



ASSESSMENT REPORT

SPRINGVALE COLLIERY

Dewatering Bore 8 Modification (DA11/92 Mod 3)

1 BACKGROUND

Springvale Colliery (Springvale) is an underground coal mine located approximately 15 kilometres (km) northwest of Lithgow (see Figure 1). Although the Springvale Pit Top is situated on the Castlereagh Highway, most mining areas are located beneath the Newnes State Forest. The Springvale Coal Services Site (which processes coal from Springvale intended for export) is also located on the Castlereagh Highway, near the village of Blackmans Flat, approximately 6 km from the Pit Top area.

Springvale is owned and operated by Springvale Coal Pty Ltd (Springvale Coal), a joint venture company owned in equal shares by Centennial Springvale Pty Ltd, a subsidiary of Centennial Coal (Centennial), and Springvale SK Kores Pty Ltd.

There are other coal mines in the vicinity (both operating and decommissioned) including the adjacent Angus Place and Clarence Collieries, which are both owned by Centennial.

2 CURRENT OPERATIONS

Mining of coal commenced at Springvale in 1995 under development consent DA 11/92. The current approved production rate is 3.4 million tonnes of run-of-mine (ROM) coal per year. Coal is extracted from the Lithgow Seam using longwall mining techniques. Coal extracted from the underground workings is transported via conveyor to the Coal Screening and Crusher Plant and ROM stockpile at the Pit Top area.

The coal is then transported by overland conveyor to either Mt Piper Power Station, Wallerawang Power Station or to the Springvale Coal Services site. From the Coal Services site, a conveyor takes the washed coal intended for export to Lidsdale Siding for transport by rail to Port Kembla. The location of the Springvale facilities is shown on Figure 2.

Since the commencement of operations in 1995, seven mine dewatering boreholes have been drilled and operated in the Newnes State Forest. All these facilities have been located along the northern perimeter of the mine workings to dewater low points within the coal seam.

Access to Springvale's exploration boreholes, ventilation shafts and dewatering sites in the Newnes State Forest is generally via unsealed forest roads. Springvale has a maintenance agreement with Forests NSW for the upkeep of these roads.

Bores 1 to 4 are now decommissioned and rehabilitated. Bore 5 is decommissioned but remains unsealed as a contingency measure. Bore 6 (which has three submersible pumps) is currently used to dewater the Springvale mine workings. Water from the mine is either re-used in the mine as process water; sent via the Springvale-Delta Water Transfer Scheme (SDWTS) to the Wallerawang Power Station for use in its cooling towers; or discharged to the Cox's River in accordance with the mine's Environmental Protection Licence (EPL).

