

19 June 2017

**NSW Planning Assessment Commission Determination Report
Springvale Water Treatment Project (SSD 7592)**

1. INTRODUCTION

On 28 April 2017, the Planning Assessment Commission received from the Department of Planning and Environment a State significant development application from Centennial Coal Pty Limited (the applicant) to develop a water treatment facility at Mt Piper Power Station and several transfer pipelines to transfer and treat mine water from Springvale Coal Mine.

The Department has referred the application 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 application consisted of Mr Ross Carter (Chair), Ms Lynelle Briggs AO and Mr David Johnson.

1.1 Summary of Development Application

The Springvale Water Treatment Project (the project) application proposes a:

- 15km pipeline from Springvale Mine to Mt Piper Power Station with a capacity of 42 megalitres per day;
- 1.8km residuals pipeline to transfer a residual waste by-product from the water treatment facility to the Western Coal Services site;
- desalination water treatment facility at Mt Piper Power Station, and integrated within the existing system; and
- number of ancillary and construction features to the water treatment works.

1.2 Need for the proposal

When granting consent for the Springvale Mine Extension project in 2015, the Commission imposed strict water quality performance measures on water discharge. The current Environment Protection License allows for mine water to be discharged into Sawyers Swamp Creek. However, the discharge of water into Sawyers Swamp Creek was intended by the Commission to be an interim solution only, with the 2015 Springvale Mine Extension Project requiring the applicant to consider the potential transfer of mine water to the Mt Piper Power Station.

The Applicant's Environmental Impact Statement (EIS) identifies that the project would improve environmental outcomes and:

- treat all mine water prior to either industrial reuse or environmental release;
- maximise the reuse of mine water within the Mt Piper Power Station;
- reduce the reliance on water extraction from the catchment to meet Mt Piper Power Station's water demands;
- minimise the volume of treated water released to the environment; and
- comply with the water management performance measures required under the Springvale Mine Extension project consent.

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 Department's report included a summary of key events important to this project:

Date	Event
1992	Springvale Mine – development consent (DA 11/92) granted
1995	Springvale Mine – underground coal mining operations commenced
2006	Wallerawang Power Station – Pollution Reduction Program required mine water from Springvale Mine and Angus Place Colliery to be transferred to the power station for treatment and beneficial re-use
November 2014	Wallerawang Power Station – closed
December 2014	Springvale Mine – environmental protection license issued that allows mine water discharges into Sawyers Swamp Creek (intended as a temporary measure)
June – September 2015	Springvale Mine Extension project – PAC review and determination led to requirements to reduce salinity in mine water discharges at Sawyers Swamp Creek
April – May 2016	Springvale Water Treatment project – SEARs requested and issued
September 2016	Springvale Water Treatment project – development application lodged
November 2016	Western Coal Services MOD 1 lodged
December 2016	Springvale Mine Extension project MOD 2 lodged

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

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.

Springvale Mine Extension project Modification 2

The major components of the Springvale Mine Extension project Modification 2: Deferral of salinity reductions are removal of the interim salinity reduction target for mine water discharge and deferral of the elimination of mine water toxicity by two years to align with construction of the Springvale water treatment facility.

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 site is suitable for the water treatment facility and that the mine water transfer pipelines would have minimal environmental impacts. Once completed, the water treatment facility would provide significant benefit in reducing the amount of mine water being discharged into the Cocks River catchment.

The Department's assessment report concluded that the project would improve or at least maintain the biodiversity values of the locality over the medium and long term and that any biodiversity impacts can be managed and/or mitigated by appropriate conditions.

The Department also concluded that the project would provide a positive socio-economic contribution to the Lithgow region as the project would provide flow-on benefits to the local community through job creation and capital investment.

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 the 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 Springvale Mine Extension Project MOD 2 (SSD 5594) and Western Coal Services Project MOD 1 (SSD 5579) projects.

The Commission has reviewed and accepts the Department's assessment and recommendations in respect of matters including water, biodiversity, socio-economic and other impacts.

The key matters considered by the Commission include:

- the interrelation between the Springvale Water Treatment Project, Springvale Mine Extension Project Modification 2 and Western Coal Services Project Modification 1;
- the pipeline route;
- pipeline water transfer volumes;
- removal of existing pipeline;
- water treatment facility construction;
- water impacts;
- Sydney Drinking Water Catchment SEPP; and
- socio-economic impacts.

