

19 June 2017

**NSW Planning Assessment Commission Determination Report  
Springvale Mine Extension Project MOD 2 (SSD 5594)**

**1. INTRODUCTION**

On 28 April 2017, the Planning Assessment Commission received from the Department of Planning and Environment a modification request for a State significant development application from Centennial Coal Pty Limited (the applicant) to modify the Springvale Mine Extension Project (the project) consent to remove the interim salinity reduction target and defer the elimination of mine water toxicity by two years.

The Department has referred the modification to the Commission for determination in accordance with the Minister for Planning's delegation dated 14 September 2011 because the Department received more than 25 submissions from the public in the nature of objections.

The Commission to determine the modification consisted of Mr Ross Carter (Chair), Ms Lynelle Briggs AO and Mr David Johnson.

**1.1 Summary of Development Application**

The current project consent requires the following water quality improvements in mine water discharges:

- Salinity levels of 700 uS/cm (50<sup>th</sup> percentile), 900 uS/cm (90<sup>th</sup> percentile) and 1,000 uS/cm (100<sup>th</sup> percentile) by 30 June 2017;
- Elimination of acute and chronic toxicity to aquatic species by 30 June 2017; and
- A salinity level of 500 uS/cm (90<sup>th</sup> percentile) by 30 June 2019.

The modification intends to defer the 30 June 2017 salinity targets by two years until the Springvale water treatment facility is operational in June 2019. The modification does not intend to change the mine layout or operating functions of the mine.

**1.2 Need for the proposal**

The applicant has stated that the modification is required as, despite the applicant's best endeavours, it is unable to meet the 30 June 2017 discharge and toxicity consent requirements. The modification seeks to retain existing discharge and toxicity requirements until 30 June 2019 when the water treatment facility is constructed and mine water can be more appropriately managed to deliver a much better water quality outcome overall.

The applicant's Environmental Impact Statement (EIS) identifies that the project does not propose to increase the rate of mine water discharge through Licensed Discharge Point 009 (LDP 009) to Sawyers Swamp Creek nor will there be any change to flooding or drainage to Sawyers Swamp Creek.

**1.3 Background**

Mining operations originally commenced within the site in 1995 under a development consent granted in 1992. In September 2015, a new development consent for the Springvale Mine Extension project was approved by the Commission. The consent permits:

- mining operations until 31 December 2028;

- extraction of up to 4.5 million tonnes per annum (Mtpa) of run-of-mine coal;
- transportation of coal:
  - by overland conveyor to the Western Coal Services Site for further processing;
  - by overland conveyor to the Mt Piper Power Station; or
  - by road to local domestic customers; and
- operation of support infrastructure, including ventilation shafts, coal stockpile, mine services bores and offices.

The 2015 Springvale Mine Extension project consent required that for mine water discharged to the Coxs River and Sydney water catchment, the applicant meet limits for salinity of 700 (50<sup>th</sup> percentile), 900 (90<sup>th</sup> percentile) and 1,000 (100<sup>th</sup> percentile) uS/cm EC by 30 June 2017.

In April 2017, the most recent modification (Springvale Mine Extension Modification 1) to the consent was approved by the Commission making the following amendments to the existing development:

- increase the mine's annual run-of-mine coal production from 4.5Mtpa to 5.5Mtpa;
- increase the capacity of the run-of-mine coal stockpile from 85,000 tonnes to 200,000 tonnes;
- extend the stockpile footprint 0.3ha to the north-east; and
- increase the workforce from 310 full time equivalent personnel, including contractors, to 450 full time equivalent personnel.

The Springvale Mine Extension Modification 1 did not increase the total permitted resources to be extracted from Springvale mine or make any changes to permitted discharges.

#### **1.4 Related applications**

The Springvale Water Treatment Project, Springvale Mine Extension project Modification 2 and Western Coal Services project Modification 1 were submitted to the Commission as one package by the Department as they are fundamentally interrelated.

The Department has advised and the Commission is satisfied that this modification application can and should be dealt with separately on its own merits.

#### Springvale Water Treatment project

The major components of the Springvale Water Treatment project application include:

- a pipeline to transfer mine water from Springvale Mine to Mt Piper Power Station;
- a water treatment facility utilising reverse osmosis;
- use of treated water in the cooling towers of Mt Piper Power Station;
- residual waste from pre-treatment process to be transferred via pipeline to the Western Coal Services site;
- disposal of concentrated brine slurry to continue at the Mt Piper Power Station ash emplacement area; and
- the transfer of surplus treated mine water into Wangcol Creek via a new licensed discharge point and to Thompsons Creek Dam for storage and ultimate beneficial reuse at Mt Piper Power Station.