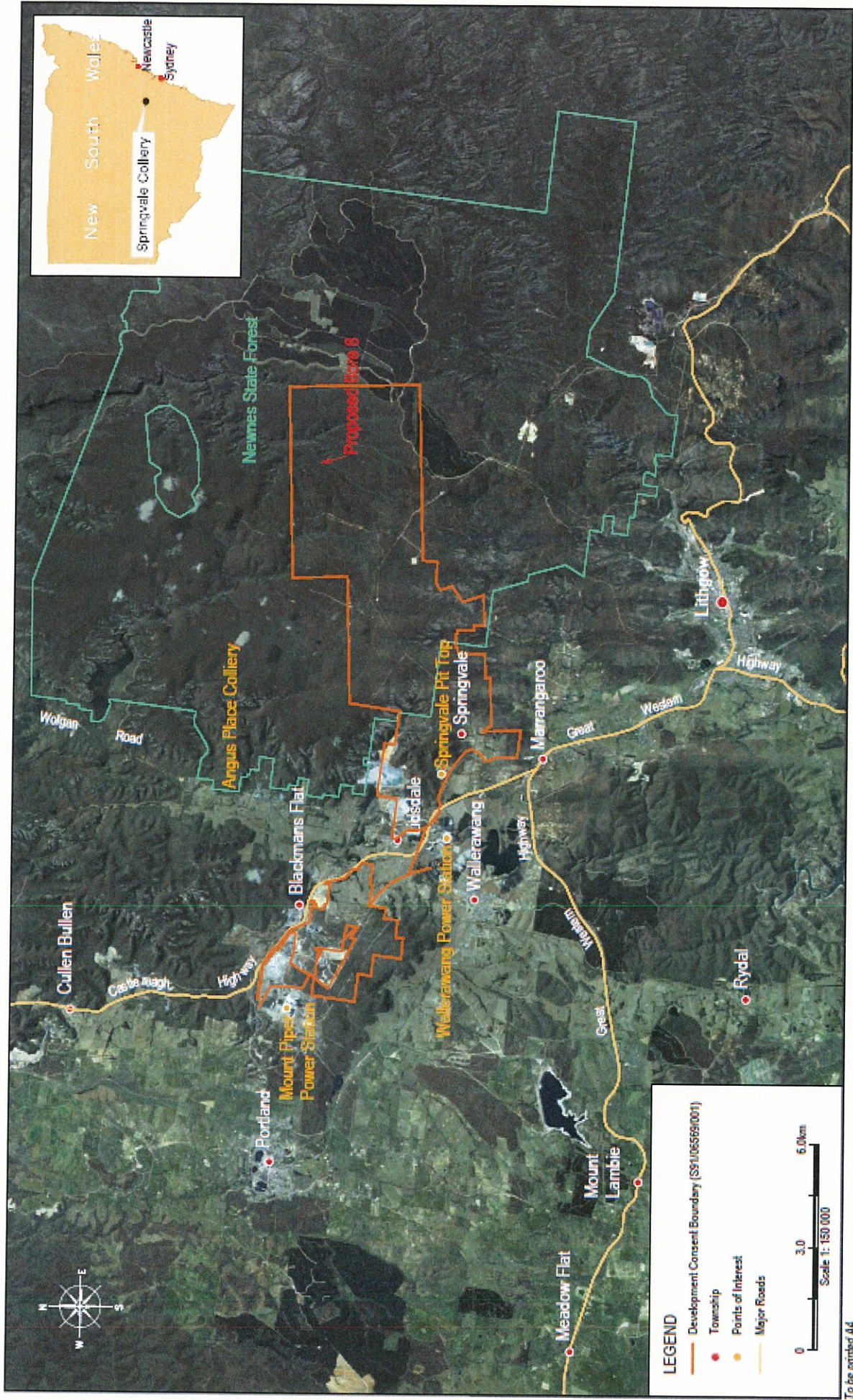


Figure 1 – Location of Springvale Colliery and surface facilities

Springvale Colliery

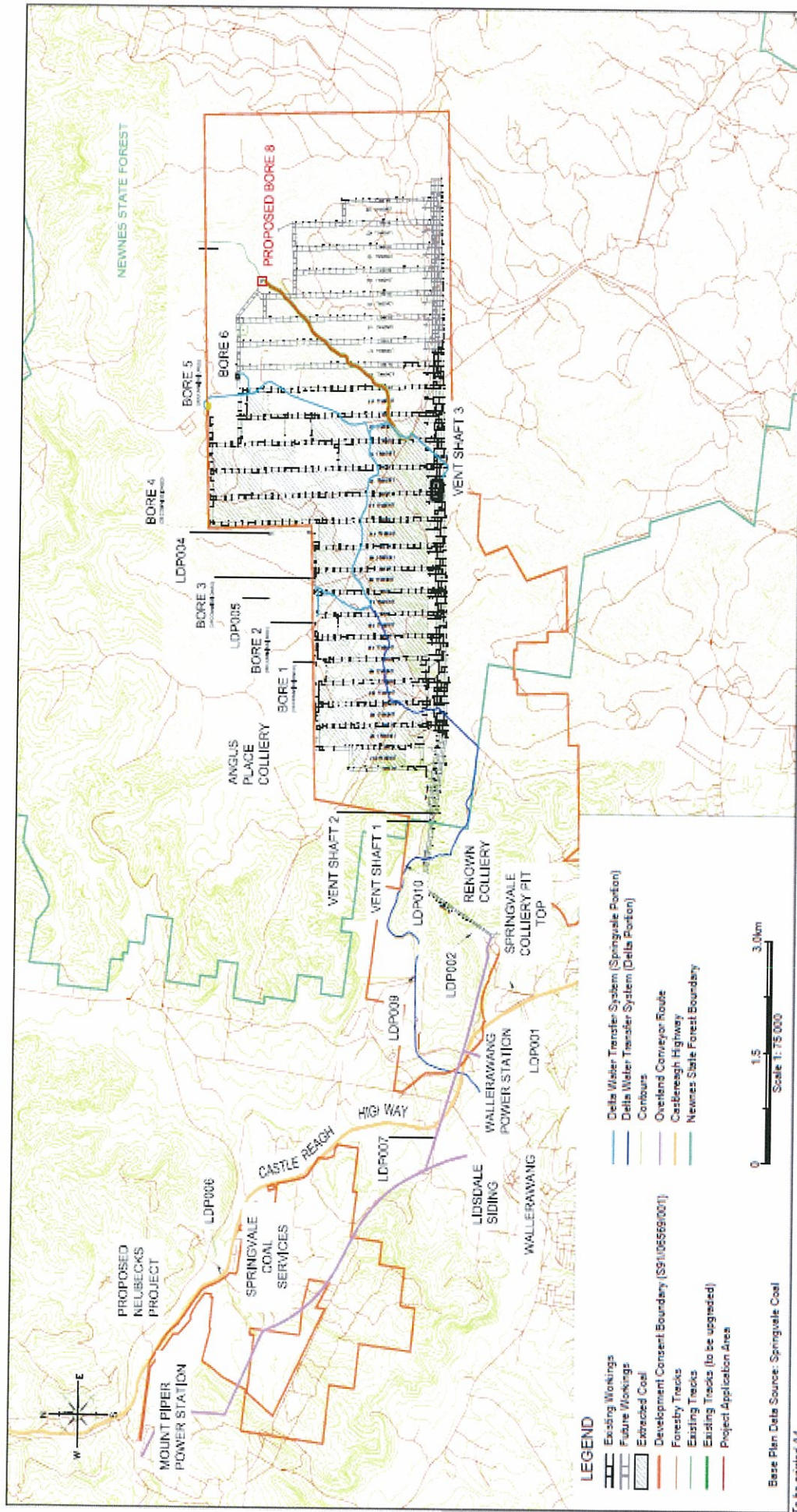


Figure 2 – Location of Bore 8 in relation to mine and infrastructure layout

3 PROPOSED MODIFICATION

Springvale Coal is seeking a modification to its existing development consent DA 11/92 to allow for the construction and operation of an additional mine dewatering facility (Bore 8) and ancillary infrastructure, including a 3.5 km access track.

Bore 8 is required for mine de-watering necessary to facilitate the progress of coal extraction further to the east. It would need to be established ahead of coal extraction to ensure that water levels in the mine are kept at safe and manageable levels. Bore 8 is therefore a critical part of the mine dewatering system as longwall mining progresses through LW416 to LW419.

Springvale Coal wants to construct Bore 8 prior to June 2013, when coal extraction from LW416 is due to commence. By that time, the current dewatering bore (Bore 6) would not be able to provide a dewatering function to the area of the LW416 mine workings, as these lie at a lower elevation than the base of Bore 6. Springvale Coal would not be able to effectively manage mine water inflows and mining operations would have to be curtailed in this area.