5.1 Pipeline route

The Commission received several submissions identifying impacts with the pipeline route alignment. Submissions raised concerns that the proposed pipeline alignment from Springvale mine to LDP 009 was proceeding through Shrub Swamp which is an endangered ecological community. In addition, a submission also questioned the need for the applicant to build an additional pipeline, rather than rely on the existing pipelines and route. When preparing the project, the applicant prepared two pipeline options and ultimately settled on the 'northern' alignment in consultation with agencies and the Department.

The applicant briefed the Commission on the pipeline alignment from Springvale mine to the water treatment facility. The applicant informed the Commission that between LDP 009 and the water treatment facility, the pipeline would be built alongside existing easements to allow ease of access from the road running adjacent. Between Springvale mine and LDP 009, the northern alignment was selected as it follows a previous logging trail, would result in less vegetation clearance and provides a gentler grade allowing for safer and easier access for construction and maintenance.

The applicant made a submission after the public meeting to clarify several issues raised regarding the pipeline alignment. The applicant confirmed that it had settled on the northern alignment as there were several constructability and operability constraints associated with the southern route (alongside the existing pipeline) due to it traversing an extremely steep section of escarpment. Furthermore, the southern pipeline alignment traversed through an area of pagodas and resulted in the clearance of approximately 31ha of native vegetation, which was 3.6ha greater than required for the northern alignment.

The Commission requested additional information from the Department confirming that the Office of Environment and Heritage (OEH) was satisfied with the alignment of the northern proposed pipeline from Springvale mine to the water treatment facility. The Department's response confirmed that OEH was satisfied with the applicant's northern and southern proposed pipeline alignment. OEH considers that both the pipeline routes avoid significant impacts to biodiversity and heritage values, and is satisfied with the applicant's approach and proceeding with the northern alignment.

In reviewing the pipeline alignment, the Commission finds that the northern pipeline alignment chosen by the applicant considers potential biodiversity and heritage impacts adequately, and enhances safety. The Commission is satisfied that the pipeline alignment would not have significant adverse environmental impacts.

The Commission did not receive any objections relating to the pipeline alignment from the water treatment facility to Thompsons Creek reservoir. The Commission is satisfied that the applicant has adequately considered and planned for environmental impacts when aligning the pipeline between the water treatment facility and Thompsons Creek reservoir.

5.2 Pipeline water transfer volumes

A submission was received by the Commission raising concerns over the volume of water proposed to be transferred by the new pipeline. The submission identified perceived inconsistencies with the applicant's EIS regarding the volume of water proposed to be transferred from Springvale mine to the water treatment facility. The submission stated that the proposed water treatment facility was only capable of treating 36ML/day yet the applicant was intending to transfer up to 72ML/day of mine water, that being 30ML through the existing pipeline from Springvale mine to LDP 009 and 42ML/day through a new pipeline. The submission claimed that the applicant would then have two pipelines discharging 72ML/day at LDP 009 and that the water treatment facility was not capable of treating this amount of water.

The Commission sought confirmation from the applicant on the transfer volumes. The applicant's response confirmed that the existing pipeline is not part of the project and will not be used to transfer water to the water treatment facility. The applicant informed the Commission that once the 42ML/day pipeline is commissioned, the existing 30ML/day pipeline will become redundant and no longer used.

The applicant also acknowledged that although the water treatment facility was capable of treating 36ML/day, the 42ML/day pipeline capacity was to manage short-term fluctuations in underground mine water, provide for maintenance of individual modules within the water treatment facility and to allow for flexibility to temporarily increase flows to allow "catch-ups" after maintenance or shut down-periods.

The Commission finds that that the applicant's response adequately outlines the need for a pipeline capable of transferring 42ML/day. Furthermore, the applicant has indicated that it will cease transferring water through the existing pipeline once the water treatment facility is operational.

5.2 Removal of existing pipeline

The Commission received a submission requesting a condition to require the applicant to remove the existing pipeline and commence rehabilitation of the existing alignment. The submission requested that as the existing 30ML/day transfer pipeline was no longer needed once the new 42ML/day transfer pipeline was constructed, the pipeline should be decommissioned with the existing landscape rehabilitated where possible.

During the site visit, the applicant recommended that the existing pipeline be retained as the existing infrastructure could be utilised as a contingency. Furthermore, the applicant stated that remediating the existing pipeline alignment between Springvale mine and LDP 009 could delay construction of the new proposed pipeline.

