

ASSESSMENT REPORT

Mangoola Coal Mine Section 75W Modification

BACKGROUND

The Mangoola Coal Project is located near Wyong in the Upper Hunter Valley (see Figure 1). The project was approved by the Minister on 7 June 2007, at which time it was known as the “Anvil Hill Coal Project”.



Figure 1: Location of the Mangoola Coal Project

The approval allows the development of a new open cut coal mine to extract a total of 150 million tonnes of coal over 21 years, at a rate of up to 10.5 million tonnes of run-of-mine coal a year, as well as the construction of a range of associated infrastructure including coal processing, rail loading and water management facilities.

In October 2007, Xstrata Mangoola Pty Limited (Xstrata) bought the project from Centennial Hunter Pty Limited, and subsequently renamed it the Mangoola Coal Project.

Xstrata has undergone an extensive review of Centennial's original design plans, and as a result has modified the project approval twice since 2007 to enable:

- certain 'early works' to be carried out prior to the commencement of the construction of the mine infrastructure, approved in July 2008; and
- the pipeline for supplying water to the mine from the Hunter River to be relocated, approved in June 2009.

Xstrata is now seeking to relocate the Mining Infrastructure Area (MIA) and make design alterations to the Coal Handling and Preparation Plant (CHPP). It has lodged an application and supporting Environmental Assessment requesting a modification to its project approval under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to allow these changes.

PROPOSED MODIFICATIONS AND NEED

Xstrata's proposed alterations to approved project infrastructure are considered under separate sub-headings below and depicted in Figure 2, where relevant.

Relocation of the Mining Infrastructure Area

Xstrata proposes to relocate the Mining Infrastructure Area (MIA) approximately 1km north-north-east (NNE) of the approved location, see Figure 2. The relocated MIA would be contained within the approved project disturbance boundary; however the base level of the MIA facilities would be approximately 10 metres higher than the approved levels.

The relocation is proposed to allow sufficient area for the MIA and to separate the administration and workshop areas from the operational aspects of the mine, including the Coal Handling and Preparation Plant (CHPP) and run-of-mine (ROM) stockpile pad.

Xstrata has also identified the need to include a helipad and mine rescue station for improved safety. These components are additional facilities not included in the original design of the MIA.

Changes to the Coal Handling and Preparation Plant

Minor design changes to the CHPP are proposed in order to improve site safety. These would be contained within the previously approved location of the CHPP and include:

- change the orientation of the CHPP building from NE-SW to NW-SE;
- change the position of the ROM stockpile pad, moving it 100 metres to the south; and
- change in base levels resulting in an increase in the height of the reject bin by 3 metres.

