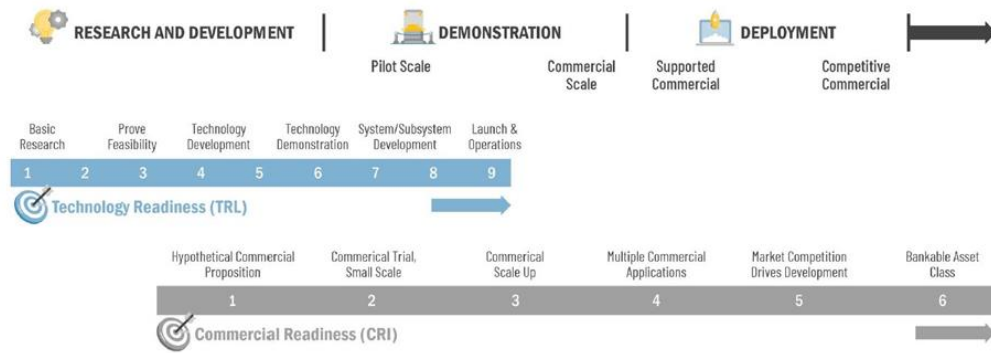


Figure 3.8 Technology Readiness Level and Commercial Readiness Index concepts

PHASES	TRL	DESCRIPTION	 RECIPROCATING ENGINES >30 L	 GRID SUPPLIED	 HYBRID STORAGE/ ENGINE	 HYBRID STORAGE/ FUEL CELL	 HYBRID STORAGE
			Diesel Hydrogen Ammonia Bio-Diesel - 20% Synthetic Diesel - 100% Catenary Trailing cable		Storage / Engine / Regen Storage / Engine / Static Charge / Regen Storage / Engine / Catenary / Regen Storage / Engine / Catenary / Static Charge / Regen	Storage / Fuel Cell / Regen Storage / Fuel Cell / Static Charge / Regen Storage / Fuel Cell / Catenary / Regen Storage / Fuel Cell / Catenary / Static Charge / Regen	Storage / Regen Storage / Engine / Static Charge / Regen Storage / Catenary / Regen Storage / Catenary / Static Charge / Regen
Basic research	1	Basic principles and research					
	2	Application formulated					
	3	Proof of concept					
Applied research	4	Components validated in laboratory environment					
	5	Integrated components demonstrated in a laboratory environment					
Development	6	Prototype demonstrated in relevant environment					
	7	Prototype demonstrated in operational environment					
	8	Technology proven in operational environment					
Implementation	9	Technology refined and adopted					

Figure 3.9 Potential technologies for powering surface mining equipment with current TRL

GHG – Potential future initiatives for diesel mitigation

- Overhead catenary support for diesel-electric trucks is used in some limited non-coal instances globally.
- Little opportunity to use this sort of system in the coal sector due to the progressive nature of mine advancement and highly variable haulage routes.
- Draglines, shovels and large-capacity drills are available, and are currently used, or have been previously been used, at HVO.
- Cabled connection renders them useful for specific, usually high volume, tasks only. As a multi-seam open cut with multiple thin seams of coal and interburden which require frequent relocation, a large number of smaller hydraulic excavators in backhoe configuration are required for efficient mining.
- Some equipment is utilised as electric cable supplied machines at HVO. However, the further use of electric equipment for all excavators and drills is constrained by practicality and efficiency.
- As fleet is replaced, forecasts of their respective uses will be assessed including whether lower GHG options are available**

PHASES	TRL	DESCRIPTION	GRID SUPPLIED ELECTRICAL POWER					RECIPROCATING ENGINES (> 30L OPTIONS)				
			DIESEL ELECTRIC WITH CATENARY					ELECTRIC TETHERED CABLE				
			Trucks overhead mounted	Trucks parallel side mounted	Excavators	Loaders and dozers	Ancillary	Trucks	Excavators / Shovel	Excavators / Backhoe	Loaders and dozers	Ancillary
Basic research	1	Basic principles and research										
	2	Application formulated										
	3	Proof of concept										
Applied research	4	Components validated in laboratory environment										
	5	Integrated components demonstrated in a laboratory environment										
Development	6	Prototype demonstrated in relevant environment										
	7	Prototype demonstrated in operational environment										
	8	Technology proven in operational environment										
Implementation	9	Technology refined and adopted										

Figure 3.10

Mining equipment optionality with current TRL – grid supplied electrical power and alternate fuels

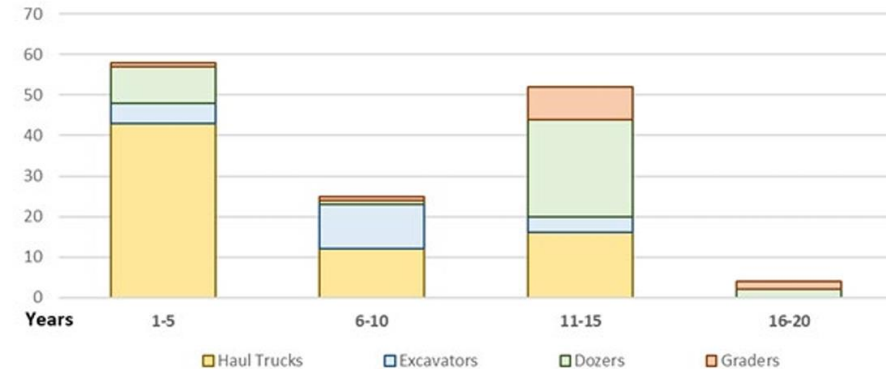


Figure 3.7

Indicative estimate of equipment purchase (year 1 is 2027)



NSW EPA's Climate Change Licensee Requirements

After conducting extensive consultation and evidence-gathering, the NSW EPA recently finalised its GHG Mitigation Guide and Climate Change Licensee Requirements. **The EPA's final mitigation measures for open-cut mines reflect comparable positions to HVO's assessment.**

The finalised requirements:

- Provide a range of mitigation measures for consideration
- Focus on gassy undergrounds with high methane
- Recognise barriers to feasibility, the need for site-specific assessments, and hard-to-abate emissions
- Introduce a range of comprehensive GHG Mitigation plan preparation, reporting and goal setting measures (based on net emissions), to allow emissions forecasting and emissions reduction initiatives to be understood and implemented where feasible

NSW EPA Coal Mine Mitigation Measures	Proposed draft measures during consultation (with varying commencement dates, not always listed here)	Final measures based on evidence gathered
Fugitive methane at UG mines	• Gas drainage with flaring or utilisation required • Minimise methane leaks from old workings • VAM abatement by Jul 2030 for mines >100ktCO₂-e	Focus on gassy undergrounds • If drained gas has CH₄ concentration >30%, it must be flared or utilised • Minimise leaks from old mine workings • VAM abatement for mines with consistent >0.2% CH₄ VAM, and operating after 2030
Diesel Emissions	Low carbon fuel (LCF) mandates from 5% LCF by 2030 to 25% LCF by 2040, plus from 75% increasing to 100% of large fleet being "zero-emission" vehicles between 2040 to 2050	Withdrawn Acknowledgment that this is a high-cost measure, limited availability, uncertainty of fleet development and grid capacity constraints. NSW-wide measures need to be looked at, not just coal in isolation.
Fugitive methane at OC mines	Compulsory OC pre-drainage was suggested by the EPA as a consultation question	Not progressed Acknowledgement of site-specific nature of OC fugitives and no one-size fits all approach.

