



# **Charbon Coal Mod 1 & Airly Mine Mod 2: Rail Water Transfer**

State Significant  
Development  
Modification Assessment  
08\_0211 MOD 1  
SSD 5581 MOD 2



July 2019

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### **Cover photo**

Train carting water

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# Glossary

Abbreviation	Definition
$\mu\text{S/cm}$	microSiemens per centimetre
AWD	Available Water Determination
BDAR	Biodiversity Development Assessment Report
CHPP	coal handling and preparation plant
Consent	Development Consent
Department	Department of Planning, Industry and Environment
DRG	Division of Resources and Geoscience, within the Department
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EP&A STOP Regulation	Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017
EPL	Environment Protection Licence
FTE	Full-time equivalent
IPC	Independent Planning Commission
km	kilometres
L/s	litres per second
LDP	Licensed Discharge Point
MOP	Mining Operations Plan
Minister	Minister for Planning and Public Spaces
ML	megalitre
ML/year	megalitres per year
NSW	The state of New South Wales
PAC	Planning Assessment Commission
ROM	run-of-mine
Secretary	Secretary of the Department of Planning, Industry and Environment
SSD	State Significant Development
SSGV	site-specific guideline value
WAL	Water Access Licence



## Executive Summary

Centennial Coal Company Limited (Centennial) is seeking, through its subsidiary companies Charbon Coal Pty Ltd (Charbon Coal) and Centennial Airly Pty Ltd (Centennial Airly), to modify the State significant development (SSD) consents for two of its coal mines located in the western coalfield of New South Wales (NSW):

- Charbon Colliery (Charbon) is located approximately three kilometres (km) south of Kandos, in the Mid-Western Regional Council local government area. The mine is currently being rehabilitated.
- Airly Coal Mine (Airly) is an operating underground mine that is located approximately 25 km north-west of Lithgow, in the Lithgow City Council local government area.

Extremely dry and hot conditions since April 2017 has led to a reduction in the availability of water at Airly, with the mine likely to have insufficient water to meet its processing demands in the near future. A water deficit of 170 megalitres per year (ML/year) has been estimated in a 'dry' year. Charbon has a surplus of water supply, as it holds adequate water access licences (336 ML/year) to extract water from Reedy Creek Dam and minimal water demand during rehabilitation, with no requirement for operational water.

The modification applications are therefore seeking approval to transfer up to 170 ML/year from Charbon to Airly by rail, to meet Airly's water security needs.

The Department of Planning, Industry and Environment (the Department) exhibited the applications and accompanying modification reports from 1 to 14 May 2019. Seven government agencies provided advice on the two applications. No public submissions were received.

The noise, water, transport and air quality impacts associated with the proposed water transfer would be within the scale of impacts approved under the original consents for both Airly and Charbon.

Centennial Airly and Charbon Coal would however update the respective water management plans to reflect the proposed water transfers to ensure any unforeseen impacts are effectively managed.

The modification applications would allow Centennial to provide additional water to Airly, to ensure the mine can continue to operate as approved. Environmental impacts associated with the modification would be consistent with the impacts of the approved mines while realising the social and economic benefits associated with avoiding potential suspension of mining operations at Airly, such as job losses and reductions to royalty revenue.

Consequently, the Department considers that the proposed modifications are in the public interest and recommends that both proposed modifications are approved, subject to recommended conditions set out in the Notices of Modification.



# 1. Introduction

## 1.1 Background

This report provides the Department's assessment of two related modification applications submitted by subsidiary companies of Centennial Coal Company Limited (Centennial) to modify the State significant development (SSD) consents of two of Centennial's coal mines located in the western coalfield of New South Wales (NSW).

The proposals seek to augment water supply options at Airly Coal Mine (Airly) to meet its operational water security needs. The applications seek to achieve water security by enabling the transfer of up to 170 megalitres of water per year (ML/year) from Charbon Colliery (Charbon) to Airly by rail (further discussed in Section 2).

Airly and Charbon are situated in the Western Coalfield, where the high sandstone terrain of the Blue Mountains breaks up into separate mesas and ridges. The area is characterised by grazing and agricultural land use on the lower terrain, some rural residential properties, and nearby national parks, conservation areas and state forests.

### 1.1.1 Charbon Colliery

Charbon Coal Pty Ltd (Charbon Coal) owns and operates Charbon, which is located approximately three kilometres (km) south of Kandos, in the Mid-Western Regional Council local government area (see **Figure 1**).

Coal mining has taken place at Charbon since 1920. In 1985 the mine was upgraded to include a rail loop, a coal handling and preparation plant (CHPP). Centennial acquired Charbon Coal and the mine in 1994.

On 7 September 2010, the Charbon Coal Project (MP 08\_0211) was approved under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) by the Planning Assessment Commission (PAC) (now, Independent Planning Commission - IPC). The approval allows the underground and open cut extraction, processing, and rail transport of up to 1.5 million tonnes of run-of-mine (ROM) coal per year, until 31 August 2025. However, the coal resource at the mine has been fully extracted and the site is now being progressively rehabilitated.

Under Clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (EP&A STOP Regulation), the Charbon project was transitioned to SSD by order, which was published in the NSW Government Gazette on 6 July 2018.

### 1.1.2 Airly Coal Mine

Centennial Airly Pty Ltd (Centennial Airly) owns and operates Airly, which is approximately 25 km north-west of Lithgow, in the Lithgow City local government area (see **Figure 1**). The mine is an operating underground coal mine.

Development consent was first granted for mining at Airly in 1993. Centennial acquired the mine in 1997.

