Department of Planning and Environment

dpie.nsw.gov.au

Springvale Water Treatment Project Modification 10 and Western Coal Services Project Modification 6

State Significant Development Modification Assessment Report (SSD-7592-Mod-10 and SSD-5579-Mod-6)

December 2023

Acknowledgement of Country

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

Published by NSW Department of Planning and Environment

dpie.nsw.gov.au

Springvale Water Treatment Project Modification 10 and Western Coal Services Project Modification 6 (SSD-7592-Mod-10 and SSD-5579-Mod-6) Assessment Report

Published: December 2023

Preface

This assessment report provides a record of the Department of Planning and Environment's (the Department) assessment and evaluation of Modification 10 (Mod 10) of the State significant development (SSD) application for the Springvale Water Treatment Project (SSD-7592) and Modification 6 (Mod 6) of the SSD application for the Western Coal Services Project (SSD-5579), both lodged by Springvale Coal Pty Limited (Springvale Coal).

The report includes:

- an assessment of the modifications against government policy and statutory requirements, including mandatory considerations;
- a demonstration of how matters raised by the community and other stakeholders have been considered;
- an explanation of any changes made to the modifications during the assessment process;
- an assessment of the likely environmental, social and economic impacts of the modifications;
- an evaluation which weighs up the likely impacts and benefits of the modifications, having regard to the proposed mitigations, community views and expert advice; and provides a view on whether the impacts are on balance, acceptable; and
- an opinion on whether the modifications are approvable or not, along with the reasons, to assist the Independent Planning Commission in making an informed decision about whether the consents for the projects can be modified and any conditions that should be imposed.

Executive Summary

The Springvale Water Treatment Project (SWTP) is located approximately 15 km northwest of Lithgow, adjacent to the Mount Piper Power Station (MPPS).

The SWTP is a joint venture between Springvale Coal Pty Limited (Springvale Coal) (the applicant), a subsidiary of Centennial Coal Company Limited (Centennial), and Energy Australia Pty Limited. The facility is operated by Veolia Water Australia Pty Limited.

Springvale Coal also operates the Western Coal Services Project (WCSP), which is a coal handling, processing, transport and management facility located 15 km northwest of Lithgow. WCSP operates under SSD consent SSD-5579, granted by the then Planning Assessment Commission on 4 April 2014.

The SWTP operates under State Significant Development (SSD) consent SSD 7592 granted by the then Planning Assessment Commission on 19 June 2017. The consent provides for the transfer and treatment of up to 42 ML per day of mine water from Angus Place and Springvale Coal Mine and the transfer of residual waste from SWTP to the WCSP at a rate of up to 0.35 mega litres (ML) per day on an annual average basis or up to 0.43 ML per day as a daily maximum, via the Residuals Transfer Pipeline.

Springvale Coal proposes to modify consents SSD-7592 and SSD-5579 to temporarily increase the transfer rate of residuals between the SWTP and WCSP to up to 0.50 ML per day on an annual daily average basis and up to 1.0 ML per day as a daily maximum, until 30 June 2025.

The modification applications were lodged under Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Department is satisfied that the proposed modifications are within the scope of section 4.55(1A) EP&A Act and can be assessed and determined under this section.

In accordance with Section 4.5(a) of the EP&A Act and clause 2.7(1) of the *State Environmental Planning Policy (Planning Systems) 2021,* the Independent Planning Commission of NSW is the consent authority for the modification applications as Centennial has reported political donations.

The Department exhibited the modification applications and Modification Report (a single report addressing both modification applications) from 10 November until 23 November 2023 and received one objecting public submission.

The Department's Environment Protection Authority (EPA), WaterNSW and DPE Water initially raised concerns regarding the proposed modifications. Following review of Submissions Report, the agencies provided recommendations for conditions of consent.

The Department's assessment has found that the proposed modifications would be unlikely to have an adverse impact on the stream flow and hydrology of the receiving environment of Wangcol Creek. However, the Department considers that the proposed modifications have the potential to affect the

water quality of the discharges from LDP001 and subsequently the receiving environment of Wangcol Creek.

The Department understands that the water treatment plant at SWTP is currently not operating to its maximum capacity due to the high turbidity in the mine water received at the plant. This presents a risk of decreased levels of the treated water being transferred to MPPS for beneficial reuse and inefficient operations at Springvale Mine due to mine water inflows. This would impact the ongoing efficient operation of MPPS and its capacity to meet NSW energy demands.

The Department acknowledges that the modifications as proposed provide a medium-term solution (approximately 18 months) for the efficient operation of SWTP. However, given the uncertainty around the potential water quality impacts on the receiving environment of Wangcol Creek associated with the proposed modifications, the Department has recommended strict conditions of consent that limit the timeframe permitted for the increased rate of residuals transfer between SWTP and WCSP to 30 April 2024 (approximately 3-4 months from the date of determination).

The Department's assessment has concluded that the potential impacts of the proposed modifications would be temporary, and that the existing and recommended conditions would be adequate to manage the impacts of the modifications.

Consequently, the Department considers that the proposed modifications are in the public interest and are approvable, subject to the recommended conditions.

Contents

1 Introduction

1.1 Background

1. Springvale Water Treatment Project (SWTP) is a water processing facility located approximately 15 kilometres (km) northwest of Lithgow, adjacent to the Mount Piper Power Station (MPPS) (see **Figure** 1 and **Figure 2**).

2. SWTP processes mine water from the nearby Angus Place Colliery (currently under care and maintenance) and Springvale Mine, for beneficial reuse. Springvale Mine requires dewatering to ensure continued extraction of coal for supply to MPPS. The project provides for:

   - the transfer and treatment of up to 42 ML per day of mine water from Angus Place and Springvale mines;
   - transfer of residual waste from SWTP to the Western Coal Services Project (WCSP) at a rate of up to 0.35 mega litres (ML) per day on an annual average basis or up to 0.50 ML per day as a daily maximum, via the Residuals Transfer Pipeline;
   - transfer of processed water to MPPS for beneficial reuse in the cooling towers; and
   - the transfer of excess treated water to Thompsons Creek Reservoir via the Cox's River Water Supply Pipeline.

