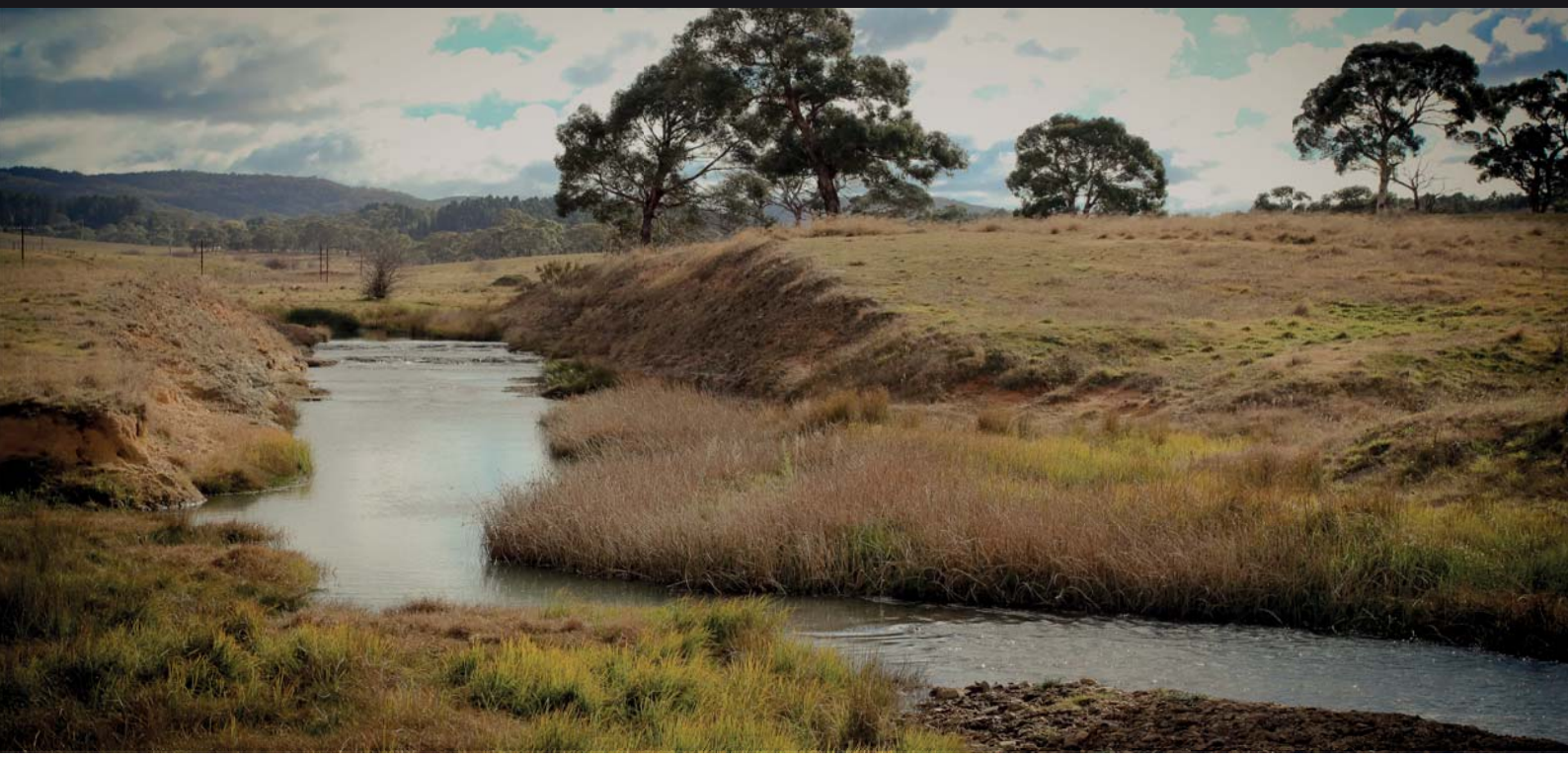
Springvale Water Treatment Project

Modification 2 - Skelly Road
Statement of Environmental Effects

September 2018



EnergyAustralia

Centennial Coal

Executive summary

The Springvale Water Treatment Project (the project) was approved as State Significant Development (SSD) 7592 by the Planning Assessment Commission on 19 June 2017, under delegation from the Minister for Planning.

The approved project involves the transfer of water from existing dewatering facilities on the Newnes Plateau to a new water treatment plant located at the Mount Piper Power Station (MPPS). Treated water will be used as a priority within the MPPS cooling water system and excess water transferred to Thompsons Creek Reservoir for storage and subsequent reuse in the power station operations.

The project was modified under Section 96(1A) of the EP&A Act to incorporate a series of minor design changes and was approved on the 12 January 2018 (Modification 1). Modification 1 included a minor re-alignment of the water transfer pipeline near Skelly Road to accommodate the use of directional drilling. However, further constructability assessments undertaken by Abergeldie revealed that it is not feasible to install the pipeline by directional drilling at this location.

