

HVOCC PRESENTATION - NOVEMBER 2016

Appendix D



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D

HVO South Modification 5

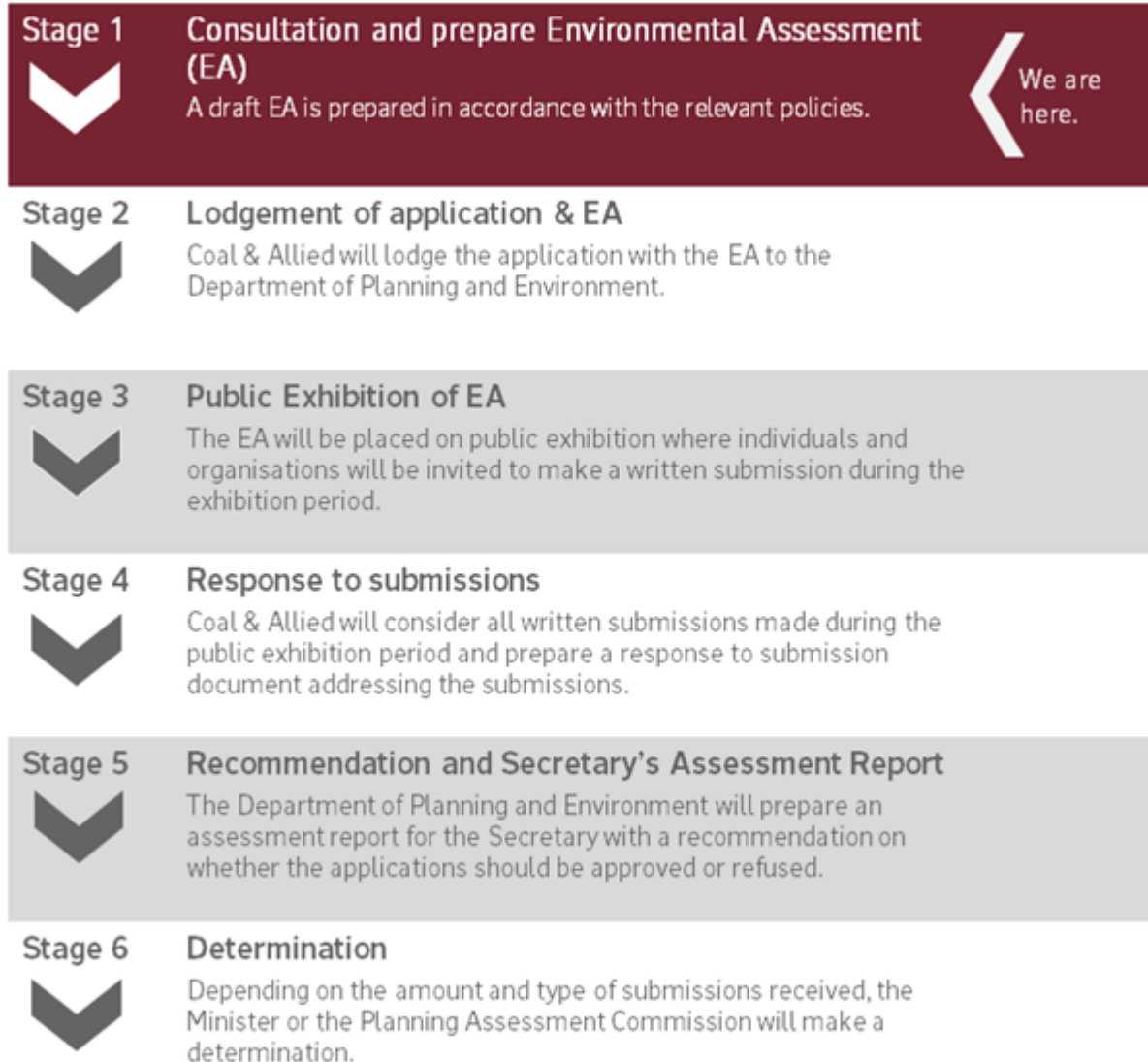
Environmental Assessment Report

November 2016

Overview

- A modification is proposed to the Hunter Valley Operations South development consent PA 06_0261.
- An Environmental Assessment Report (EAR) that considers the social, environmental and economic impacts and benefits of the proposal is expected to be available for public exhibition early in 2017.
- Hunter Valley Operations will be undertaking consultation with local stakeholders on the preliminary findings of the EAR prior to exhibition.
- The CCC is the first group to be presented the preliminary findings.
 - Description of proposed modification
 - Visual amenity
 - Noise
 - Air quality
 - Groundwater
 - Surface water
 - Ecology
 - Final landform, rehabilitation and land use

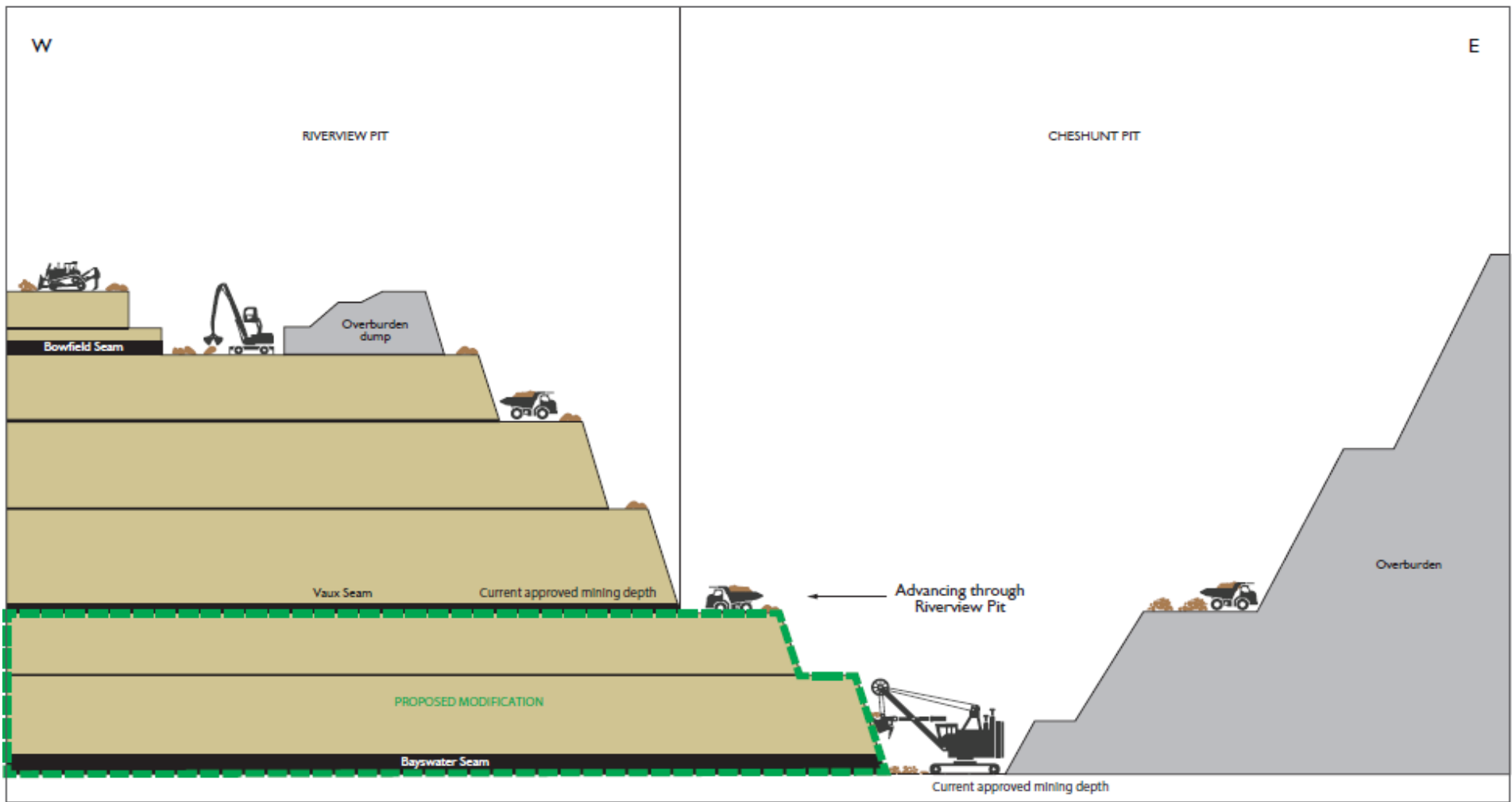
Timeline



Proposed Modification

- Mining depth extension in Riverview Pit from Vaux to Bayswater seam.
- Mining depth extension in South Lemington Pit 2 from Bowfield to Vaux seam.
- Increase in maximum height of Cheshunt overburden emplacement from RL155 to 240 m AHD in the northern section only.
- Ability to increase the rate of mining from 16 to 20 mtpa ROM if required to provide greater flexibility for sourcing coal across the integrated HVO operation.