On 15 December 2016, development consent was granted by the then PAC for the Airly Mine Extension Project (SSD 5581). The development consent allows:

- extraction of up to 1.8 million tonnes per annum of ROM coal by continuous mining methods for power generation, until 31 January 2037;
- transportation of coal by rail to Eraring Power Station and to export markets; and
- operation of supporting infrastructure, including a pit top, ventilation shafts, a coal stockpile, water management infrastructure and offices.

Airly employs up to 155 full-time-equivalent (FTE) personnel, provides approximately \$6.5 million per year in royalty revenue for the State and is a significant contributor to the local, regional and state economy.

The development consent has been modified once, which allowed pillar splitting and quartering in areas near clifflines.

Since April 2017, the Central West region of NSW has experienced extremely dry and hot conditions. These conditions have led to Airly having insufficient water to meet its processing demands. In a 'dry' year, Airly's outputs of water total 322 ML/year, compared to inputs of 154 ML/year – creating a supply deficit of 168 ML/year. In an average year Airly's outputs total 349 ML/year, compared to inputs of 285 ML/year – creating a supply deficit of 64 ML/year.

Airly has three existing primary water sources, which are utilised in the following priority order:

- run-off captured in surface dams;
- groundwater inflows to the mine; and
- a groundwater production bore.

The prolonged dry conditions in the region has reduced run-off into surface dams and consequently, process water demand is greater than the rate of water harvesting.

Groundwater inflows into mined areas were predicted to be 183 ML/year in the Airly Mine Extension Project Environmental Impact Statement (EIS). More recent monitoring data and simulations predict mine inflows to be only 76 ML/year. All of the predicted groundwater inflow is being absorbed in the mined coal, and removed as product coal moisture.

The groundwater production bore is licensed to draw up to 158 ML/year (equivalent to 5 litres per second (L/s)). However, flow rates have recently dropped to less than 1 L/s, and are continuing to decrease.





**Figure 1 | Site Location**



## 2. Proposed Modifications

As of mid-June 2019, Airly had approximately eleven weeks of water supply remaining, and would be required to significantly scale back operations if its water supply was exhausted.

A water balance assessment undertaken for Airly identified a water deficit of 170 ML in a 'dry' year<sup>1</sup> and 64 ML in an average rainfall year that would be needed to supplement on-site water. No additional water would be required in a 'wet' year. Charbon has a surplus of water supply in its dams<sup>2</sup> and is entitled to extract up to 336 ML/year<sup>3</sup>.

To provide increased water security at Airly, Centennial is seeking approval to transfer up to 170 ML/year of water from Charbon to Airly by rail using one train per day, 24 hours per day, seven days per week. To transfer 170 ML/year, 218 return trips per year would be required (approximately 4.2 trips per week). However, on average, only 82 return trips would be required to transfer 64 ML/year (approximately 1.5 trips per week).

The proposed water security measure would require the utilisation of the Wallerawang-Gwabegar rail line within the Country Regional Network, which connects Airly and Charbon. The proposed rail transport route is shown in **Figure 2**. The Country Regional Network is operated by John Holland Rail on behalf of Transport for NSW. The Wallerawang-Gwabegar rail line is not operated to a fixed timetable and the section from Kandos to Capertee is currently unused.

Minor modifications are also required to water management facilities at both mines to enable train loading at Charbon and train unloading at Airly. The infrastructure associated with the modifications would take six weeks to construct.

### 2.1 Charbon MOD 1

Charbon Coal's modification application and accompanying Modification Report seeks approval to:

- transfer up to 170 ML/year of water by rail from Charbon to Airly (located approximately 25 km south of Charbon); and
- modify existing water pumping facilities on site to enable train loading.

A number of minor infrastructure upgrades would occur at Charbon to facilitate the transfer of water to Airly:

- a new above-ground multi-outlet water manifold would be constructed near the rail loop to allow water from the CHPP Dam 3 to transfer water to ISO-containers on rail wagons, using flexible hoses; and
- a new pipeline, of approximately 200m length would be installed from CHPP Dam 3 to the new manifold, via an existing pump house.

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<sup>1</sup> A dry year was defined as the driest year in the historical record (347mm in 1982), run continuously in a water balance model.

<sup>2</sup> This includes a 220 ML capacity Reedy Creek Dam, three CHPP dams (with a total capacity of 12.5 ML) and a 32 ML LDP4 Dam.

<sup>3</sup> Charbon holds 336 units, which in most circumstances allows 336 ML to be extracted in a year.



**Figure 3** shows the location of site disturbance at Charbon.

No changes are proposed to Charbon's approved mine life, approved mining areas, mining methods, extraction rate or rehabilitation requirements.

## 2.2 Airly MOD 2

Centennial Airly's modification application and accompanying Modification Report seeks approval to:

- receive up to 170 ML/year of water by rail from Charbon; and
- modify the existing water management system at the Airly pit top to enable transfer of water from the train to existing onsite storages.

A number of minor infrastructure upgrades would occur at Airly to facilitate the import of water from Charbon:

- the Train Loader Dam would be enlarged, and its existing pumps to the 109 ML Dirty Water Dam would be upgraded; and
- the existing pipeline between the Train Loader Dam and the 109 ML Dirty Water Dam would be upgraded.

**Figure 4** shows the location of site disturbance at Airly.

No changes are proposed to Airly's approved mine life, approved mining areas, mining methods or extraction rate.

