



OUT21/14225

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Dear Mr Nevill

**Narrabri Underground Mine Stage 3 Extension Project (SSD-10269)  
Supplementary RTS**

I refer to your email of 27 September 2021 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

Narrabri Coal Operations Pty Ltd (NCOPL), a subsidiary of Whitehaven Coal Ltd, is seeking consent for an extension of the existing underground mining area until July 2031.

DPIE Water and NRAR recommend that post approval, NCOPL:

- has a strategy in place to ensure they have suitable entitlement to account for operational and post operational water take across all mines, and that
- they are able to adequately monitor and account for surface water take as a result of subsidence.

Please note our detailed advice is in Attachment A.

Any further referrals to DPIE Water and NRAR can be sent by email to [landuse.enquiries@dpie.nsw.gov.au](mailto:landuse.enquiries@dpie.nsw.gov.au) or to the following coordinating officer within DPIE Water:

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Yours sincerely

A handwritten signature in blue ink, appearing to read 'M Isaacs'.

Mitchell Isaacs  
Chief Knowledge Officer  
**Department of Planning, Industry and Environment: Water**  
29 October 2021

## Attachment A

# Detailed advice to DPIE Planning & Assessment regarding the Narrabri Underground Mine Stage 3 Extension Project (SSD-10269)

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## 1.0 Water take and licensing

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### 1.1 Recommendations – Post Determination

That the proponent:

- a. provide a strategy consistent with the NSW Aquifer Interference Policy (AIP), on how currently held Water Access Licences (WALs) from other mine sites are to be transferred/allocated to meet all take requirements during:
  - i. the operational life of the mine year by year, and
  - ii. post-operations mine closure take stages.
- b. report on water take at the site each year (direct and indirect) in the Annual Review. This is to include water take where a water licence is required and where an exemption applies. Where a water licence is required the water take needs to be reviewed against existing water licences.
- c. ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source prior to take occurring.
- d. ensure that relevant nomination of work dealing applications for Water Access Licences proposed to account for water take by the project have been completed prior to the water take occurring.
- e. be aware of the rules of the relevant water sharing plans and how they may impact the project and ability to trade water.

### Explanation

Although, the information provided in the supplementary RTS shows that availability of entitlement from other mine sites operated by the proponent should account for peak water take for this project, the information is based on other mine sites closing at the currently approved mine life date. The proponent will need to re-evaluate the availability of entitlement should any of these operations have their mine life extended as well as take into account post operational requirements.

The NSW AIP includes a requirement to account for post-operational take - *“a strategy for accounting for any water taken beyond the life of the operation of the project, such as continuing to hold the appropriate amount of licence entitlement to cover the ongoing volumetric impact or surrendering a component of licence entitlement at the end of the project”*.

NCOPL has presented information showing entitlements which are surplus to the operational take across seven other mines available for transfer to account for the predicted maximum operational groundwater take in 2040 from the Gunnedah-Oxley Basin MDB Groundwater Source. Please note that this is a water source with unassigned water. Interested parties can currently apply for a licence under the controlled allocation order (<https://www.industry.nsw.gov.au/water/allocations-availability/controlled>).

This information does not include the operational and post-operational take in each year until post-operational groundwater equilibrium is reached at each of NCOPL's approved and proposed operations. This may significantly limit the availability of any apparent allocation surplus for transfer.

DPIE Water is concerned that from a resource management perspective there is a risk that entitlement is being transferred away from a mine site which may still require entitlement to address ongoing impacts.

DPIE Water recommends that the proponent prepare a strategy to ensure that cumulative impacts are taken into account when transferring entitlement between projects during operation and post mining, and which demonstrates that there is a viable pathway to obtain the necessary entitlement. The proponent must ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source prior to take occurring.

## **2.0 Subsidence impacts and other issues**

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### **2.1 Recommendation – Post Determination**

- a. The Water Management Plan be updated to reflect additional monitoring, metering and management measures to report on groundwater inflows and potential impacts to water sources due to the underground development. Where existing monitoring bores are to be impacted, suitable alternatives need to be installed with baseline data collection commenced prior to mining activities.
- b. The ability to accurately meter and monitor water take from surface and groundwater sources will need to be developed with ongoing review of actual versus modelled predictions. This will be a key component to confirm impact predictions, the adequacy of mitigating measures and compliance for water take.
- c. Subsidence impacts to watercourses need to be remediated to ensure stability and natural ecological functioning. Works are to be in accordance with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).

### **Explanation**

The proponent has quantified the volume of surface water take via subsidence fracturing based on a technique which appears to be relatively new. The technique utilised fracture dimensions sourced from a geotechnical assessment combined with predictions of runoff capture based on ponding within the fractures. This approach has determined the maximum annual surface water take from subsidence induced fracturing to be 4.2ML, which includes 3.5ML on minor streams and 0.7ML on third order streams. It assumes the fractures would be rehabilitated after six months and that rehabilitation is only applied to fractures which exceed 50mm.

Developing useful monitoring parameters will be required to review the suitability of this approach with key aspects being rainfall/runoff and resultant ponding/infiltration processes, and the potential for connections to shallow aquifer systems and the underground. The proponent will need to ensure that water take from fractures less than 50mm is also included within the total water take requirement.

Accounting for subsidence induced surface water take is to be via Harvestable Rights and through purchase of entitlement in the Eulah Creek Water Source which is supported. Whilst there is limited trading in the Eulah Creek Water Source, the volume required is minor which reduces the risk in acquisition.

**End Attachment A**