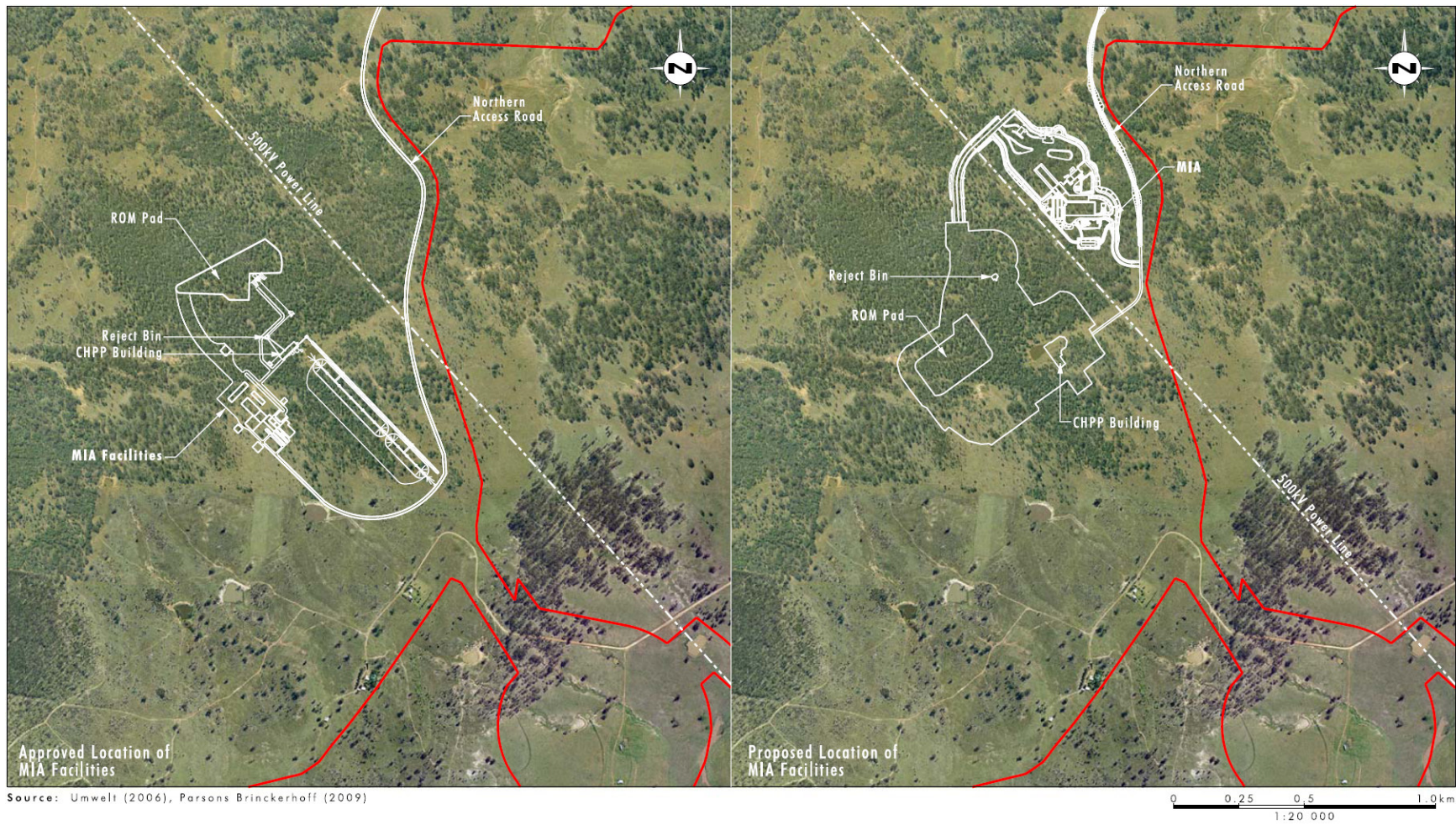
STATUTORY CONTEXT

Approval Authority

The Minister was the approval authority for the original project application, and is consequently the approval authority for this modification application. However, on 4 March 2009, the Minister delegated her powers and functions as an approval authority to modify certain project approvals under Section 75W of the EP&A Act to the Executive Director, Major Development Assessment. This modification application meets the terms of this delegation and therefore the Executive Director may determine the application under delegated authority.

Modification

The proposed modification does not involve changes to any of the mine's operating functions or approved extraction volume. Consequently, the Department is satisfied that the proposed modification may be determined under Section 75W of the EP&A Act.



Legend

Approved Mine Disturbance Boundary

Figure 2: Location of Approved and Proposed MIA Facilities, including the CHPP

CONSULTATION

The Department is not required to notify or exhibit applications under section 75W of the EP&A Act. As the proposed facilities are located entirely within the approved project boundary and the nearest private residences are located over 4km away, the Department considers that consultation is unwarranted.

CONSIDERATION

The Department has assessed the application and considers the key issues relate to visual, noise, air quality and surface water impacts. Impacts on ecology, Aboriginal and non-Aboriginal heritage, traffic, socio-economic and greenhouse gas would not change from those assessed as part of the project approval, given that the proposed MIA relocation would remain within the approved project disturbance boundary.