The Bore 8 surface site would consist of four individual boreholes (installed with submersible pumps), a high voltage switchroom with power control equipment for the operation of the pumps, a sump and fencing. In appearance, it would be similar to the existing Bore 6 (see Photo 1). To provide access to the Bore 8 site, an existing fire trail that is 3.5 metres (m) wide (see Photo 2) would need to be widened to 10 m over its 3.5 km length. During construction, 11 kilovolt electricity supply cables and water pipelines would be buried alongside the track within an infrastructure corridor. After construction, the width of the access track would be reduced to approximately 5 m and its edges would be revegetated.

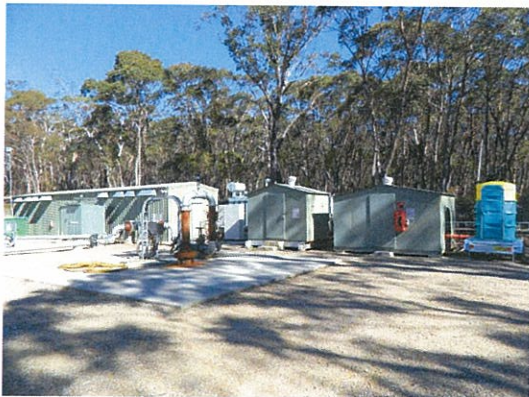


Photo 1 - Bore 6 Dewatering Facility



Photo 2 – Existing 3.5 m wide fire trail

The modification would involve the clearing of a total of 4 hectares (ha) of vegetation along the access track and at the bore site. Approximately 2.34 ha of this cleared area would be rehabilitated following the six month construction period.