The project will remain substantially the same development as originally approved, however returning to the original pipeline alignment will not be “generally in accordance” with the development described within Modification 1. A second modification to SSD 7592 is required to return the design for Skelly Road back to the original pipeline alignment.

To evaluate the impacts of the proposed modification, an assessment of potential impacts was undertaken for the modification. The potential impacts are considered consistent with those described in the EIS.

The environmental impacts from the modification are negligible to minor and it is considered appropriate that the modification be considered under Section 4.55(1A) of the EP&A Act.Springvale Coal therefore propose to modify SSD 7592 under Section 4.55(1A) of the EP&A Act to regularise the consent and ensure the preferred design for the project meets the terms of the consent.

Table of contents

Table index

Figure index

1. Introduction

1.1 Overview

The Springvale Water Treatment Project (the project) was approved as State Significant Development (SSD) 7592 on 19 June 2017. Development consent was granted under Section 89E of the *Environmental Planning and Assessment Act, 1979* (EP&A Act) based upon the development described in the Springvale Water Treatment Project Environmental Impact Statement (the EIS), the Response to Submissions and the Amendment to Development Application.

The project involves the transfer of water from existing dewatering facilities on the Newnes Plateau to a new water treatment plant located at the Mount Piper Power Station (MPPS). Treated water will be used as a priority within the MPPS cooling water system and excess water transferred to Thompsons Creek Reservoir for storage and subsequent reuse in the power station operations.

Springvale Coal Pty Ltd (Springvale Coal) and EnergyAustralia has progressed the procurement process for delivery of the project and Veolia had been selected as the preferred proponent to complete the detailed design, construction and operation of the project. Veolia engaged Abergeldie Complex Infrastructure (Abergeldie) as the construction subcontractor for the project.

Modification 1 to SSD 7592 was approved on the 12 January 2018 and included a number of minor design modifications to improve the operational efficiency and to regularise the consent for the preferred design solution developed by Veolia. Modification 1 included a minor realignment of the water transfer pipeline near Skelly Road to accommodate the use of horizontal directional drilling (HDD) to traverse Skelly Road and eliminate a sharp right hand bend in the transfer pipeline.

Further constructability assessments undertaken by Abergeldie revealed that it is not feasible to construct a receival pit within the approved project application area. Adopting trenchless technology (either HDD or Thrust Bore) would require moving the location of the receival pit to a lower elevation outside the approved project application area and would result in impacts to adjoining endangered ecological communities.

Trenchless technology is therefore not considered suitable for the Skelly Road crossing and the pipeline route is proposed to return to the original alignment assessed within the EIS. The project will remain substantially the same development as originally approved, however returning to the original pipeline alignment will not be “generally in accordance” with the development described within Modification 1. The modifications include:

- Return pipeline alignment near Skelly Road to original design as outlined in EIS.
- Return construction methodology for pipeline alignment near Skelly Road from horizontal directional drilling outlined in Modification 1 to open trench cut proposed in EIS.

Springvale Coal therefore propose to submit Modification 2 to SSD 7592 to regularise the consent for the preferred project.

1.2 Purpose of this report

This statement of environmental effects (SEE) has been prepared to support the application to modify development consent SSD 7592 pursuant to Section 96(1A) of the EP&A Act. The report assesses the potential environmental impacts associated with returning the water transfer

pipeline to the original pipeline alignment and construction methodology in the vicinity of Skelly Road, Lidsdale. The report has been prepared to a level of detail commensurate with the minor scale of the modifications and the minimal potential for environmental impacts associated with the proposed design changes.

1.3 The applicant

Springvale Mine is owned by Centennial Springvale Pty Limited (50%) and Springvale SK Kores Pty Limited (50%) as participants in the Springvale unincorporated joint venture. Springvale Mine is operated by Springvale Coal for and on behalf of the joint venture participants.

Springvale Coal is the applicant of the project for the purposes of the development application.

Springvale Coal are developing the Project in conjunction with Energy Australia who operate the MPPS. The partners are currently progressing commercial arrangements for the delivery and operation of the project by Veolia as an independent operator company.

The relevant postal address for Springvale Coal is:

Springvale Coal Pty Limited
Level 18
1 Market St
Sydney NSW 2000

1.4 Modification approval framework

The Project was approved as State Significant Development (SSD 7592) under Section 89E of the EP&A Act on 19 June 2017. Under Section 4.55 of the EP&A Act, SSD consents may be modified provided information stipulated in Clause 115 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) is contained within the application, and the development as modified will be substantially the same development for which consent was originally granted.

Initial advice from the NSW Department of Planning and Environment (DP&E) has indicated that the appropriate modification pathway for the proposed design changes would be Section 4.55(1A) relating to modification involving minimal environmental impact.

The requirements of Clause 115 of the EP&A Regulation and where they are addressed in this document are outlined in Table 1.1.