Visual

A visual impact assessment for the proposed modification was undertaken by O'Hanlon Design Pty Ltd. The assessment considered the key aspects of the modification that are likely to have visual impacts, including:

- increased height of the MIA facilities (including office, workshop, bath house and light towers) by approximately 10 metres;
- closer proximity of the MIA to viewers along Roxburgh and Mangoola Roads; and
- increased height of the reject bin, within the CHPP, by 3 metres.

The visual assessment considered views from the same points as those assessed in the original Environmental Assessment (EA) and determined view points (VP) 1, 2, 3 and 4 to be the most affected, see Figure 3. These view points are located to the north-east, east and south of the proposed MIA and CHPP facilities and represent views from Mangoola and Roxburgh Roads.

The visual assessment concluded that the proposed location of the MIA, 1km NNE of the approved location remains within a moderate-high scenic quality zone as defined in the original EA. The assessment determined that there would be no change to the visual impact rating of VP1, 2 and 4. The rating at VP3 would change from moderate to moderate-high impact due to the MIA moving to the eastern edge of the ridgeline. VP3 represents the views experienced by traffic passing through the intersection of Mangoola and Roxburgh Roads. No private residences are located at this view point, with the nearest being over 1km to the east.

The assessment also considered the extent of screening vegetation between the MIA and the key view points. The assessment concluded that insufficient vegetation would remain on the eastern and southern slopes below the MIA to screen it from viewers at VP2, 3 and 4. Therefore, Xstrata has commenced planting a rapid growing vegetation screen along the western edge of Mangoola Road from the northern side of VP3 through to VP4 (see Figure 3). Vegetation has been planted between VP3 and VP4, with the section to the north of VP3 yet to be planted. This northern section is subject to a Ground Disturbance Permit procedure requiring Aboriginal stakeholder consultation prior to undertaking planting. Once mature, the vegetation would provide a reasonable level of screening of the MIA when viewed from Mangoola Road between VP3 and VP4.

The Department considers that the revised visual impacts at VP3, increasing from moderate to moderate-high, would have only a minor impact, given that there are no private residences in this location and the views to be affected are from passing traffic. The proposed vegetation screen from VP3 to 4 would, in time, minimise these impacts. The Department has recommended a condition requiring Xstrata to complete this planting early, to provide the maximum time for the vegetation to mature. As the section north of VP3 is subject to stakeholder consultation, and to avoid planting during the hottest months, the Department requires Xstrata to complete the planting no later than July 2010.

The alteration of views must also be considered in the context of the overall development, including the open cut pit, the CHPP, rail loading infrastructure and associated night lighting. These aspects would transform the landscape for the duration of mining activities. Relocation of the MIA within the approved disturbance boundary would be insignificant in the context of the broader approved development.