During operation, the footprint of the Bore 8 facility would be approximately 0.32 ha within a 120 m x 120 m surveyed area. An asset protection zone would need to be maintained around the facility to protect it from bushfire.

Bore 8 would be incorporated into Springvale's existing dewatering system. The majority of the water pumped out of the underground workings through Bore 8 would be transferred through predominantly trenched pipelines to Wallerawang Power Station. There would be no changes to the current surface water management system at the Colliery or to the current water discharge limits to the Coxs River.

Bore 8 would be decommissioned at the end of 2016, when the drill pad area would be rehabilitated and returned to native forest vegetation.

4 STATUTORY CONTEXT

4.1 *Modification under Section 75W*

The development consent for the Springvale Colliery (DA 11/92) was granted under section 101 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). Clause 8J(8) of the *Environmental Planning and Assessment Regulation 2000* requires modifications of such development consents to be carried out under the now repealed section 75W of the EP&A Act. Despite its repeal, the effect of section 75W is continued for such consents by clause 12 in schedule 6A of the Act.

The Department is satisfied that it is appropriate to characterise the proposed changes as a modification to the existing development consent. The Department notes that the proposed modification involves no changes to the total tonnage of coal produced by the mine, mining methods, employment or environmental standards applicable to the site.

4.2 *Approval Authority*

Under section 75W of the EP&A Act, the Minister for Planning and Infrastructure is the approval authority for this modification application. However, under the Minister's delegation of 14 September 2011, the Planning Assessment Commission must determine the modification application, since Centennial has made reportable political donations.

5 CONSULTATION

Under section 75W of the EP&A Act, the Department is not required to exhibit the modification application or to undertake consultation. However, the Department publicly exhibited the Environmental Assessment (EA) for this modification from 13 to 29 October 2012.

The exhibition was advertised in the Lithgow Mercury on 13 October 2012 and copies of the EA were placed on the Department's website, at the Department's Head Office Information Centre, at Lithgow Council offices, at the Wallerawang Branch Library and at the Nature Conservation Council's office. In addition, relevant State Government agencies, Lithgow Council, the Blue Mountains Conservation Society, the Colong Foundation for Wilderness and the Nature Conservation Council were all notified of the proposal.

The Department received 7 submissions from Government agencies, as detailed below. No submissions were received from the general public or from special interest groups.

Lithgow City Council advised that it has no objections to the proposed modification.

The **NSW Environment Protection Authority (EPA)** is satisfied that the proposed construction and operation of Bore 8 can be managed so as to have negligible impacts on the environment with respect to air, noise and water quality. The EPA supports the relevant commitments in the EA and advised that no modifications to EPL 3607 would be required in the event that the modification is approved.

The **NSW Office of Environment and Heritage (OEH)** considers that, while the degree of impact of this particular proposal may be moderate, the cumulative impacts of Springvale Coal's proposed mining operations are likely to be extensive. It considers that Springvale Coal should seek to avoid, mitigate and offset impacts on biodiversity and cultural heritage that might arise from the proposed clearing of native vegetation (particularly the endangered plant *Persoonia hindii*). OEH recommends that a detailed offset strategy is required prior to consent being granted so that its likely effectiveness in maintaining or improving biodiversity can be assessed.

Forests NSW, part of the Department of Primary Industries, advises that the proposal is acceptable and that it is in the process of issuing an Occupation Permit to Springvale Coal for the site. It recommends conditions of consent requiring implementation of measures in the Statement of Commitments regarding threatened species and heritage as well as requiring that Bore 8 is secured from the public at all times.

NSW Office of Water (NOW), also part of the Department of Primary Industries, identifies that the proposed modification requires a bore licence to account for the take of water from the Richmond groundwater source.