#### Western Coal Services project Modification 1

The major component of the Western Coal Services project Modification 1: Residuals emplacement (SSD 5579, MOD 1) is modification of the consent to allow the Western Coal Services project site to receive and emplace a residual waste material produced by the proposed Springvale Water Treatment project.

## **2. DEPARTMENT'S ASSESSMENT REPORT**

The Department's assessment report identified that the proposed modification would not increase the level of mine water discharges that already occur at the mine. The Department found that the key issue when assessing the project was consistency with the Sydney Drinking Water Catchment SEPP. The Department is satisfied that although the interim improvements to the water quality would not be achieved, the long-term target for improving water quality in the catchment would be exceeded. The Department considers that the Springvale water treatment facility is the most appropriate option to improve overall water quality in the Coxs River Catchment.

The Department is satisfied that the modification is in the public interest and recommends it be approved.

## **3. COMMISSION'S MEETINGS AND SITE VISIT**

As part of its assessment of the proposal, the Commission met with the Department, the applicant, Lithgow City Council, the Environment Protection Authority (EPA) and visited the site. Notes from these meetings and the site inspection are provided in **Appendix 1**. The Commission also conducted a public meeting. Notes from the public meeting are provided in **Appendices 2 and 3**.

### **3.1 Briefing from the Department**

On 9 May 2017, the Department briefed the Commission on all three projects and the Department's assessment report. Specifically, the Department outlined the history of the project, impacts of the proposed pipeline, implications of the water treatment facility waste by-product and the impacts of emplacing the water treatment facility waste on the Western Coal Services site.

### **3.2 Briefings from Other Agencies**

On 9 May 2017, the Commission met with the EPA to discuss all three projects. The EPA's main concern with the project was with licensed discharge point 006 (LDP 006). The EPA acknowledged that LDP 006 had historically been no more than a trickle and that discharge flows have recently (2009/10) increased to 4-5ML/day. The EPA questioned why geotextile bags were not proposed to further treat residual waste from the waste treatment facility.

### **3.3 Briefing from the Applicant and Site Visit**

On 16 May 2017, the Commission met with the applicant and visited the site. The applicant provided the Commission with an overview of the three project applications, the interconnection between Springvale mine and Mt Piper Power Station, the process of water movement and treatment, and the environmental impacts of the project. During the site visit, the Commission visited LDP 006, the waste emplacement ash dam, the proposed location of the water treatment facility and LDP 009.

### **3.4 Meeting with Lithgow City Council**

On 16 May 2017, the Commission met with Lithgow City Council (Council) to discuss the projects. Council advised the Commission that it was unanimously in support of the projects and the employment opportunities they would provide.

### **3.5 Public Meeting**

The Commission held a public meeting at the Lithgow Council civic ballroom on 17 May 2017 to hear the public's views on the three projects. A list of the 41 speakers that registered to speak to the Commission is provided in **Appendix 2**. A summary of the issues raised by the speakers and provided in written submissions is provided in **Appendix 3**. In summary, the main issues of concern include the Lithgow regional economy and employment situation, water impacts, environmental impacts and matters regarding the project's approval.

#### 4. ADDITIONAL INFORMATION

The Commission requested the following additional information from the Applicant on the three projects:

- at the Western Coal Services Site, additional details of proposed works identified under the pollution reduction plan, including details of any works that would impact on surface water movements;
- details of proposed works intended to be included within the Catchment Improvement Plan;
- a high level schedule of works identifying how the water treatment works project will be completed within two years;
- reasons why undertaking interim works are not an option in the two years prior to the water treatment facility's completion;
- details on the proposed pipeline route selected and why it is considered more appropriate than the initial route;
- specific numbers on the discharge volumes from LDP 009; and,
- details of the proposed Pollution Reduction Works to be undertaken on the Western Coal Services Site.

The Commission requested the following additional information from the Department:

- Whether a condition containing milestones aligning with progressive construction of the water treatment facility is available;
- Confirmation that the Office of Environment and Heritage was satisfied with the pipeline alignment;
- If the Department had received any agency submissions identifying issues with groundwater leakages to the Western Coal Services Site from the ash emplacement.

#### 5. COMMISSION'S CONSIDERATION

In this determination, the Commission has considered carefully:

- all information provided by the applicant including the additional information requested;
- the Department's assessment report;
- advice and recommendations from government agencies;
- relevant matters for consideration specified in section 79C of the *Environmental Planning and Assessment Act 1979* (EP&A Act), including:
  - relevant environmental planning instruments;
  - the *Environmental Planning and Assessment Regulation 2000*;
  - the likely impacts of the development on both the natural and built environments;
  - social and economic impacts in the locality;
  - the suitability of the site for the development;
  - written and verbal submissions from the public; and
  - the public interest, including the objects of the EP&A Act.
- assessment and findings of the Western Coal Services Project MOD 1 (SSD 5579) and Springvale Water Treatment Project (SSD 7592) projects.