3. The facility is owned by Springvale Coal Pty Limited (Springvale Coal), a subsidiary of Centennial Coal Company Limited (Centennial), and Energy Australia Pty Limited (Energy Australia) and operated by Veolia Water Australia Pty Limited.

4. Springvale Coal also operates WCSP, which is a coal handling, processing, transport and management facility located 15 km northwest of Lithgow (see **Figure 1**).

5. The Springvale Coal Services Site (SCSS) forms part of the WCSP. The SCSS receives and processes coal, residual wastes and water from multiple coal mining and ancillary projects in the Lithgow area (see **Figure 2**).

1.2 Approvals history

1.2.1 Springvale Water Treatment Project

6. The SWTP operates under State Significant Development (SSD) consent SSD 7592 granted by the then Planning Assessment Commission on 19 June 2017.

7. The consent has been modified on eight occasions, with Modifications 1 and 2 dealing with pipeline alignment works, and Modifications 3 -8 involving changes to the project's water management strategy.

8. A ninth modification (SSD-7592-Mod-9), which is currently under assessment, seeks to extend a previously approved interim water management strategy for an additional 3 years.

1.2.2 Western Coal Services Project

9. WCSP operates under SSD consent SSD-5579, granted by the then Planning Assessment Commission on 4 April 2014.

10. The WCSP development consent has been modified on four occasions, as shown in **Table 1**. A fifth modification (SSD-5579-Mod-5), which is currently under assessment, seeks approval for the increase of water transfers to the site from Angus Place Mine.

Table 1 | Summary of modifications to SSD-5579

Modification	Description	Decision-maker	Date
MOD 1	Residual waste transfer increase	PAC	19 June 2017
MOD 2	Revision of noise criteria and increase in coal transfers to WCSP (SCSS) from Springvale Mine	Department	15 December 2017
MOD 3	Increase in coal transfers to WCSP (SCSS)	Department	23 August 2019
MOD 4	Construction of- and upgrades to- water transfer systems	Department	21 October 2022