The Commission accepts the applicant's position, however does recognise the community's concerns regarding retention of the pipeline. The Commission has subsequently altered the conditions of consent to require the applicant to commence rehabilitation within 2 years of decommissioning a pipeline and pipelines be progressively rehabilitated where possible. The Commission finds that this amendment to the conditions will provide the community with additional assurance on the applicant's intended remediation of the pipeline alignment.

5.3 Water treatment facility construction

Submissions received by the Commission identified concerns that the recommended conditions of consent provide no guarantee that the water treatment facility would be constructed. Submissions raised concerns that the applicant could continue to modify the original consent conditions of Springvale mine until the mine had finished extraction of the remaining coal resources. The

Commission requested additional information from the applicant identifying a step by step timeframe acknowledging how the water treatment facility could be delivered within two years.

The applicant's response to the Commission identified that the water treatment facility would be completed in accordance with the *following key milestones*:

- June 2017 – Nominate “preferred” tenderer;
- July 2017 – Commence early works;
- August 2017 – Negotiate with “preferred” tenderer;
- August 2017 – Negotiate with “preferred” tenderer and finalise contract;
- September 2017 – Financial close;
- October 2017 – Construction commencement;
- March 2019 – Construction completion; and
- April – June 2019 – Water treatment facility commissioning.

The Commission acknowledges the concerns raised over commencement of the water treatment facility and sought assistance from the Department outlining how the Commission could ensure delivery of the water treatment facility for the community. The Commission subsequently inserted a condition requiring the applicant prepare quarterly reports, to the satisfaction of the Department's Secretary. The quarterly reporting requires the applicant to identify what progress has been made over the last quarter, what development was carried out and to identify any potential delays. To provide the community with transparency of the process, the applicant will publish the quarterly reports on their website. The Commission finds that the quarterly reports will help provide the community with assurance of the project's delivery.

5.4 Water Impacts

The Department's assessment report identified two by-product materials produced from the water treatment facility, an additional brine slurry from the highly saline mine water and residual waste from the presence of suspended solids in the mine water.

The Department's assessment report identifies that the applicant proposes to deposit increased concentrations of brine slurry at the Mount Piper Power Station ash emplacement dam. The applicant proposes to place the brine slurry at the highest areas of the emplacement which would minimise the risk of groundwater interaction and leaching into shallow aquifers. The brine slurry is emplaced in a chemically and structurally stable manner with the applicant's assessment demonstrating that the brine slurry is not expected to have an environmental impact or contribute to flows into the wider catchment as various protective layers have been designed to prevent permeability into the groundwater. The Department and WaterNSW were satisfied that the applicant can manage the brine concentrations through the existing approvals for the Mt Piper Power Station. The Commission is satisfied that the applicant's brine slurry by-product resulting from the water treatment facility crystalliser has been adequately planned for and would not negatively impact on the environment.

The water treatment plan is proposed to transfer up to 0.43ML/day from the removal of suspended solids from mine water from Springvale mine prior to desalination. The applicant proposes to transfer the residual waste water via a transfer pipeline to the adjacent Western Coal Services site for emplacement. The Commission acknowledges that the disposal of the 0.43ML/day is the subject of the Western Coal Services Project Modification 1: Residuals emplacement (SSD 5579 MOD 1). The environmental impacts of SSD 5579 MOD 1 have been assessed under that proposal and considered under this assessment.

The community made submissions to the Commission which requested that the water treatment facility also treat mine water from other mines within the region. At the Commission's visit to the site, the applicant informed the Commission that the proposed water treatment facility has been designed specifically to resolve the Springvale Mine water discharge problem. The project has been tailored to accommodate a specified amount of water and is not capable of taking mine water from other mines. Furthermore, the water treatment facility was designed to treat water of a specific chemical composition for beneficial reuse within the Mount Piper Power Station and that water from other mines would likely be incompatible with the acceptable chemical composition. The applicant informed the Commission that if it were to accommodate water from other mines there would be considerable time delays, additional costs and that the water from these mines is outside the remit of this project. The Commission acknowledges the suggestions made by the community but finds that requesting the applicant accept water from other mines is outside the scope of this project and could delay delivery of the water treatment facility.

5.5 State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

The State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 ('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) test. The Department's assessment report weighed the significant benefits for the drinking water catchment resulting from the reduced discharge and construction of the water treatment facility against the minor decrease in water quality at the western coal services site.