Proposed Modification

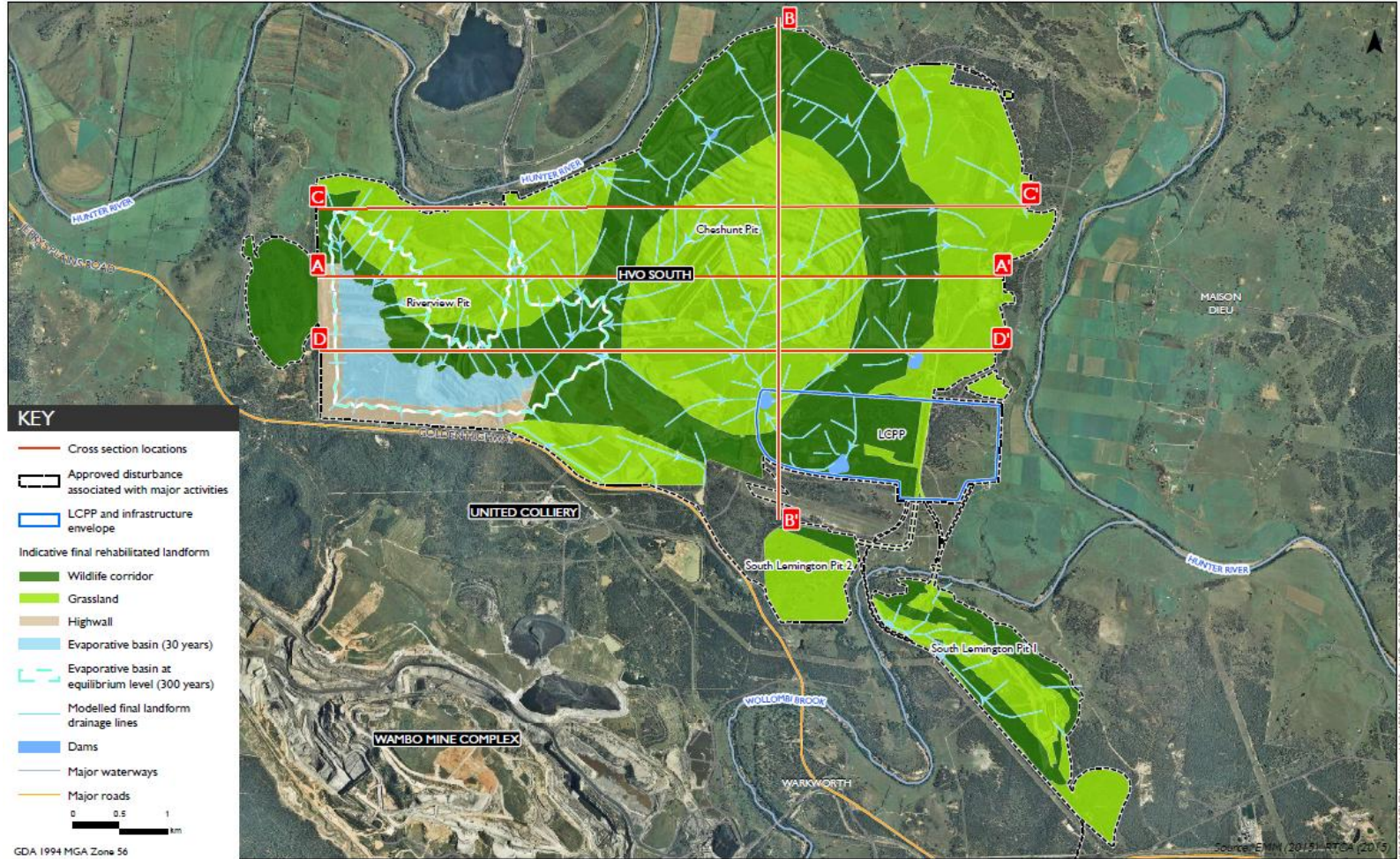


Proposed Modification

- Mine plan review process that considered avoidance and minimisation of environmental impacts.
- No extension of State-approved disturbance footprint.
- Micro-relief incorporated into overburden emplacement area.
- Overburden height increased to RL240M in Northern Cheshunt.
- Final void lake further from Hunter River.
- The proposal is not seeking to extend the current approval period, which is due to expire in 2030.