Table 1.1 Requirements for application for modification of development consent

Requirement	Response/reference
(1) An application for modification of a development consent under section 4.55(1), (1A) or (2) or 4.56 (1) of the Act must contain the following information:	
(a) the name and address of the applicant,	Section 1.3
(b) a description of the development to be carried out under the consent (as previously modified),	Section 2.1
(c) the address, and formal particulars of title, of the land on which the development is to be carried out,	Section 2.2
(d) a description of the proposed modification to the development consent,	Section 3
(e) a statement that indicates either: (i) that the modification is merely intended to correct a minor error, misdescription or miscalculation, or	Section 1

Requirement	Response/reference
(ii) that the modification is intended to have some other effect, as specified in the statement,	
(f) a description of the expected impacts of the modification,	Section 4
(g) an undertaking to the effect that the development (as to be modified) will remain substantially the same as the development that was originally approved,	Section 3.1
(g1) in the case of an application that is accompanied by a biodiversity development assessment report, the reasonable steps taken to obtain the like-for-like biodiversity credits required to be retired under the report to offset the residual impacts on biodiversity values if different biodiversity credits are proposed to be used as offsets in accordance with the variation rules under the Biodiversity Conservation Act 2016,	Not applicable
(h) if the applicant is not the owner of the land, a statement signed by the owner of the land to the effect that the owner consents to the making of the application (except where the application for the consent the subject of the modification was made, or could have been made, without the consent of the owner),	Not applicable – public notification development in accordance with Clause 49(2)(b) of the EP&A Regulation
(i) a statement as to whether the application is being made to the Court (under section 4.55) or to the consent authority (under section 4.56),	Not applicable - The application is being made to the consent authority under Section 4.55(1A)

When assessing an application under Section 4.55 for modification to consent, the consent authority is required to take into consideration the relevant matters outlined in Section 4.15 of the EP&A Act.

The proposed design changes will not alter any aspect of the permissibility or regulatory framework for the project presented in Chapter 6 of the Springvale Water Treatment Project EIS.

