

# ASSESSMENT REPORT

## Cadia East Gold/Copper Project Modification of Project Approval (06\_0295 Mod 2)

### 1 BACKGROUND

Cadia Holdings Pty Ltd (Cadia) owns and operates the Cadia Valley mining complex approximately 25 kilometres (km) south-west of Orange, in the Central Tablelands of New South Wales (Figure 1). The mining complex is also known as the Cadia Valley Operations (CVO).





This complex comprises the:

- Cadia Hill open cut mine, approved by the Minister following a Commission of Inquiry (COI) in 1996;
- Ridgeway underground mine, approved by the Minister following a COI in 2000, and subsequently extended (known as 'Ridgeway Deeps') in 2005;
- the Cadia East underground mine, approved by the Minister in January 2010; and
- Blayney Dewatering Facility (BDF), approved by the Minister in 2000.

Essentially, ore is extracted from the Cadia and Ridgeway mines, processed on site, and then sent by pipeline to the BDF, where it is dewatered and finally railed to Port Kembla. Construction of the Cadia East underground mine commenced following the Minister's approval and the subsequent Commonwealth and company approvals. All activities associated with the mining complex are now covered by the Cadia East project approval (06\_0295).

The existing BDF has been in operation since 1998 and is located in an industrial precinct north of the rail line and adjacent to the Linfox Linehaul loading facility, in the town of Blayney (see Figure 2). The function of the BDF is to dewater the product concentrate produced at and pumped from the CVO via pipeline (approximately 30km in length) to the BDF, and to stockpile the product in containers to transport to market via rail. The BDF operates 24 hours per day over two 12 hour shifts, seven days per week. Container filling and train loading operations are undertaken between the hours of 7:00am and 7:00pm, up to 7 days per week.

A new dewatering facility (the CVO Dewatering Facility) was assessed and approved as part of the Cadia East project approval, to be built to the east of Blayney (see Figure 2). This facility was approved to be constructed during years 2 and 3 of the project, with the BDF retained to provide standby processing capacity during years 4 to 7. A feasibility review indicated that the capital cost could be significantly reduced by delaying the construction of the approved CVO Dewatering Facility until year 4 of the project, and upgrading the BDF to facilitate a temporary increase in capacity of the facility.



Figure 2: Location of the existing BDF and approved CVO Dewatering Facility

## 2 PROPOSED MODIFICATION

To facilitate a delay in construction of the CVO Dewatering Facility, Cadia is seeking to increase the:

- capacity of the BDF from 220,000 tonnes per annum (tpa) to 400,000 tpa; and
- operational life of the facility by 2 years, to 2015 (and associated extension to the standby period).



The proposal also involves train loading up to five times per week, increasing from the existing three trains per week, but still remaining within the maximum of six trains per week for the Main Western Railway, approved under the Cadia East project approval.

The increased capacity would require additional processing equipment including a filter press, sump pump, air receiver and compressor, to be installed within the approved BDF footprint (see Figure 3).

The hours of operation for the modified BDF would remain unchanged from those currently approved. Dewatering would continue to take place 24 hours per day, seven days per week with container and train loading activities being conducted between 7.00 am to 7.00 pm, seven days per week.