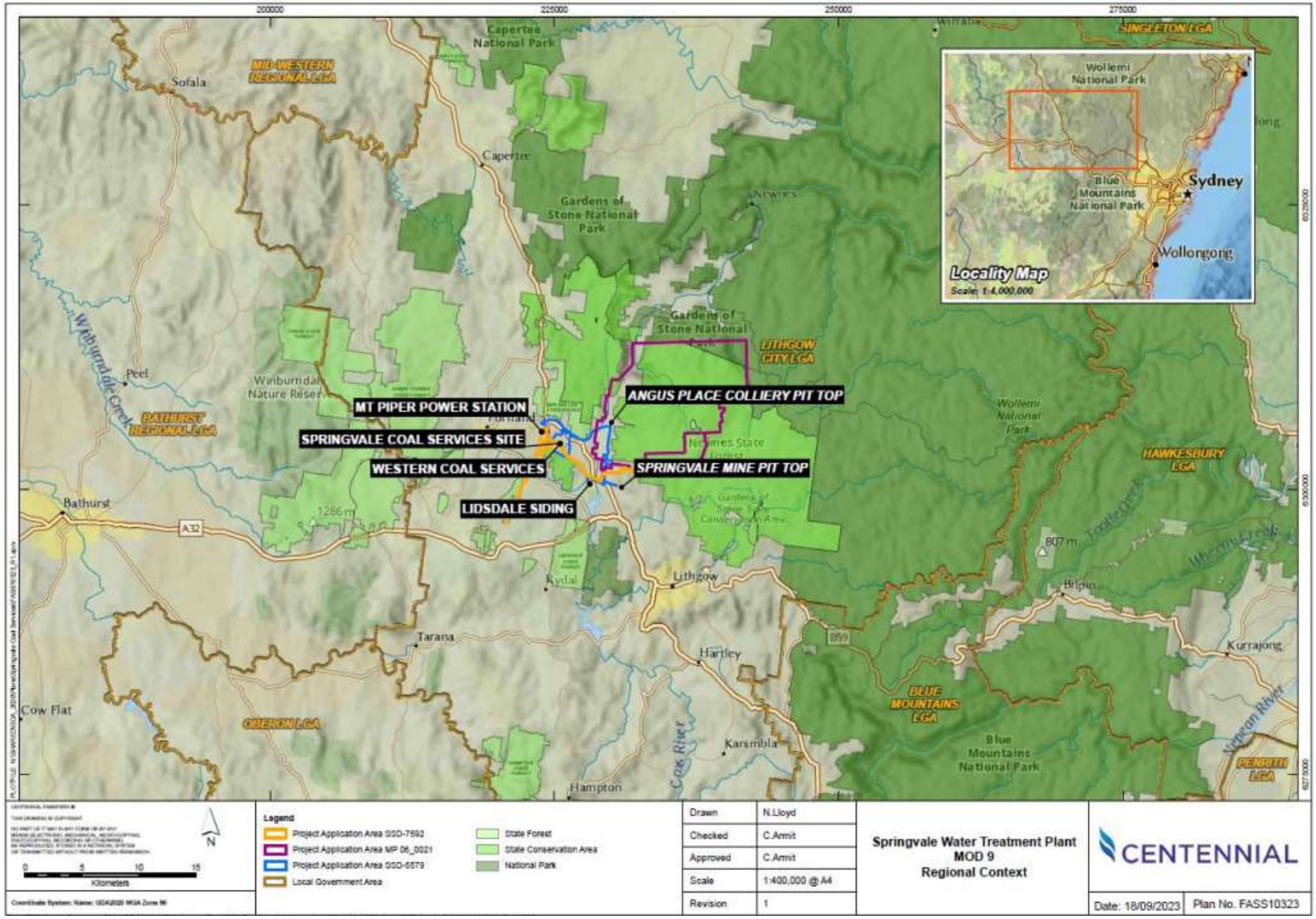

Figure 1 | Regional context map

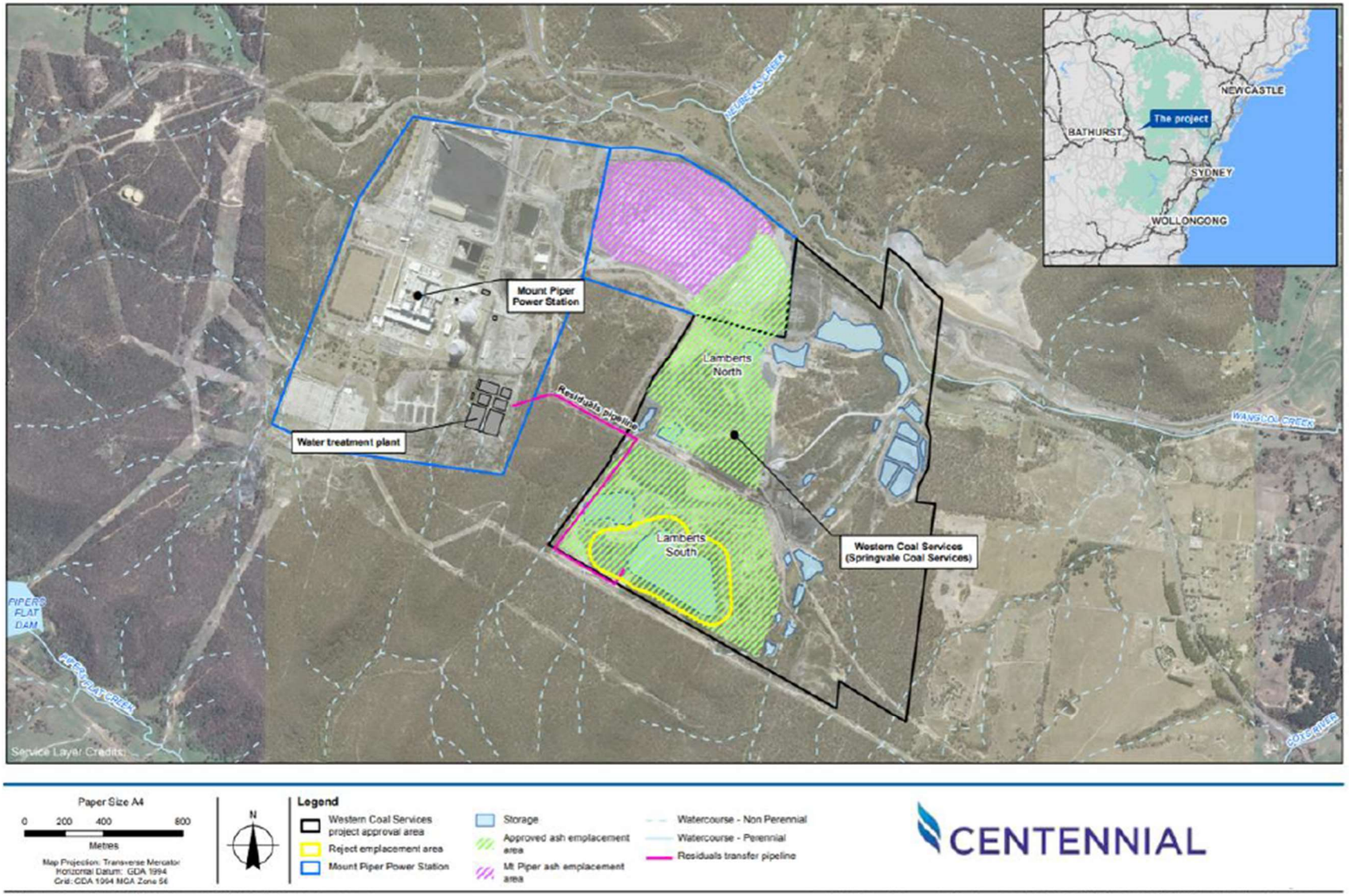

Figure 2 | Local context map

2 Proposed modifications

11. Springvale Coal has recently reported a higher turbidity in the mine water being transferred to the SWTP due to the geological conditions at Springvale Mine and Angus Place Colliery. This has resulted in a rapid sludge build up at the settling pond at the SWTP. To avoid exceedance of the design criteria of the settling pond and the approved residual waste stream levels, Springvale Coal has been required to reduce the mine water processing volumes at the SWTP during the high turbidity events.

12. The reduced throughput at the SWTP results in a reduced efficiency of the SWTP and therefore increases a risk of discharge of untreated mine water from Springvale Mine and Angus Place Colliery directly into the Coxs River catchment and decreased supply of treated water to MPPS.

13. In response, Springvale Coal submitted modification applications and an accompanying combined Modification Report to the Department on 25 October 2023. Springvale Coal is seeking to temporarily increase the average and maximum residual waste stream transfer rates between the SWTP to the Reject Emplacement Area at the WCSP to ensure the SWTP can operate at its full capacity during high turbidity events.

14. The proposed modifications seek approval to temporarily increase the permitted rate of residual waste transfers between the SWTP and WCSP from:

    - 0.35 ML/day to 0.50 ML/day on an annual daily basis; and
    - 0.43 ML/day to 1.0 ML/day on a daily maximum basis.

15. The increased rate of daily and annual residual waste transfers is sought until 25 June 2025. Transfers would continue from the existing pre-treatment section of SWTP to the Reject Emplacement Area at the WCSP, via the Residuals Transfer Pipeline (see **Figure 2**).

3 Strategic context

3.1 Energy security

16. The Lithgow region is a strategically important coal mining centre that is important for cost effective generation of electricity for Sydney and NSW. Springvale Mine is the main local supplier of coal to the MPPS, which provides up to 15% of NSW's electricity. Springvale Mine typically provides between 80% and 100% of all coal supplied to the power station. In the broader context of NSW energy supply, it is important that the power station has a reliable source of coal to enable it to operate continuously, particularly during periods of increased demand.

17. MPPS was commissioned in 1992. It is one of four operational coal-fired power stations in NSW. It is the newest and is also expected to be the last operating coal-fired power station in the State, with an expected closure date of 2040.