2. Existing consent

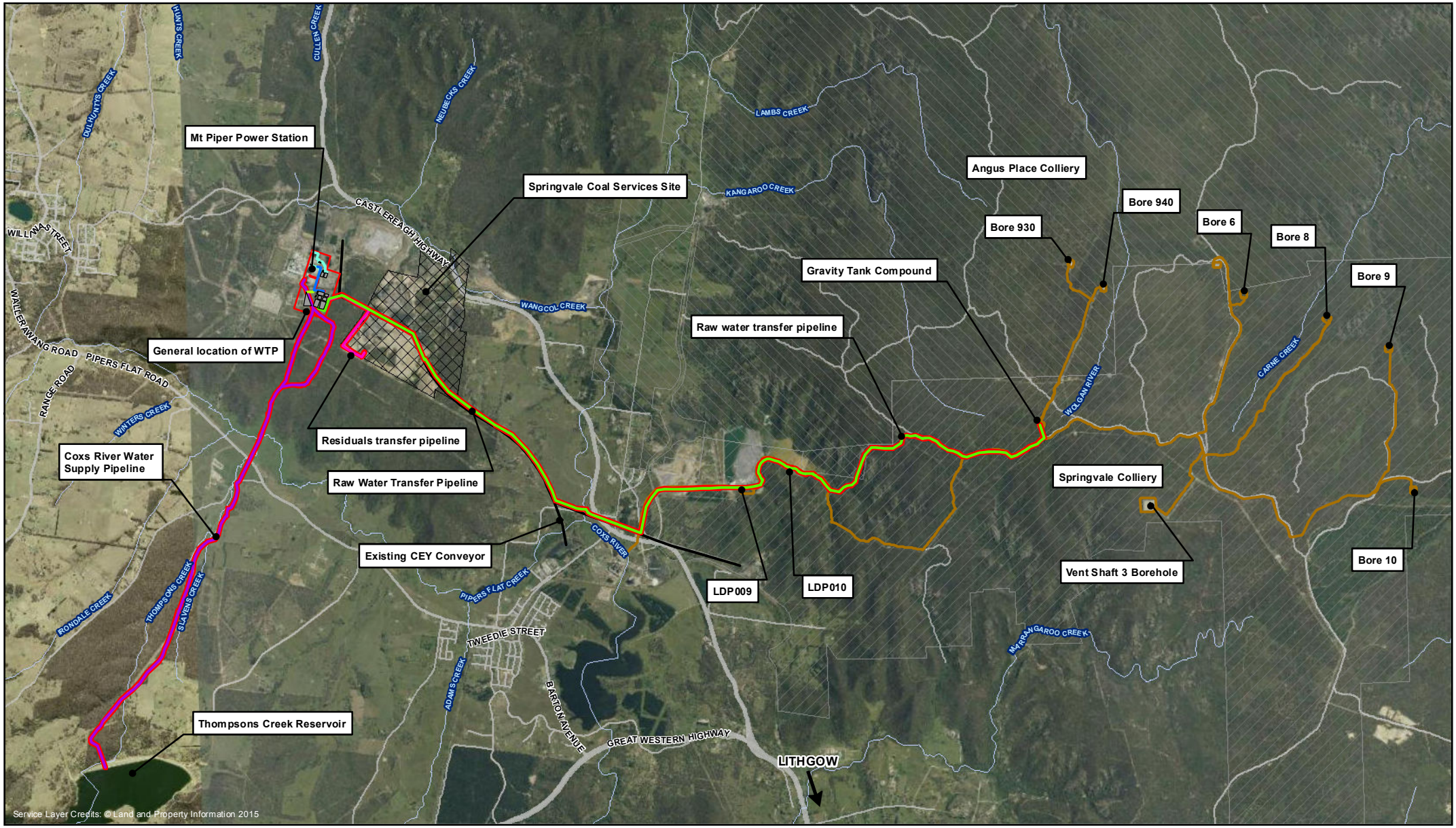
2.1 The approved project

The project involves the transfer of water from existing dewatering facilities on the Newnes Plateau to a new water treatment plant located at MPPS. Treated water will be used as a priority for industrial reuse to meet the demand for make-up water requirements within the MPPS cooling water system. Any excess treated water will be temporarily stored within Thompsons Creek Reservoir for subsequent reuse during periods of high water demand in the MPPS cooling water system. The approved project as defined in SSD 7592 Modification 1 comprises the following major elements:

- A system to transfer up to 42 ML/day of dewatered mine water from the existing gravity tank forming part of the approved Springvale Delta Water Transfer Scheme (SDWTS) on the Newnes Plateau to the Mount Piper Power Station (MPPS) site.
- A new water treatment plant at MPPS incorporating desalination processes to reduce the salinity in mine water to a standard suitable for either industrial reuse or environmental release.
- Transfer of treated water from the water treatment plant to the MPPS cooling water system to contribute to the demand for make-up water.
- Use of the existing Coxs River Water Supply pipeline to transfer excess treated water to Thompsons Creek Reservoir for storage and subsequent reuse in the cooling water system.
- Disposal of residuals from the pre-treatment process in the reject emplacement area (REA) at the neighbouring Springvale Coal Services site (part of Western Coal Services Project, SSD 5579).
- Implementation of an Optimised Pre-treatment and Unique Separation (OPUS) process including the addition of an additional reverse osmosis system to replace the use of the brine concentrators and manage salt load from the new water treatment plant (WTP) Disposal of brine will continue in accordance with existing approvals and practices at MPPS.
- The project would create direct employment opportunities including an operational workforce of 22 Full Time Equivalent (FTE) positions. The peak force during constructions would be 120 workers. during peak workforce

2.2 Site location

The project is located in the western coalfields of NSW near Lithgow. A gravity transfer pipeline will extend from the existing water management infrastructure on the Newnes Plateau approved under the existing Springvale MEP SSD 5594 Consent. The pipeline will transfer mine water from the existing “Gravity Tank” to the MPPS as shown on Figure 2.1.



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0 500 1,000 2,000

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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LEGEND

Proposed Alignment

- Raw water transfer pipeline
- Residuals transfer pipeline
- Brine transfer pipeline
- Crystallised salt transfer pipelines
- Treated water pipeline to cooling tower forebay
- Existing and Approved SDWTS
- Existing CEY Conveyor
- Cox's River Water Supply Pipeline
- Treated water pipeline to Coxs River Water Supply Pipeline
- Proposed WTP Layout
- Project application area (representative)
- Springvale Mine
- Angus Place Colliery
- Springvale Coal Services Site

Centennial Coal and EnergyAustralia
EA/CEY Water Treatment Project

Job Number 21-25109
Revision A
Date 02 Nov 2016

Project Application Area Figure 2.1

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Data source: General Topo - NSW LPI DTDB 2012, Imagery - sixmaps 2015. Created by:mking3

From the gravity tank on the Newnes Plateau, the pipeline would initially follow the alignment of existing access trails and a former logging trail over the escarpment to Springvale Mines existing LDP 009 on EPL 3607. The remainder of the pipeline alignment between LDP009 and the MPPS follows existing ash pipelines, haul roads and an overland conveyor system. The pipeline will traverse a number of roads including the Castlereagh Highway, the Coxs River and a private rail spur.

The water treatment plant will be located on the MPPS site to the south of the existing cooling water system.

The existing Coxs River Water Supply pipeline will be used to transfer excess treated water between MPPS and Thompsons Creek Reservoir for storage and subsequent reuse in the power station operations.

The project application area includes a buffer surrounding the proposed water treatment infrastructure at MPPS and 20 m corridor along the proposed pipeline alignments. Lot and DP's remain the same and land holdings traversed by the project will remain consistent with the existing approval.

2.3 Need for the modification

Veolia was selected by Springvale Coal and EnergyAustralia as the preferred proponent to complete the detailed design, construction and operation of the project. The proponent developed a preferred design to improve the operational efficiency of the project, which was approved via modification to SSD 7592 on the 12 January 2018 (Modification 1).