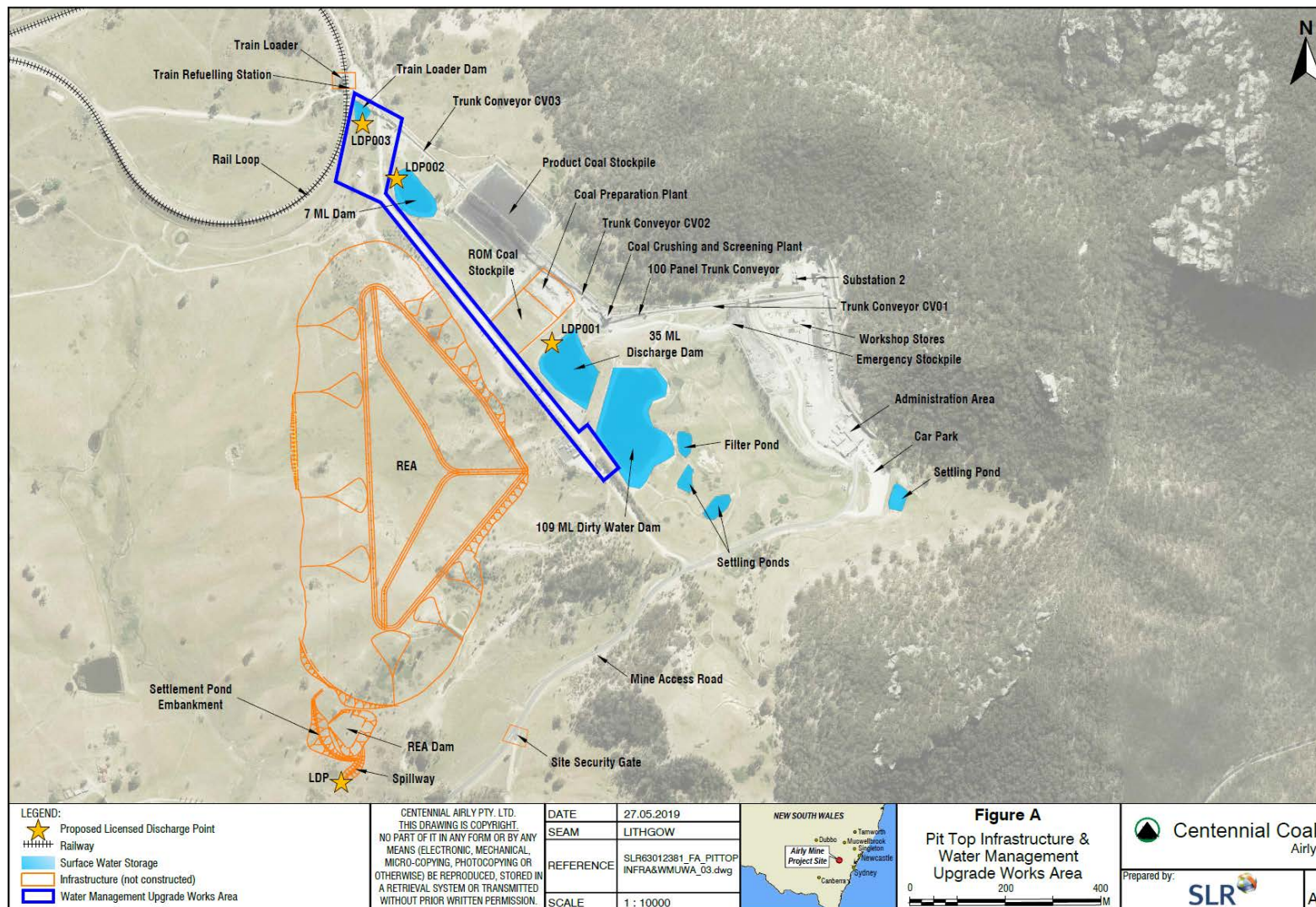


**Figure 2 |** Proposed rail transportation route



**Figure 3** | Location of site disturbance for loading water onto rail at Charbon





**Figure 4** | Location of site disturbance for unloading water from rail at Airly



## 3. Statutory Context

### 3.1 Modifying Development Consents

The modifications were lodged as s4.55(2) modifications. However, following review of the modification reports, the Department is satisfied that the proposed modifications involve minimal environmental impact and are both within the scope of section 4.55(1A) of the EP&A Act, as the proposals:

- are substantially the same development as originally approved (see Section 3.3);
- would not significantly increase the environmental impacts of the projects as approved (see Section 5); and
- would not involve any further disturbance outside the already approved disturbance areas for the projects (see **Figure 3** and **Figure 4**).

The Department has also:

- notified the application in accordance with the relevant requirements (see Section 4);
- considered submissions made concerning the proposed modification (see Section 4); and
- considered the relevant matters in Section 4.15(1) of the EP&A Act, including:
  - the provisions of any relevant environmental planning instrument, or planning agreement (see Section 3.4);
  - the likely impacts of the proposed modification, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality (see Section 5);
  - the suitability of the site for the project (see Section 5);
  - the public interest, including any relevant objects of the EP&A Act (see Section 6); and
  - the reasons given by the approval authority for the grant of the original approval (see Section 3.6).

### 3.2 Approval Authority

The Minister for Planning and Public Spaces is the consent authority for both applications under Section 4.5(a) of the EP&A Act. However, under the Minister's delegation dated 11 October 2017, the Director, Resource Assessments, may determine the application, as:

- Lithgow City Council and Mid-Western Regional Council did not object;
- Charbon Coal and Centennial Airly did not report any political donations; and
- no public submissions were received.

### 3.3 Substantially the Same Development

The Department is satisfied that both projects as modified would be substantially the same developments as approved, and that the proposals should be characterised as modifications to the respective development consents, as:

- there is no change to the project areas or life of operations;
- rail movements would remain within already assessed and approved rail movements;
- infrastructure upgrades are not significant; and
- the impacts of the development as modified would be similar to the impacts of the approved project (see Section 5).