The water treatment facility would receive fluctuations of up to 42ML/day of untreated mine water that would have previously been discharged through LDP 009, treat the water at the water treatment facility and then discharge 0.43ML/day of residual waste stream into the Western Coal Services Site. The project would also pump excess treated water back and forth through a newly constructed pipeline into the Thompson Creek reservoir to meet the demands of Mt Piper Power Station.

The Commission finds that the base case for comparison is the average water discharge of 30ML/day from Springvale mine at present and the subsequent discharge conditional requirements required of the applicant by 30 June 2017 and 30 June 2019. The Commission finds that the outcome of the project, which is to reduce the mine water discharge from LDP 009 from an average of 30ML/day to zero discharge, in comparison to 0.43ML/day of residual waste from the water treatment facility, is a substantial environmental improvement. The project would also remove the need for Mt Piper Power Station to extract a significant amount of water from the catchment via Lake Lyall, which will provide an additional environmental improvement.

The Commission finds that the evidence provided by the applicant and the Department confirm that the project would have a beneficial impact on the Sydney Drinking Water Catchment. The Commission did not receive a submission from the public disputing that the water treatment facility would have a beneficial impact on the Sydney Drinking Water Catchment.

5.6 NorBE on wider catchment resulting from the three projects

The Commission finds that although the residuals waste emplacement will have only a marginal beneficial effect on the water catchment, the project is a crucial part of the wider Springvale project. The discharge of up to 0.43ML/day of residual waste at the Western Coal Services site will allow the water treatment facility to operate and remove up to an average of 30ML of Springvale mine water from being discharged daily into the Sydney drinking water catchment. The Commission finds that the three projects will improve water quality within the Sydney drinking water catchment.

5.7 Socio-Economic Impacts

The Commission heard from the public that the project was vitally important to the future of the Lithgow community. Concerns were expressed to the Commission identifying Lithgow's above average unemployment rates and the need to retain and create jobs where possible. Furthermore, that if the project was not supported by the Commission, the existing 600 people employed at Springvale mine and the Mt Piper Power Station could be made redundant.

Submissions at the public meeting also stated that the community has a long history and association with coal mining, and that with mine closures over the last few years there are only three mines left operating within the vicinity of Lithgow. Several members of the community spoke passionately at the public meeting about the impact of the Springvale mine shutdown in 2015 on Lithgow and surrounding region, and of the dampening effect this and other major industrial closures had had on the local economy and community spirit.

Lithgow Council acknowledges that the future of the community needs to transition away from extractive industries in the long term, however the loss of Springvale mine and 600 jobs would be devastating in the short term. Council identified that it unanimously supported the application stating that the potential minor environmental impacts at the Western Coal Services Site were well and truly worth the likely economic benefits received by the Lithgow community.

Beyond the employment dependent on approval of the projects, the Commission acknowledges that Springvale mine is the only mine supplying coal to Mt Piper Power Station and that Mt Piper Power Station supplies 15% of NSW's energy supply. The closure of Springvale mine could hinder Mt Piper Power Station's capabilities to deliver energy to NSW, and therefore reduce energy security.

The Commission agrees with the submissions received and notes that the project would deliver significant economic benefit to the Lithgow economy. The delivery of 50 full time jobs associated with the three projects' completion is important to the local community, and the Commission recognises the importance of the project in preserving 600 jobs at Springvale mine and Mt Piper Power Station that could be lost should the project not proceed and the mine close.

5.8 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, conjointly the three projects deliver considerable environmental benefit to the Sydney drinking water catchment. The projects would remove an average of 30ML/day of waste water from Springvale mine being discharged into the Cocks 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.

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 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 proposal or its potential impacts, but to the wider impact of the three projects.

The Commission finds that the development will have a beneficial impact on the Sydney drinking water catchment as the water treatment facility will remove up to 36ML/day of mine water being discharged from Springvale mine. The project will also reduce Mt Piper Power Station's need to draw water from the local catchment providing benefit to the restoration of environmental flow regimes, particularly in periods of low flow. The Commission acknowledges that up to 0.43ML/day of residual waste will be produced as a by-product of the water treatment process, however disposal of this waste is assessed under the Western Coal Services (SSD 5579) modification and is considered under that proposal.

The Commission finds that the environmental impacts of the proposed pipeline alignment are acceptable and that the conditions of consent sufficiently ensure that the applicant will undertake the required remediation works.

The Commission agrees with the submissions raised that the project would deliver significant economic benefit by sustaining local employment within the region and helping to retain energy security delivered by Mt Piper Power Station to NSW.

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 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