



Springvale Water Treatment Project MOD 5

*State Significant
Development Modification
Assessment*

(SSD 7592 MOD 5)

January 2020

© Crown Copyright, State of NSW through its Department of Planning, Industry & Environment 2020

Cover photo

Coxs River near Wallerawang, Department of Planning and Environment 2017

Disclaimer

While every reasonable effort has been made to ensure this document is correct at time of printing, the State of NSW, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance or upon the whole or any part of this document.

Copyright notice

In keeping with the NSW Government's commitment to encourage the availability of information, you are welcome to reproduce the material that appears in this report. This material is licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0). You are required to comply with the terms of CC BY 4.0 and the requirements of the Department of Planning, Industry & Environment. More information can be found at: <http://www.planning.nsw.gov.au/Copyright-and-Disclaimer>.



1. Introduction

1.1 Background

Springvale Coal Pty Limited (Springvale Coal) is developing the Springvale Water Treatment Project in a joint venture with EnergyAustralia NSW Pty Limited. The project is located between the Springvale Coal Mine and the Mount Piper Power Station, in the Lithgow local government area.

The project involves developing a water transfer pipeline from the mine to the power station, a reverse-osmosis water treatment plant and ancillary infrastructure at the power station, and a residual material pipeline from the treatment plant to the Western Coal Services site (see **Figure 1**).

The project is being developed to use the mine water transferred from the Springvale and Angus Place Coal Mines as cooling water at the power station's cooling towers. It allows Springvale Coal to achieve its strict water quality performance measures under the Springvale Coal Mine development consent, which required all mine water discharges to the Coxs River to cease after 30 June 2019.

The project has the capacity to transfer and treat up to 42 million litres per day (ML/day) of mine water from Centennial's Springvale and Angus Place coal mines. The consent also allows for excess treated water to be transferred from the power station to nearby Thompsons Creek Reservoir using the existing Coxs River Water Supply Pipeline, which forms part of the Coxs River Water Supply System (established to provide water for local power stations).

The project was approved in June 2017 by the former Planning Assessment Commission, under delegation from the then Minister for Planning. Construction works commenced in September 2017. The development consent has been modified four times, with two modifications dealing with pipeline alignment works and the most recent two modifications in May 2019 and November 2019 respectively, involving an interim water management strategy. This interim strategy allows for up to 5,760 ML of partially treated (filtered) mine water to be stored in Thompsons Creek Reservoir while the water treatment facility is fully commissioned.

The water treatment facility is being progressively commissioned with the desalination units operating consistently at 24 ML/day since the start of commissioning period in September 2019. The approved operating capacity (42 ML/day) of the facility is yet to commence.

In December 2019, major bushfires impacted the Lithgow region, resulting in substantial impacts to the Springvale Mine and Angus Place Colliery power supply, communication networks and dewatering infrastructure. Furthermore, the workforce at the power station and project work sites were evacuated to ensure the safety of the workforce.

Consequently, a limited amount of water has been extracted from the mines dewatering facilities, which are reaching critical safety levels, and further ongoing delays may be experienced during the project commissioning works.

Therefore, there remains the potential need to partially treat and transfer water for storage at Thompsons Creek Reservoir until the project is fully operational. As such, an extension of time is required for the interim water management strategy as a contingency measure during the commissioning of the project and to allow for critical dewatering of the underground mine workings.



2. Proposed Modification

On 10 January 2020, Springvale Coal submitted a modification application and supporting modification report (see **Appendix A**) to the Department for the project (SSD 7592 Mod 5). The proposal seeks to extend the interim water management strategy timeframe from 31 January 2020 (approved in November 2019) to 30 June 2020.

The primary reason for the proposed modification is to incorporate a contingency measure during the commissioning and optimisation of the project, which would allow for the transfer of up to 42 ML/day of partially treated mine water until 30 June 2020.

Considering the amount of water that is required to be stored, there are no feasible or safe alternatives to storing the water in the reservoir. There is not enough underground storage at the Springvale and Angus Place mines or capacity in the other storages at the power station. The consequences of the proposed modification not going ahead would be:

- flooding of active mine workings at Springvale and Angus Place, and potential impacts to the integrity of underground infrastructure; and
- Springvale Coal Mine having to reduce its production and ability to supply coal to the power station, with potential impacts to energy generation in NSW.