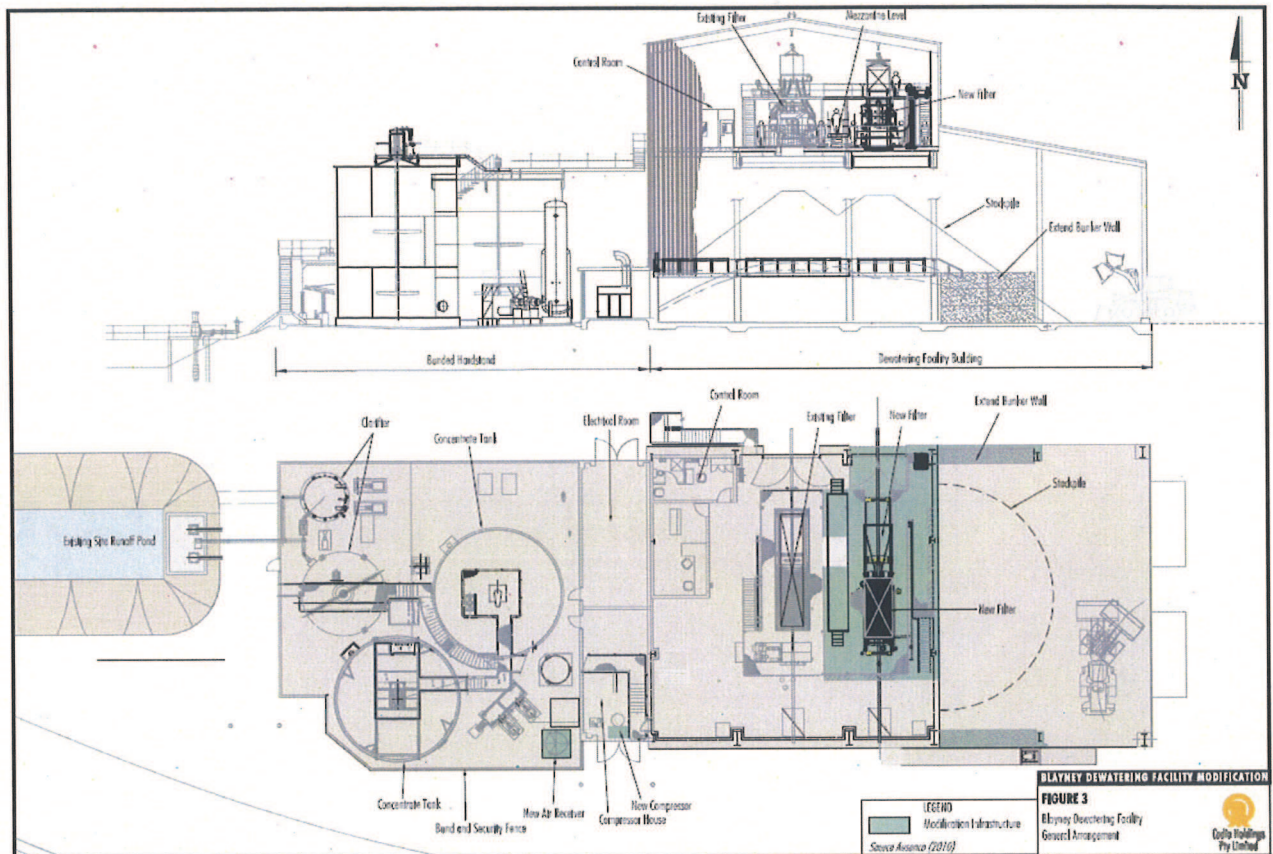


Figure 3 – Proposed Modifications to BDF

### 3 STATUTORY CONTEXT

#### Approval Authority

The Minister for Planning was the approval authority for the original project application, and is consequently the approval authority for this modification application. However, the Director Mining & Industry Projects may determine the modification application under the Minister's delegation of 25 January 2010.

#### Section 75W

The proposal involves making some minor changes to the existing dewatering facility at Blayney, essentially to facilitate a temporary increase in throughput capacity and life of the facility to delay the construction of the approved CVO Dewatering Facility. These changes would occur within the existing building footprint, and would have minor environmental impacts. The modification would not involve any changes to the operations and life of the mines of the CVO.

Consequently, the Department is satisfied that they can be properly characterised as modifications to the approved development under the existing major project approval, rather than a new project in its own right, and can be approved under section 75W of the EP&A Act.

#### Exhibition and Notification

Under section 75W, the Department is not required to notify or exhibit the application. However, after accepting the EA for the proposed modification, the Department:

- made the EA publicly available from 10 September to 27 September 2010:
  - on the Department's website,



- at the Department's Information Centre; and
- at the office of the Nature Conservation Council of NSW;
- notified relevant State and local government authorities by letter; and
- advertised the exhibition in the Blayney Chronicle.