18. Coal supply to MPPS is limited by a lack of rail access from the Hunter Valley coal supply chain. MPPS has alternative coal supply but not at an adequate volume without impacts on regional communities or additional Government intervention (such as for coal trucking). In the future it may be feasible to supply coal via rail from other existing mines located further afield in the Mudgee area, however this is not currently a commercially viable or approved option. Such an option is also further complicated by the current loader/unloader infrastructure at Springvale Mine.

19. Operation of the Springvale Mine relies on effective water management infrastructure, including the SWTP and WCSP to manage mine inflows, create a safer mining environment for workers and support ongoing coal supply to MPPS.

20. The current water management issues and water levels at Springvale Mine threaten medium term coal supply to MPPS. If Springvale operations cease, there are significant and prolonged electricity reliability risks from winter 2024, potentially until replacement electricity generation is built. While there are no immediate risks if Springvale Mine temporarily ceases production as MPSS has sufficient coal for the summer period, there are significant risks in the medium term.

3.2 Environmental context

21. Mining has been undertaken in the area for over 70 years within a series of underground mine workings and open cut pits. The sites are located within the Wangcol Creek and Coxs River catchments, both highly modified environments that flow south towards Lake Wallace, Lake

Lyell and ultimately Lake Burragorang (approximately 100 km downstream). The catchments have been exposed to impacts from mining and other industries for an extended period. Historical mining activities have included the direct discharge of mine water into the surface water environment. The commissioning of the SWTP in 2019 has dramatically reduced the volumes of mine water discharge into the catchment.

3.3 Sydney drinking water catchment

22. The SWTP and WCSP sites are located in Sydney's drinking water catchment. Under Section 6.61(1) and 6.63 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (Biodiversity and Conservation SEPP), the consent authority must "not grant consent to carrying out of development" in the drinking water catchment unless it would have a 'neutral or beneficial effect' on water quality (NorBE).

23. Although the NorBE test does not strictly apply to modification applications[1], it is clear that the intent behind Section 6.61(1) and 6.63 of the Biodiversity and Conservation SEPP is to protect Sydney's drinking water catchment, and the Department considers that this should be taken into account for these modification applications.

24. Consideration of NorBE test is presented in **Section 6.1** of this report.

4 Statutory context

4.1 Scope of modification and assessment pathway

25. The modification applications were lodged under section 4.55(1A) of the *Environmental Planning and* Assessment *Act 1979* (EP&A Act). Under Section 4.55(1A), a development consent can only be modified if the consent authority is satisfied that the proposed modification is of minimal environmental impact and that the development would remain substantially the same as the originally approved project.

26. The Department considers that the modification applications can be characterised as modifications involving minimal environmental impacts as the proposals:

- would likely result in minimal environmental impacts;
- are substantially the same development as approved; and

[1] Sections 4.55(4) and 4.56(1C) of the EP&A Act each provide that a modification of a development consent is "*not taken to be granting of development consent*".

- would not involve any further disturbance outside the already approved disturbance areas for each project.

27. The Department is therefore satisfied that the proposed modification application is within the scope of section 4.55(1A) of the EP&A Act and can be assessed and determined under this section.

4.2 Consent authority

28. Centennial, the parent company to Springvale Coal (the applicant for both modification applications), disclosed a reportable political donation under section 10.4 of the EP&A Act.

29. As such, in accordance with Section 4.5(a) of the EP&A Act and clause 2.7(1) of the State Environmental Planning Policy (Planning Systems) 2021, the Independent Planning Commission of NSW (the Commission) is the consent authority for these applications.

4.3 Mandatory matters for consideration

30. The Department has undertaken a detailed assessment of the proposed modifications, taking into consideration each of the relevant matters listed in section 4.15(1) and 4.55(3) of the EP&A Act, including:

- the objects of the Act (see **Appendix C**);
- applicable environmental planning instruments (see **Appendix C**);
- issues raised in submissions on the proposed modifications (see **Sections 5** and **6**);
- the likely impacts of the modification application (see **Section 6**);
- the suitability of the sites for the proposed modifications (see **Sections 3**, **6** and **7**); and
- the public interest (see **Section 7**).

4.4 Other approvals and authorisations

31. Water discharges from the WCSP are regulated by an Environment Protection Licence (EPL 21229) issued under the *Protection of the Environment Operations Act 2000.*

32. Should the modification to the WCSP consent be approved, Springvale Coal may require a variation to EPL 21229 to account for a temporary change to the discharge water quality limits in the licence.

5 Engagement

5.1 Department's engagement

33. The Department publicly exhibited the modification applications and Modification Report on the NSW Major Projects planning portal for a period of 14 days from 10 November until 23 November 2023. The Department also advertised the exhibition in the Lithgow Mercury newspaper, notified previous submitters and invited comment from relevant government agencies and Lithgow City Council (Council).

5.1.1 Summary of public submissions

34. During the exhibition period, the Department received 1 public submission from a special interest group (Hunter Community Environment Centre), who objected to the proposed modifications.

35. The key issue raised by the submitter related to the assessment pathways for the proposed modifications. A link to the submission in full is provided in **Appendix B.**

36. The Department's consideration of the assessment pathways for the proposed modifications is presented in Section 4.

5.1.2 Summary of agency advice

37. Four State government agencies provided advice in relation to the proposed modifications. A summary of this is provided in **Table 2.** A copy of all agency advice is provided in **Appendix B**. Further consideration of agency advice is provided in **Section 6**.