### 3.4 Environmental Planning Instruments and Objects of the EP&A Act

In undertaking its assessment, the Department has considered the objects of the EP&A Act and the provisions of relevant environmental planning instruments including:

he Department has considered the objects of the EP&A Act and the provisions of relevant environmental planning instruments including:

- *Mid-Western Local Environmental Plan 2012;*
- *Lithgow Local Environmental Plan 2014;*
- *State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP);*
- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP);*
- *State Environmental Planning Policy 55 (SEPP No. 55) – Remediation of Land;*
- *State Environmental Planning Policy 44 (SEPP No. 44) – Koala Habitat Protection; and*
- *State Environmental Planning Policy 33 (SEPP No. 33) – Hazardous and Offensive Development*

The Department notes that Centennial undertook a detailed consideration of the objects of the EP&A Act and relevant EPIs in the two modification reports submitted with the modification applications. The Department has considered this information.

### 3.5 Planning Agreements

The proposed modification would not increase any additional demands to local infrastructure or services. The current Planning Agreements for each mine would continue to apply to the projects.

### 3.6 Reasons for Granting Original Approval

In determining both the original Charbon application and original Airly application, the PAC in both cases concluded that the benefits of the project would outweigh any adverse impacts subject to the implementation of conditions.

The Department has considered the proposed modifications against the reasons the PAC gave for determining the projects in their determination reports, and is satisfied that the proposed modifications are not contrary to any of the PAC's findings on key issues or its conditions.





## 4. Engagement

### 4.1 Department's Engagement

To ensure the community was informed of the proposed modification and given an opportunity to provide a submission, the Department exhibited both applications from 1 to 14 May 2019:

- on the Department's website;
- at the offices of the Department; and
- at the Nature Conservation Council's office.

Charbon Coal's modification application was also exhibited at the Mid-Western Regional Council office.

Centennial Airly's modification application was also exhibited at the Lithgow City Council offices and Capertee General Store in Capertee.

On 31 April 2019, the Charbon proposal was advertised in the Mudgee Guardian and the Airly proposal was advertised in the Lithgow Mercury. The modification applications were also referred to relevant government agencies.

The Department undertook a site visit to both mines on Thursday 9 May 2019 in the company of government agencies.

No public submissions were received for the modification applications.

### 4.2 Summary of Agency Advice

Seven government agencies provided advice on the proposals. A summary of the advice is provided below, and a full copy of the advice is provided in **Appendix B**.

On 20 May 2019, the Department requested Centennial to respond to the submissions received and provide additional information relating to water quality, water availability, consent expiry, biodiversity and social and economic impacts.

Centennial provided a Submissions Report for each application, which were made available on the Department's website in June 2019 (see **Appendix C**).

#### 4.2.1 Transport for NSW

Transport for NSW commented on the operation of water trains on the Wallerawang-Gwabegar rail line, requesting that Centennial:

- ensures that rail noise from the proposal complies with the limits set out in the Environment Protection Licence (EPL) for the rail line; and
- consults with John Holland Rail about the proposed timing of rail movements.

In its Submissions Report, Centennial advised that:

- the proposed modification would comply with the EPL;

- it would consult with John Holland Rail prior to operation of the train regarding:
  - the timing of inspections; and
  - limiting interactions between Centennial Coal trains and other rail users.

#### **4.2.2 Environment Protection Authority**

The EPA advised that:

- noise and air quality impacts could be managed under Charbon and Airly's existing EPLs; and
- rail noise should comply with the rail noise limits under EPL 13421.

#### **4.2.3 Resources Regulator**

The Resources Regulator advised that Charbon's Mining Operations Plan (MOP) and rehabilitation bond may need to be updated.

In its Submissions Report, Charbon Coal advised that it would update its:

- MOP to include the land disturbance associated with the installation of the additional water pumping facilities; and
- rehabilitation cost estimate to inform an updated rehabilitation bond for Charbon.

#### **4.2.4 Mid-Western Regional Council**

Mid-Western Regional Council commented on the Charbon modification, advising that:

- the period of the proposed water transfer arrangement was unclear;
- Centennial should consult with downstream water users about the proposal; and
- water for rehabilitation activities should take priority over water transfers to Airly.

In its Submissions Report, Charbon Coal advised that:

- it would restrict the transfer of water to the time limit set in the consent, that only permits mining operations until 31 August 2025. A longer-term strategy to provide water to Airly after 2025 is being considered;
- it would inform downstream water users, at least one week prior to transfers, of the volumes and timing of extractions. It committed to water level monitoring in Reedy Creek Dam and flow monitoring downstream of the dam. Information regarding water transfers would also be provided to the community; and
- water for site rehabilitation activities would be sourced from different dams to those identified as sources of water for transfer to Airly. Water modelling showed that the availability of water during rehabilitation (for dust suppression) did not change as a result of the modification. Sufficient water would be available for rehabilitation activities at Charbon.

#### **4.2.5 Other agency advice**

The Department's Division of Resources and Geosciences, Lithgow City Council and the Department's Water Division (as the former Department of Industry – Lands and Water) did not raise any issues requiring further assessment.



## 5. Assessment

### 5.1 Introduction

The Department considers that the key issue for consideration in the assessment of Charbon MOD 1 and Airly MOD 2 relates to water management, in particular water availability and take at Charbon, and potential water quality impacts at Airly associated with the water transfer. The Department has also considered rail transport-related impacts (traffic, air quality and noise), construction-related impacts, and the scale of impacts in comparison to previously approved impacts.