The modification proposed the use of horizontal directional drilling (HDD) to traverse Skelly Road and eliminate a sharp right hand bend in the transfer pipeline. The works required excavation of a launch and receival pit within the original project application area and drilling an approximate 100 metre bore to allow the pipeline to be pulled through the bored section resulting in a more direct project alignment

Veolia subcontracted Abergeldie to assist in the design and construction of the WTP. Abergeldie conducted further constructability assessments and identified that as a result of the elevated terrain on the western side of Skelly Road, it is not feasible to construct a receival pit within the approved project application area.

Adopting trenchless technology (either HDD or Thrust Bore) would require moving the location of the receival pit to a lower elevation outside the approved project application area and would result in impacts to adjoining endangered ecological communities.

Trenchless technology is therefore not considered suitable for the Skelly Road crossing, but will still be adopted for traversing Cox River and Castlereagh Highway in accordance with Modification 1 of the consent. Installation of the pipeline at Skelly Road is proposed to return to the preferred alignment approved as part of the original consent for SSD 7592.

3. Proposed modification

3.1 Overview of proposed change

The project will remain substantially in accordance with the approved development, as it returns the pipeline alignment near Skelly Road to the original design as outlined in the EIS as shown in Figure 3.1.

A more detailed description of the proposed design modification and the rationale for the amendment are outlined in the subsequent sections.