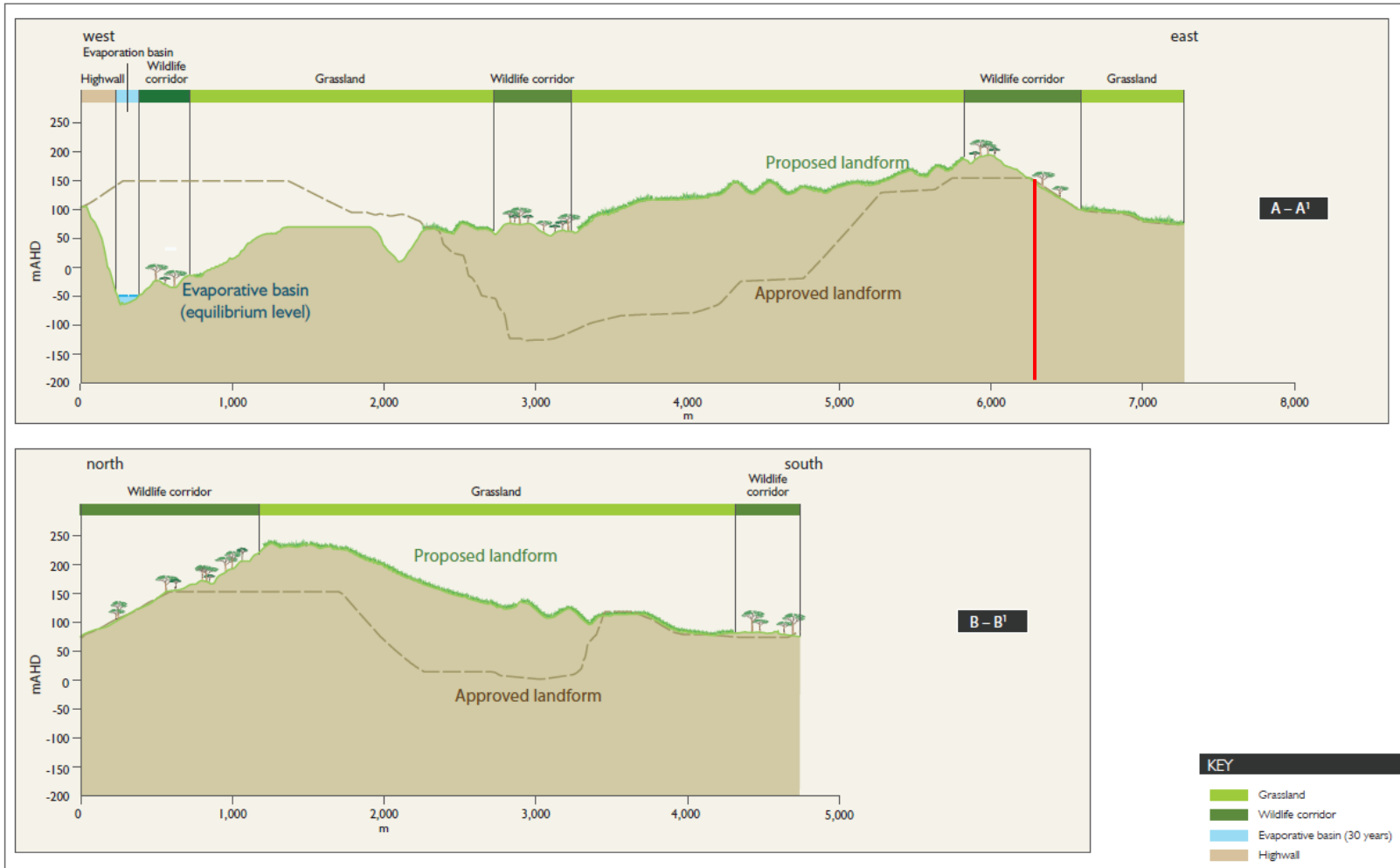
Proposed Modification

Indicative Final Landform



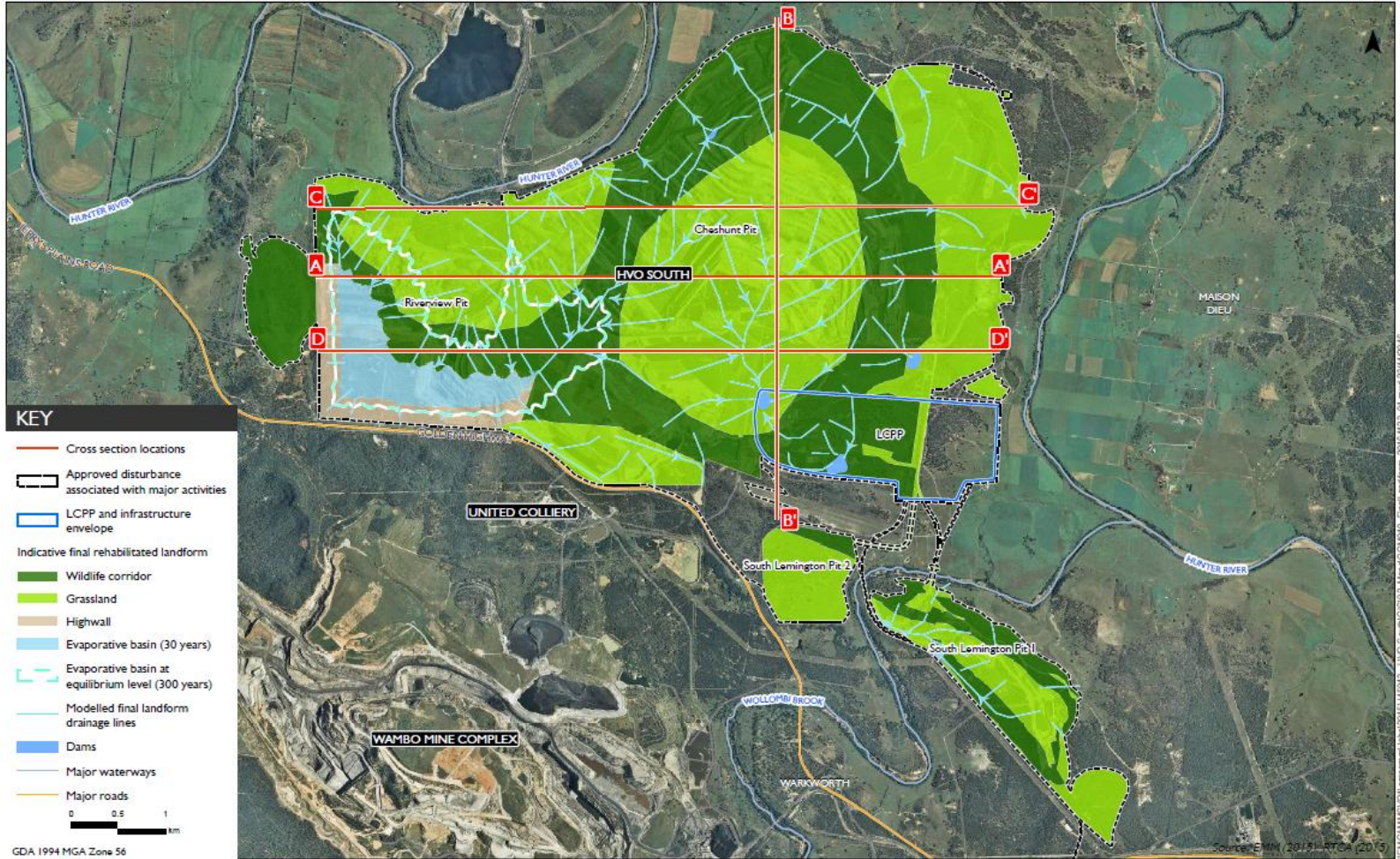
Proposed Modification

Indicative Final Landform



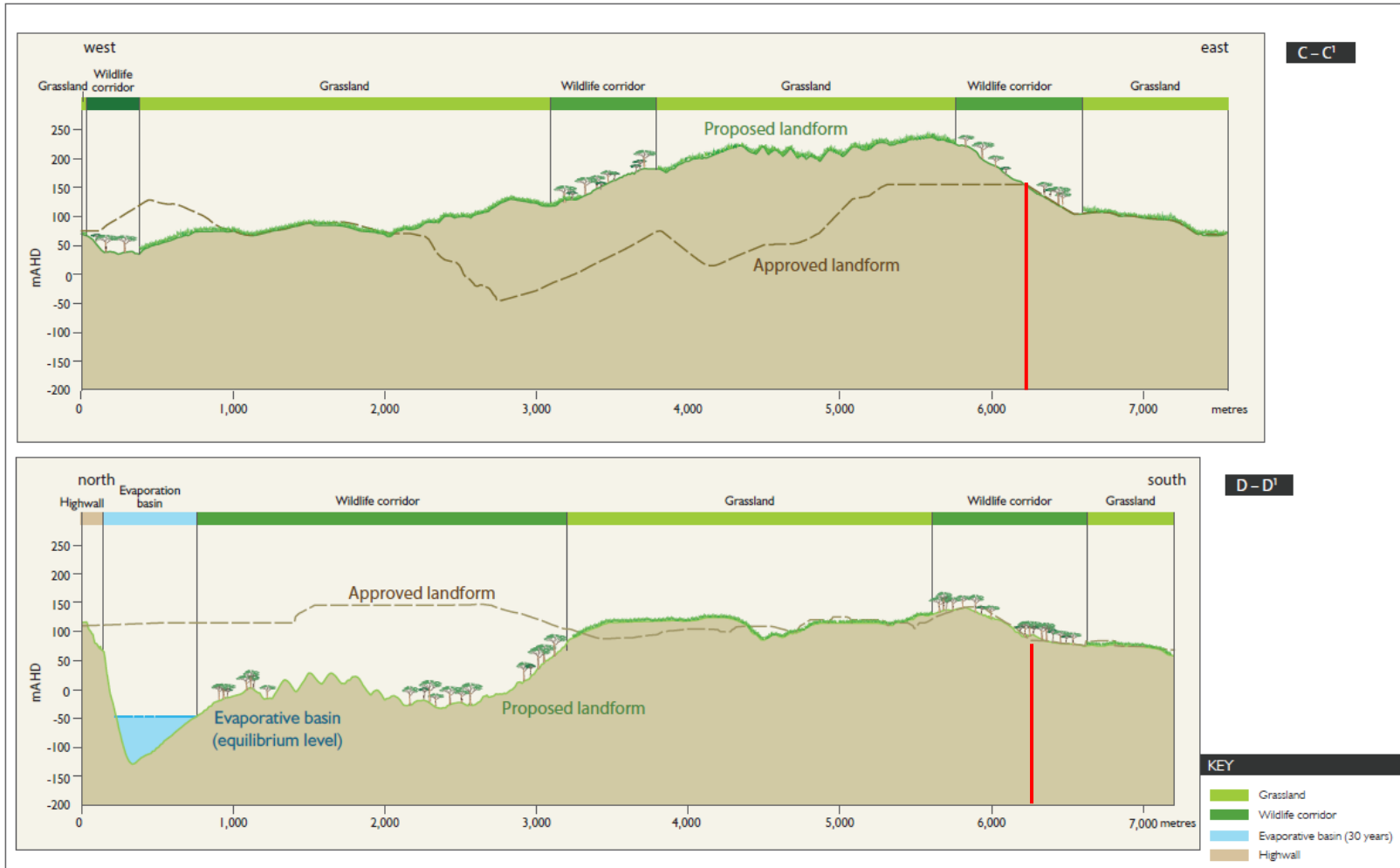
Proposed Modification

Indicative Final Landform



Proposed Modification

Indicative Final Landform



Visual Amenity

- Moderate impacts in the short to medium term to the east until rehabilitation can be completed in nominally Year 2022 (Stage 2).
- Approx 700m of the existing rehabilitated face of the emplacement area seen from Shearers Lane at Maison Dieu will be retained.
- Increase in maximum overburden height to RL240M in Northern Cheshunt similar to current approved height at HVO North and Ravensworth Operations.