The Commission has reviewed and accepts the Department's assessment and recommendations in respect of matters including the State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 and predicted water impacts from the project.

The key matters considered further by the Commission include:

- Delayed implementation of the water treatment plant;
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011;
  - Neutral of Beneficial Effect (NorBE);

- Current discharge from Springvale Mine Extension project; and
- Springvale Mine Extension project Modification 2;
- The interrelation between the Springvale Water Treatment project, Springvale Mine Extension project Modification 2 and Western Coal Services project Modification 1;
- NorBE on the wider catchment resulting from the three projects;
- Variation to catchment improvement and land management plans.

### **5.1 Delayed Implementation and temporary options**

The Department's assessment report states that the performance measures for improving water quality identified in the Springvale Mine Extension project in 2015 were always going to be difficult to achieve. When approving the project, the 2015 Commission panel acknowledged the inherent difficulties in achieving the salinity and mine water discharges in the short term, but received assurances at the time from the applicant that the timeframes were very tight, but achievable. Consequently, the current Commission panel sought advice from the applicant about the reasons for the delay in the implementation of the water treatment plant in line with the original consent.

The applicant's submission to the Commission explained why there has been a delay in delivering the water treatment facility. In summary, the applicant identified that:

- between September 2015 and February 2016, it undertook investigation solutions to meet the water quality measures outlined within the consent;
- in February 2016 preparation commenced of a state significant development application for a water treatment facility;
- after the preparation of an EIS and a series of meetings with relevant stakeholders, the state significant development application was publicly exhibited from 27 September to 8 November 2016;
- the three Springvale project applications were lodged with the Department by 23 December 2016. The applicant then worked with the Department to finalise outstanding matters before the Department submitted the three projects to the Commission on the 17 May 2017.

The Commission is satisfied that developing a state significant development application for a water treatment facility is an extremely complicated process and the applicant actively attempted to achieve the water quality requirements. The Commission recognises that the delivery timeframe for the project was difficult and is satisfied with the reasons provided by the applicant for completion dates.

The Commission received submissions requesting that interim water quality treatment options be considered to achieve the water quality requirements by 30 June 2017. The applicant explored several interim options including:

- blending of mine water from the Springvale Delta Water Transfer Scheme and Clarence Colliery;
- construction of new water treatment facility at Springvale Colliery (LDP 009), which included the potential utilization of the existing reverse osmosis desalination plant at Wallerawang Power Station; and
- storing mine water underground within the historical or existing workings at Angus Place Colliery and Springvale Mine in the period 1 July 2017 to 30 June 2019, before the Springvale water treatment facility is operational.

The applicant's submission outlined why each of these options had considerable limitations, primarily being that they required considerable lead in time, substantial construction and logistics, and would not have been achievable any faster than the delivery of the water treatment facility.

Furthermore, the applicant has committed to undertaking restoration works in the Cox's River catchment over a 10-year period to compensate for the delay in achieving improvements to water quality discharged through LDP 009.

The Commission is satisfied that the applicant has adequately explored alternative methods to achieve the water quality requirements of the Springvale Mine Extension project consent.

## **5.2 State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011**

### **5.2.1 Neutral or beneficial effect**

The Commission acknowledges that clause 10 of the State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 ('Sydney Drinking Water Catchment SEPP') doesn't strictly apply to the assessment of a modification application such as the proposal. However, the Sydney Drinking Water Catchment SEPP is recognised as a relevant consideration by the Commission as the site is located within the Sydney drinking water catchment, and is subsequently afforded significant weight in the determination of this project. The Sydney Drinking Water Catchment SEPP requires any development identified within the Sydney Drinking Water Catchment area to have a neutral or beneficial impact on the catchment in accordance with the Neutral or Beneficial Effect (NorBE) tool.

As the project is a modification, the Commission, when assessing the neutral or beneficial effect of the project, has compared the future of the catchment under the existing conditions of consent against the proposed conditions of consent outlined within the modification.

The Commission recognises that the project will impact on water quality within the catchment in various ways depending on the location. Due to the nature of the pollutants, being primarily salt, the concentration of salt emitted from the project is at its highest immediately at the discharge point LDP 009 and is then diluted as it moves through the catchment. Therefore, the Commission has assessed the impact on the catchment primarily at LDP 009 as it represents the location where the impact on the catchment will be the most acute.