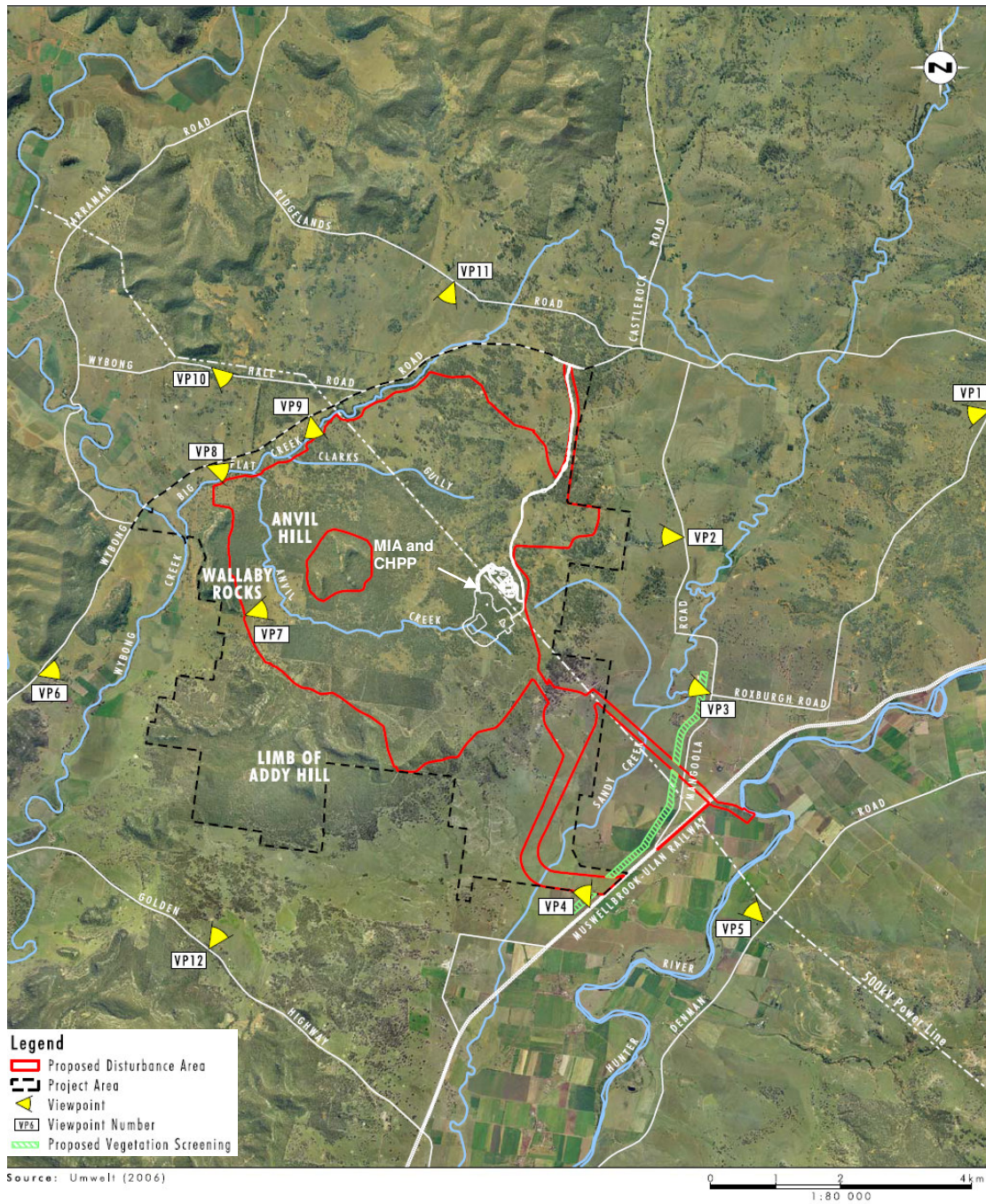
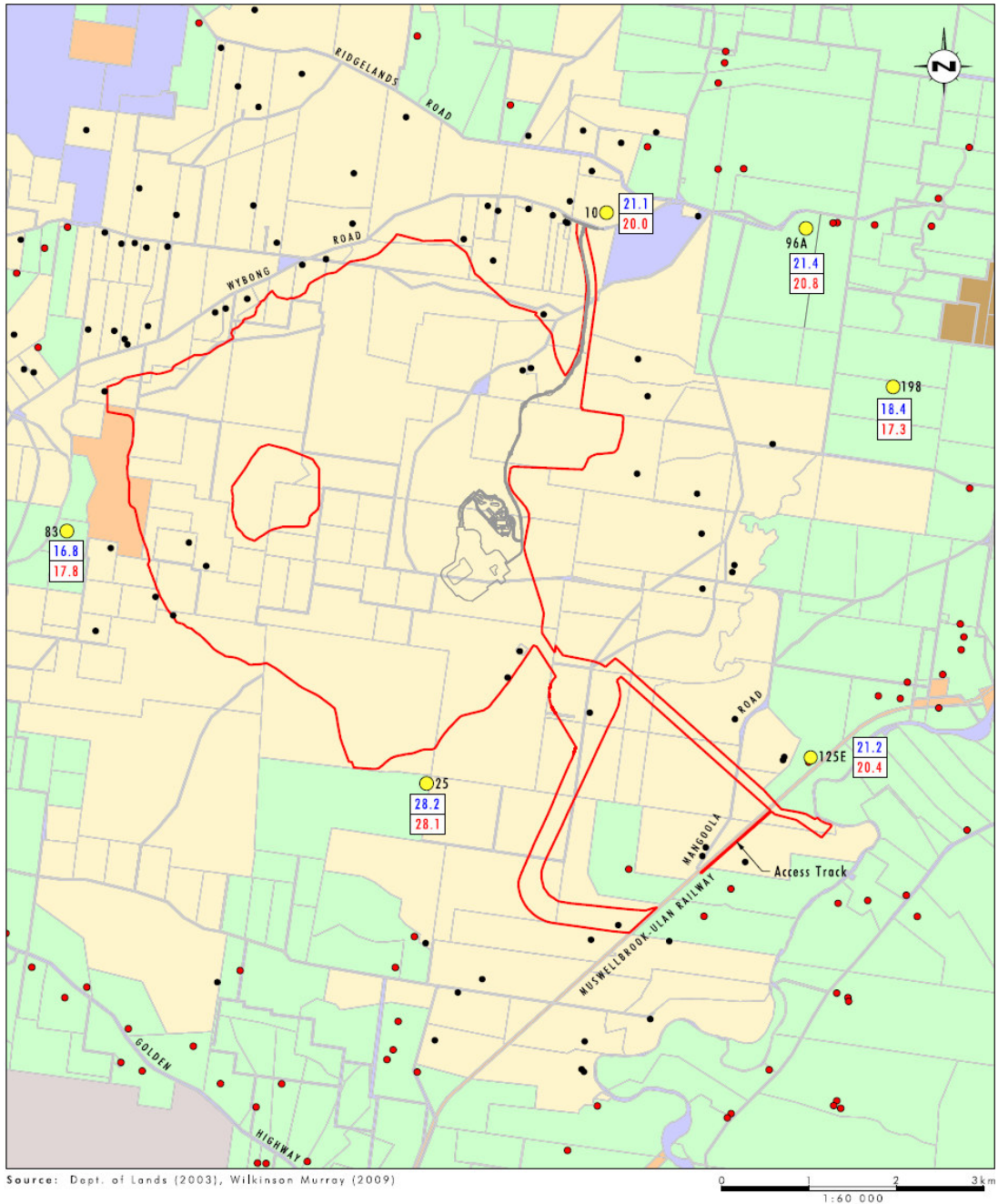