### 5.2 Water

Charbon and Airly have detailed water management plans in place that include robust surface water flow and water quality monitoring programs. Discharges are managed through existing EPLs under the *Protection of the Environment Operations Act 1997*. Water take is managed through existing Water Access Licences (WALs) under the *Water Management Act 2000* and the requirements and rules of the relevant Water Sharing Plans.

Centennial Airly is required to comply with specific water management performance measures, including a requirement that water discharges to Airly Creek do not cause greater impacts than predicted in its Environmental Impact Statement for water flow and quality and that there are negligible environmental consequences for water quality and flow where Airly Creek enters downstream National Park areas.

#### 5.2.1 Water Availability

Charbon Coal is approved to extract up to 336 ML/ year of water from the Upper Cudgegong River Water Source WALs issued under the *Macquarie Bogan Unregulated and Alluvial Water Sources Water Sharing Plan 2012*. To ensure long term sustainable water management within a water source, extraction limits can be reduced through setting Available Water Determinations (AWDs) each year. Charbon, like any other water user, would be required to reduce its extraction rate in accordance with any AWD that reduces water allocations. The Department understands that there has been no reduction in the AWD for general security licences within the Upper Cudgegong River Water Source since the Water Sharing Plan commenced in 2012.

Transferring up to 170 ML/year from Charbon to Airly would have minimal effect on water availability at Charbon for its operations. This is because Charbon's water demand has significantly reduced following the completion of mining activities, and water is only required for dust suppression. Dust suppression water would continue to be sourced from other site storages, and not Reedy Creek Dam, CHPP Dam or LDP4 Discharge Dam (i.e. the proposed water sources for Airly) (see **Figure 5**).

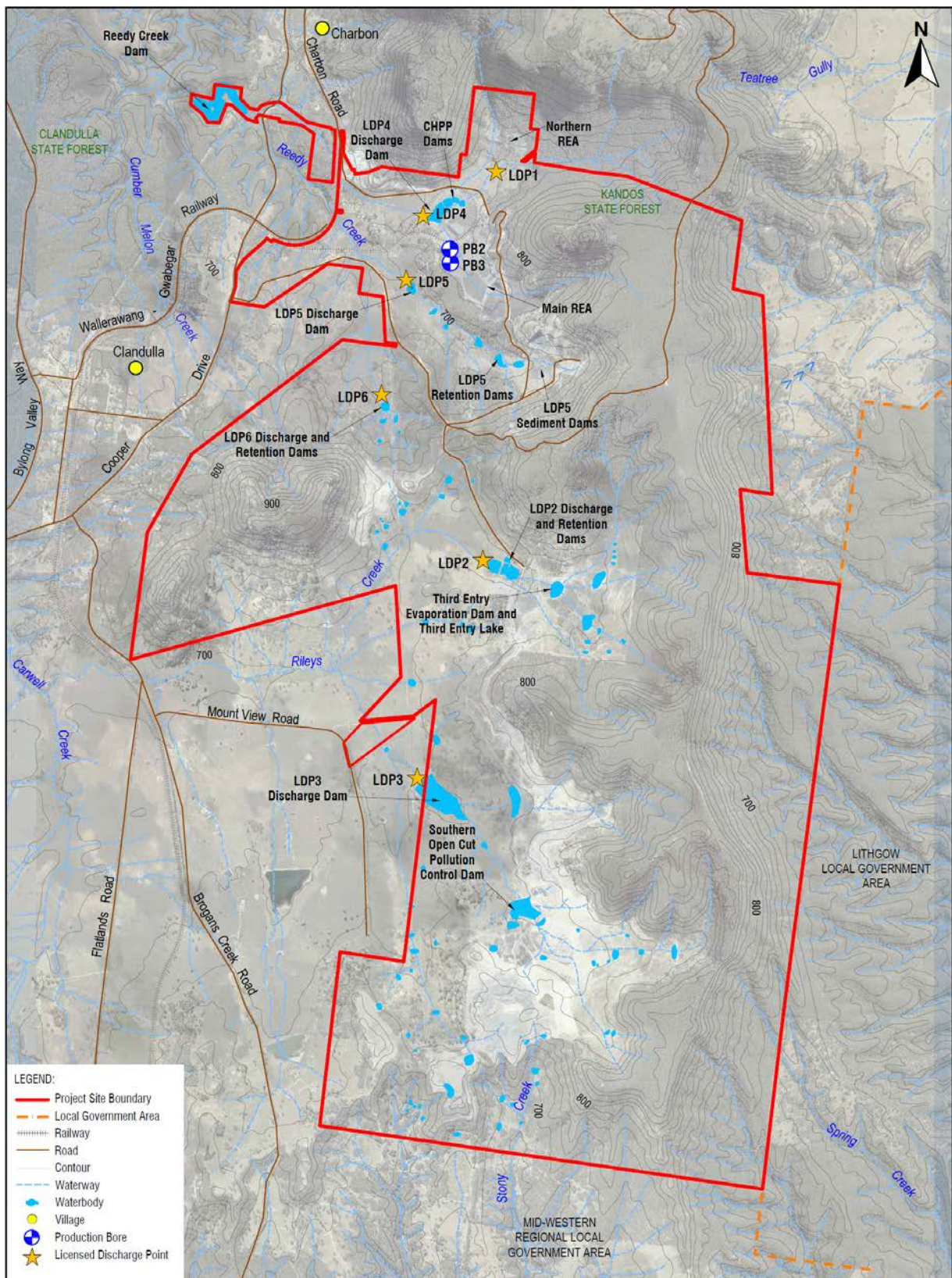
While Charbon already has approval to take up to 336 ML/year from Reedy Creek Dam and the Upper Cudgegong River Water Source, further consideration has been undertaken on impacts to downstream users for the transfer of 170 ML/year to Airly Mine. Reedy Creek Dam discharges into Cumber Melon Creek. Water users that extract from Cumber Melon Creek currently experience insufficient flows to satisfy their full water entitlements in about 10 per cent of years. Based on water balance modelling, potential impacts to downstream water users would not materially change because of the proposed water transfer.