Scope 3 emissions conditions are not required

- Based on historical data (2023-2024), saleable coal from the HVO Complex is predominantly sold to customers in export markets in Asia, with Japan being the largest export destination over the past 2 years.
- The primary countries that HVO Complex coal has been exported to all have NDCs under the Paris Agreement (or have followed equivalent standards).

HVO acknowledges that the IPC is required to consider whether conditions are needed to minimise GHG emissions to the greatest extent possible.

- Most significant source of Scope 3 emissions is from customers' use of product coal (98%) which is not controlled as part of the project.
- The NSW Guide for Large Emitters does not require proponents to set goals in respect of scope 3 emissions for this reason.
- Coal from the HVO project will continue to be exported primarily to countries that are signatories to the Paris Agreement and that have their own Nationally Determined Contributions (or equivalent standards); and
- The project is generally consistent with the NSW EPA's recommendation in the Greenhouse Gas Mitigation Guide for NSW Coal Mines that coal mining companies take opportunities to reduce scope 3 emissions by selling coal to buyers in countries that have strong climate policies and emissions reduction targets.
- **Having regard to the above, and the fact that the Amended Project reduces Scope 3 emissions by 23%, we do not consider conditions relating to Scope 3 emissions are required.**



* Destinations based on coal sales data for 2023 and 2024

GHG – Climate Change Considerations

Amended Project emissions

- Total of about 809 Mt CO₂-e of GHG emissions (between 2027 and 2045) including scope 1, 2 and 3 emissions. This would equate to 0.048% of the global emissions budget of 1,700,000 Mt CO₂-e for the period 2000 to 2050 (CCA 2014)
- It will produce a maximum of about 50 Mt CO₂-e of annual emissions in 2039 and an annual average of about 43 Mt CO₂-e. The peak would equate to 0.132% of the global energy-related CO₂ emissions of 37,800 Mt in 2024 (IEA 2025)

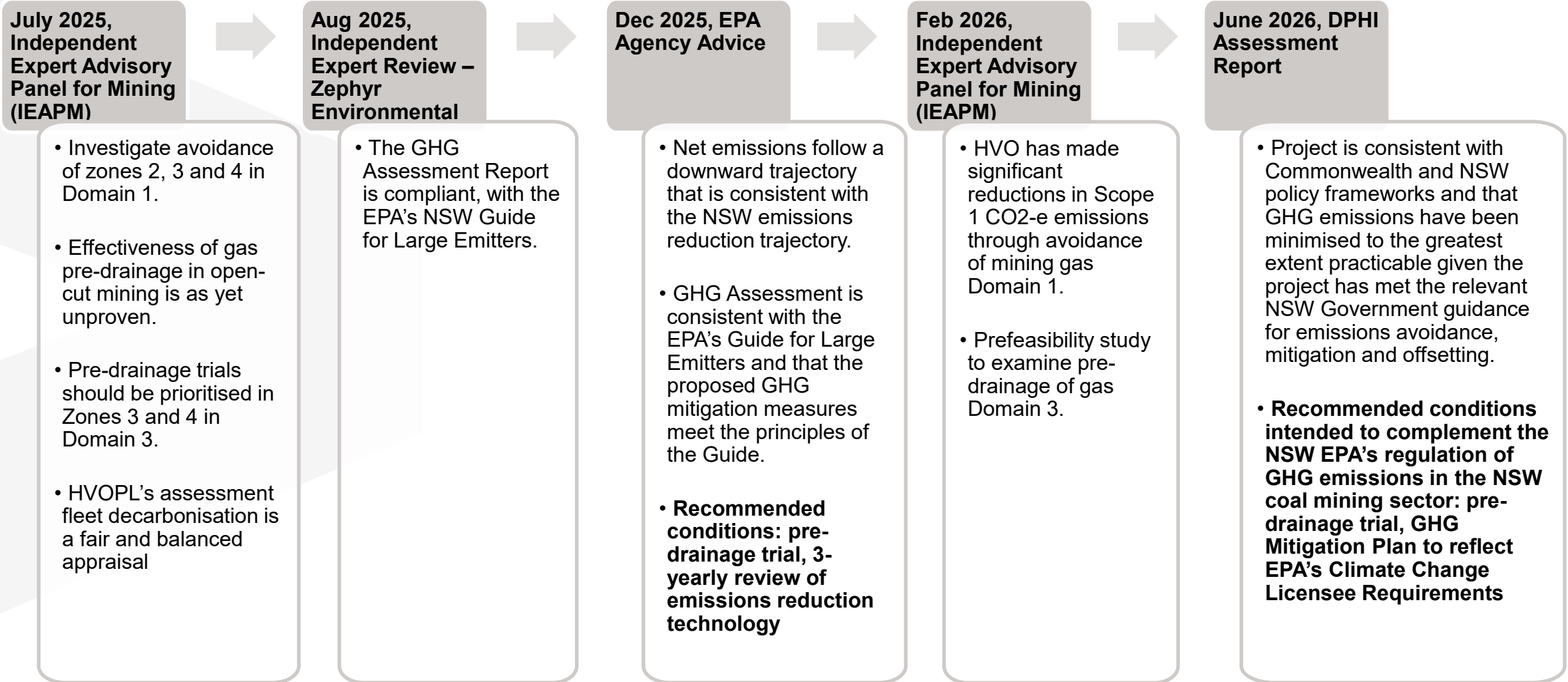
Effects of climate change have been examined at global, national and local levels

- Global climate effects based on AR6 (IPCC) include: temperature increase, extreme weather events, water scarcity, sea level rise, high risk of ecosystem and biodiversity loss and disruption, impacts to human health (heat, disease, mental health), food and water security
- National climate effects based on CSIRO and the Bureau of Meteorology (BoM) State of the Climate 2024 report include: temperature increase, extreme heat, marine heatwaves, fire weather, heavy rainfall, sea level rise, ocean acidification.
- NSW and Australian Regional Climate Modelling (NARClIM) projects that the locality of the Amended Project, the Hunter region, is susceptible to: agricultural sensitivity, water resource pressures, bushfire exposure, sea level rise, infrastructure vulnerability, community exposure.