Table 2 | Summary of agency advice

Agency	Advice summary
WaterNSW	Following review of the Modification Report, WaterNSW initially raised concerns regarding achievement of a neutral or beneficial effect (NorBe) on water quality and requested: • implementation of management and mitigation measures; • updating of LDP and EPL references; and • further consultation for updating the WSCP water management plan. Following review of the Submissions Report, WaterNSW: • strongly supported time-limiting the proposed residuals transfer increase to 30 June 2025 and considered it likely to reduce the impact on water quality in comparison to what was assessed in the Modification Report; and • requested further consultation during the design and approval process for any future modifications.
EPA	Following review of the Modification Report, EPA initially raised concerns regarding potential impacts to discharge water quality and volume increases at LDP001. EPA did not support the modifications as proposed and provided alternate options for residual waste management. Following review of the Submissions Report and additional information provided by Springvale Coal, EPA provided recommendations for conditions of consent that would limit the timeframe for the permitted increase in the rate of residuals transfer and short and long-term mitigation measures for management of residuals.
DPE Water	DPE Water raised concerns in relation to potential water quality impacts to surface water and groundwater and made recommendations for: • additional groundwater assessment against the minimal impact considerations set out in the *NSW Aquifer Interference Policy* (AIP); • cumulative impact assessment considering water transfers to the WCSP proposed under modification application SSD-5579-MOD-5; and • additional targeted post approval groundwater performance monitoring around the REA and between the REA and Wangcol Creek. Notwithstanding the above concerns and recommendations, DPE Water indicated it supported the Department's recommended conditions of consent, provided additional assessments in line with these recommendations are undertaken for any future modifications related to residuals transfers at SWTP and WCSP.

Agency	Advice summary
Office of Energy and Climate Change	Advised that the Springvale Mine is significant for NSW electricity supply and noted that the current water management issues threaten mining operations and therefore subsequently threaten coal supply and electricity generation. The agency emphasised that the proposed modification would assist with continuation of mining operations at Springvale Mine and hence help alleviate the risk of an energy emergency.

5.1.3 Summary of Council submissions and advice

38. Council lodged a submission supporting the proposed modifications. It did not raise any specific concerns or issues to be addressed during the assessment of the modification applications.

5.2 Response to submissions

39. Following the public exhibition period, the Department requested that Springvale Coal respond to the issues raised in submissions and the advice received from government agencies. The applicant provided a Submissions Report to the Department on 13 December 2023 (see **Appendix B**).

40. The Department published the Submissions Report on the Department's website and forwarded a copy to relevant government agencies and Council for comment.

41. The report provided Springvale Coal's consideration of issues raised in submissions and agency advice. It also included a refinement to the proposed modifications to limit the permitted timeframe for the increased rate of residual waste transfers to 30 June 2025.

6 Assessment

42. The proposed modifications seek approval for a temporary increase to the permitted rate of residuals transfer between SWTP and WCSP in accordance with Springvale Coal's previously assessed and approved water management system. The modifications do not seek to change any other element of the existing approved operational water management system. The potential for environmental impacts greater than those previously assessed and approved is therefore minimal. Nevertheless, the Department considers that the key assessment issue relates to potential impacts on the receiving surface water environment. This issue is

assessed in **Section 6.1**. A summary of the Department's assessment of other issues is presented in **Section 6.2**.

6.1 Surface water

6.1.1 Existing environment

43. SWTP and WCSP are within the Wangcol Creek catchment, a highly modified environment that drains into the Coxs River. Water quality in the Wangcol Creek catchment upstream of the site shows evidence of impacts from historical mining, with elevated salinity and heavy metal concentrations.

6.1.2 Existing water management system

44. The SWTP utilises a reverse osmosis process to treat mine water from Springvale Mine and Angus Place Colliery and then transfer the treated mine water from the water treatment plant to the MPPS (for use in the cooling towers) and the Thompsons Creek Reservoir.

45. The pre-treatment process at the SWTP consists of a solids contact clarifier and a settling (sludge) pond. The solids contact clarifier removes the suspended solids from raw mine water prior to desalination. The removed suspended solids (sludge) are placed in the settling pond.

46. The pre-treatment process results in a separate residual waste stream that is currently transferred to the WCSP site at a maximum rate of 0.43 ML/day (and a typical rate of 0.35 ML/day). The residual waste stream is pumped to the WCSP site for disposal within the onsite Reject Emplacement Area via the Residual Transfer Pipeline.

47. The Reject Emplacement Area stores residuals and coarse and fine coal reject from the coal handling and preparation plant. Water from the Reject Emplacement Area seeps into the former historical underground workings. Some of the water from the underground workings reports to Cooks Dam as seepage discharge.

48. Cooks Dam is a key collection and management point for dirty water. It is located in the backfilled void of an historic open cut mining operation of the former Western Main Colliery. Stored water within Cooks Dam is used for dust suppression and process water and some water is lost to evaporation. Cooks Dam loses some water as seepage discharge directly to Wangcol Creek, while the balance of excess water within Cooks Dam is discharged via LDP001. Discharges from LDP001 predominantly consist of untreated groundwater from historical mine workings and runoff. Some water also reports directly to Wangcol Creek as seepage discharge.

49. Springvale Coal has reported all discharges to date from LDP001 to be compliant with the concentration limits in EPL 21229. The Department notes that the EPL 21229 sets no discharge volumes, salinity levels or heavy metal composition limits.

50. The water management system at the WCSP is illustrated in **Figure 3.**

6.2 Predicted impacts

6.2.1 Stream flow and hydrology

51. The Department notes that the modifications would likely result in a temporary increase in the discharge volumes from LDP001. The maximum increase in discharge volume would be equivalent to the increased rate of residuals transfer from the SWTP to the Reject Emplacement Area, which could then enter the former underground workings before leaving site via LDP001 or seeping into Wangcol Creek. This equates to a maximum daily increase in discharge of 0.57 ML and annual daily average (on a pro-rata basis) of 0.15 ML.

52. While there are no volumetric discharge limits applied to LDP001, Centennial has reported that the average daily discharge rate from LDP001 for the period 15 December 2022 to 14 December 2023 was 3 ML/day. The reported average daily discharge rate from LDP001 for 2023 was 8.8 ML/day. The Department notes that an annual daily average increase of 0.15 ML would represent a 5% and 2% increase on the daily average discharge rate reported for 2023 and 2022, respectively. Assuming similar discharge rates for the 2024 reporting year, the Department considers the proposed increase to the average daily residuals transfer rate and interrelated daily average discharge rate from LDP001 (or seepage directly into Wangcol Creek), would be unlikely to have an adverse impact on the stream flow and hydrology of the receiving environment of Wangcol Creek.