The **Hawkesbury-Nepean Catchment Management Authority** (HNCMA) recommends that the extent of clearing be minimised to limit impacts on the endangered plant *Persoonia hindii* and on environmentally sensitive upland swamps in the vicinity. The HNCMA also recommends that adequate sediment and nutrient control is undertaken on areas of land disturbance; that cleared areas are rehabilitated with locally occurring native species; and that the clearance of hollow-bearing trees is avoided.

The **Division of Resources and Energy** (DRE), part of the Department of Trade and Investment, Regional Infrastructure & Services, supports the proposed modification and recommends that a Rehabilitation Management Plan be required in conditions of consent.

6 ASSESSMENT

Key issues associated with the proposed modification are the potential impacts on biodiversity (particularly the endangered plant *Persoonia hindii*) and on groundwater.

6.1 Flora

The EA's Flora and Fauna Study Area (see Figure 3) is linear in nature but includes the area directly affected by the proposed modification (see Figure 2) and a surrounding area of approximately 19.3 ha. The Study Area comprises remnant vegetation in the Newnes State Forest that is selectively logged by Forests NSW.

The four vegetation communities within the project application area (see Figure 4) are:

- *MU30 Exposed Blue Mountains Sydney Peppermint – Silvertop Ash Shrubby Woodland;*
- *MU28 Sandstone Plateau and Ridge Scribbly Gum – Silvertop Ash Shrubby Woodland;*
- *MU26 Newnes Plateau Narrow Leaved Peppermint – Silvertop Ash Layered Open Forest;*
- *MU7 Newnes Plateau Narrow Leaved Peppermint – Mountain Gum – Brown Stringybark Layered Forest.*

None of these vegetation communities are listed as endangered under the *Threatened Species Conservation Act 1995* (TSC Act) or the Commonwealth's *Environment Protection and Biodiversity Act 1999* (EPBC Act).

However, there are several areas of *MU50 Newnes Plateau Shrub Swamp* and *MU51 Newnes Plateau Hanging Swamp* in the vicinity of the areas proposed to be disturbed (see Figure 4). Both these communities, which are dependent on groundwater, are part of a Critically Endangered Ecological Community (CEEC) listed under the EPBC Act (*Temperate Highland Peat Swamps on Sandstone*). One of these communities is also listed as an endangered ecological community (EEC) under the TSC Act (*Newnes Plateau Shrub Swamp in the Sydney Basin Bioregion*).

Figure 4 shows that the areas of direct disturbance associated with the proposed modification mainly occur along a ridge-top track, while the swamps are located in nearby valleys, separated by at least 50 m and usually over 100 m from any planned vegetative clearing.

Persoonia hindii

Persoonia hindii, a flowering Geebung shrub listed as endangered under the TSC Act, has been identified within the project application area (see Figure 3). *Persoonia hindii* is only known from a limited number of locations on the Newnes Plateau, where it occurs in dry forest habitats. This plant is not well-understood in terms of its habitat, ability to reproduce and regenerate, or its areal extent. Hence its total population (or whether it is truly limited to the Newnes Plateau) is not known.

A feature of this plant is its rhizomatous nature, with much of each plant being located beneath the ground surface, from which stems (botanically termed ramets) are produced that can be observed during surveys. The habit of this plant creates survey difficulties in determining whether individual stems (ie ramets) belong to a single plant or to several. The procedure employed during the flora assessment was to consider stems rather than number of plants.

The proposal would require the removal of 93 stems of *Persoonia hindii*. This represents the removal of approximately 0.8% of the known local population of approximately 12,000 stems. A radius of 2.8 km, in accordance with flora survey methodology, was used as the basis of determining the extent of this local population.

In its response to submissions, Springvale Coal proposes a number of actions including undertaking a *Persoonia hindii* research and mapping program across the Newnes Plateau and the translocation of the 93 stems of the *Persoonia hindii* in the path of the access track to sites within one kilometre that provide suitable, similar habitat. Subsequently, Springvale Coal proposes to return these stems to their original locations as a component of its planned rehabilitation of the access track.

The Department considers this response to be generally appropriate, given the limited magnitude of the impact associated with the construction of the proposed Bore 8. It would enable research to be undertaken that would inform decisions relating to future development applications which may impact this plant and would assist in the long-term management and survival of this species.