- The Amended Project will contribute to global GHG emissions.
- However, this contribution will be very small as a proportion of global GHG emissions and is not sufficient to materially affect the extent or timing of climate change impacts in the locality, which are driven by global cumulative emissions.
- **It is also not possible to conclude that the Amended Project's GHG emissions will lead to a net increase in global emissions, and therefore contribute to an increase in global temperatures, as this outcome is dependent on multiple factors external to the Amended Project.**

GHG – Summary of Independent Expert and Agency Advice

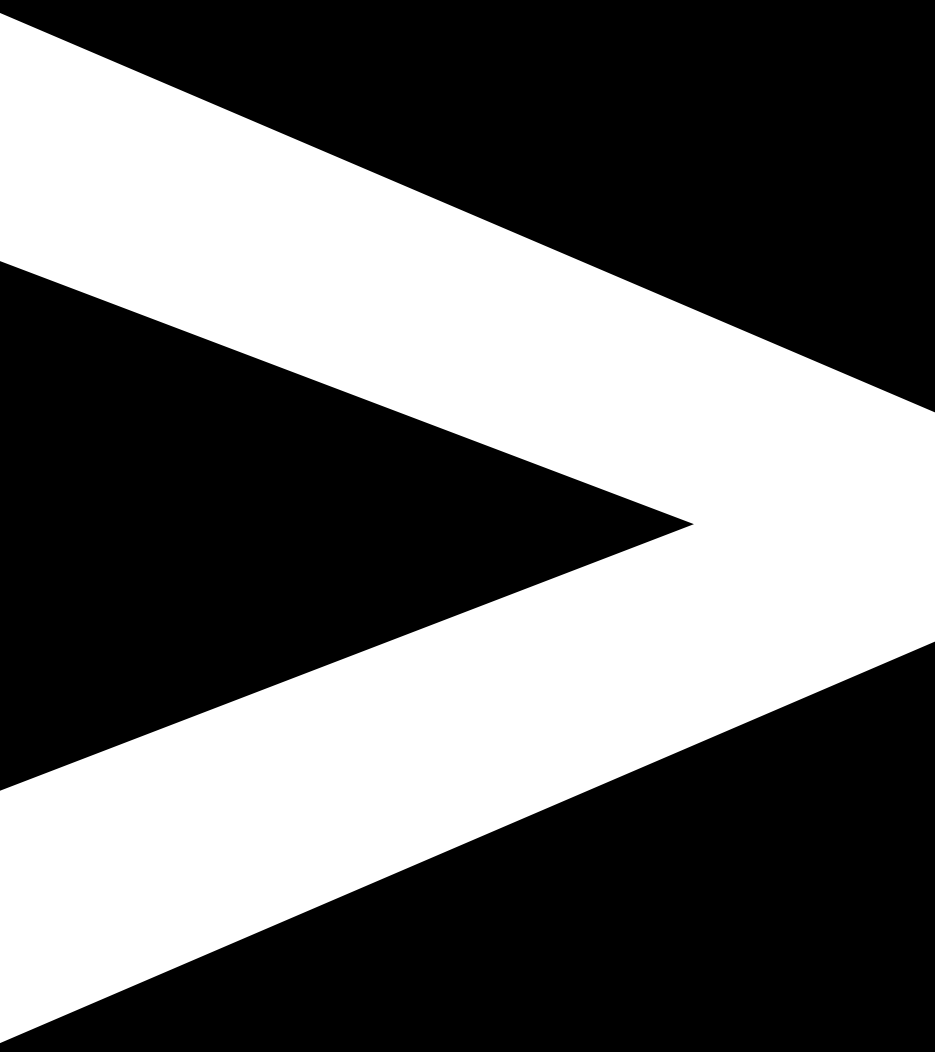
GHG emissions and mitigation measures have been comprehensively assessed, and the recommended conditions will ensure that GHG emissions continue to be minimised to the greatest extent practicable, in a manner consistent with Commonwealth and State policy frameworks



GHG – Summary

GHG emissions and mitigation measures have been comprehensively assessed, and the recommended conditions will ensure that GHG emissions continue to be minimised to the greatest extent practicable, in a manner consistent with Commonwealth and State policy frameworks

- Comprehensive GHG quantification
- Independent expert reviews
- Application of mitigation hierarchy, with significant avoidance applied
- Emissions reduction consistent with NSW trajectory
- Emissions from the original project are included in NSW emissions modelling, which demonstrates that the coal sector is reducing emissions consistent with NSW trajectory
- Consistent with Commonwealth and State GHG policy frameworks



Biodiversity



Existing Landscape

PROJECT
HUNTER VALLEY
OPERATIONS

- Landscape within and surrounding HVO has been extensively modified by historical agricultural, mining and rural land uses
- Large areas proposed for disturbance have already been approved under existing mining consents
- Only approximately 24% of the combined Development Footprints supports native woody vegetation



