



Department of Primary Industries

OUT13/19709

31 JUL 2013

Ms Caitlin Elliott
Mining & Industry Projects
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

caitlin.elliott@planning.nsw.gov.au

Dear Ms Elliott,

Atlas-Campaspe Mineral Sands Project (SSD-5012) Response to exhibition of Environmental Impact Statement

I refer to your email dated 7 June 2013 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Comment by Crown Lands

Crown Lands advise that it is willing to support the proposal, conditional on the detailed comments and recommendations in Attachment A being adopted in any approval. It is noted that while most of these matters were earlier advised (in the DPI letter dated 12 March 2013 in respect to the adequacy of the draft EIS), documentation of responses remains insufficient.

For further information please contact Rodney Price, Property Management Project Officer (Dubbo office) on 6883 5434, or at: Rodney.Price@lands.nsw.gov.au.

Comment by NSW Office of Water

The NSW Office of Water advises the following key issues, and the detailed comments and recommended conditions should the application be approved, in Attachment B:

- (i) The proponent holds sufficient water entitlement to account for the proposed groundwater take predicted by the Atlas Campaspe project. A dealing application under the *Water Management Act 2000* will be required to authorise the take of water from the new points of extraction (bores and pits).
- (ii) The groundwater assessment has indicated the potential impact to water level, water pressure and water quality will meet the Level 1 minimal impact considerations for less productive groundwater sources as defined by the Aquifer Interference Policy. The impact is therefore considered acceptable.

- (iii) Licensing under the *Water Act 1912* will be required for additional monitoring bores.
- (iv) The Office of Water supports the proposed development of a Water Management Plan which is to include a groundwater management plan and monitoring programs for both surface water and groundwater. Comprehensive metering of all points of water take combined with water level monitoring is critical for reporting against water licence requirements, and supporting periodic reviews for model calibration, predictions of mine inflow, and review of groundwater drawdown impacts.

For further information please contact Tim Baker, Senior Water Regulation Officer (Dubbo office) on 6841 7403, or at: Tim.Baker@water.nsw.gov.au.

Comment by Fisheries NSW

Fisheries NSW raise no issues.

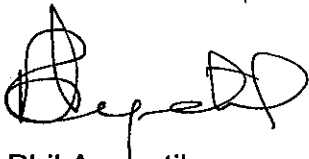
For further information please contact Luke Pearce, Conservation Manager (Albury office) on 6042 4213 or at luke.pearce@dpi.nsw.gov.au.

Comment by NSW Office of Agricultural Sustainability & Food Security

In accordance with arrangements in respect to mining applications that affect agricultural land, the Office of Agricultural Sustainability & Food Security will respond direct to your Department by separate letter.

For further information please contact Liz Rogers, Project Manager (Orange office) on 63913642 or by email liz.rogers@dpi.nsw.gov.au.

Yours sincerely



Phil Anquetil
Executive Director Business Services

Attachment A

Atlas-Campaspe Mineral Sands Project (SSD-5012) Response to exhibition of EIS Comment by Crown Lands

1. Crown Land Licences

A Crown Lands Licence (issued under the *Crown Lands Act 1989*) will be required to authorise occupation over the affected land tenure (Western Lands Lease (WLL) 3339) for the proposed Ivanhoe Rail Siding. If the proponents intend to negotiate with the current lessee regarding the purchase of the lease or the affected portion, then a licence will still be required in the interim if the proponents require early occupation of the site.

In addition, a Crown Land Licence may be required for any of the following:

- (a) Infrastructure not located within the Mining Lease Area (MLA) and/or covered by the Mining Lease, such as the STP and mine accommodation camp (MAC);
- (b) Extracted materials (including gravel, sand, loam and hard rock) used for construction of the mine and associated infrastructure;
- (c) Sewage pipelines from mine buildings within the MLA and the MAC, but only where the pipelines do not traverse the MLA; and
- (d) Water supply pipelines from the nominated bore field to the mine site and other infrastructure, but only where the pipelines do not traverse the MLA.

Any and all licences must be obtained prior to any activity occurring.

It should be noted that earlier comment by Crown Lands (conveyed in the DPI letter dated 12 March 2013 in respect to the adequacy of the draft EIS) was that if any of the abovementioned activities are expected to occur, details of each activity and their location should be detailed in the EIS.

2. Topsoil stockpiles

Section 5.4.2 (Page 5-20) of the EIS outlines the handling of topsoil and subsoil. Stockpiles should be sown with locally endemic native plant species and must not be stored in an area that may be exposed to potentially contaminated soils/materials. The EIS identifies three species, however this is insufficient.

3. Proposed End Land Use

Section 4.3.2 (Page 4-12) of the EIS indicates that rehabilitation of the project would aim to restore self-sustaining ecosystems, including the native species characteristics of vegetation communities cleared by the project development. However, the EIS does not outline how areas that were previously used for cultivation will be restored to a suitable profile and structure to allow for future cultivation activities. If the land areas are not to be returned to previous use, the EIS will need to address why.

4. Construction Materials

The EIS does not detail the amount and source of gravel, sand and other materials required for the construction of the mine site infrastructure, STP, MAC, other buildings and infrastructure, and construction / upgrade / maintenance of roads and access tracks.

5. Travelling Stock Reserve

Travelling Stock Reserve (TSR) 583 (Gazetted 10 March 1884) traverses Lot 614 in Deposited Plan (DP) 761601. The proposed mine development and biodiversity offset area, shown in Figure 4-13 (Section 4, Page 4-46), is likely to encroach upon the TSR. In which case, the proponent will need to negotiate with the relevant Livestock Health and Pest Authority (LHPA) regarding site access and occupation. This is not stated in the EIS.