Following the exhibition of the EA, the Department received 2 submissions on the proposal (Department of Environment, Climate Change and Water (DECCW), and Industry & Investment NSW (I&I NSW)), neither of which objected to the proposal. No submissions were received from the general public.

## 4 ASSESSMENT

The Department has assessed the potential impacts of the proposed modification and considers that the key assessment issue is potential noise impacts.

### 4.1 Noise

The EA includes an assessment of existing noise levels and potential noise impacts associated with the modification, undertaken by Wilkinson Murray Pty Ltd (Wilkinson Murray), in accordance with the *NSW Industrial Noise Policy* (INP) and DECCW's *Interim Construction Noise Guidelines* (ICNG).

The existing BDF is located in a recognised industrial precinct, adjacent to the Linfox export facility (see Figure 2). The existing acoustic environment is dominated by operational noise from both the BDF and the Linfox export facility. In addition, freight and passenger trains operate on the Main Western Railway immediately adjacent to the facility up to 24 hours a day. Prominent noise sources from the industrial precinct are from loading and unloading of forklift containers, train noise, truck noise and plant noise.

Regular noise monitoring of the facility has been conducted over a long period. Monitoring data since 2002 indicates that operational noise levels are generally compliant; however some measurements as well as predictions of existing noise levels indicate that noise levels may be exceeded, particularly under noise-enhancing meteorological conditions and when additional actions such as train loading are being undertaken. Under adverse weather conditions, the noise impact assessment criteria for the Cadia East project approval may currently be exceeded by up to 12 dB(A) (see Table 1).

Table 1: Predicted Noise Levels from the Existing BDF at Noise Monitoring Locations (dB(A))

Noise Monitoring Location	Approved Criteria - Day/Evening	Existing BDF Predicted Levels - Day/Evening	Approved Criteria - Night	Existing BDF Predicted Levels - Night
Location 1	48	<b>53</b>	38	<b>44</b>
Location 2	48	<b>53</b>	38	37
Location 3	53	52	43	42
Location 4	43	<b>52</b>	35	<b>41</b>
Location 5	48	<b>60</b>	38	<b>49</b>

Note: Bold text denotes exceedance.

The modification has the potential to increase noise at receivers near the site, as a result of the installation of an additional filter press, sump pump, air receiver and compressor within the existing BDF footprint, as well as the increased quantity of concentrate to be dewatered, stockpiled and transported. However, the noise assessment found that noise impacts during adverse weather conditions could be reduced from current levels by up to 5 dB(A) with the implementation of proposed noise mitigation measures (see Table 2). These measures include the installation of a cover on the concentrate tanks, the replacement of the existing forklift with a quieter model and the enclosing of the container loading area to the north and south with cladding. The Department has recommended the noise impact assessment criteria for the BDF in the Cadia East project approval be amended to reflect the predicted noise levels identified in the noise assessment.

Table 2: Predicted Noise Levels from the Proposed Modified BDF (with Mitigation Measures) at Noise Monitoring Locations (dB(A))

Noise Monitoring Location	Existing BDF Predicted Levels - Day/Evening	Modified BDF Predicted Levels - Day/Evening	Existing BDF Predicted Levels - Night	Modified BDF Predicted Levels - Night
Location 1	53	53	44	<b>39</b>
Location 2	53	<b>51</b>	37	<b>36</b>
Location 3	52	<b>49</b>	42	<b>37</b>
Location 4	52	<b>51</b>	41	<b>36</b>
Location 5	60	<b>59</b>	49	<b>45</b>

Note: Bold text denotes reduction from existing BDF predicted noise levels.

The Department is generally satisfied that Cadia has done everything that is reasonable and feasible to minimise the noise impacts of the modified project and that the proposed mitigation measures are consistent with best practice.