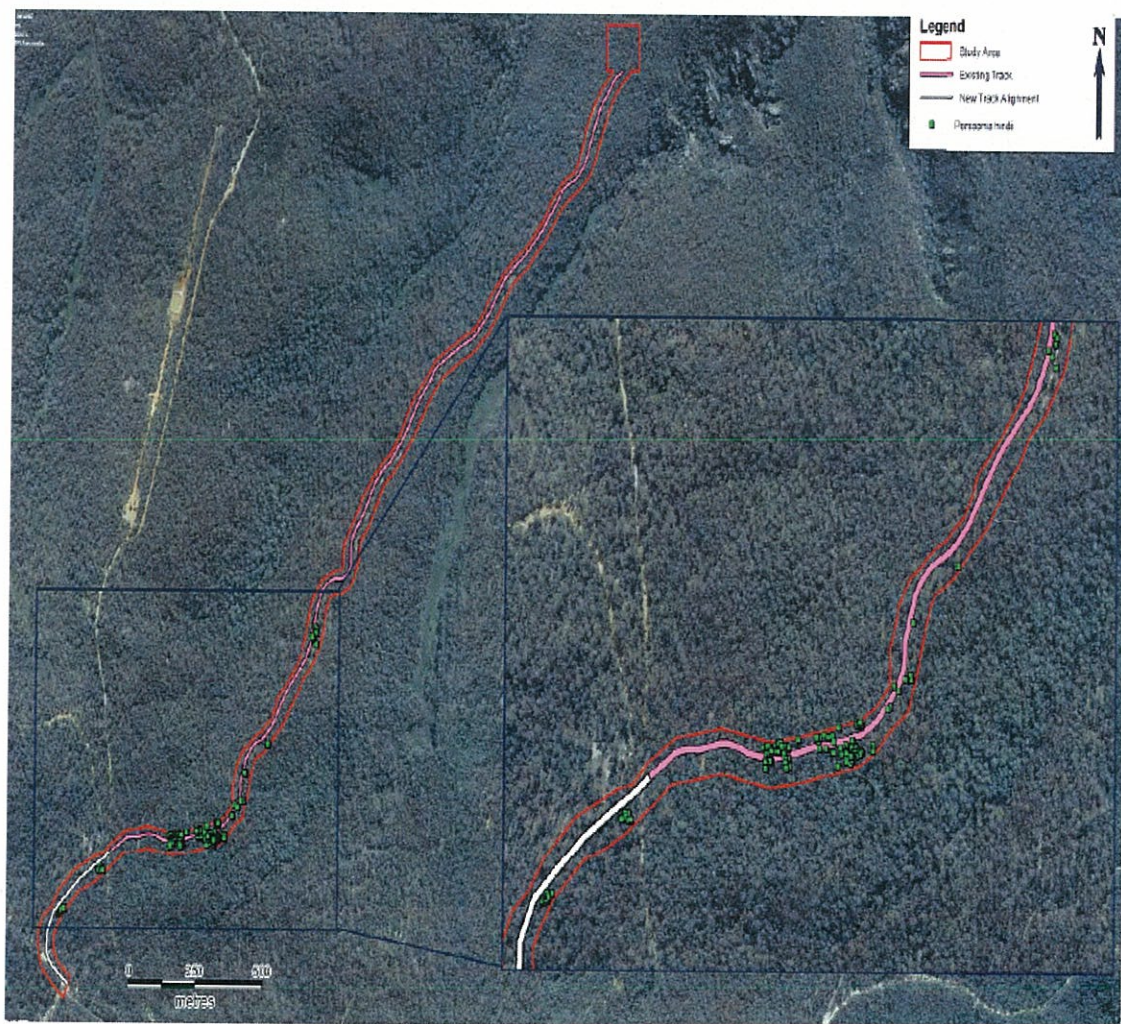


Figure 3 – Flora and Fauna Study Area, showing identified locations of *Persoonia hindii*

The Department considers that the proposal has been generally designed to minimise the impact of clearing on the local *Persoonia hindii* population and that the verge of the access track may be naturally re-colonised by *Persoonia hindii* either through the soil seed bank or through rhizomes that are “left behind” when vegetation is cleared down to ground level, but roots and rhizomes are not removed (see Photo 3). Springvale Coal’s proposals for translocation should be accompanied by trials to assess whether translocated stems can be successfully returned to their original locations as a rehabilitation component.