Cumber Melon Creek feeds into the Cudgegong River (see **Figure 6**). The Cudgegong River catchment is far greater in area than the Reedy Creek Dam catchment. Therefore, potential reductions in discharges to the river because of the proposed modifications are not expected to be measurable.

However, to ensure that impacts are appropriately measured and managed, Charbon Coal would expand its surface water monitoring program to include:

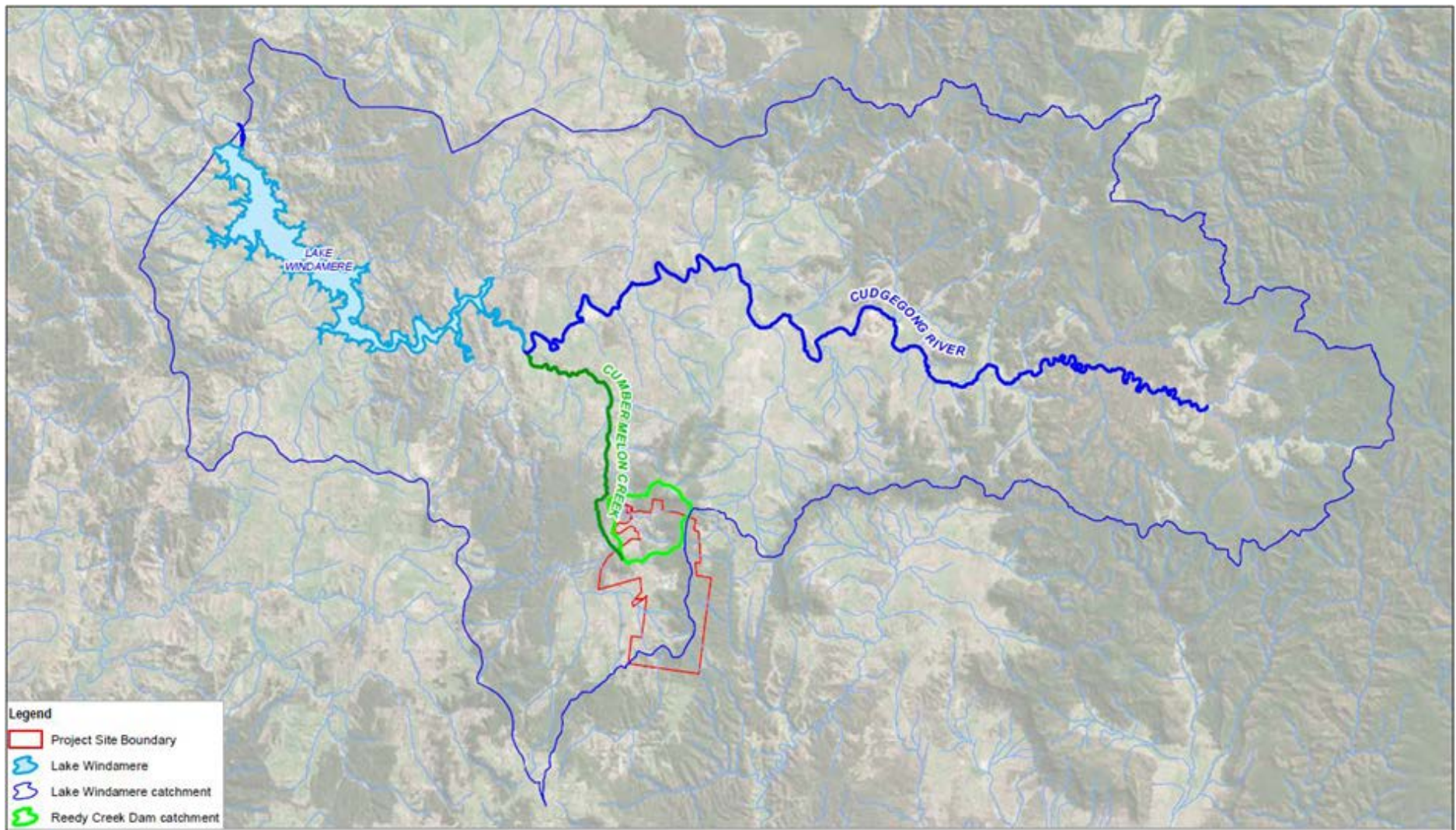
- water level monitoring at Reedy Creek Dam; and
- flow monitoring in Cumber Melon Creek (subject to obtaining relevant approvals and gaining landowner access).





**Figure 5** | Water storages at Charbon





**Figure 6** | Water catchments affected by proposed project



### 5.2.2 Potential Water Quality Impacts at Airly

Depending on how the water transfer is managed, the transfer of up to 170 ML/year from Charbon to supplement on-site water at Airly may potentially impact on the volume and quality of discharges from the mine site to Airly Creek. Airly's onsite storages include a 109 ML Dirty Water Dam and a 35 ML Discharge Dam, which overflows into Airly Creek.

#### *Discharge quality and salt loads*

Based on water balance modelling, there would be no change to the volume or frequency of discharges at Airly because discharges from onsite storages into Airly Creek would be limited by:

- ensuring at least 25 per cent freeboard in all dams to manage moderate rainfalls; and
- only importing water from Charbon when its surface storages are less than 75 per cent full.