3.2 Re-alignment of pipeline near Skelly Road

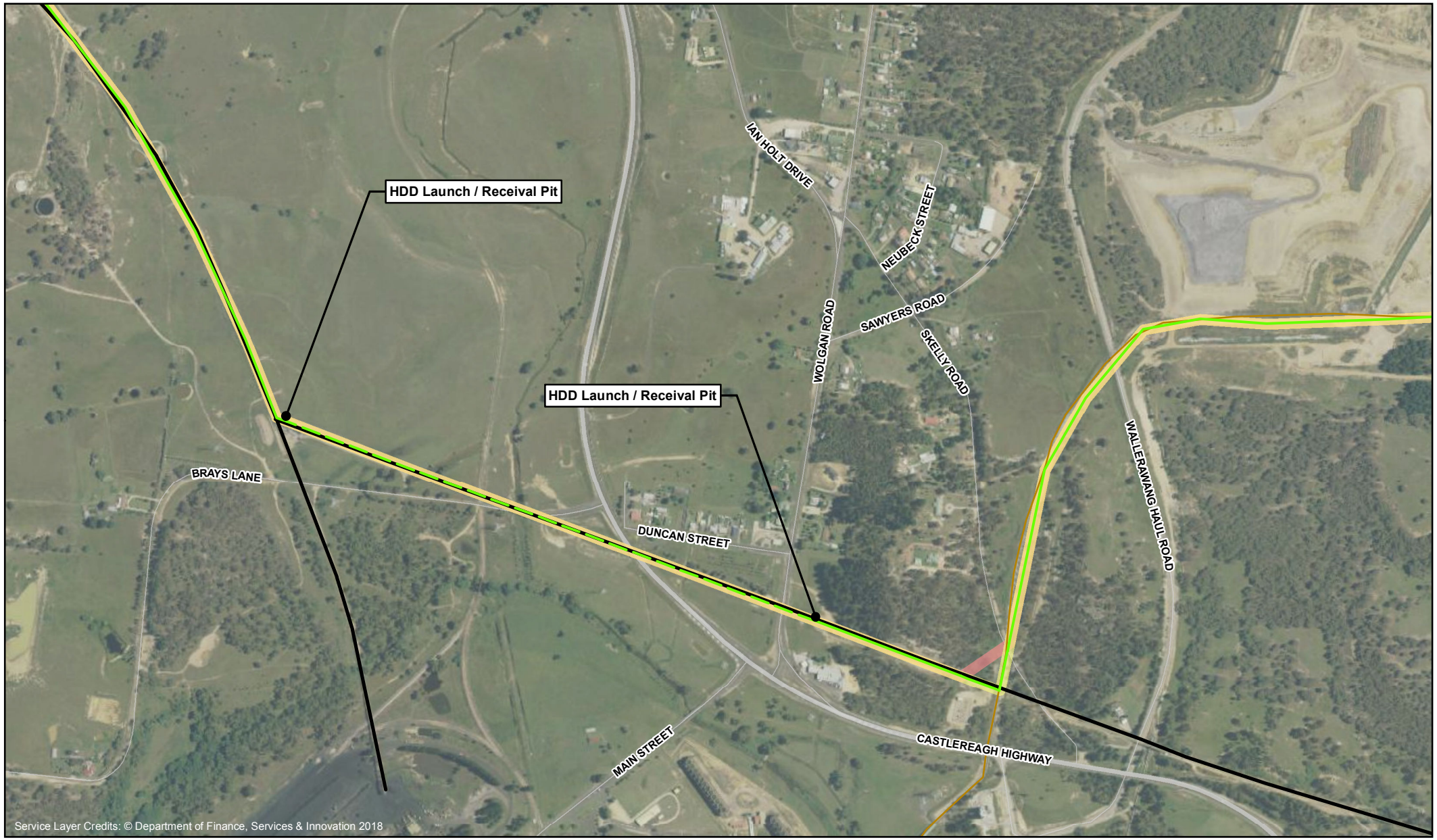
3.2.1 Existing Approved Project

The approved project utilises horizontal directional drilling as the preferred construction methodology near Skelly Road. Modification 1 amended the pipeline alignment near Skelly Road where an approximate 100 metre direction drilling cuts the corner of the pipeline alignment proposed as part of the EIS.

Directional drilling requires the excavation of launch and receival pits on either side of the length of pipeline to be installed. The pits would be established in cleared areas within the approved disturbance footprint along the pipeline alignment. The directional drill would be launched from one pit and the drill head would be driven horizontally using lengths of drilling rods which are continually added as required for the length of the drilled section. At completion of the bore, the drilling head would enter the receival pit and the new pipeline will be pulled back through the bored section. There will be no disturbance to the surface of the ground for the length of the drilled section between the launch and receival pits.

3.2.2 Proposed amendments

The proposed amendment will return the pipeline alignment near Skelly Road to the original designed outlined in the EIS. The pipeline will be installed through conventional trenching methods along the edge of an existing haul road extending between Sawyers Swamp Ash Dam and the now decommissioned Wallerawang Power Station. The pipeline will pass beneath Skelly Road within an existing culvert used for the disused ash pipelines from Wallerawang Power Station as shown on Figure 3.2. The pipeline will continue along the edge of the haul road until it takes a sharp right hand bend and follows a cleared maintenance path on the southern side of the existing conveyor as shown on Figure 3.3.



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Metres

Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 56

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LEGEND

Proposed Alignment

- Raw water transfer pipeline
- Raw water transfer pipeline (bored segment)
- Existing and Approved SDWTS
- Existing CEY Conveyor
- Current approved project
- Mod 2 - Original EIS Design

Centennial Coal and EnergyAustralia
EA/CEY Water Treatment Project

Pipeline re-alignment near Skelly Road

Job Number 21-25109
Revision A
Date 04 Sep 2018

Figure 3.1

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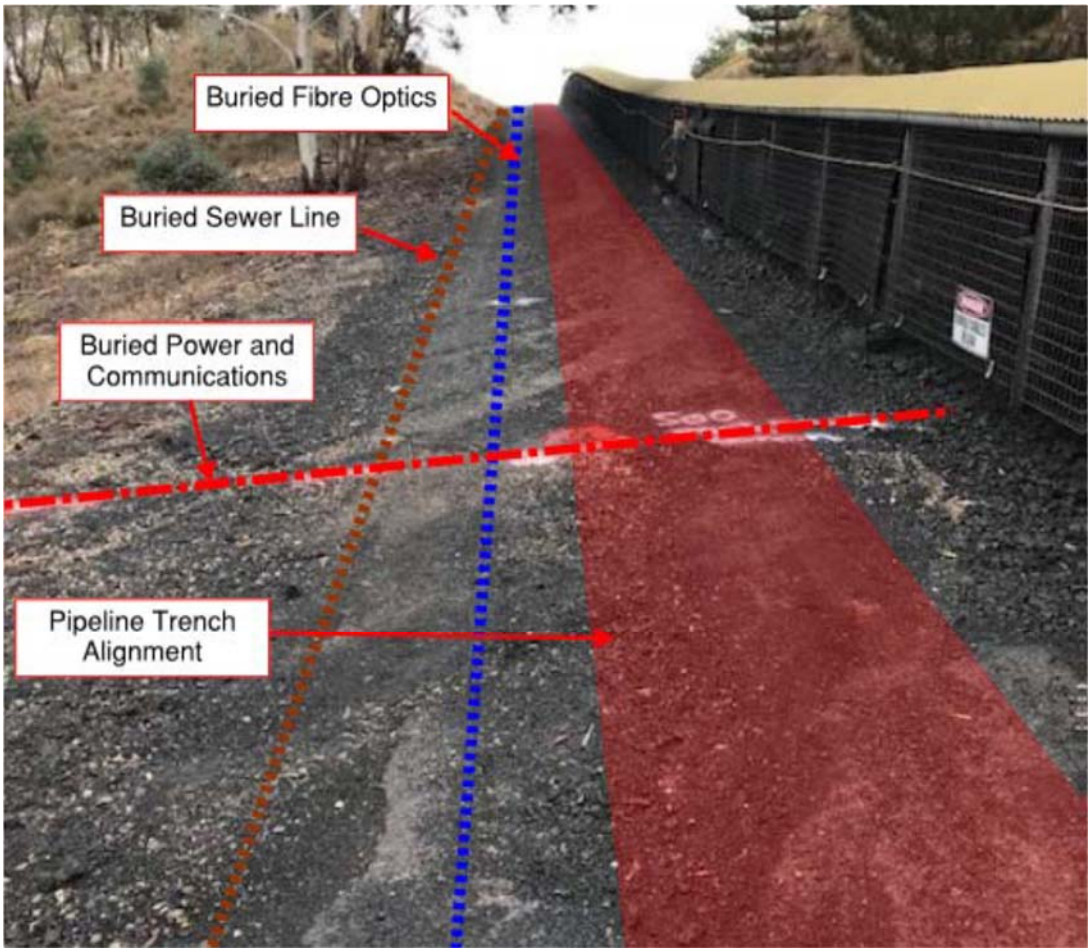
Level 15, 133 Castlereagh Street Sydney NSW 2000 **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com.au **W** www.ghd.com.au