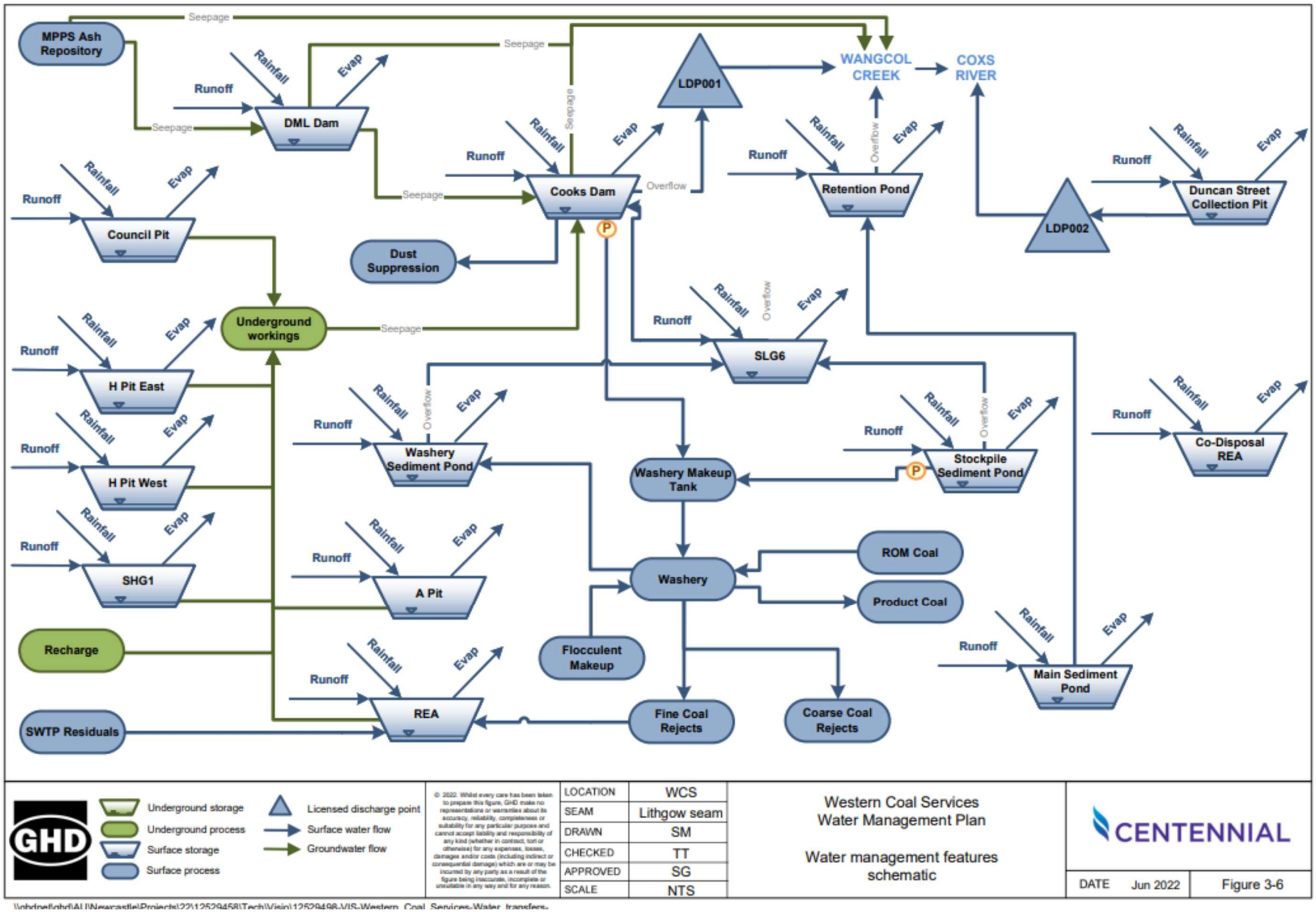

Figure 3 | Water management system at WCS

6.2.2 Water quality

53. In terms of water quality impacts, the Department considers that the proposed modifications have the potential to affect the water quality of the discharges from LDP001 due to the larger contribution of residuals within the discharge water. However, the Department considers these impacts would be minimal given the relatively minor contribution of the residuals to the total volumes of water discharged from LDP001 (2%-5% increase in daily average discharge volume compared to 2022-2023, as above).

54. Residuals transfers between SWTP and the Reject Emplacement Area at the WCSP would be undertaken in accordance with Springvale Coal's previously assessed and approved water management system. The Department understands that the water quality of the residuals is likely to be similar to that which has been transferred from the SWTP to the Reject Emplacement Area since commissioning of the Residuals Transfer Pipeline in June 2019. The Department notes that water quality monitoring of the Reject Emplacement Area decant water (of which the transferred residuals are a key component) has returned results above the corresponding site-specific trigger values on several occasions, despite no exceedances of the discharge water quality criteria established for LDP001 under EPL 21229 having been recorded during the same timeframe. This indicates that the residuals are diluted within the underground water storage before reporting to Cooks Dam and LDP001.

55. Notwithstanding this dilution, the Department considers that without further detailed assessment, it is difficult to conclude that a sustained increase to the rate of residuals transfer between SWTP and WCSP would not affect the water quality of the receiving environment of Wangcol Creek.

56. For this reason, the Department has recommended strict conditions of consent that limit the timeframe permitted for the increased rate of residuals transfer between SWTP and WCSP to 30 April 2024. The Department considers these conditions strike a balance between maintaining the efficient operation of the water treatment plant (and by extension the critical supply of coal to the MPPS from Springvale Mine) and protecting the water quality of Wangcol Creek and the Coxs River catchment. WaterNSW, DPE Water and EPA are also supportive of time-limiting the increased rate of residuals transfer between SWTP and WCSP.

57. The Department notes that EPA has recommended several other mitigation measures for the medium-term and long-term management of residuals at the SWTP. While the Department generally supports these recommended measures, it considers that in order for them to the implemented, they would need to be subject to separate merit-based assessments and require further modifications to the development consents for SWTP (SSD-7592) and WSCP

(SSD-5579). For this reason, these additional recommended mitigation measures have not been adopted for the proposed modifications or in the recommended conditions.