Existing landform as at November 2015

**COAL
&
ALLIED**
Managed by Rio Tinto Coal Australia

Shearers Lane
HVO South Modification 5
Environmental Assessment

Figure 6.7

Visual Amenity

Mitigation

- The emplacement of overburden has been designed to the northern end of Cheshunt Pit to preserve the viewshed through to the Wollemi National Park.
- The current setback distance from Maison Dieu is maintained (approx. 2.6km).
- Overburden emplacement is designed to be more consistent with the natural terrain.
- Progressive rehabilitation will continue with the slopes planted to ironbark woodland.
- During construction, emplacement areas will be seeded with a temporary vegetation cover.



Existing landforms as at November 2015

Visual Amenity

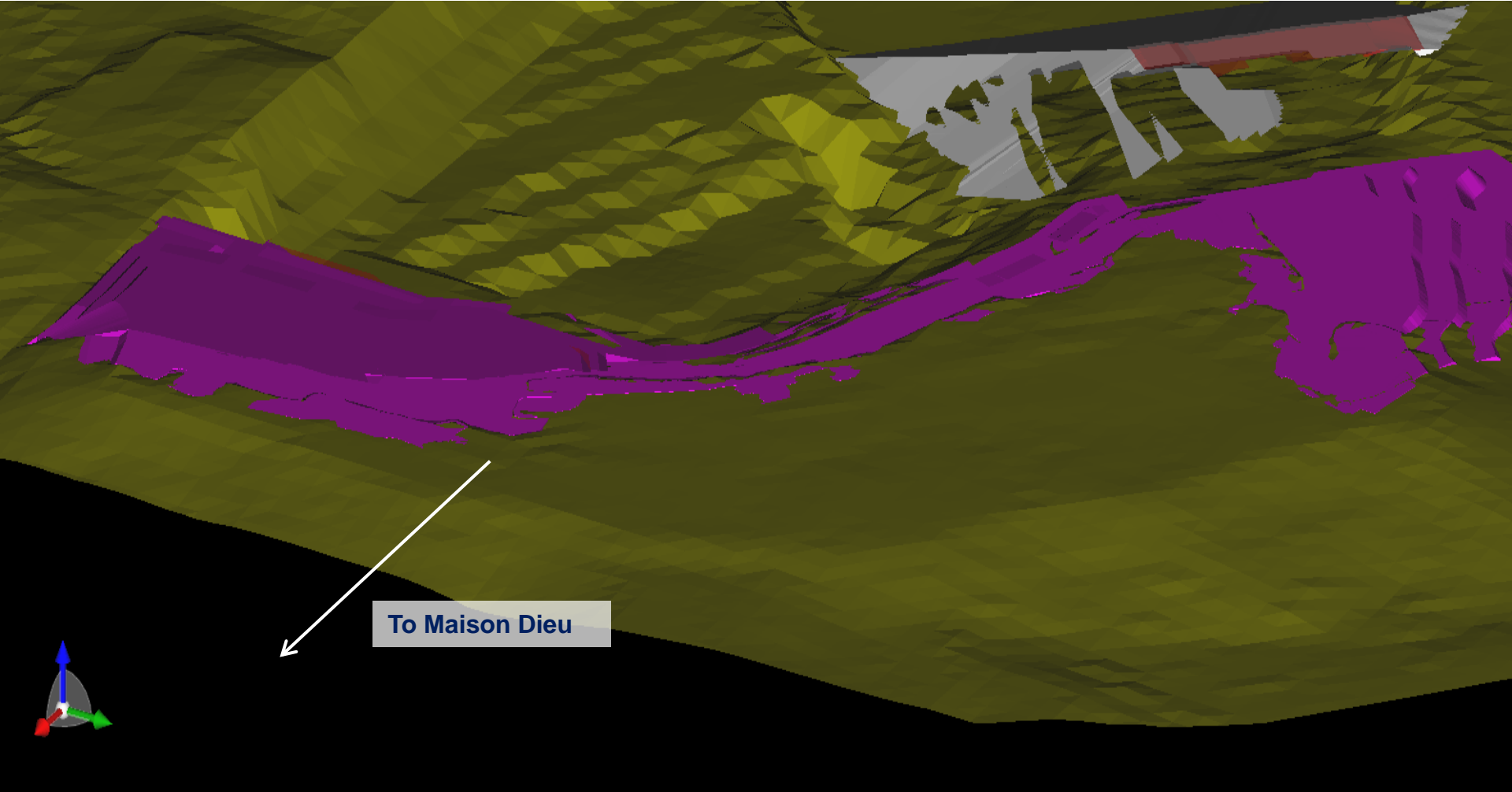
Additional Viewshed of Emplacement



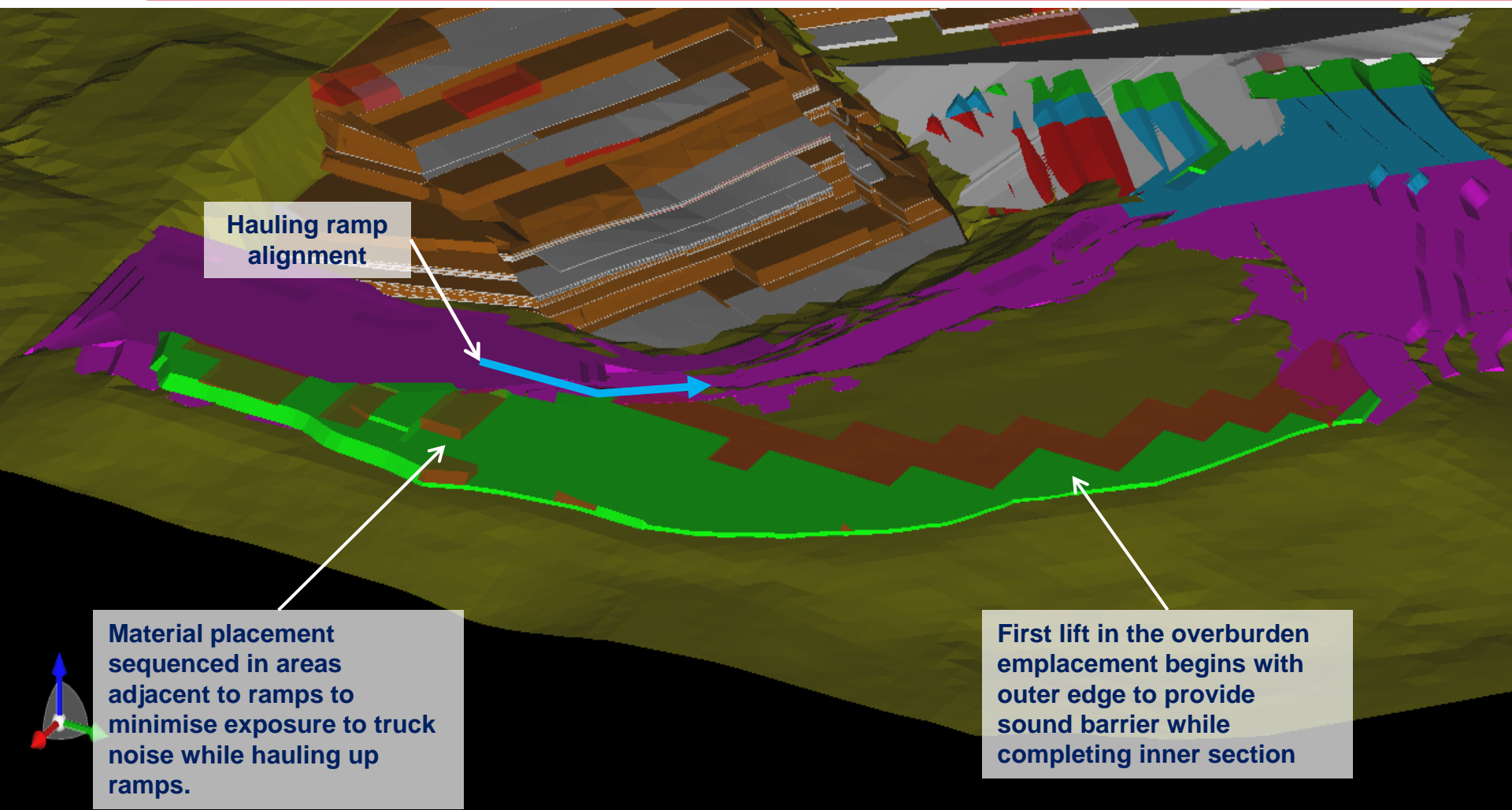
VPI - Shearers Lane - viewshed analysis of approved and proposed final landform
 HVO South Modification 5
 Environmental Assessment