However, importing water from Charbon would increase the salinity of discharges at Airly to a maximum concentration of 1,700  $\mu\text{S}/\text{cm}$ . This is within the acceptable salinity range specified in Airly's EPL 12374, which requires 90<sup>th</sup> percentile salinity levels to be below 2,244  $\mu\text{S}/\text{cm}$ .

Due to an average higher electrical conductivity in the water transferred from Charbon compared to on-site water at Airly, the average annual salt load discharged into Airly Creek would also increase from a current baseline of 10 tonnes to 13 tonnes. However, this is well below the approved average salt load modelled of 35 tonnes under the original assessment, which included use of higher salinity groundwater sources from mine inflows and the groundwater bore to supplement on-site water. As the water from Charbon is less saline than this groundwater source, overall salt loads discharged to Airly Creek are reduced compared to the approved project.

Importation of water may also increase turbidity, total suspended solids and total nitrogen at Airly. However, median concentrations are expected to be below the site-specific guideline values (SSGVs) derived for Airly Creek below the mine site, based on from the *Australia and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG 2018) and well below the EPL discharge limits set by the EPA.

#### *Aquatic ecology*

There are potential impacts to downstream aquatic ecology from the importation of water from Charbon due to changes in discharge water quality and potentially from new macroinvertebrate taxa and fish species introduced to Airly Creek from the extraction point from Reedy Creek Dam.

While overall the quality of water from Charbon is similar to the on-site water at Airly and downstream in Airly Creek, there are slight increases in some water quality parameters including dissolved manganese and nickel. However, risks to macroinvertebrates from discharges to Airly Creek are considered low because the median concentrations of these parameters are well below the SSGVs and the EPL discharge limits.

Some macroinvertebrate taxa present in Reedy Creek Dam at Charbon have not been previously observed in Airly Creek. These macroinvertebrates are unlikely to survive transportation to Airly, and as Airly would be operated to minimise discharges from its storages, the risk of introducing new macroinvertebrate species to Airly Creek is considered low.

*Gambusia Holbrooki* (Plague Minnow), an invasive fish species, is present in Reedy Creek Dam and it is likely that individuals would survive the journey to Airly. In the case of a controlled discharge, *Gambusia* could enter Airly

Creek, however this species is already present in the creek and the proposed modification would be unlikely to increase the range of this invasive species.

### 5.2.3 Recommendations

To ensure that any water-related impacts are limited to levels assessed in the modification reports, the Department has recommended a condition that limits water transfers to Airly to 170 ML/year.

The water management plans for both mines would be reviewed and updated to reflect the proposed water transfer arrangements, any additional on-site water infrastructure and proposed water monitoring. These updates would be undertaken in accordance with the existing conditions of consent.

## 5.3 Other Issues

The Department has considered a range of other issues. Its assessment is summarised in **Table 1**.

Table 1 | Summary of other issues

Issue	Findings	Recommended Condition
Noise	<ul style="list-style-type: none"> <li>No exceedances to the existing operational noise criteria are expected at both Airly and Charbon.</li> <li>No exceedances of the <i>Rail Infrastructure Noise Guideline</i> (EPA) trigger levels are predicted.</li> <li>Construction noise impacts are expected to be minimal, temporary (six-week duration) and comply with existing operational noise criteria at both sites.</li> <li>Regular operational noise monitoring would continue to be undertaken in accordance with the noise management plans at each site.</li> </ul>	<ul style="list-style-type: none"> <li>No changes to existing conditions of consent required.</li> </ul>
Rail traffic	<ul style="list-style-type: none"> <li>Charbon is currently allowed to transport coal via rail 24-hours, 7 day per week using a maximum of 10 train movements per day.</li> <li>Only one train per day would transfer water.</li> <li>Existing Airly coal trains travel to/from the south. There would be minimal interaction with existing coal trains.</li> <li>Centennial would consult with the rail line operator regarding the use of the rail line, and determine whether the existing Safety Interface Agreements require amendment.</li> <li>Other rail users are not expected to be significantly impacted by the proposed two rail movements per day.</li> </ul>	<ul style="list-style-type: none"> <li>No more than one water train to depart Charbon per day (two movements per day).</li> </ul>
Air quality	<ul style="list-style-type: none"> <li>Small volumes of dust could be generated during the construction of the pipeline trenches at both Charbon and Airly, and excavation of the Train loader dam at Airly.</li> <li>The EPA has confirmed that the proposed modifications would be unlikely to result in any exceedances to air quality criteria at Airly and Charbon.</li> <li>Air quality would continue to be managed in accordance with the air quality management plans at each site.</li> </ul>	<ul style="list-style-type: none"> <li>The annual average PM<sub>10</sub> criterion was changed from 30 µg/m<sup>3</sup> to 25 µg/m<sup>3</sup>.</li> </ul>