HUNTER VALLEY OPERATIONS

HVO South Native Vegetation Extent

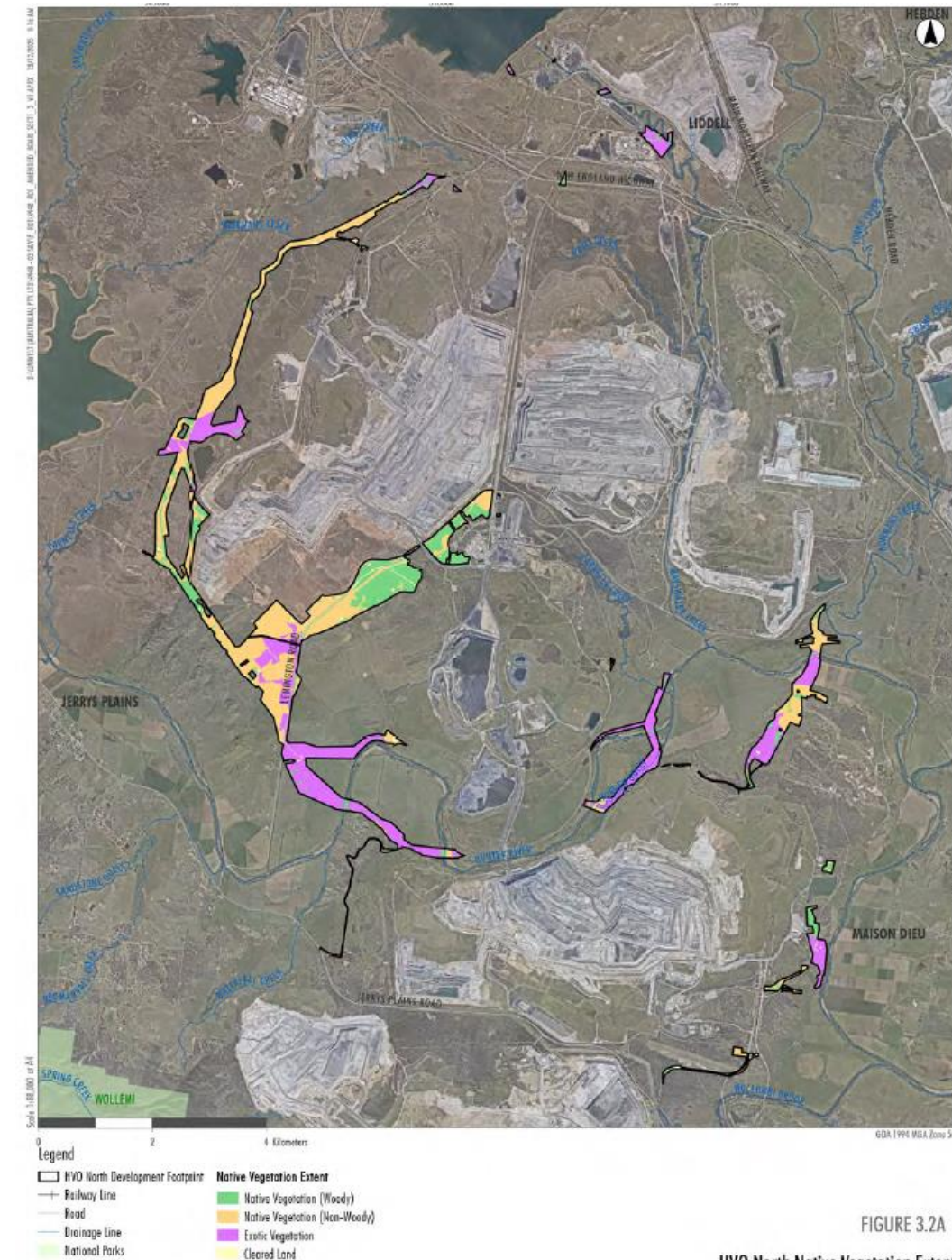


FIGURE 3.2A

HVO North Native Vegetation Extent



Avoidance and minimisation

- Avoidance of significant biodiversity constraints, which include SAI entities, has been a key objective of the Project
- Impacts minimised as far as practically possible
- The Department considers that HV Operations designed the Project to avoid and minimise impacts on biodiversity values

Key Biodiversity Features Avoided Through Project Design and Refinement

Biodiversity Feature	Project Component Area Avoided (ha)						Total Area Avoided Since EIS (ha)
	Lemington Road Realignment (exhibited EIS)+	Lemington Road Realignment (current)	Transmission Line Alignment	River Red Gum Additional Disturbance Area	Removal of Previous Impacts	Post-RTS Project Amendments	
Native forest and woodland habitat	19.5	25.4	23.6	5.8	90.2	9.8	154.8
Native and exotic grasslands	6.3	18.8	161.2	N/A	33.7	5.8	219.5
Hunter Valley delma (<i>Delma vescolineata</i>) habitat [^]	4.7	4.8	145.4	N/A	0.0	5.7	155.9
BC Act-listed Features							
Warkworth Sands Woodland EEC	7.2	9.8 [#]	0.0	0.0	0.0	0.3	10.1
Central Hunter Grey Box – Ironbark Woodland EEC	9.1	12.7	4.6	0.0	87.4	49.5	154.2
Hunter Floodplain Red Gum Woodland EEC	0.0	0.0	0.4	5.8	1.3	0.6	8.1
Hunter Valley Footslopes Slaty Gum Woodland VEC	2.6	1.1	0.0	0.0	1.5	0.0	2.6
River Red Gum (<i>Eucalyptus camaldulensis</i>)	0	0	5 individuals	255 individuals	0	0	260 individuals
[^] PCT3431 DNG, Thinned Woodland, Scattered Regeneration and PCT4089 DNG. ⁺ Not included in total (ha). [#] Not inclusive of approximately 2.3 ha of possible WSW EEC included in original impact calculations.							

Source: HVO BDAR (Umwelt Feb 2026)

Residual Impacts

- Direct impact to 184.8 ha of native vegetation requiring offsetting under the Biodiversity Offsets Scheme
- Following project refinements, only one candidate SAI entity remains – Hunter Floodplain Red Gum Woodland EEC:
 - Design refinements avoided 8.1 ha and approx. 260 River Red Gum trees
 - Residual impacts to 1.2 ha
 - 39 Ecosystem Credits & 25 Species Credits to appropriately offset
 - **Additional:** Proposed restoration strategy would establish approx. 6.6 ha of the EEC adjacent to existing remnants
 - **DPHI concluded the Project is unlikely to contribute significantly to the extinction risk of Hunter Floodplain Red Gum Woodland EEC**