58. The Department notes that the residuals management system at SWTP and WCSP would continue to the implemented for the proposed modifications. This system, which is documented in a Brine and Residuals Management Plan and Water Management Plan, includes:

- undertaking physical inspections of water management infrastructures to identify and respond to any issues relating to capacity and structural integrity; and
- water quality and flow monitoring of the residuals stream transferred to the reject emplacement area from the water treatment plant, water decanted from the reject emplacement area, water within Cooks Dam, and licensed discharges from LDP001.

59. WaterNSW has expressed support for the continued implementation of these measures.

60. The Department also acknowledges the improved water quality outcomes that would be derived from the continued efficient operation of the water treatment plant at the SWTP. The temporary increase in residuals transfers would help to facilitate the efficient operation of the water treatment plant. This in turn would provide for the ongoing supply of clean water to Thompson Creek Reservoir and brine to the MPPS. It would also reduce the risk of untreated mine water discharge into the Coxs River catchment from Springvale Mine and Angus Place Colliery.

61. Subject to the recommended conditions, the Department considers the surface water impacts of the proposed modifications are acceptable.

6.3 Other issues

62. The Department's consideration of other issues is summarised in **Table 3** below.

Table 3 | Assessment of other issues

Issue	Findings and conclusions
Groundwater	• DPE Water expressed concerns regarding the assessment of the potential impacts on groundwater. • Springvale Coal provided further consideration of the modification applications against the NSW Aquifer Interference Policy. • Whilst Springvale Coal asserts that the proposed modifications are not expected to result in greater than the level 1 minimal impacts under the NSW AIP, DPE Water and the Department consider further detailed assessment would be required for sustained transfer of residuals between SWTP and WCSP. • Nevertheless, the Department and DPE Water consider that, provided the recommend conditions of consent are implemented, the proposed modifications would pose an acceptable risk to groundwater impacts.
Reject Emplacement Area capacity	• The Department is satisfied that the Reject Emplacement Area has sufficient capacity to accommodate additional emplacement of residual waste from SWTP.
Aquatic ecology	• The in-stream habitat of Wangcol Creek immediately downstream of LDP001 is already heavily degraded due to disturbance from past land-use activities. • There is no evidence of cumulative impacts from the SWTP operations on the aquatic health within the upper Coxs River catchment. • Aquatic monitoring will continue to be undertaken in accordance with the company's existing environmental management system in place.
Socio-Economic	• The temporary increase in residual waste transfer would ensure efficient operation of SWTP. This would assist in maintaining the treated water levels transferred to MPPS for beneficial reuse and therefore assist the ongoing efficient operation of the power station and its capacity to meet NSW energy demands.

Issue	Findings and conclusions
Cumulative impacts	• The Department understands that two modifications applications related to WCSP are currently under assessment by the Department (SSD-5579-MOD 6 and SSD-5579-MOD 5). • SSD-5579-MOD 6 is the subject of this Assessment Report and is likely to be determined prior to SSD-5579-MOD 5. • SSD-5579-MOD 5 seeks approval for the transfer of up to 10ML/day of mine water to the WCSP from Angus Place Colliery. The received mine water would contribute to LDP001 discharges. • Should SSD-5579-MOD 6 (the application assessed in this report) be approved, it would form part of the approved project under SSD-5579 for the assessment of SSD-5579-MOD 5 and would be considered accordingly.

7 Evaluation

63. The Department has assessed the merits of the proposed modifications and has considered the relevant matters and objects of the EP&A Act, advice from government agencies, local council and public submissions (**Section 5**), and strategic government policies and plans (**Appendix C**).

64. The Department's assessment has found that the proposed modifications would be unlikely to have an adverse impact on the stream flow and hydrology of the receiving environment of Wangcol Creek. However, the Department considers that the proposed modifications have the potential to affect the water quality of the discharges from LDP001 and subsequently the receiving environment of Wangcol Creek.

65. The Department understands that the water treatment plant at SWTP is currently not operating to its maximum capacity due to the high turbidity in the mine water received at the plant. The Department acknowledges that there is an urgent need for a solution to ensure efficient operation of SWTP.

66. The Department considers that the modifications would provide a short-term solution to ensure flexibility during the high mine water turbidity events and allow for the SWTP to operate at its full capacity during these events. This would assist in maintaining the treated water levels transferred to MPPS for beneficial reuse and operations at Springvale Mine. This

would support the ongoing efficient operation of MPPS and its capacity to meet NSW energy demands.

67. The Department acknowledges that the ongoing management of residual waste may require a more long-term engineering solution. The Department understands that Centennial is currently investigating options for alternative residual treatment measures to minimise the potential water quality impacts in the catchment. The development of alternative residual treatment measures is supported by WaterNSW and EPA.

68. The Department notes that Springvale Coal proposed the increased rate of residual transfer to be time-limited for a period of 18 months (i.e. to 30 June 2025) to allow for finalisation of ongoing investigations on the alternative residual treatment measures. Nevertheless, the Department considers that without further detailed assessment, it is difficult to conclude that a sustained increase to the rate of residuals transfer between SWTP and WCSP would not affect the water quality of the receiving environment of Wangcol Creek.

69. The Department considers that Springvale Coal would need to implement strict management controls to ensure NorBE is achieved. This is particularly of importance to ensure the protection of the Sydney drinking water catchment. Therefore, the Department considers that a more stringent time limitation to 30 April 2024 is required to minimise the risk of water quality impacts from the proposed modifications. Future modifications may be sought once the investigations on the alternative residual management are concluded.

70. The Department considers that the potential impacts of the proposed modifications would be temporary, and that the existing and recommended conditions would be adequate to manage the impacts of the modifications.

71. Consequently, the Department considers that the proposed modification is in the public interest and is approvable, subject to the recommended conditions set out in the notices of modification (see **Appendix D**). Consolidated development consents incorporating the recommended changes are provided in **Appendix E**.

72. This Modification Assessment Report is hereby presented to the Commission to determine the application.

Appendices

Appendix A – Summary of amendments to the modification application

Since lodgement, some key aspects of the modification application have evolved in response to EPA advice. A summary of the project changes is provided in **Table 4** below.