Figure 9.2

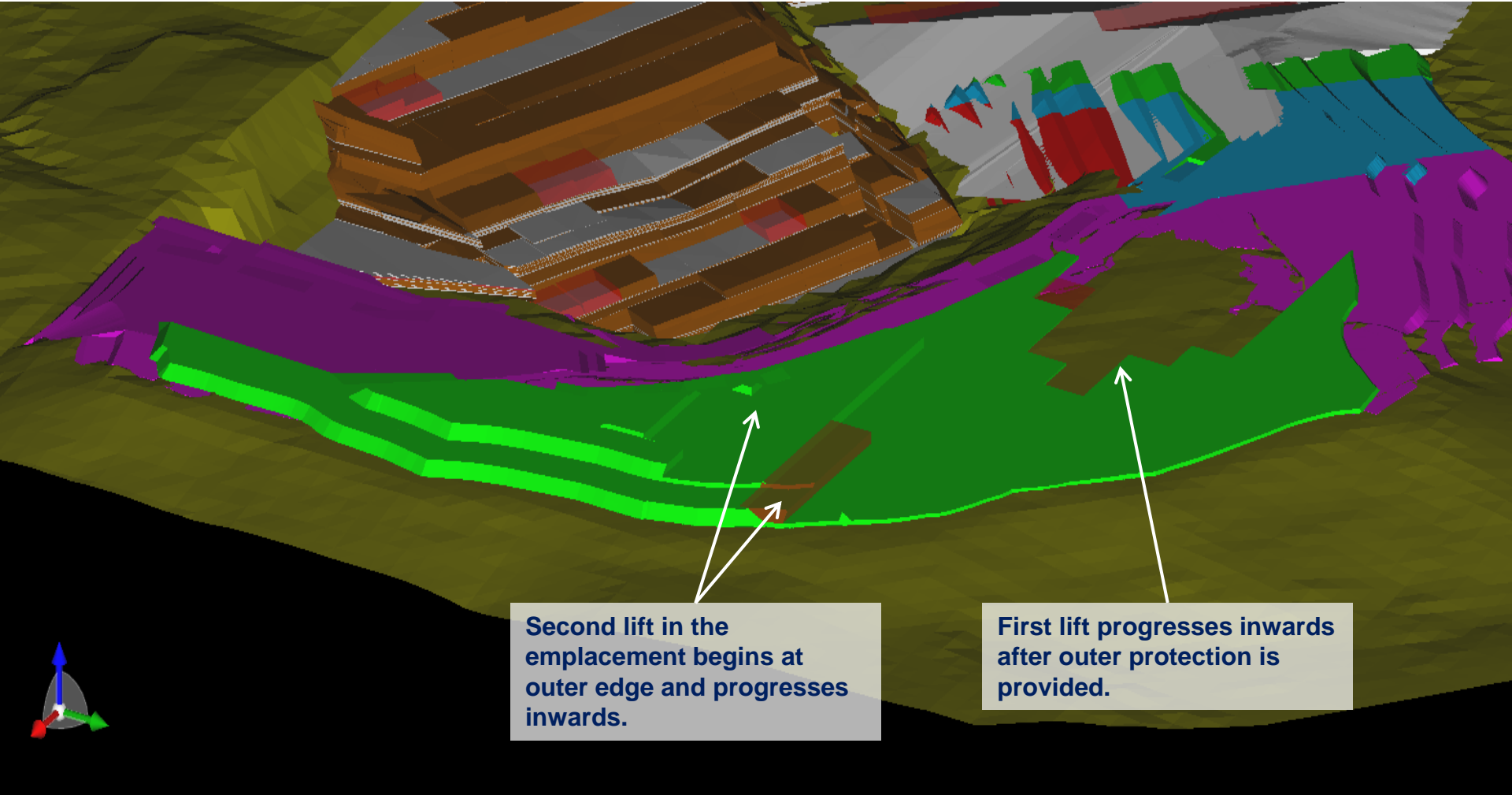
Cheshunt Overburden Emplacement – Build Concept and Management Principles