The noise assessment found that predicted construction noise levels associated with the upgrading of the BDF would be below DECCW's construction noise criteria at all but one sensitive receiver (Location 5). The Department has recommended construction noise limits, based on the maximum predicted construction noise levels in the noise assessment. Construction of the upgraded BDF would be for a duration of approximately six weeks and would be undertaken during standard construction hours, in accordance with the ICNG. Cadia proposes to inform potentially-affected residents about construction activities. Consequently, the Department is satisfied that construction noise associated with the upgrading of the BDF would result in negligible impacts on local residents.

In conclusion, the Department is satisfied that Cadia has assessed the potential noise impacts of the modification in accordance with the relevant guidelines. The Department is also satisfied that the proposed mitigation measures are reasonable and feasible and has recommended revised noise impact assessment criteria to reflect the predicted noise levels from the modified BDF. The Department has also recommended construction noise limits, based on the maximum predicted construction noise levels. Overall, the Department is satisfied that, with the implementation of the above mitigation measures and continued implementation of Cadia's Noise Management Plan, the impacts of the proposed modification would be appropriately minimised, managed and monitored during the temporary 2-year extension to the operation of the BDF.

#### 4.2 Other Issues

The Department's assessment of other issues is summarised in the table below. All other issues have been considered by the Department and are considered to have negligible environmental impacts over and above those assessed and approved, and do not warrant further management measures or conditions.

<b>Issue</b>	<b>Consideration</b>	<b>Conclusion</b>
<i>Air Quality</i>	<p>The modification would result in an increase in concentrate slurry being dewatered, stockpiled and transported. However, the moisture content of the material being handled, the enclosed nature of the facility, and the use of enclosed shipping containers for product transport are considered to keep dust generation negligible.</p> <p>The modified dewatering plant, concentrate stockpile and container filling operations would continue to remain enclosed to effectively eliminate the potential for dust emissions to the surrounding environment.</p> <p>The Department is satisfied that the proposal is unlikely to result in significant air quality impacts, subject to the continued implementation of the existing dust mitigation measures on site.</p>	Negligible impacts.
<i>Transport</i>	<p>The modification would involve train loading up to five times per week, increasing from the existing three trains per week. However, this would remain within the maximum of six trains per week, approved under the Cadia East project approval.</p> <p>The modification would not alter the method used to transport the concentrate from the mining complex to the BDF, with the proposed increased concentrate slurry still being transported to the BDF via a concentrate pipeline. There would not be any additional impacts to the local road network, residents and other road users.</p> <p>Given that train loading would still remain within the approved maximum, and that no additional impacts to the local road network, residents and other road users would be generated, the Department is satisfied that the potential transport impacts of the modification would be negligible.</p>	Negligible impacts.
<i>Visual Amenity</i>	<p>The modification would result in the installation of additional dewatering components, although these would be installed wholly within the footprint of the existing building and hardstand area.</p> <p>The BDF is also located within an industrial landscape setting, immediately</p>	No change.

Issue	Consideration	Conclusion
	<p>west of the Linfox export facility and north-east of a former abattoir.</p> <p>Given that the additional components of the modification would be installed within the building footprint and hardstand area, and the site's industrial landscape setting, the Department is satisfied that the potential visual impact of the modification would be negligible.</p>	

## 5 CONCLUSION

The Department has assessed the modification application in accordance with the relevant requirements of the EP&A Act. The Department is satisfied that the proposed modification would enable Cadia to continue using the BDF with negligible changes to the approved project's environmental impacts.

The Department therefore believes that the proposed modification is in the public interest and should be approved.

## 6 RECOMMENDATION

It is RECOMMENDED that the Director, Mining & Industry Projects, as delegate of the Minister:

- **consider** the findings and recommendations of this report;
- **determine** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approve** the proposed modification under section 75W of the EP&A Act; and
- **sign** the attached Notice of Modification (Tag A).

*Howard Reed*

22.10.10

Howard Reed  
Manager Mining Projects

*DKitto 25/10/10*

David Kitto  
Director, Mining & Industry Projects