Issue	Findings	Recommended Condition
	<ul style="list-style-type: none"> <li>The air quality criterion for annual average PM<sub>10</sub> has been updated to reflect the updated <i>National Environment Protection (Ambient Air Quality) Measure</i>.</li> </ul>	
Biodiversity	<ul style="list-style-type: none"> <li>The proposed rail loading/unloading infrastructure areas are heavily disturbed and cleared.</li> <li>Under the relevant provisions of the <i>Biodiversity Conservation Act 2016</i> and <i>Biodiversity Conservation (Savings and Transitional) Regulation 2017</i>, the Department is satisfied that a BDAR report is not required to be submitted with the applications as the modifications will not increase the impact on biodiversity values on the sites.</li> </ul>	<ul style="list-style-type: none"> <li>No changes to existing conditions of consent required.</li> </ul>
Greenhouse gas emissions	<ul style="list-style-type: none"> <li>The modifications would generate: <ul style="list-style-type: none"> <li>a small fraction of the total previous rail haulage greenhouse gas emissions that were originally assessed for Charbon; and</li> <li>a minor increase to the rail haulage greenhouse gas emissions at Airly, because water trains are much shorter and also travelling a much shorter distance than existing Airly coal trains.</li> </ul> </li> <li>Existing plans are in place to manage greenhouse gas emissions.</li> </ul>	<ul style="list-style-type: none"> <li>No changes to existing conditions of consent required.</li> </ul>
Social and economic	<ul style="list-style-type: none"> <li>Water, noise, air quality and transport impacts would be minimised through operational and engineered mitigation.</li> <li>Centennial Airly has demonstrated that not proceeding with the proposed modifications would potentially result in suspension of operations, with social and/or economic consequences that could include: <ul style="list-style-type: none"> <li>reduced royalty revenue of around \$6.5 million per year, and reductions to other tax revenues;</li> <li>a loss of approximately 141 FTE positions;</li> <li>the loss of around \$6.8 million per year of indirect contributions to the local economy.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>No changes to existing conditions of consent required.</li> </ul>
Timeframe of water transfers	<ul style="list-style-type: none"> <li>The consent permits mine operations at Charbon until 31 August 2025 (and to 31 January 2037 at Airly), the Department considers that the lifetime of the water transfer should be limited to the operational life of the Charbon mine.</li> </ul>	<ul style="list-style-type: none"> <li>Water transfer timeframe to be limited to life of mine operations at Charbon.</li> </ul>
Administrative	<ul style="list-style-type: none"> <li>The existing Charbon and Airly consents included references to a number of outdated agency names and provisions.</li> <li>The existing Airly consent has incorrect figure numbers, condition numbers, and references to conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Update agency names and other outdated provisions.</li> <li>Correct figure numbers, condition numbers and references to conditions within the Airly consent.</li> </ul>



## 6. Evaluation

The Department has carefully assessed the potential environmental, social and economic impacts of the proposed modification in accordance with the requirements of the EP&A Act, and in consultation with Mid-Western Regional Council, Lithgow City Council and relevant Government agencies, including EPA, the Resources Regulator and Transport for NSW.

The recent dry conditions at Airly along with lower groundwater inflow to mine workings than predicted has led to predicted deficits to water supply to meet operational demands, while Charbon has surplus water available.

Transferring up to 170 ML/year from Charbon to Airly would have a minimal effect on water availability at Charbon and would not significantly affect downstream water users or downstream environments. The availability of water during rehabilitation (for dust suppression) would not change as a result of the modification and sufficient water would be available for rehabilitation activities at Charbon. The volume of water take and associated impacts are already approved and regulated under the water sharing plan and water access licence. The water transfer would lead to minimal changes to the volume and water quality of discharges from Airly compared to the original consent.

Only minor site infrastructure upgrades are required to enable the transfer of water; and noise impacts associated with construction, water pumping and rail operation are expected to be within existing criteria. Train movements would be within existing approved train limits and any rail traffic impacts to Airly coal trains or other rail users are expected to be minimal.

Overall, the noise, water, transport and air quality impacts associated with the proposed water transfer would be negligible and within the scale of impacts approved under the original consents for both Airly and Charbon.

Centennial Airly and Charbon Coal would update the respective existing site water management plans to reflect the proposed modifications.

The Department considers that the modification applications present an innovative means for Centennial to provide additional water to Airly, to ensure it operates as approved. Incremental environmental impacts are expected to be minimal compared to the approved projects, while the social and economic benefits associated with avoiding potential suspension of mining operations at Airly are realised (such as job losses of around 141 FTE and reductions to royalty revenues of around \$6.5 million per year).

Consequently, the Department considers that the proposed modifications are in the public interest and should be approved, subject to the recommended conditions set out in the notices of modification (see **Appendix E**) and consolidated consents (see **Appendix D**).




## 7. Recommendations

It is recommended that the Director – Resource Assessments, as delegate of the Minister for Planning and Public Spaces:

- **consider** the findings and recommendations of this report; and
- **determine** that the applications MP 08\_0211 MOD 1 and SSD 5581 MOD 2 both fall within the scope of section 4.55(1A) of the EP&A Act;
- **accept and adopt** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the applications;
- **agree** with the key reasons for approval listed in the draft notices of decision;
- **modify** the consents MP 08\_0211 and SSD 5581; and
- **sign** the attached approvals of the modifications (**Appendix E**).


Recommended by:

 29 July 2019

**Andrew Rode**

Senior Environmental Assessment Officer  
Energy and Resources

Recommended by:

 29.7.19

**Paul Freeman**

Team Leader  
Energy and Resources



## 8. Determination

The recommendation is: **Adopted** / Not adopted by:

*SD* 30/7/19

**Steve O'Donoghue**

Director – Resource Assessments

as delegate of the Minister for Planning and Public Spaces





# Appendices

## Appendix A – Modification Reports

Regarding Airly, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11011>

Regarding Charbon, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/13371>

## Appendix B – Advice from agencies

Regarding Airly, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11011>

Regarding Charbon, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/13371>

## Appendix C – Submissions Reports

Regarding Airly, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11011>

Regarding Charbon, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/13371>

## Appendix D – Consolidated Consents

Regarding Airly, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11011>

Regarding Charbon, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/13371>

## Appendix E – Notices of Modification

Regarding Airly, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11011>

Regarding Charbon, see the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/13371>