Cheshunt Overburden Emplacement – Build Concept and Management Principles



Cheshunt Overburden Emplacement – Build Concept and Management Principles

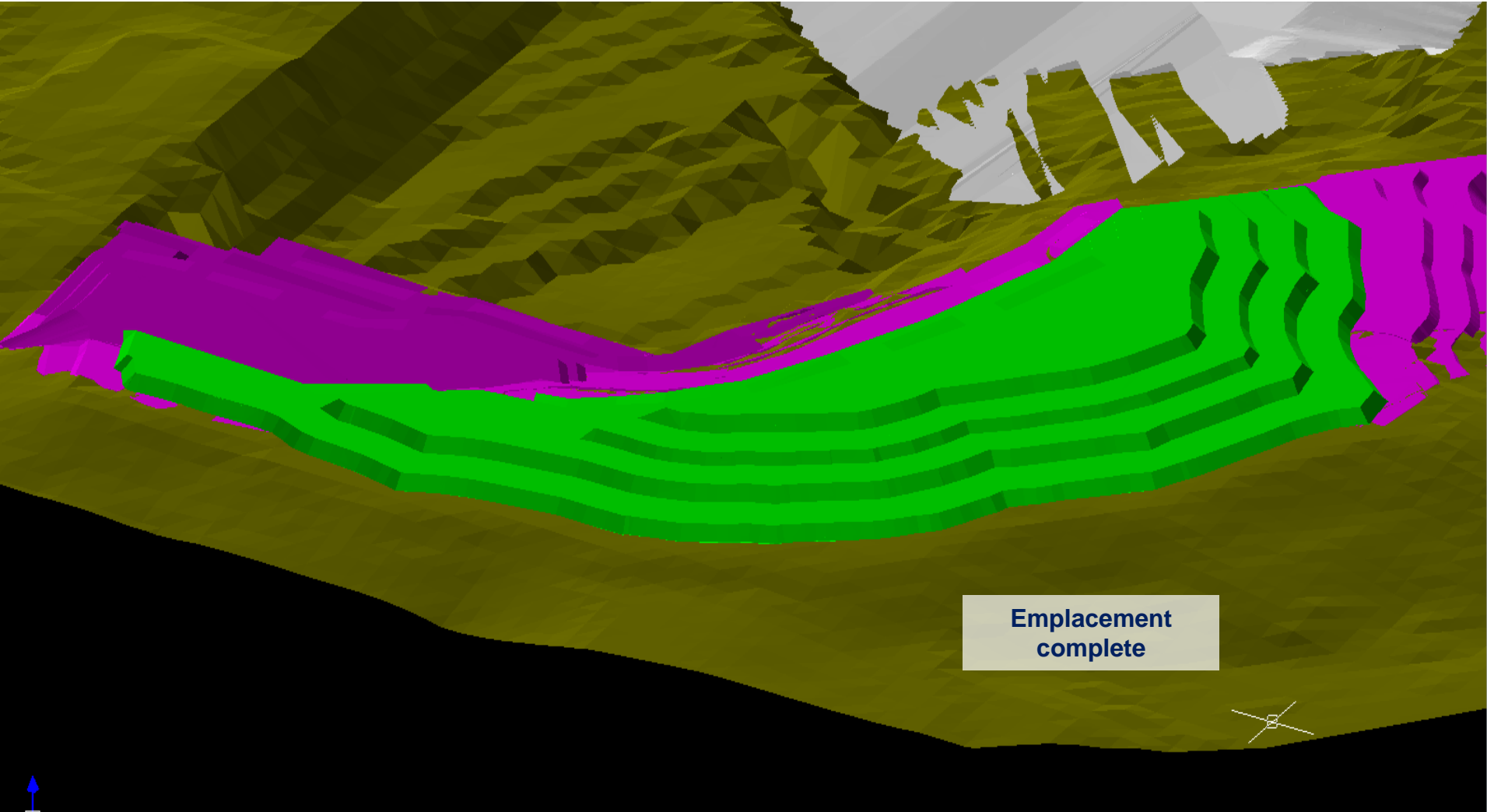


Second lift in the emplacement begins at outer edge and progresses inwards.

First lift progresses inwards after outer protection is provided.



Cheshunt Overburden Emplacement – Build Concept and Management Principles



Visual Amenity

Interactive Application

Following the last HVO CCC, it was agreed to modify the HVO South flyover to show earlier stages plans rather than Stage 4 only.



Noise

Noise and vibration study in accordance with NSW Industrial Noise Policy and Voluntary Land Acquisition and Mitigation Policy (VLAMP)

- No additional properties are significantly impacted due to the proposed modification.
- Ten properties along Jerrys Plains Road (all east of Jerrys Plains village), not currently entitled to noise mitigation in accordance with the existing PA 06_0261, are entitled to mitigation in accordance with VLAMP (3 to 5dB above PSNL).
- Five properties are marginally above operational noise criteria (1 to 2 dB above PSNL). Four on Jerrys Plains Road and one in Maison Dieu.
- Some of these properties are within the acquisition zone for the Wambo United project.

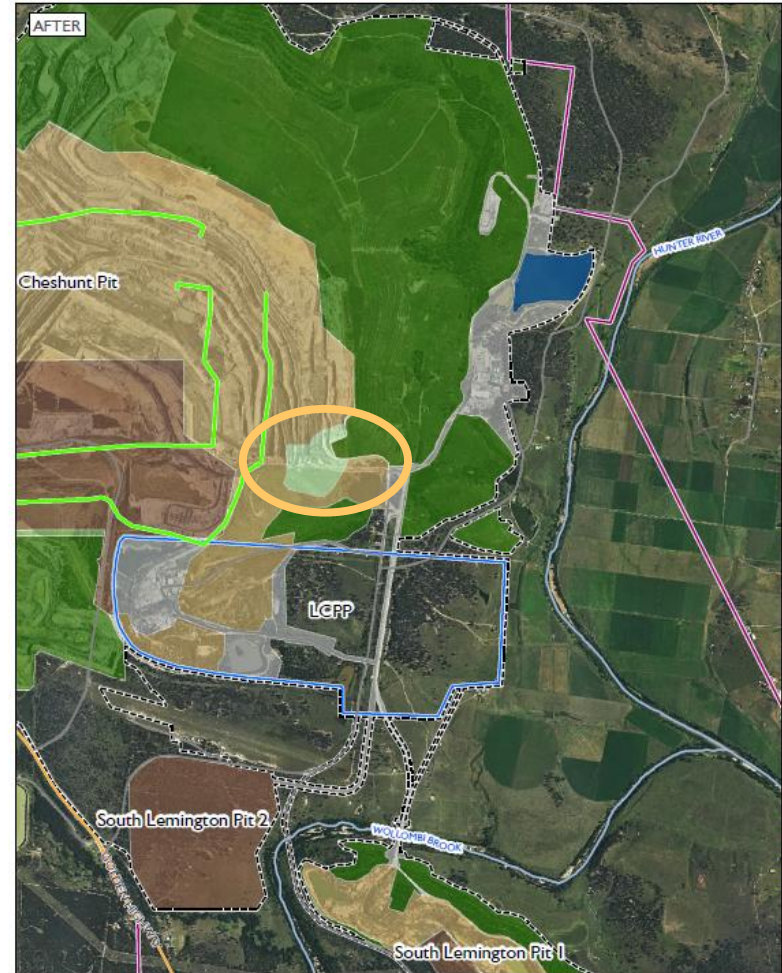
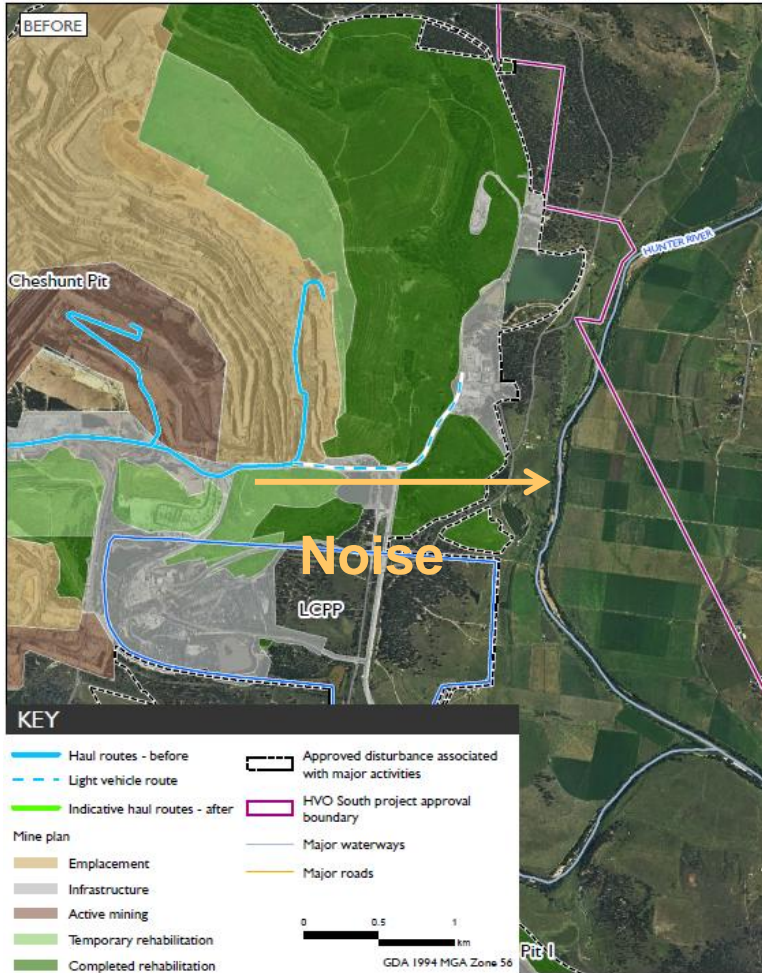
Noise

Mitigation

- HVO will progressively attenuate all the haul truck fleet to minimise noise impacts.
- Continued operational management measures such as the relocation or shutting down of equipment during adverse weather conditions.
- Haul roads to the proposed higher emplacement area to be confined behind a noise bund.
- Closure of light vehicle road that directs noise towards Maison Dieu.
- Monitoring to support operational management including through the recent installation of a directional noise monitor within Jerrys Plains village.
- Landholders entitled to mitigation may request mitigation of their property.

Noise

Services Road Closure



Haul routes - before and after
HVO South Modification 5
Environmental Assessment

Air Quality

Air quality and greenhouse gas assessment in accordance with NSW Approved Method and Voluntary Land Acquisition and Mitigation Policy.