The Department has recommended a condition of consent that requires Springvale Coal to produce, implement and fund a *Persoonia hindii* Management and Research Program in consultation with OEH and Forests NSW. This program must include:

- surveys and mapping of *Persoonia hindii* across the Newnes Plateau;
- translocation of all stems of *Persoonia hindii* found in the area of disturbance for the Bore 8 access track to a nearby area with similar physical and biological habitat features;
- include trials to assess whether translocated stems can be successfully returned to their original locations as a component of the rehabilitation of these areas;
- a study of the rhizomatous habit of *Persoonia hindii* and how this may affect the success of the species in translocation and/or re-colonising disturbed areas;
- a monitoring program for studying the translocated *Persoonia hindii* plants before and after translocation,
- a monitoring program to measure the ability of the residual *Persoonia hindii* population along the disturbed areas of the Bore 8 access track and construction site to regenerate;
- short and long-term goals to measure the effectiveness of the Program; and
- provision of information obtained from the Program to the Department, OEH and Forests NSW.



Photo 3 – *Persoonia hindii* recolonising a road verge in Newnes State Forest

The Department has also recommended a condition of consent that requires Springvale Coal to undertake rehabilitation, in consultation with Forests NSW, of those portions of disturbed land of the access track and the Bore 8 construction site not required for its ongoing use, as soon as practicable, and to the satisfaction of DRE.

The Department has carefully considered whether an offset for biodiversity impacts associated with this proposal is warranted. The total area of vegetation clearing is 4 ha, with rehabilitation activities planned to commence on 2.34 ha about 6 months after its disturbance. Rehabilitation of the Bore 8 site itself is planned to be undertaken after its decommissioning in 2016. As the area to be cleared is part of a working State Forest, subject to logging activities, the Department is satisfied that the residual impacts of this proposal are relatively small.

The research and mapping program for *Persoonia hindii* that Springvale Coal would be required to undertake would require considerable time and resources to be expended by the company and contribute significantly to the knowledge base for this poorly-understood plant. The Department also considers that providing an immediate offset for such a low level of impact would not be administratively efficient or advance conservation outcomes significantly when compared to the benefits of the proposed research program.

However, the opportunity exists to combine an offset for the residual impacts of this proposal with other biodiversity offsets likely to be required for other Centennial mining proposals, particularly those on the Newnes Plateau. One such proposal currently under consideration, but not yet determined, is the Angus Place Colliery Ventilation Facilities modification which involves 15 ha of vegetative clearing. Other proposals include an expansion of Springvale and Angus Place Collieries. Director-General's requirements for the proposed Springvale Mine Extension project (a State significant development) were issued by the Department in November 2012.

The Department has therefore recommended a condition of consent that requires Springvale Coal to provide an area that is suitable in its vegetation types and extent to satisfactorily offset the residual impacts of clearing native vegetation, including the residual impacts on *Persoonia hindii*. However, in determining a suitable residual offset, the Director-General will have regard to the outcomes of the *Persoonia hindii* Management and Research Program, particularly the success of translocation and/or regeneration, and Springvale Coal's success in implementing the Rehabilitation Management Plan.

The Department has allowed 4 years for this process to be finalised, firstly to enable improved knowledge about *Persoonia hindii* to be obtained and applied, secondly to allow for rehabilitation of the access track and monitoring of its success, and thirdly to allow the various offset components from other Centennial proposals in the Western Coalfield to be aggregated so that the offsetting process is efficient from both administrative and conservation perspectives. In the unlikely event that other offsets are not aggregated, Springvale Coal would be required to provide a stand-alone offset to satisfy the condition.

The Department is satisfied that the proposed measures to address biodiversity impacts are comprehensive and appropriate to the circumstances that apply to the Bore 8 proposal.

6.2 Fauna

A total of 46 threatened fauna species and two insect species have been previously recorded within 10 km of the Study Area or have potential to occur within the Study Area. No threatened species were recorded in areas proposed to be cleared.

As only 4 ha of the 25,000 ha of vegetation on the Newnes Plateau would be cleared as part of this proposal, the Department considers that it is unlikely to affect the availability of habitat or the lifecycles of any of these species and that measures to mitigate impacts for the vegetation of the area would also minimise impacts to local fauna.