Figure 3: Visual Assessment Locations & Vegetation Screen

Noise

A noise assessment of the proposed modification was undertaken by Wilkinson Murray Pty Ltd. The assessment predicted noise level changes at six residences most likely to be impacted by the relocation of the MIA. These residences are shown on Figure 4. The results of the assessment are shown in Table 1 and summarised below.



- Legend**
- Approved Project Disturbance Boundary
 - Private Residence
 - Mine Owned Residence
 - Assessed Residence Location
 - 28.2 Noise Levels (dB(A)) from MIA (day time scenario) Approved Project
 - 28.1 Noise Levels (dB(A)) from MIA (day time) Proposed Modification
- Land Ownership Status:**
- Xstrata Mangoola Pty Limited
 - Crown Land
 - The State of NSW
 - Private
 - Other Mine Owned

FIGURE 4.2
Residence Locations used for Noise Assessment

Figure 4: Residence Locations used for Noise Assessment

Table 1: Noise Assessment Results

| Residence No. | EA Noise Level | Modification Noise Level | Predicted Change | Acquisition Status |
|----------------------|-----------------------|---------------------------------|-------------------------|--------------------------------|
| 10 | 21.1 | 20.0 | -1.1 | Acquired |
| 25 | 28.2 | 28.1 | -0.1 | Rights already in place |
| 83 | 16.8 | 17.8 | +1.0 | Rights already in place |
| 96A | 21.4 | 20.8 | -0.6 | N/A |
| 198 | 18.4 | 17.3 | -1.1 | N/A |
| 125E | 21.2 | 20.4 | -0.8 | N/A |

Note: Noise levels are for day time conditions measured as dB(A).