- Similar air quality conditions modelled for Maison Dieu and Jerrys Plains as what is already approved for the existing operation. The proposal will not result in any significant change.
- PM_{10} annual average criterion of $30\mu\text{g}/\text{m}^3$ is satisfied at all residences with the exception of three privately-owned properties. These privately-owned properties are in the existing acquisition zone for other mine operations.
- Two of these properties are non-residences (Warkworth Hall and the Anglican Church) and the third property is entitled to acquisition upon request to Wambo Coal Mine as noted in the existing PA 06_0261.

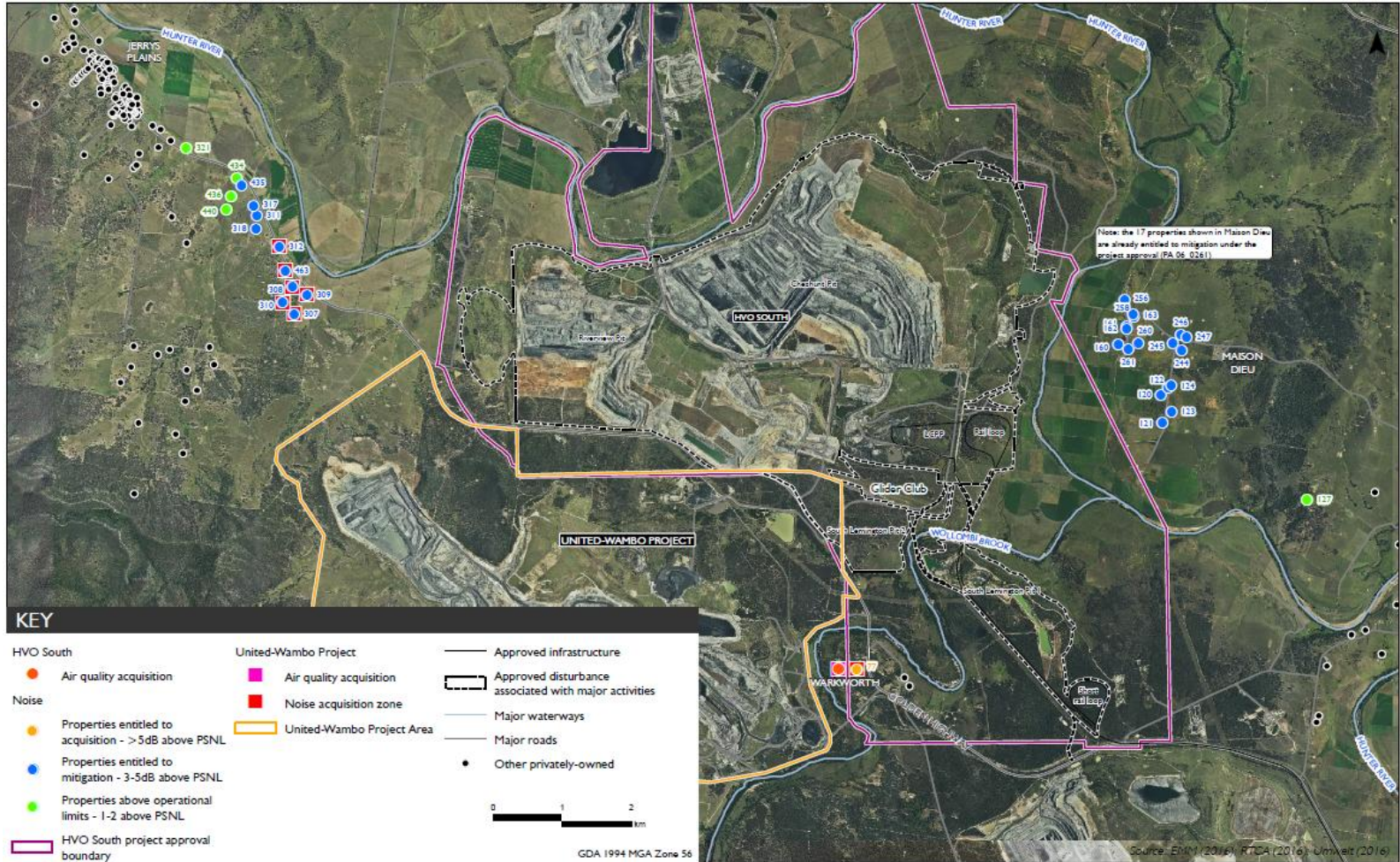
Air Quality

Mitigation

Continued implementation of air quality management plan, including:

- Use of water carts to manage wheel generated dust.
- Altered or reduced operations in periods of high winds / elevated PM10.
- Use of lower / more protected dumping locations during adverse conditions.
- Use of meteorological forecast information to guide mining operations.
- Ongoing monitoring.

Noise and Air Quality modelling



Groundwater

A groundwater assessment was undertaken against the Aquifer Interference Policy including a groundwater model peer reviewed by Dr Frans Kalf.

- Groundwater take from Permian, alluvium and surface aquifers within previous predicted peak takes.
- No private bores will be affected by >2m drawdown.
- Final void will remain as a groundwater sink resulting in no release of water to surrounding environment.

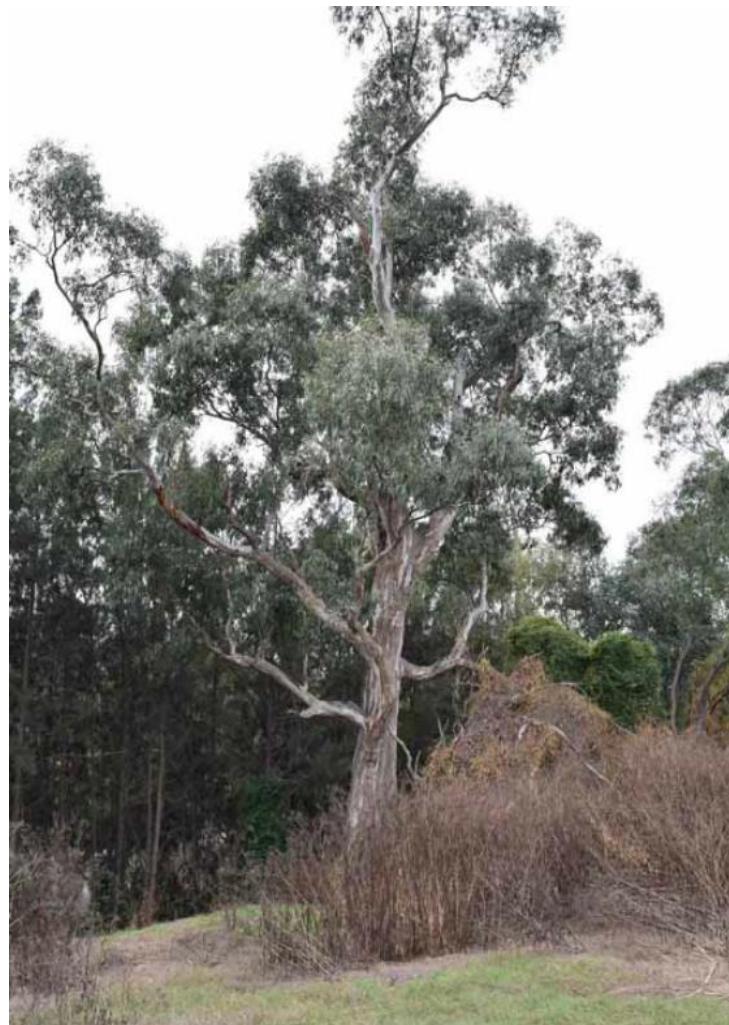
Surface Water

A surface water assessment determined:

- No extension of State-approved disturbance footprint.
- HVO South will not increase the cumulative impacts of salinity within the Hunter River due to continued participation in the HRSTS.
- Any water taken from the Hunter River Regulated Water Source is in accordance with the Water Access Licence (WAL) which will not adversely affect other licence holders from accessing their licenced water entitlements.
- Final landform designed to minimise surface water draining to the final void.

Ecology and Cultural Heritage

- Proposal limited to within existing State-approved disturbance footprint.
- No additional impacts to the ecology or heritage features.