Data source: General Topo - NSW LPI DTDB 2012, Imagery - sixmaps 2015. Created by:mking3

Figure 3.2 Pipeline passing within existing culvert under Skelly Road

Figure 3.3 Conventional trenching adjacent to conveyor



4. Environmental assessment

4.1 Soil and water resources

4.1.1 Environmental setting

The project is located in the Upper Coxs River catchment including Wangcol Creek, Sawyers Swamp Creek and the Coxs River within the broader Hawkesbury Nepean Catchment. Flow in the upper Coxs River is regulated by three reservoirs including Lake Wallace, Thompsons Creek Reservoir and Lake Lyell and eventually flows to Lake Burragorang forming part of Sydney's drinking water catchment.

The overall objective of the project is to improve environmental outcomes for the Upper Coxs River catchment through the treatment and reuse of underground mine water at the MPPS.

The section of the pipeline near Skelly Road will be installed along the edge of an existing haul road and maintenance road adjacent to the existing conveyor. The Coxs River is located approximately 400 metres to the south-west of the conveyor.

4.1.2 Impact Identification

The modification represents a minor deviation to the approved alignment and construction methodology for this section of the pipeline. The pipeline installation will represent a continuation of the open cut trenching being undertaken for installation of the pipeline for the majority of the 15 kilometre pipeline alignment including sections on either side of the modified alignment.

Erosion and sediment control plans have been developed as part of the approved Soil and Water Management Plan and will provide effective controls for erosion and sediment laden run-off from this section of the pipeline.

The modification will not impact upon the overall environmental benefit to Sydney's drinking water catchment being developed by the project.

4.2 Biodiversity

4.2.1 Environmental Setting

The project application area extends from relatively intact native vegetation on the Newnes Plateau to lower lying vegetated and disturbed lands along the transfer pipeline to MPPS. The eastern portion of the project application area is located within the Newnes State Forest, which is connected to protected areas including Gardens of Stone National Park and Wollemi National Park to the north, Blue Mountains National Park to the east and Ben Bullen State Forest to the north-west. The western half of the project application area is situated predominantly on disturbed lands due to existing farming, roads, easements and mining operations. The WTP is proposed to be established on previously disturbed land on the MPPS site.

Detailed biodiversity reports completed as part of the EIS (RPS, 2016a) indicate there were 15 vegetation types identified within the project application area for the EIS and presented in Table 4.1. Mapping units (MU) are in accordance with DEC (2006a) vegetation mapping.

Table 4.1 Vegetation within the Project application area

Vegetation Map Unit Number (MU) and description	Area within the Project application area (ha)
MU 7 Newnes Plateau Narrow-leaved Peppermint - Mountain Gum - Brown Stringybark Layered Forest	2.25
MU 8 Newnes Sheltered Peppermint – Brown Barrel Shrubby Forest	1.45
MU 11 Tableland Gully Snow Gum - Ribbon Gum Montane Grassy Forest	1.27
MU 26 Newnes Plateau Narrow-leaved Peppermint - Silver-top Ash Layered Open Forest	3.55
MU 28 Sandstone Plateau and Ridge Scribbly Gum – Silvertop Ash Shrubby Woodland	0.00
MU 29 Sandstone Slopes Sydney Peppermint Shrubby Forest	0.22
MU 33 Tableland Broad-leaved Peppermint - Brittle Gum - Red Stringybark Grassy Open Forest	0.85
MU 35 Tableland Gully Mountain Gum – Broad-leaved Peppermint Grassy Forest	0.00
MU 37 Cox's Permian Red Stringybark - Brittle Gum Woodland	6.71
MU 43 Pagoda Rock Sparse Shrubland	0.00
MU 44 Sandstone Plateaux Tea Tree - Dwarf Sheoak - Banksia Rocky Heath	0.00
MU 53 Mountain Hollow Grassy Fen	0.02
MU 58 Acacia Thickets	21.92
MU 59 Non-native Vegetation – Pine Plantation / Woodlot / Shelter	0.01
MU 61 Unclassified	0.13
MU 62 Cleared/disturbed lands	41.73
Total	80.11

Those present which were part of a listed ecological community included:

- MU 11 corresponds to Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes Bioregions EEC listed under the TSC Act.
- MU 53 corresponds to Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions EEC listed under the TSC Act.