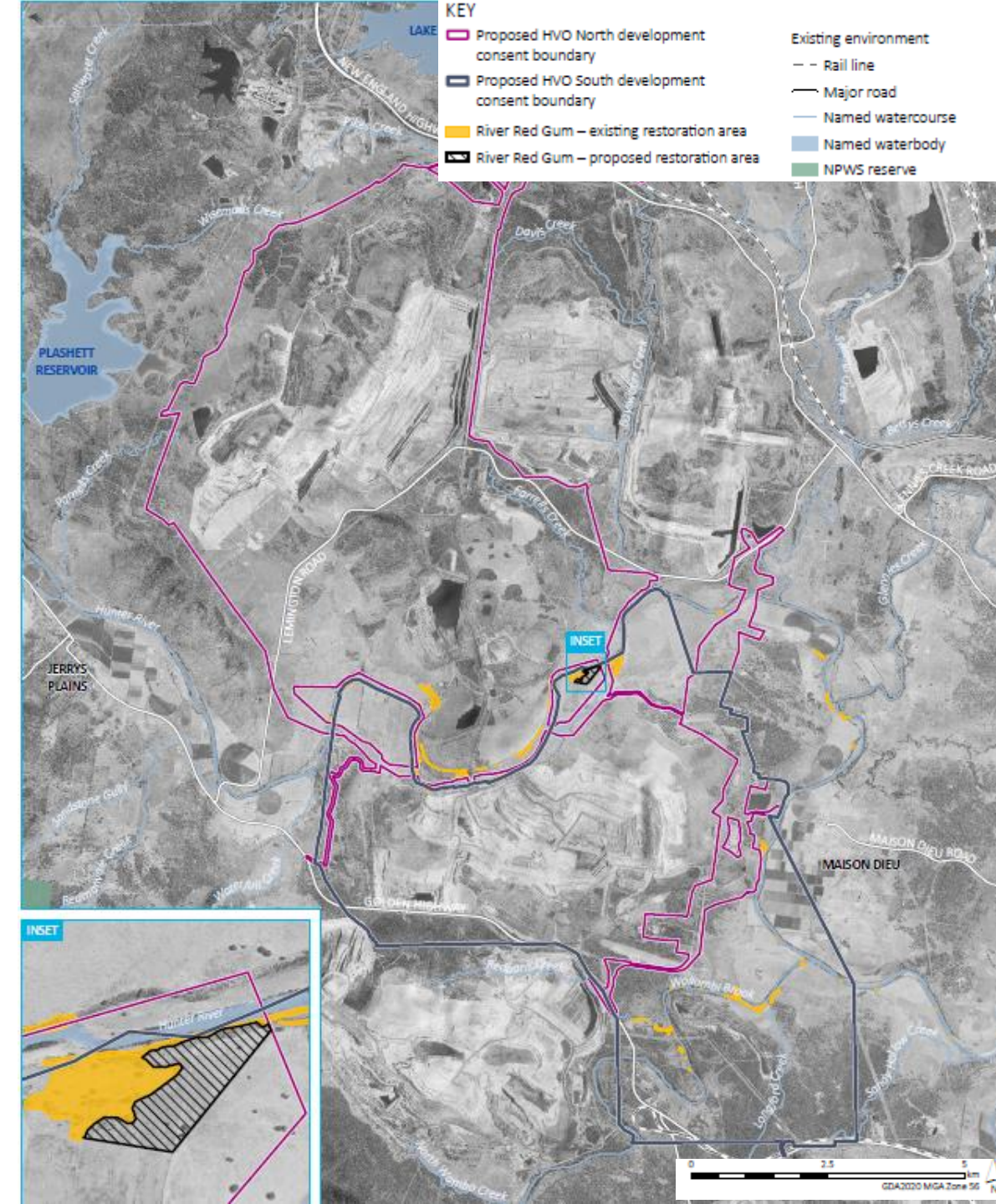


FIGURE 3.5A

HVO North - Threatened Ecological Communities under the NSW BC Act

Hunter Floodplain Red Gum Woodland EEC Restoration Area

- **In addition** to the retirement of Ecosystem Credits, a further approx. 6.6 ha of land (Restoration Area) has been identified as suitable to support additional restoration activities to achieve Hunter Floodplain Red Gum Woodland EEC
- Contiguous with other remnant areas of Hunter Floodplain Red Gum Woodland EEC and historical restoration activities
- Will be managed in accordance with an Ecological Restoration Plan (ERP)
- ERP to be developed in consultation with CPHR and Water Group
- Enforcement: establishment of the Restoration Area is a requirement of Condition B64 of recommended HVO North consent.



Biodiversity Offset Strategy

Offsets

- HVO is committed to delivering a biodiversity offset strategy that compensates for residual impacts of the Project
- Biodiversity offset strategy will be in accordance with the NSW BOS, and consider the following:
 - land based offsets - through the establishment of new stewardship sites (and the subsequent retirement of credits) or by retiring credits from existing stewardship sites
 - purchasing credits from the market, and/ or
 - paying into the BCF

DPHI conclusion

- Residual biodiversity impacts are acceptable, following substantial avoidance and minimisation, and can be appropriately offset and managed

HVO has commenced the acquisition of the biodiversity credits to account for the residual impact of the Project

Summary of Biodiversity Credit Obligations (Development Footprint)

Biodiversity Feature	Credits Required, HVO North	Credits Required, HVO South
3431 - Central Hunter Ironbark Grassy Woodland	4154	72
3485 - Hunter Valley Footslopes Slaty Gum Forest	313	0
4015 - Central Hunter Riparian Forest	65	0
4081 - Northwest River Oak-River Red Gum Forest	39	0
4089 - Namoi-Upper Hunter River Red Gum Forest	47	20
southern myotis (<i>Myotis macropus</i>)	2024	59
<i>Eucalyptus camaldulensis</i> in the Hunter Catchment	6	8
Hunter Valley delma (<i>Delma vescolineata</i>)	2567	106
brush-tailed phascogale (<i>Phascogale tapoatafa</i>)	3331	67
masked owl (<i>Tyto novaehollandiae</i>)	552	158

Source: HVO BDAR (Umwelt Feb 2026)

Environmental Controls

Environmental Management

- The HVO Complex is managed under an Environmental Management System (EMS)
- The EMS:
 - Provides a framework for managing environmental and community aspects, impacts and performance of the HVO Complex
 - Upholds compliance with primary project approvals and other licences, leases and approvals
 - Includes various management plans and procedures and associated environmental monitoring
- HVO has an extensive and established environmental monitoring network surrounding the operation including – air quality, noise, vibration, meteorological, surface and groundwater
- An Annual Review is prepared each calendar year to document the HVO Complex environmental performance
- Existing EMS framework to be continued and updated in accordance with the recommended conditions of consent



Operational practices to meet air and noise limits

Operational noise

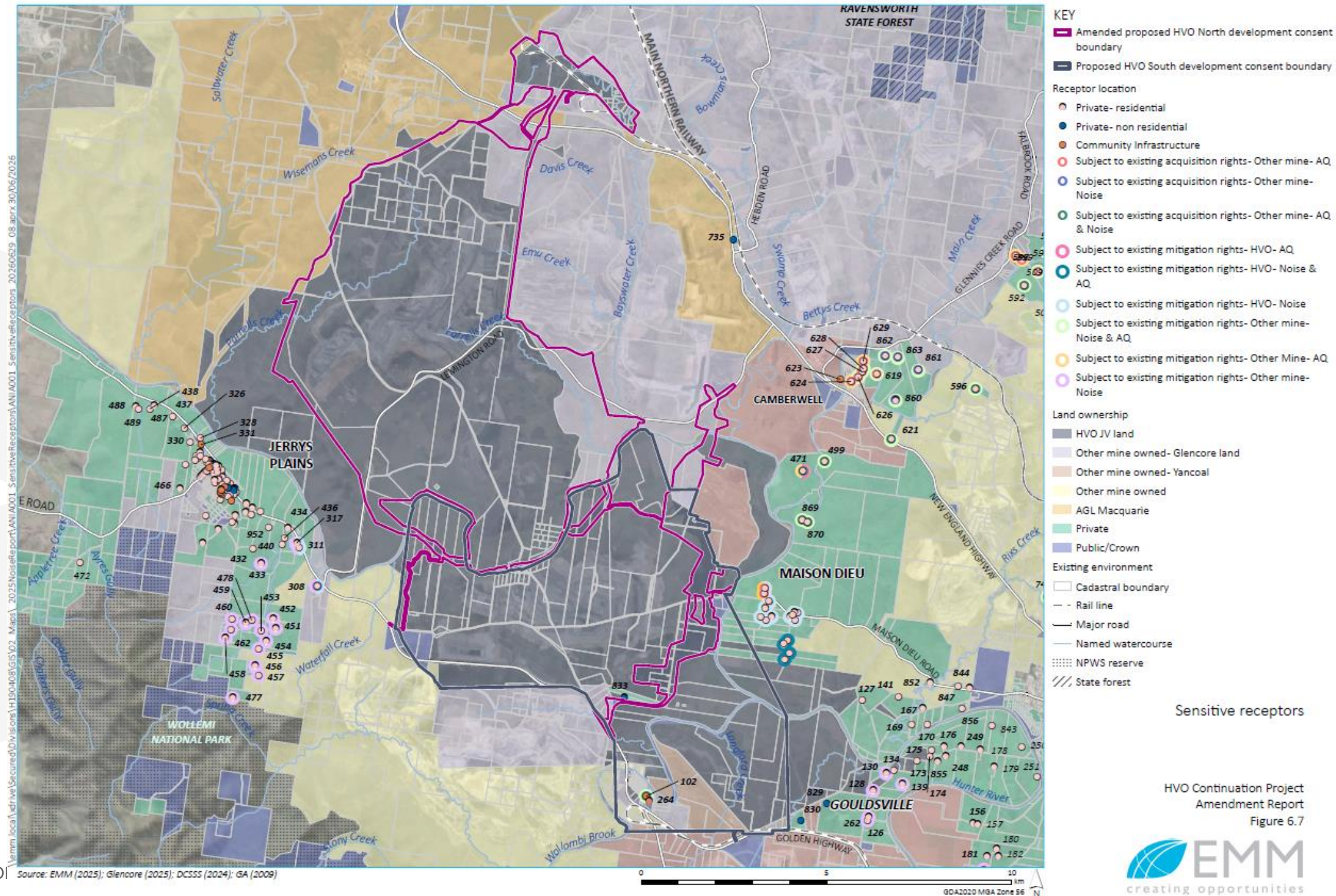
- Mine design and operational management measures were developed in conjunction with the noise assessment and incorporate all reasonable and feasible mitigation measures to minimise impacts at surrounding receptors, including:
 - Progressive noise attenuation of the mining fleet
 - Haul route design to minimise exposure of significant noise-generating mobile equipment
 - Construction of roadside bunds along exposed haul roads including:
 - Construction of 8m high roadside bund on the exposed side of the haul road from the Mitchell Pit towards the Howick CPP for approximately 900m
 - Equipment shutdowns and operational modifications during noise-enhancing meteorological conditions