The MIA is proposed to be relocated 1km to the NNE of the approved location. Residence number 83, located approximately 4.8km to the west is identified as the nearest residence to be impacted by increased noise due to the modification, albeit only a minor increase of 1dB(A). All other nearest residences to the north, north-east, south-east and south are predicted to experience a minor reduction in noise as a result of the modification.

The cumulative impact of noise from the MIA, CHPP and mining operations at residence 83 were considered in the original EA, with a worst case scenario of 35dB(A) predicted. The proposed increase of 1dB(A) from the MIA would not increase cumulative noise at this location such that the land acquisition criteria of 40dB(A) would be exceeded. However, it should be noted that this property already has land acquisition rights due to the impacts of air quality and blasting from the approved project.

Noise from use of the proposed helipad would be very infrequent, given that its primary purpose is for emergency use. It is anticipated that the helipad would be used twice every six months as it would on occasion be used by contractors visiting the site. Noise from helicopters would be unlikely to impact on the nearest private residence, located over 4km from the proposed helipad location.

The Department is satisfied with the level of additional noise assessment undertaken for the modification and considers that the predicted impacts would be negligible. No amendment to the conditions for managing noise impacts is considered warranted.

Other Impacts

Air Quality

Sinclair Knight Merz undertook an assessment to quantify the change in total dust emissions as a result of the modification. The modifications most likely to alter dust emissions include:

- decreasing the size of the ROM pad by 0.9 hectares;
- increasing the size of the product stockpile by 1 hectare; and
- increasing the length of the haul route from the pit to the ROM pad by approximately 100 metres.

The assessment concluded that the difference between the approved project and the modification would be less than 0.1%, which would be undetectable off-site in all assessment years.

The Department is satisfied that the air quality impacts of the project would remain unchanged as a result of the modification.

Surface Water

The approved MIA and CHPP were located entirely within the Anvil Creek catchment area. The proposed relocation of the MIA 1km to the NNE would result in 1.6 hectares of the MIA being located in the adjacent Sandy Creek catchment. This represents less than 0.1% of the total catchment area and would result in a minor increase in annual flow volumes within Sandy Creek.

The Department considers that the change in water management required as a result of the modification can be adequately managed via the approved Site Water Management Plan for the project. There are already a range of controls in place for managing impacts on surface water resulting from project activities in the Sandy Creek catchment. These include the preparation of individual erosion and sediment control plans for discrete areas of activity, prior to disturbance. The

Department is satisfied that these measures are sufficient to manage any potential surface water impacts on the Sandy Creek catchment as a result of the modification.

RECOMMENDED CONDITIONS

The Department has drafted recommended conditions for the modification. Xstrata does not object to these conditions.

CONCLUSION

The Department has assessed the proposed modification in accordance with the relevant requirements of the EP&A Act, including the objects of the Act and the principles of ecologically sustainable development.

Based on this assessment, the Department considers that the proposed modifications represent minor changes in the context of the approved project, and is confident that they are able to be carried out with minimal environmental impact on surrounding land users and the local and regional environment.

The Department is satisfied that the proposed relocation of the Mining Infrastructure Area and alterations to the Coal Handling and Preparation Plant are required to improve safety and operational efficiency.

On balance, the Department is satisfied that the benefits of the proposal outweigh any residual costs, and that it is in the public interest and should be approved, subject to conditions.

RECOMMENDATION

It is RECOMMENDED that the Executive Director, as delegate of the Minister:

- consider the findings and recommendations of this report;
- determine that the proposed modification would not “radically transform” the approved project;
- approve the application, subject to conditions; and
- sign the attached notice of modification.

Signed 2 November 2009

Signed 4 November 2009

David Kitto
Director

Chris Wilson
Executive Director