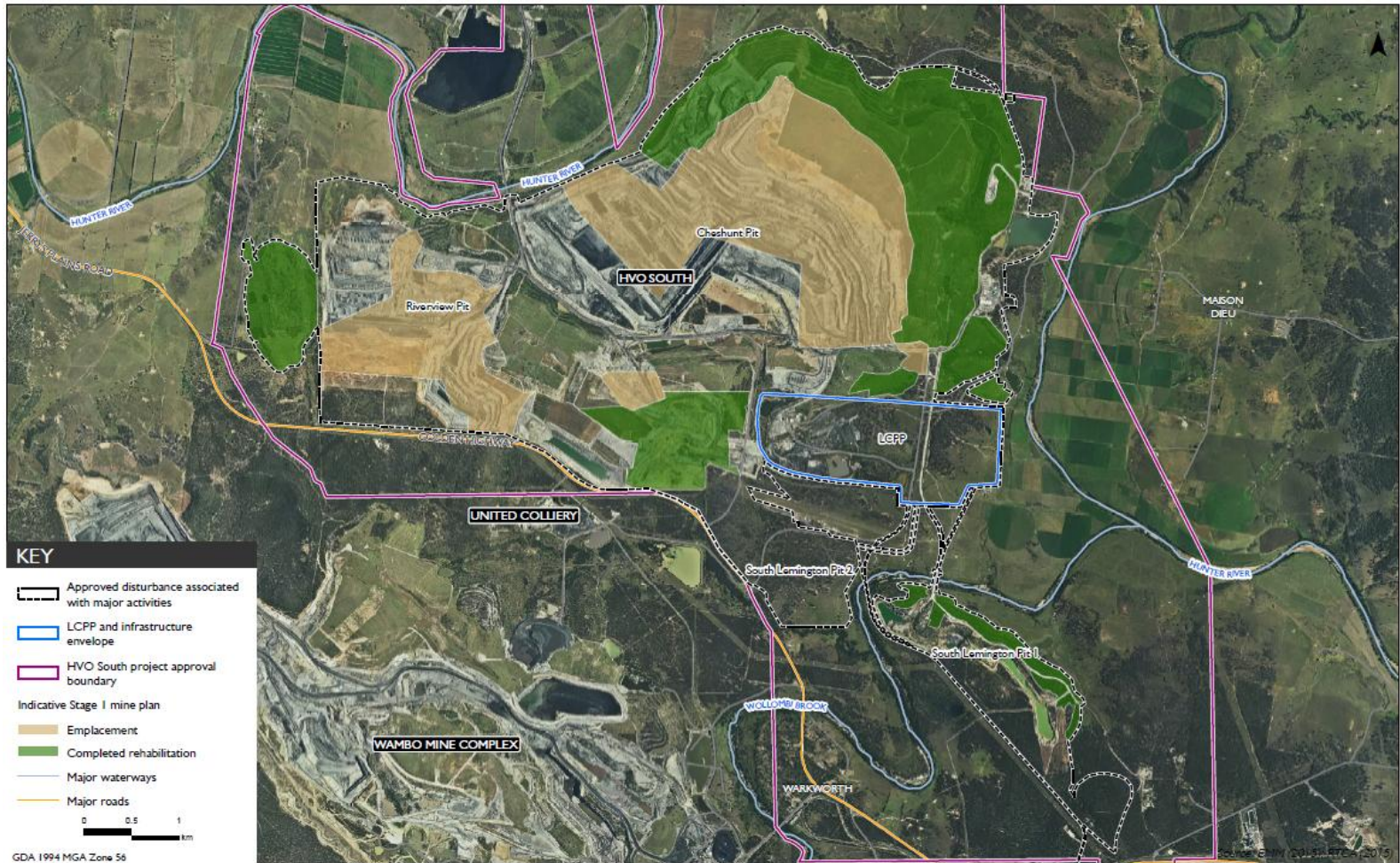
Socio-economic

- Sustains mine employment at current levels and generates additional economic activity including \$243 million in royalties and \$160 million in taxes.
- It does not result in social impacts arising from workforce influx, population change and associated impacts on infrastructure.

Feedback

Visual Amenity

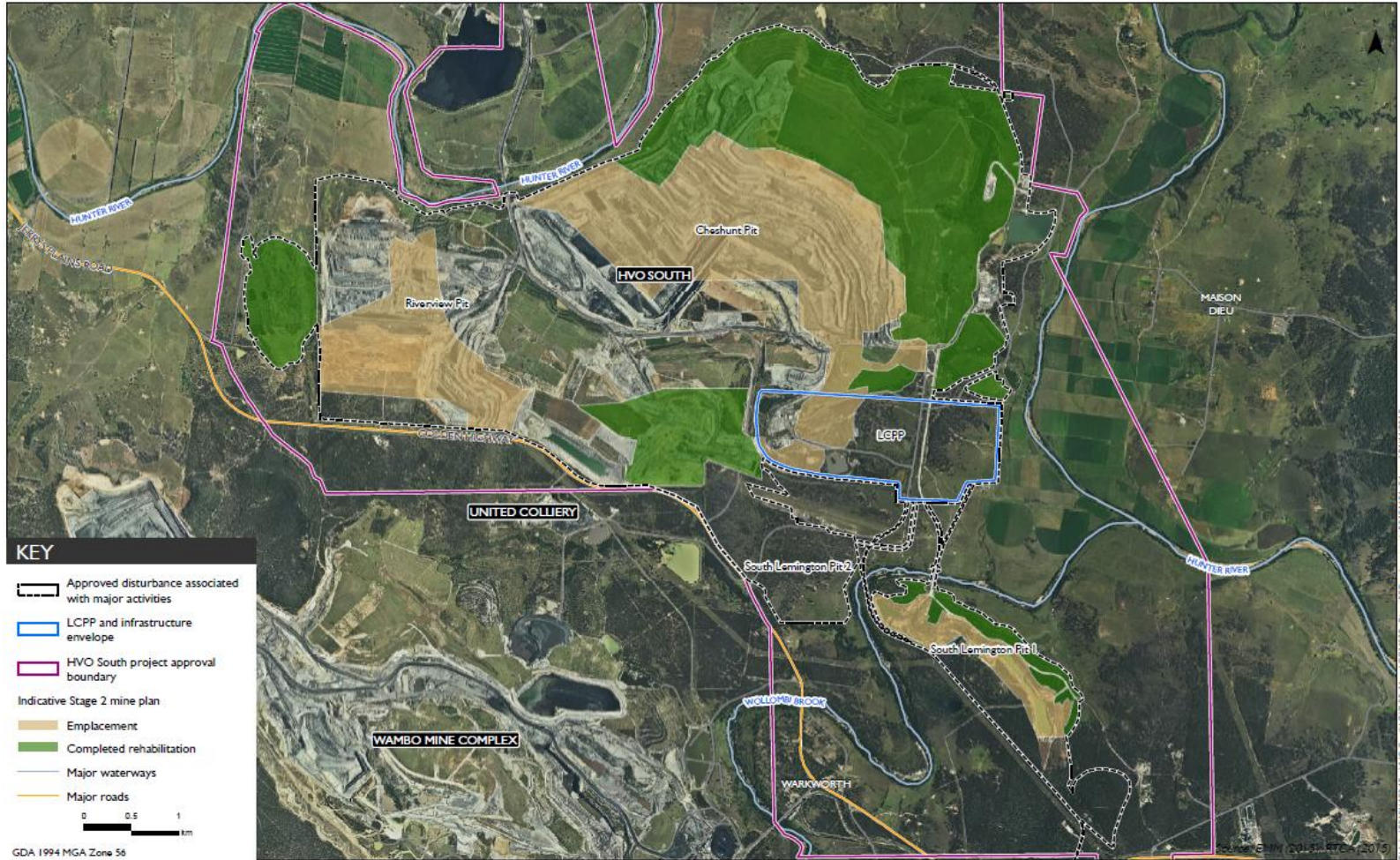
Rehabilitation progression – nominally 2019



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Visual Amenity

Rehabilitation progression – nominally 2022



Indicative Stage 2 emplacement areas
 HVO South Modification 5
 Environmental Assessment