Air Quality

- **Reactive air quality management** will continue to assess the need to modify the activities in response to the following triggers:
 - visual conditions, such as excessive visible dust, identified through the use of cameras as well as visual observations
 - meteorological conditions, such as dry, strong wind conditions
 - ambient air quality conditions (that is, elevated short-term PM₁₀ concentrations, observed through air quality monitoring results)
 - a Trigger Action Response Plan (TARP) process will be implemented, and dust levels investigated when the TARP process is enacted to identify likely sources of dust.
- **Proactive air quality management** measures will include daily forecasts, alerting operations of the potential requirement to modify mining activities, as appropriate, to minimise or avoid the potential dust impacts.

DPHI conclusion

- DPHI concluded that operational noise and air quality impacts associated with the amended Project are acceptable and can be appropriately managed through the proposed mitigation, monitoring and adaptive management framework



Water model performance

Water Resources

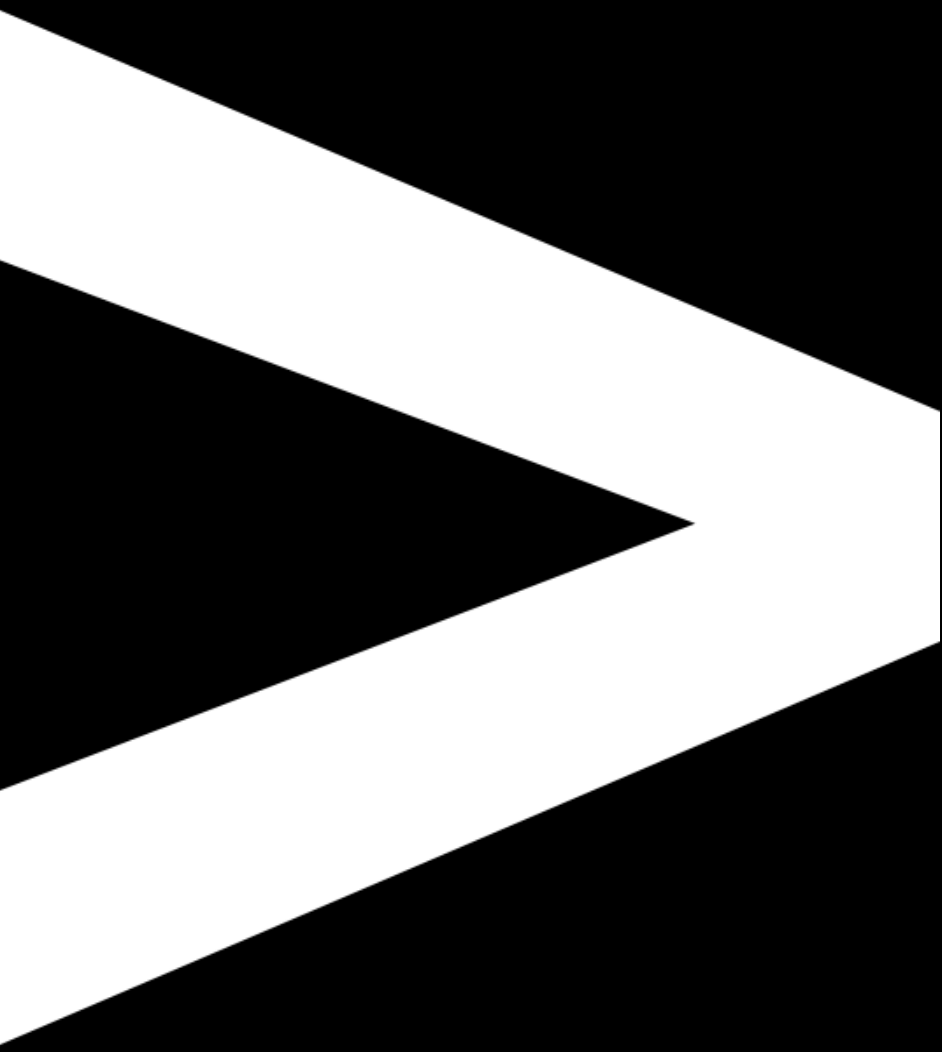
- Comprehensive and peer reviewed surface and groundwater assessment completed, which identified appropriate performance measures in accordance with relevant govt guidelines and policies.
- Recommended Condition B55 includes the requirement for a Water Management Plan approved by the Planning Secretary, and must include:
 - *a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development.*
- Condition B55 also requires: *a program to periodically validate the groundwater model for the development, including an independent review of the model and comparison of monitoring results with modelled predictions every 3 years (unless otherwise agreed by the Planning Secretary) until the end of mining operations.*

DPHI conclusion

- DPHI concluded that water-related impacts are generally low, can be effectively managed through existing and proposed mitigation measures.