The Commission also recognises that although this project significantly relates to the water treatment facility project and Western Coal Services site modification, its neutral or beneficial effect is assessed in isolation of the other two projects as well as in the overall context of the combined projects.

### **5.2.2 Future discharge under the existing Springvale Mine Extension conditions of consent**

Under the current conditions of consent, the Springvale mine has no conditions which restrict discharge until 30 June 2017, with the environment protection license (EPL) limiting discharge to 30ML/day. The consent does however require the applicant to meet limits for salinity of 700 uS/cm EC (50<sup>th</sup> percentile), 900 uS/cm EC (90<sup>th</sup> percentile) and 1,000 uS/cm EC (100<sup>th</sup> percentile) by 30 June 2017. The consent then requires the mine to commence discharging at 500 uS/cm EC (90<sup>th</sup> percentile) limits from 30 June 2019 until the end of the mining life. Under the existing conditions of consent, the project would result in the following tonnes of salt discharged (source: Centennial Coal submission 29 May 2017):

Period of discharge	Salinity / tonnes of salt
30 June 2017 – 30 June 2019: 700 (50 <sup>th</sup> percentile), 900 (90 <sup>th</sup> percentile) and 1,000 (100 <sup>th</sup> percentile) uS/cm EC	12,908.6
30 June 2019 – end of mine: 500 (90 <sup>th</sup> percentile) uS/cm EC	13,467.2
	<b>Total: 26, 375.8</b>

The Commission therefore finds that the projected discharge of 26,375.8t of salt through the LDP 009 discharge point is the base case. The Commission finds that if the modification was not approved, Springvale mine will continue to discharge up to the existing limits of consent until the end of the mine's life. The Commission assessed the proposed modification against this base case discharge to determine if the project will have a neutral or beneficial impact on the Sydney drinking water catchment.

### 5.2.3 Springvale Mine Extension project Modification 2

The applicant is proposing to modify the consent to remove the conditions of consent requiring the applicant to meet limits for salinity of 700 uS/cm EC (50<sup>th</sup> percentile), 900 uS/cm EC (90<sup>th</sup> percentile) and 1,000 uS/cm EC (100<sup>th</sup> percentile) by 30 June 2017.

The Commission acknowledges that the requirements of the 2015 consent to reduce discharge within prescribed limits within the timeframe was difficult for the applicant to achieve. The existing consent provided the applicant with two years to develop and implement a solution that would resolve the water quality discharge requirements. The applicant has demonstrated to the Commission that it has made progress since 2015 to advance treatment of the LDP 009 discharge and that the proposed modification represents a beneficial outcome for the catchment.

The applicant requests the consent be modified to remove the 30 June 2017 EC limits until a pipeline is constructed by June 2019 to transfer the LDP 009 mine water discharge to a newly constructed water treatment facility at Mt Piper Power Station. The applicant acknowledges that the modification will increase discharge limits over the next two years over the existing approval but will completely remove mine water discharge once the pipeline has been constructed. Under the proposed modification, removing discharge limits until June 2019 and then ceasing discharge through LDP009 beyond June 2019, the project would discharge the following tonnages of salt through LDP 009 (source: Centennial Coal submission 29 May 2017):

Period of discharge	Salinity / tonnes of salt
30 June 2017 – 30 June 2019	17,274.5
30 June 2019 – End of mine	0
	<b>Total: 17,274.5</b>

The proposed modification will increase the discharge of salt from LDP 009 between 30 June 2017 and 30 June 2019 by 4,365.9 tonnes. However, between 30 June 2019 and the end of the mine's life, there will no longer be any mine water discharged through LDP 009 once the pipeline has been constructed. Comparing the base case existing operations, the modification will result in a total reduction of salt discharge by 9,101.3 tonnes or 35%.

While the Commission acknowledges that there will be more saline mine water discharged over the next two years, this immediate impact is offset by a considerable decrease in the total volume of salt to be discharged within the catchment. In addition, the faster the catchment returns to nil discharge,

the faster it can return to a more natural state. The Commission finds that the future discharge conditions of consent under the modification will significantly reduce the total tonnes of salt entering the Sydney drinking water catchment compared to the existing baseline, it will have a beneficial impact on the Sydney drinking water catchment over the life of the mine.

The removal of any discharge from June 2019, in combination with the reduced need for Mt Piper Power Station to draw raw water from the catchment, will have the additional benefit of more closely reflecting natural flow regimes. Environmental flows, particularly in times of low flow, are recognised as an important element in aquatic environmental health.