As per the previous approved modification, mine water would be partially treated to filter out solids before it is transferred to the reservoir.

The water would continue to be transferred to the reservoir using the existing Coxs River Water Supply Pipeline (see **Figure 1**). No additional infrastructure would be required to facilitate the proposed transfer of water to the reservoir and no other changes are proposed for the project.

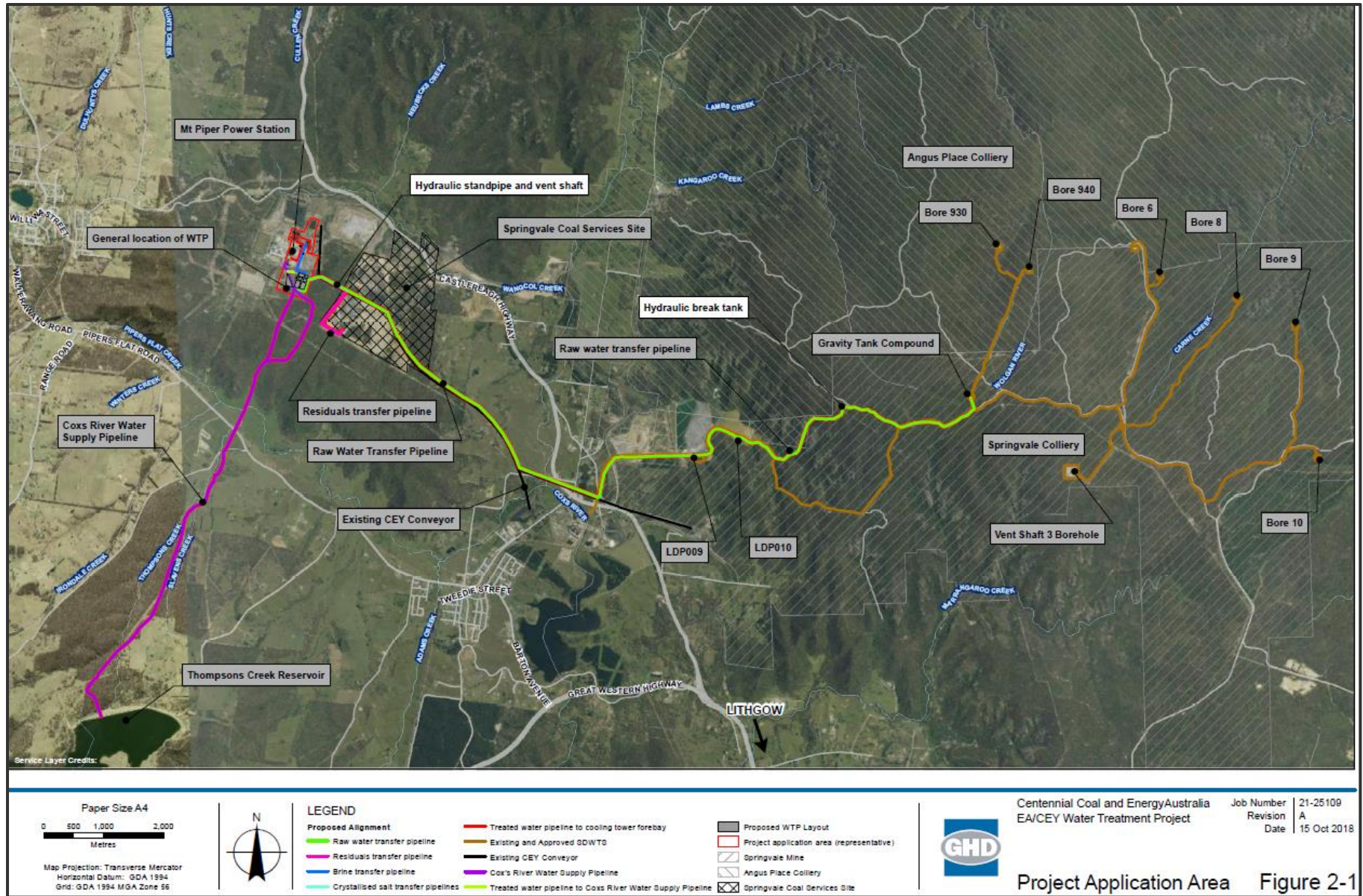


Figure 1 | Site Location and Project Components



3. Statutory Context

3.1 Scope of Modification

The modification application and Modification Report were lodged under Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Department has reviewed the scope of the modification and considers that it:

- would not increase the environmental impacts of the project as approved (see Section 5);
- is substantially the same development as originally approved (see Section 3.2); and
- would not involve any further disturbance outside of the already approved disturbance areas for the project.

Therefore, the Department is satisfied the proposed modification is within the scope of section 4.55(1A) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(1A) of the EP&A Act.

The Department has also considered:

- advice provided concerning the proposed modification (see Section 4.3); and
- the relevant matters in Section 4.15(1) of the EP&A Act, including:
 - the provisions of any relevant environmental planning instrument (see Section 3.5);
 - 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 public interest, including any relevant objects of the EP&A Act (see Section 3.6); and
 - the reasons given by the approval authority for the grant of the original approval (see Section 3.5).

3.2 Substantially the Same Development

The Department is satisfied that the project as modified would be substantially the same development as approved, and that the proposal should be characterised a modification to the existing development consent, as:

- there would be no change to the operations and components of the project;
- there would no change to the water transfer and treatment capacity of the project; and
- the impacts of the development as modified would be similar to the impacts of the approved project.

3.3 Consent Authority

The Minister for Planning and Public Spaces (Minister) is the consent authority for the modification application 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.

3.4 Publication of Application

The Department is not required to formally exhibit or seek public submissions on the application because it involves minimal environmental impact.

Nevertheless, the Department made the application available on its website.

3.5 Mandatory Matters for consideration

In accordance with Section 4.55(3) and Section 4.15(1) of the EP&A Act, a consent authority must consider the following matters, to the extent they are relevant, when considering the merits of the application:

- environmental planning instruments or proposed instruments;
- any planning agreements;
- EP&A regulation;
- likely impacts of the modification application, including environmental impacts on both the natural and built environments, and social and economic impacts;
- suitability of the site;
- any submissions;
- the public interest; and
- the reasons for granting approval for the original application.

The Department has considered all these matters carefully, and summarised the findings of this below and in Sections 4 and 5 of this report.

Environmental planning Instruments or proposed instruments

Several environmental planning instruments apply to the modification, including:

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP);
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011;
- State Environmental Planning Policy 55 (SEPP No. 55) – Remediation of Land;
- State Environmental Planning Policy 44 (SEPP No. 44) – Koala Habitat Protection;
- State Environmental Planning Policy 33 (SEPP No. 33) – Hazardous and Offensive Development; and
- Lithgow Local Environmental Plan 2014.

The Department has considered the proposed modification against the relevant provisions of these instruments. The Department considers that the proposed modification can be undertaken in a manner that is generally in accordance with the aims, objectives and provisions of these instruments.

Reasons for granting the consent for the original application

In determining the original Springvale Water Treatment Project, the Planning Assessment Commission concluded that the benefits of the project outweighed the residual environmental impacts and imposed a range of strict conditions to appropriately manage impacts. The Department has considered the proposed modification against the reasons the Commission gave for determining the project and is satisfied that the proposed modification does not affect the decision that was previously made. The proposed modification would allow similar benefits to be realised at local, regional and State levels.

3.6 Objects of the EP&A Act

The Department has assessed the proposed modification against the current objects of the EP&A Act. The objects of the most relevance to the decision on whether or not to approve the proposed modification are found in section 1.3 of the EP&A Act; and are:

- Object 1.3(a): to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources;
- Object 1.3(b): to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;
- Object 1.3(c): to promote the orderly and economic use and development of land;
- Object 1.3(e): to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats;
- Object 1.3(f): to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage); and
- Object 1.3(j): to provide increased opportunity for community participation in environmental planning and assessment.