Future feasibility studies

- No mitigation measures required to meet recommended consent conditions are dependent on future feasibility studies
- HVO has a well-established environmental management system and monitoring network



Final Voids, Levee and closure



Final Landform : Voids - Rationale

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Final voids are designed, by virtue of the mining process, to be as small as practicable noting:

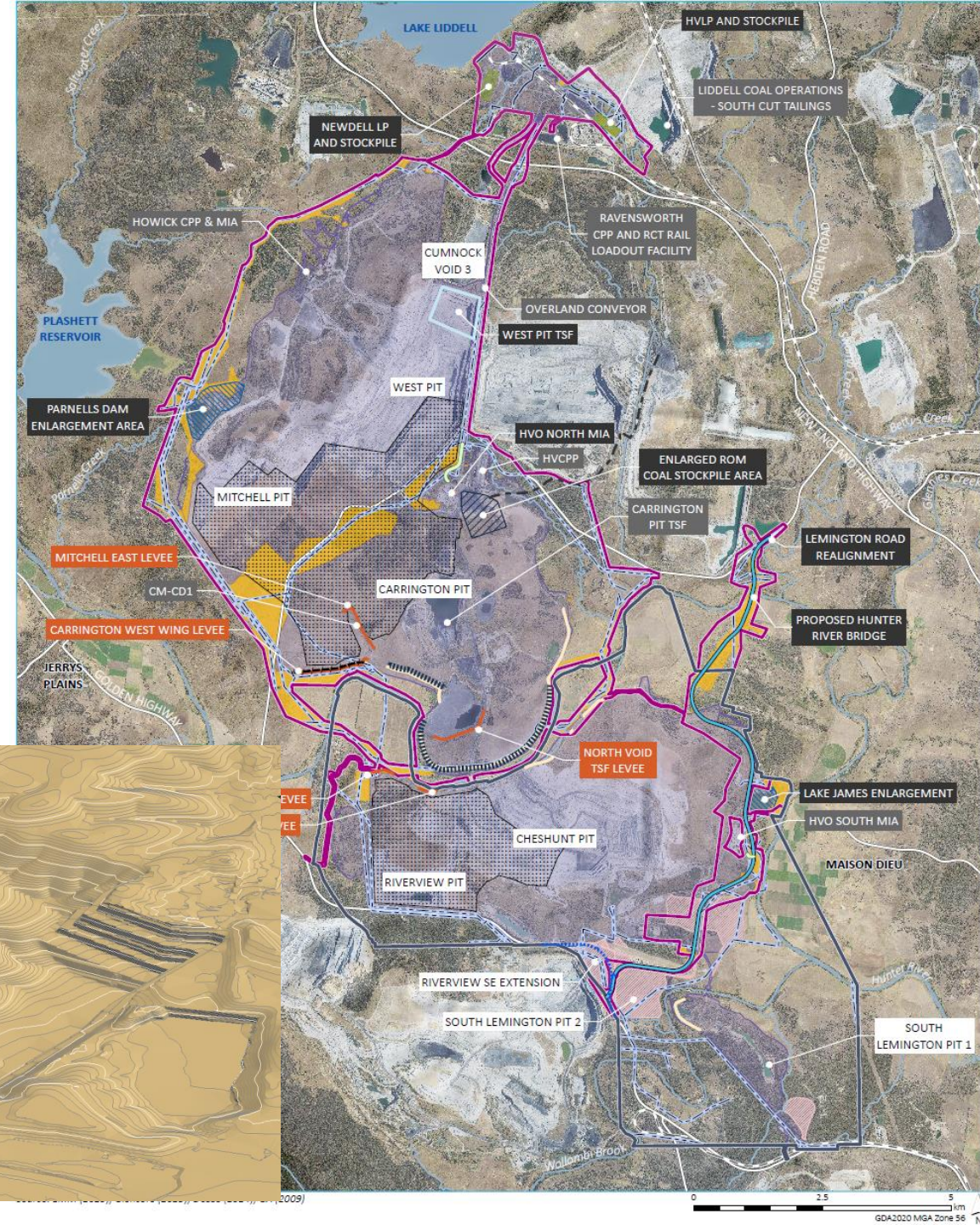
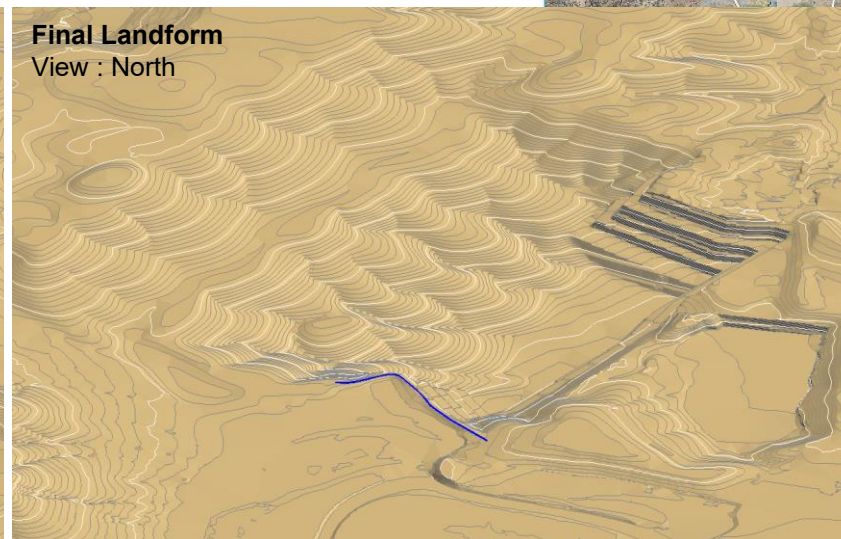
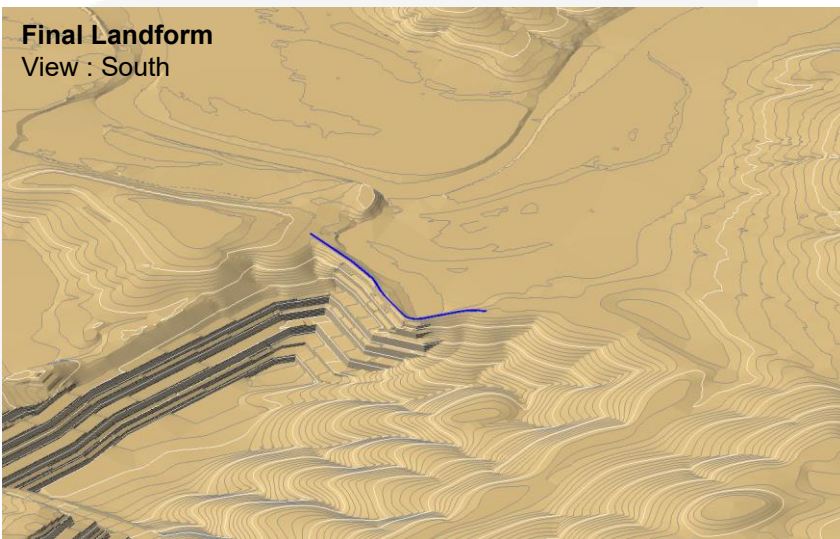
- Overburden material has to be cleared from the floor to release the lowest coal
- This process involves hauling and stacking overburden to allow safe clearance of the coal
- Economics naturally drives haulage to the lowest and closest available dump.
- Notwithstanding that geotechnical safety requires a certain 'lay back' of the high wall and the low wall (overburden dump).
- Final landform design, including Geofluv, must also be incorporated into the dump design to provide natural, low erosion drainage flows with minimum void catchment.
- A contributing factor to the HVO North final void size is the material required to fill the Carrington West Wing.