To ensure the beneficial effect on the water catchment is achieved, the Commission has amended the conditions in agreement with the applicant to allow LDP 009 discharge to continue until June 2019 before removing all discharge from LDP 009 until the end of the life of the mine.

### **5.3 The interrelation between the Springvale Water Treatment project, Springvale Mine Extension project Modification 2 and Western Coal Services project Modification 1**

The Department submitted the three applications to the Commission conjointly due to their inter-connection. The Commission acknowledges that the projects need to be assessed on their individual merits, however it also notes that conjointly the three projects deliver considerable environmental benefit to the Sydney drinking water catchment. The projects would remove 30ML/day of waste water from Springvale mine being discharged into the Coxs River catchment, treat the mine water at the water treatment facility, and emplace up to 0.43ML/day of residual waste into the Western Coal Services Site. In combination, this will reduce salinity loads to the catchment and reduce the existing Mt Piper Power Station draw on raw catchment water. The latter is anticipated to provide additional benefit to the restoration of environmental flow regimes, particularly in periods of low flow. The Commission agrees with the Department's findings that the water quality within the catchment would be substantially improved if the three projects were to proceed.

### **5.4 NorBE on wider catchment resulting from the three projects**

The Commission recognises that this project is an essential part of delivering the Water Treatment Project SSD 7592. The discharge extension provides the applicant a period of time to complete construction of the water treatment facility, which will have a significant benefit to the Sydney drinking water catchment. Along with the Western Coal Services Project MOD 1, by 30 June 2019, the three projects will remove up to 30ML of Springvale mine water being discharged daily and replace it with 0.43ML of residual waste water from the water treatment facility being disposed at the Western Coal Services site (the specifics of this project are discussed within the SSD 5576 MOD 1 determination). Treating the mine water will also reduce the amount of water Mt Piper Power Station draws from the Coxs River. The Commission finds that the three projects will improve water quality within the Sydney drinking water catchment.

### **5.5 Variation to catchment improvement and land management plan**

The applicant has committed to undertaking extensive restoration works within the Coxs River Catchment on land owned by Centennial Coal over a 10-year period to compensate for the delay in achieving improvements in water quality discharged through the LDP 009.

The applicant made a submission to the Commission identifying an error in the Department's recommended conditions of consent. The applicant stated that the parcels of land identified on the catchment improvement and land management plan within the conditions of consent were not correct. The applicant's submission stated that not all parcels of land identified were owned by the applicant and requested a new map be included within the consent which identifies only land owned by the applicant. Furthermore, the applicant identified that the revised parcels of land did not

decrease the total land mass committed to be improved under the catchment improvement and land management plan.

The Commission referred the map to the Department and it identified no issue with the updated mapping provided by the applicant. The Commission acknowledges that the amendment is administrative in nature and has included the new map within the conditions of consent.

## **6. COMMISSION'S FINDINGS AND DETERMINATION**

The Commission has considered carefully the applicant's proposal, the Department's assessment report and the relevant matters for consideration under section 79C of the EP&A Act. The Commission has noted the advice and recommendations from Lithgow City Council, and government agencies including EPA and OEH. The Commission has heard from members of the community about their concerns for the proposal during the public meeting in Lithgow on the 17 May 2017.

The Commission considers the proposed modification of the Springvale Mine Extension project does not fundamentally change the essential nature of the development in its currently approved form. The development consent, if modified, would provide the same extractive industry purpose which is currently permitted under development consent. In the Commission's view, the proposed changes are within the scope of section 96(2) of the EP&A Act.

The Commission has responded to concerns expressed by speakers at the public meeting, while noting that a number of those issues do not relate to substantive aspects of this modification proposal or its potential impacts, but to the wider impact of the three projects and the existing approval for the Springvale mine.

The Commission finds that the development will have a beneficial impact on the Sydney drinking water catchment. The Commission recognises that although the project will increase discharge through LDP 009 in the short term, there will be significant long term benefits for the water catchment. The modification will stop mine water being discharged from LDP 009 after 1 July 2019 and result in a total reduction of salt discharged through LDP 009 by 9,101.3 tonnes or 35% over the life of the project.

Furthermore, it is recognised that this project is one critical part of three projects that will have a significantly beneficial impact on the water catchment through the treatment of Springvale mine water at a water treatment facility to be built at Mt Piper Power Station. The three projects will allow operations to continue at Springvale mine and the retention of mine employees within the local community.

The Commission accepts the Department's recommendation that this proposal be approved. Consequently, the Commission has determined to grant consent to the development modification request subject to the conditions set out in the instrument of approval.



**Ross Carter (Chair)**  
Member of the Commission



**Lynelle Briggs AO**  
Chair of the Commission



**David Johnson**  
Member of the Commission