6. Seepage Control

Section 5.3.2 (Page 5-15) of the EIS indicates that off-path sand residue dams would typically store saline material and would be constructed to minimise the potential for seepage by using clay to line the base and embankment of the dams. The permeability of the proposed clay liners or clay layers is not stated in the EIS. Similarly, the permeability of the materials to be used to seal the process waste cells is not stated in the EIS.

7. Native Vegetation

A proposed biodiversity offset strategy is outlined in Section 4.6.4 (Page 4-45), stating that a biodiversity offset area of approximately 16,540 hectares within 'Boree Plains' and 'Wampo' is to be protected in perpetuity.

The proposed biodiversity offset area will burden a substantial area of land within these properties and 'Conservation' is not currently a prescribed purpose for the leases. Therefore, a Change of Lease Purpose will need to be completed to reflect the use being made of the land, following subdivision. The proponent will need to apply to Crown Lands for a 'Change of Lease Purpose' to incorporate 'Conservation' within the purpose for the newly created leases.

The proponents will need to continue to consult with Crown Lands with respect to the proposed biodiversity offset strategy, whilst seeking approval from the Office of Environment and Heritage.

Section 5.4.2 (Page 5-18) of the EIS states that cleared vegetation would either be directly placed on rehabilitation areas or stockpiled adjacent to the mine path. The proponent must ensure that cleared vegetation that is intended for re-use in the rehabilitation process is not stored where it may be exposed to potentially contaminated soils/materials.

End Attachment A

Attachment B

Atlas-Campaspe Mineral Sands Project (SSD-5012) Response to exhibition of EIS Comment by NSW Office of Water (NOW)

1. Groundwater Licensing

- (i) The estimated groundwater licensing requirements detailed in Table 9 of Appendix F have clearly defined the water take for all existing and proposed Cristal Mining operations over the next 21 years in the Western Murray Porous Rock Groundwater Source of the *Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources 2011*. This indicates the maximum groundwater take of 12497ML is proposed to occur in Year 3 of the Atlas-Campaspe Project. This take is sourced from a combination of the Atlas, Snapper, Ginkgo and Crayfish mine sites. As Cristal Mining hold a total entitlement of 21442 unit shares in this Source, this represents sufficient entitlement to account for the proposed water take.
- (ii) As detailed in Table 9 of Appendix F the maximum groundwater take for the Atlas deposit is 5582ML/yr in Yr 5 and for the Campaspe deposit is 6582ML/yr in Yr 11.
- (iii) As the Atlas Campaspe project involves the installation of additional groundwater extraction points (bores and pits), Cristal Mining will be required to make a dealing application under the *Water Management Act 2000*. The dealing application is to authorise entitlement held under an existing Water Access Licence (WAL) to be taken from additional extraction points.
- (iv) Licensing under the *Water Act 1912* will be required for additional monitoring bores.
- (v) It is recommended the additional monitoring bores be constructed prior to the development of the two mines and maintained through the life of the mines. It is recommended data from the monitoring bores (including NOW's monitoring bores) be used periodically for model calibration, predictions of mine inflow, and review of groundwater drawdown impacts.

2. Groundwater Impacts

- (i) The maximum predicted groundwater drawdown is 1 metre at 2 km from the Atlas deposit borefield in Year 5 of the project, and 1 metre at 2.9 km from the Campaspe borefield in Year 20.
- (ii) The groundwater modelling indicated drawdown would be negligible (less than 2 metres) at the closest registered bore which is located 7 km to the north-east of the project.
- (iii) No groundwater dependent ecosystems were identified within the zone to be impacted by the project.
- (iv) The groundwater impacts are considered to meet the Level 1 minimal impact considerations as specified in the Aquifer Interference Policy for less productive groundwater sources.
- (v) The proposal to backfill the final voids above the groundwater table to a depth to prevent the potential for ongoing groundwater take is supported. Figure 14 of Appendix F depicts this concept and the specific backfill depths above the final groundwater table proposed. A key aspect in relation to implementation of this concept is considering the influence of the predicted water table mounding due to backfilling on the water level in the vicinity of the final voids. This may result in a reduction of the proposed buffer between the groundwater table and the final void depth until the mounding impacts have finished and equilibrium is achieved. During this time period there may be ongoing groundwater take which would need to be accounted for.

3. Recommended conditions of approval

Should the application be approved, the following conditions are recommended:

1. The proponent is required to obtain the necessary water licences for the project under the *Water Act 1912* or *Water Management Act 2000* prior to commencement of activities.
2. The Proponent shall prepare and implement a Water Management Plan for the project. This Plan must be developed in consultation with the Office of Water and include:
 - (i) details of water use, metering and water management on site,
 - (ii) details of water licence requirements,
 - (iii) Surface Water Management Plan, and
 - (iv) Groundwater Management Plan.

The Surface Water Management Plan must include:

- (i) a program to monitor:
 - surface water flows and quality,
 - surface water storage and use, and
 - sediment basin operation,
- (ii) sediment and erosion control plans,
- (iii) surface water impact assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts, and
- (iv) a protocol for the investigation and mitigation of identified exceedences of the surface water impact assessment criteria.

The Groundwater Management Plan must include:

- (i) baseline data on groundwater levels and quality,
- (ii) a program to monitor groundwater levels and quality,
- (iii) groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts,
- (iv) a protocol for the investigation and mitigation of identified exceedences of the groundwater impact assessment criteria, and
- (v) a protocol for periodic review of groundwater model calibration and verification of groundwater take predictions and groundwater impacts.

End Attachment B