Table 4 | Key project changes

Aspect	Modification report	Final proposed project	Reason for change
Timeframe for increased residuals transfer rates	No timeframe	18 months, or 30 June 2025	Consultation and advice from EPA

Appendix B – List of referenced documents

A1 – Modification Report: Refer to the 'Modification Application' folder under the 'Assessment' tab on the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase

A2 – Submissions: Refer to the 'Submissions' tab on the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase

A3 – Submissions Report: Refer to the 'Response to Submissions' folder under the 'Assessment' tab on the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase

A4 – Agency Advice: Summarised in Table A1. Refer to the 'Agency Advice' folder under the 'Assessment' tab on the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase

Table A1 | Agency Advice

Agency	Advice
Environment Protection Authority (EPA)	• EPA Advice on Mod 6 & 10 • EPA Final Advice Mod 6 & 10
DPE Water	• DPE Water advice on Mod 6 & 10 • DPE Water Final Advice on Mod 6 & 10
WaterNSW	• WaterNSW Advice on Mod 6 &10 • WaterNSW Final Advice Mod 6 & 10
Office of Energy and Climate Change (OECC)	• OECC Advice on Mod 6 &10
Lithgow City Council (LCC)	• LCC Advice on Mod 6 • LCC Advice on Mod 10

A5 – Additional Information: Summarised in Table A2. Refer to the 'Additional Information' folder under the 'Assessment' tab on the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase

Table A2 | Additional Information

Additional Information	Date
Potential environmental impacts	14 December 2023
Comment on Draft Conditions	19 December 2023

Appendix C – Statutory considerations

Objects of the EP&A Act

A summary of the Department's consideration of the relevant objects (found in section 1.3 of the EP&A Act) are provided in Table 5 below.

Table 5 | Objects of the EP&A Act and how they have been considered

Object	Consideration
(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,	The modifications meet this objective because they would: • allow efficient extraction of coal and maintain coal supply; and • deliver the improved catchment-scale water quality outcomes that would be derived from the continued efficient operation of the water treatment plant at the SWTP. Overall, the Department considers that any minor impacts can be appropriately managed under existing and recommended conditions.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	The Department considers that the modifications are minor and can be carried out in a manner that are consistent with the principles of ecologically sustainable development as they would: • not require clearing of any native vegetation; • have no impact on Aboriginal cultural heritage or historic heritage; • have minimal environmental impact beyond what is already approved; and • provide ongoing employment opportunities in the region and result in associated economic benefits.

Object	Consideration
(c) to promote the orderly and economic use and development of land,	The modifications represent a continuation of land use which is permissible on the subject land. The modifications would not require any additional land clearing and would result in no additional impacts to built or natural features beyond what is already approved. The Department considers this represents an orderly and economic use of the land.
(d) to promote the delivery and maintenance of affordable housing,	The modifications would have no impact on the existing approved project boundaries.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	The modifications do not require any land clearing and avoid any impacts on threatened species and communities and key habitats.
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	The modifications would not directly impact Aboriginal cultural heritage or historic heritage.
(g) to promote good design and amenity of the built environment,	The modifications would not require any changes to the existing built environment.
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The modifications do not require the construction of any buildings.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the state,	The Department has assessed the modification applications in consultation with Lithgow City Council and other relevant NSW government authorities and given consideration to the issues raised by these agencies in its assessment.

Environmental Planning Instruments (EPIs)

To satisfy the requirements of section 4.15(1)(a)(i) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the following considers the relevant provisions of the EPIs that govern the carrying out of this project and have been taken into consideration in the Department's environmental assessment:

Lithgow Local Environmental Plan 2014 (Lithgow LEP 2014)

Both the SWTP and WCSP are located within the Lithgow City local government area. Under the *Lithgow Local Environmental Plan 2014 (Lithgow LEP 2014*), the proposed development areas include land zones as:

1. RU1 - Primary Production;
2. RU2 - Rural Landscape;
3. RU3 - Forestry; and
4. SP2 – Infrastructure.

Water supply systems are permissible with consent in the RU1 and RU2 zones. Non-forestry land uses in State Forests are permitted in accordance with the *Forestry Act* 2012 and are subsequently permissible without consent in the RU3 zone. Development that is ancillary to the operation of the Mount Piper Power Station is permissible with consent in the SP2 zone.

Consequently, the proposed modifications are permissible with development consent.

State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP)

The proposed modifications are for the purposes of coal mining which is identified as State Significant Development through Clause 5 of Schedule 1 of the Planning Systems SEPP.

As Centennial Coal has disclosed a reportable political donation, under Section 2.7(1)(c) of the Planning System SEPP and in accordance with Section 4.5(a) of the EP&A Act the Independent Planning Commission is the consent authority.

State Environmental Planning Policy (Biodiversity and Conservation) 2021

The proposed modifications are located in Sydney's drinking water catchment. State Environmental Planning Policy (Biodiversity and Conservation) 2021, the consent authority must "*not grant consent to carrying out of development*" in the drinking water catchment unless it would have a 'neutral or beneficial effect' on water quality (NorBE). The NorBE test does not strictly apply to modification applications.

State Environmental Planning Policy (Resilience and Hazards) 2021

Hazardous and offensive development (chapter 3) Chapter 3 of this SEPP requires persons proposing to carry out development for the purposes of potentially hazardous industry to prepare a Preliminary Hazard Analysis (PHA) and to submit this with the development application.

The original assessment for SWTP considered the potential hazards and risks associated with the project, including the storage and use of dangerous goods in the water treatment process.

The proposed modifications are not considered a “potentially hazardous industry” or “potentially offensive industry” as described in this SEPP. Consequently, Centennial did not prepare a preliminary hazard analysis, and the Department considers that Part 3.11 of the SEPP does not apply to determination of the modification application.

Appendix D –Instrument of modification

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase

Appendix E – Consolidated Development Consent

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase

https://www.planningportal.nsw.gov.au/major-projects/projects/mod-6-residuals-transfer-increase