The Department is satisfied that the proposed modification encourages the proper management and development of resources, including facilitating the continued operation of the Springvale Mine, related implications for energy security in NSW (Object 1.3(a)), and the promotion of the orderly and economic use of land (Object 1.3(c)).

The Department has considered the principles of ecologically sustainable development (ESD, Object 1.3(b)) in its assessment of the proposed modification. The Department considers that the proposed modification may be carried out in a manner that is consistent with the principles of ESD. The Department's assessment has sought to integrate all significant environmental, social and economic considerations. In particular, the Department considers that the modification would continue to provide an overall benefit to the water catchment while utilising the project's established infrastructure and workforce and would ensure minimal environmental impacts by providing a logical and economical solution while the project is being commissioned. The Department has carefully considered the environmental impacts of the proposed modification, including potential impacts on the natural, cultural and built environments (Object 1.3(e) and (f)). The continued use of Thompsons Creek Reservoir to store partially treated mine water would cause minimal environmental impact on cultural and built environments. The key findings of the Department's assessment are summarised in Section 5.

3.7 Biodiversity

Under the relevant provisions of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*, the Department is satisfied that a Biodiversity Development Assessment Report is not required to be submitted with the applications as the modifications would not result in any increase in impacts on biodiversity values.



4. Engagement

4.1 Public Engagement

Due to the minor nature of the proposed modification, the application was not placed on public exhibition. However, the modification application and accompanying modification report were made available on the Department's major projects website.

4.2 Consultation

Springvale Coal invited comment on the modification report from the Environment Protection Authority (EPA), WaterNSW, Department of Primary Industries – Fisheries (DPI – Fisheries), Lithgow City Council (Council), the Colong Foundation for Wilderness and the Blue Mountains Conservation Society.

The public authority and special interest group advice is summarised in Section 4.3 (below) and provided in **Appendix B**.

4.3 Summary of Advice

The EPA and WaterNSW did not object to the proposal, noting that the proposed contingency arrangements would not result in any additional environmental impacts beyond those already approved for the project.

DPI – Fisheries and Lithgow City Council did not object to the proposal. The Colong Foundation for Wilderness and the Blue Mountains Conservation Society did not provide any comment on the modification.



5. Assessment

5.1 Introduction

In assessing the merits of the modification application, the Department has considered the:

- previous environmental assessments for the project;
- modification applications and existing conditions of consent; and
- requirements of the EP&A Act.

5.2 Issues

As the proposed modification is for an extension of time to the interim water management strategy, the Department considers the environmental impacts to be minimal. The Department has considered the potential impacts of the proposed modification, which is summarised in **Table 1**.

Table 1 | Summary of issues

Issue	Findings	Recommended Condition
Water quality	<ul style="list-style-type: none"> Springvale Coal conducted a review of the water resources assessments undertaken for Modification 3 and 4, (including geochemical modelling and water and salt balance) and concluded that the environmental impacts associated with the proposed modification would fall within the already approved predicted range of impacts for the interim strategy. Furthermore, any excess fully treated water would continue to be transferred to the reservoir during the interim strategy period. The mixing of this water with existing water in the reservoir is likely to offset any temporary decline in water quality that may occur as a result of the partially treated water transfers. 	<ul style="list-style-type: none"> No changes to conditions
Water Transfer volume	<ul style="list-style-type: none"> The proposed modification would not increase the total volume of partially treated water to be transferred to the reservoir (5,760 ML), which equates to around 12% of the storage capacity of the reservoir. To date, 2,220 ML (38%) of the approved water transfer volume has been sent to the reservoir, with about 3,540 ML of total volume remaining that would be permitted to be transferred during the extended interim strategy period. As a result of the impacts caused by the bushfires, mine water transfers to the water treatment facility will be required at up to 42 ML/day in order to recover full capacity of the water storages, including storage capacity in underground workings at Springvale and Angus Place Coal mines. The water treatment facility will be required to operate at the maximum approved capacity (42 ML/day) but has not been tested at this rate. Partially treated mine water transfers to the reservoir would only be required as a contingency if the project cannot operate at full capacity loads. Partially treated mine water would continue to be transferred to the reservoir via the existing Coxs River Water Supply Pipeline at up to 24 ML/day and no additional infrastructure would be required to support the proposal. 	<ul style="list-style-type: none"> Amendment to condition 6A of Schedule 2, to extend the interim water management strategy timeframe. Springvale Coal would also be required to review and if necessary, revise its Water Management Plan.
Reservoir infrastructure	<ul style="list-style-type: none"> Thompsons Creek Reservoir can hold up to 27,500 ML of water. Water in the reservoir is predominantly used as storage to supply the power stations demand for makeup water. With ongoing high demand for makeup water predicted, the available storage in the reservoir is more than sufficient. As such, no additional dam infrastructure would be required to support the proposal. 	<ul style="list-style-type: none"> No changes to conditions