Mitchell East Levee

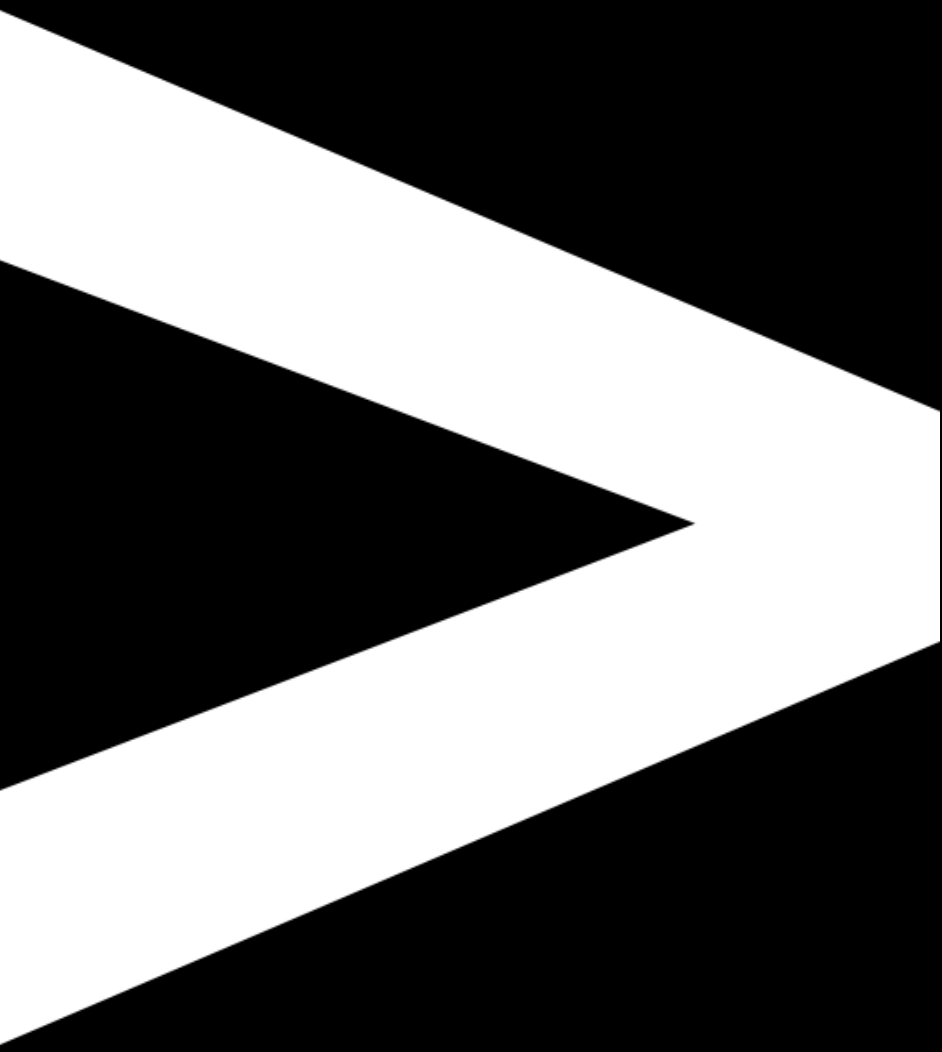
Levee Design

- Is a result of shorter mine life and resultant proximity of void to Hunter River
- Levee will be engineer designed and constructed
- Flood design event will be PMF
- Will be integrated into natural hill area and backfill of Carrington West Wing



Rehabilitation and closure

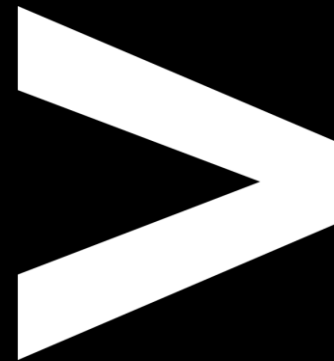
- **Development consent** specifies **rehabilitation objectives** that must be met (including final landform and land use)
- Site must also be rehabilitated **in accordance with ML conditions** under *Mining Act 1992* (regulated by the NSW Resources Regulator (RR) to ensure land is returned to a safe, stable and sustainable land use.
 - Final landform, rehab objectives, completion criteria approved by Resources Regulator
 - Forward work program and annual rehab report
- **Rehabilitation Management Plan** is required under Mining Regulation 2016, in accordance with development consent and ML conditions, and includes:
 - Final land use
 - Rehabilitation risks and management
 - Rehabilitation completion criteria
 - Rehabilitation methodology for all phases
 - Monitoring program to demonstrate success
 - Trigger Action Response Plan
 - Covers rehabilitation until lease relinquishment
- HVO is statutorily responsible for achieving the approved mine closure objectives outlined in the Rehabilitation Management Plan. HVO remain responsible until rehab is certified as meeting completion criteria and lease relinquished.
- A **security deposit** is required to cover obligations on the ML, as per Part 12A of the *Mining Act*
 - Value of security deposit is determined by the rehabilitation cost estimate (RCE), which title holders are required to submit to NSW Resource Regulator.



Evaluation & Recommended Conditions

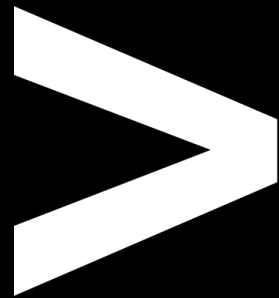
Evaluation & Recommended Conditions

- Brownfield mining development in an existing mining and power generation precinct – aligns with *NSW Coal Industry 2026-2050*
- Iterative design process based on robust technical assessments to develop a project that:
 - all residual impacts can be appropriately minimised, offset, and/or managed
 - aligns with all relevant NSW and Commonwealth government policy
 - results in significant benefits to the community
 - is supported by the local community
- Will generate
 - direct and indirect benefits in the order of **\$5,692.4 million** (NPV) to NSW includes **\$1,778.1 million** (NPV) to the Lower Hunter
 - ongoing direct employment opportunities for around 1,500 people and associated indirect employment
- Avoids all impacts to Warkworth Sands Woodland EEC, and all residual impacts can be appropriately mitigated via BOS
- On GHG, the net emissions trajectory (SGM + NSW decline) is proposed as the enforceable annual emissions limit for the Project, which is consistent with Commonwealth and State policy frameworks and NSW emissions trajectory
- DPHI have recommended a comprehensive set of consent conditions, to which HVO can and will fully comply
- ***“The Department considers the project to be in the public interest”*** (Assessment Report, DPHI 2026, pg A19)



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End



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