4.2.2 Impact Identification

The biodiversity assessment for the EIS predicted the project would result in 27.84 ha of vegetation disturbance, including impacts on 0.65 ha of NSW listed endangered ecological communities comprising 0.63 ha of HN572 (MU11) and 0.02 ha of HN602 (MU53).

The proposed design modification will return the pipeline to the original alignment assessed as part of the EIS and will be restricted to previously disturbed areas with no requirements for clearance of native vegetation. There will be no change to the extent of vegetation clearance or offset requirements for the proposed pipeline installation near Skelly Road.

4.3 Heritage

Detailed investigations were undertaken as part of the EIS (RPSb, 2016) to investigate the potential impacts upon Aboriginal and European cultural heritage values from the development of the project.

The project application area includes areas in close proximity to permanent drinking water such as Wangcol Creek and the Coxs River and shelter in nearby pagodas and cliff faces, which would have been subject to some level of Aboriginal occupation. However, the project application area has been highly modified and there were no Aboriginal sites predicted to be disturbed by the project.

There were no new Aboriginal sites identified during the archaeological surveys undertaken as part of the EIS. There were eleven Aboriginal sites previously recorded within 30 m of the Project application area, seven of which were assessed as being present at the time of EIS. The closest recorded site to the realigned section of pipeline at Skelly Road is located more than one kilometre away and will not be disturbed by the project. The pipeline will be installed in highly disturbed environment along a haul road and conveyor maintenance road and will have minimal potential to encounter any unidentified objects.

One item of local European heritage had been identified in proximity to the project application area: “the Cottage” (I191). The “Cottage” is identified as having local significance in the Lithgow LEP and does not appear on any other register. The built heritage associated with the item does not extend into the project application area, but the project application area encapsulates a 10 x 10 metre section of the curtilage.

The heritage assessment for the EIS predicted the project would minimal impacts upon Aboriginal and non-Aboriginal heritage values in proximity to the modified section of pipelinet.

4.4 Traffic and transport

A detailed traffic assessment was undertaken as part of the EIS to assess the impact of the project on the local and regional road network. The assessment found that additional vehicle movements generated during construction transfer pipeline would have minimal impact on the safety and capacity of the road network.

Skelly Road is a local road primarily servicing a small number of residential properties in Lidsdale. The pipeline will be installed within existing culverts passing beneath Skelly Road and is not anticipated to result in significant disruption to the local road network.

4.5 Noise

A construction noise assessment was undertaken for the entire transfer pipeline alignment as part of the EIS. Noise will be generated during trenching activities and has potential to result in minor disruption to residential receivers in Lidsdale as predicted in the EIS.

Pipeline installation for the modified section of the pipeline will be restricted to daylight hours and undertaken in accordance with the management measures in the approved Construction Noise Management Plan.

4.6 Air quality

Installation of the pipeline through open cut trenching has potential to result in minor dust generation during dry and windy conditions. Adequate construction site management will minimise the potential for impacts upon nearby residential receivers.

4.7 Visual

The pipeline will be installed underground and will not result in any ongoing visual impacts to the locality.

5. Conclusion

Springvale Coal is seeking a second modification to SSD 7592 in accordance with Section 4.55(1A) of the EP&A Act) to return the pipeline alignment near Skelly Road to original design outlined in the EIS.

The pipeline will be installed within previously disturbed environments following and existing haul road and conveyor.

To evaluate the impacts of the proposed modification, an assessment of potential impacts was undertaken for the modification. The potential impacts are considered consistent with those described in the EIS.

Given the minor nature of the proposed modifications, it is considered that the modification is consistent with the original development consent. The environmental impacts from the modification are negligible to minor and it is considered appropriate that the modification be considered under Section 4.55(1A) of the EP&A Act.Springvale Coal therefore propose to modify SSD 7592 under Section 4.55(1A) of the EP&A Act to regularise the consent and ensure the preferred design for the project meets the terms of the consent.

6. References

DEC (2006a), *The Vegetation of the Western Blue Mountains*. Unpublished report funded by the Hawkesbury – Nepean Catchment Management Authority. Department of Environment and Conservation. Hurstville

RPS (2016a), *Biodiversity Assessment Report: Springvale Water Treatment Project*

RPS (2016b), *Cultural Heritage Impact Assessment: Springvale Coal Mine Water Transfer Pipeline*

RPS (2017a) WCS Archaeological Inspection Report

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Document Status

Revision	Author	Reviewer		Approved for Issue		
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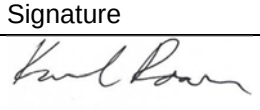
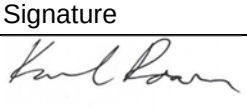
0	R Tabuai	K. Rosen		K. Rosen		12/09/2018

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