Issue	Findings	Recommended Condition
	<ul style="list-style-type: none"> The proposed modification was reviewed against the Modification 4 water balance assessment and indicates that modelled reservoir levels would be comparable to levels predicted and previously approved in Modification 4. The Department considers that it would be very unlikely for the reservoir to overtop or require additional flow releases during the extended period for the interim strategy. Furthermore, Springvale Coal has developed appropriate emergency spill protocols in consultation with EPA and WaterNSW and incorporated this in its Water Management Plan. 	
<p>NorBe 'neutral or beneficial effect'</p>	<ul style="list-style-type: none"> In terms of the neutral or beneficial effects test in the <i>State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011</i>, the assessment has again demonstrated that the interim strategy would have a negligible change when compared to the approved project. Notwithstanding, some of the overall benefits of the project on catchment water quality are already being realised as the water being transferred to the project is currently being fully treated in the operating reverse osmosis modules. 	<ul style="list-style-type: none"> No changes to conditions



6. Evaluation

The Department has assessed the merits of the proposed modification and considered its potential environmental, social and economic impacts and the relevant requirements of the EP&A Act.

The Department recognises the need to manage the water which is being transferred from the Springvale Coal Mine to the power station while the project is in its final commissioning stage. The Department considers that extending the time period for the approved interim water management strategy would be the safest and most feasible option to manage the water. The proposed modification would therefore provide a reasonable contingency solution while the Springvale Water Treatment Project is completed.

The Department's assessment has found that the proposed modification would have a negligible impact on the water quality in Thompsons Creek Reservoir and would be unlikely to affect the downstream catchment water quality.

The transfer of water would be managed under the existing conditions of consent, which includes a total limit of up to 5,760 ML of partially treated water that can be transferred to Thompsons Creek Reservoir. The Department has recommended that the time period for this be extended until 30 June

2020 to allow for the transfer of water as a potential contingency measure during the final commissioning and testing stages of the project.

If the proposed modification is not approved, mine water would need to continue to be managed in underground and surface storages at the Springvale and Angus Place coal mines. The recent bushfire events of December 2019 have substantially impacted these water storage options, which are currently nearing critical safety levels. Failure to properly manage the water at the mines would subsequently affect current mining operations at Springvale Coal Mine, with impacts to coal supply to the Mount Piper Power Station, which supplies about 15% of NSW energy needs.

Therefore, the Department considers that the proposed modification is in the public interest and should be approved.

The Department has drafted a recommended Notice of Modification (see **Appendix C**) and consolidated version of the development consent, as modified (see **Appendix D**). Springvale Coal has reviewed the draft Notice of Modification and has accepted the conditions.



7. Recommendation

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

- **considers** the findings and recommendations of this report;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the modification application;
- **agrees to modify** the consent for the Springvale Water Treatment Project (SSD 7592); and
- **signs** the attached Notice of Modification (**Appendix C**).

Recommended by:

 30/1/20

Philip Nevill


Environmental Assessment Officer

Resource Assessments



8. Determination

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

 30/1/20

Steve O'Donoghue

Director

Resource Assessments



Appendices

Appendix A – Modification Report

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/26676>

Appendix B – Agency Advice

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/26676>

Appendix C – Notice of Modification

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/26676>

Appendix D – Consolidated Consent

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/26676>