6.3 Groundwater

The EA contains an assessment of potential hydrogeological impacts from activities associated with the proposal. There are three groundwater systems that potentially could be affected by the installation and operation of the proposed Bore 8, namely:

- the perched groundwater system which supports Hanging Swamps;
- the shallow groundwater system which contains aquifer zones that support Shrub Swamps; and
- the deep groundwater system.

The EA examined the potential risks of the proposed modification to the three groundwater systems and found that it would not pose a risk to the local or regional hydrogeological regime, or the groundwater dependent ecosystems that rely on it. The cumulative impact of the proposal, from a groundwater perspective, is no different from the currently approved dewatering operations. The Department agrees with this assessment.

6.4 Other Issues

The Department is satisfied that the remaining impacts of the proposal can be mitigated and/or managed to ensure an acceptable level of environmental performance (see Table 1).

Table 1 – Other Issues

<i>Issue</i>	<i>Description of Issue</i>	<i>Recommendation</i>
<i>Noise and Vibration</i>	The closest dwellings are at least 9 km from the Bore 8 site and noise modelling demonstrates operations at the site are unlikely to be audible at these dwellings. Noise associated with construction would also have a negligible impact on the nearest sensitive receptors. Vibration levels are predicted to be below levels of human perception at the nearest residential receptors.	No change to existing conditions.
<i>Cultural Heritage</i>	A search of OEH's Aboriginal Heritage Information Management System and surveys undertaken during a field survey with registered Aboriginal stakeholders failed to identify any Aboriginal sites in the area of proposed ground disturbance. There are no items of European Heritage in or within the vicinity of the Project Application Area.	No change to existing conditions.
<i>Air Quality</i>	Dust emissions modelling shows that the predicted air quality impacts of the proposal are negligible.	No change to existing conditions.
<i>Greenhouse Gases (GHG)</i>	The construction and operation of the proposed Bore 8 is predicted to contribute an additional 11,939 tonnes CO _{2-e} per annum, an increase of 1.3% in GHG emissions for the Colliery.	The Department considers that an increase of 1.3% in GHG emissions is acceptable in terms of the socio-economic benefits that would accrue from the Colliery's continued operation.
<i>Surface Water</i>	The EA concludes that there would be minimal impacts on the surface water flows and the water quality of downstream receiving waters as a result of the proposal. Similar water management measures as those successfully employed for Bore 6 would be used for Bore 8. No watercourses would be intersected by the proposed Bore 8 or its access track.	The Department has recommended conditions requiring Springvale Coal to produce and implement a Construction Erosion and Sediment Control Plan to ensure that impacts to local waterways are minimised.
<i>Visual Amenity</i>	As the proposed Bore 8 would be short-term and would only be viewed by Springvale Coal's staff and contractors and recreational users of the access track, the visual impact would be minimal. The buildings and infrastructure would be clad with green colourbond, similar to that currently used at Bore 6 (see Photo 1).	The Department is satisfied that the proposed modification would not have a significant impact on any sensitive visual receiver.
<i>Rehabilitation and Closure</i>	Bore 8 would be a relatively short-term feature in the landscape. Once decommissioned in 2016, full rehabilitation of the area would be undertaken in	The Department has recommended conditions requiring preparation and

	<p>accordance with the Occupation Permit issued by Forests NSW.</p> <p>The four bores would be fully sealed and the land reformed so as to blend with the surrounding landscape and revegetated with endemic native vegetation. The access track would be retained with a 5 m width as a fire trail.</p>	<p>implementation of a Rehabilitation Management Plan for Bore 8 providing a timetable for how disturbed areas would be progressively rehabilitated, monitored and assessed.</p>
<i>Socio-economic impacts</i>	<p>Bore 8 would be a critical part of Springvale's mine dewatering system and therefore contributes to the ongoing employment and economic benefits of the Colliery.</p>	<p>No change to existing conditions.</p>
<i>Traffic and transport</i>	<p>During the six month construction period, it is estimated that four heavy vehicles and four light vehicles would travel to the proposed Bore 8 site each day. Once Bore 8 is operational, traffic movements would be minimal, with an occasional light vehicle trip being undertaken for maintenance and inspection.</p> <p>All forestry access tracks and roads used by Springvale Colliery are maintained under a maintenance agreement with Forests NSW.</p>	<p>No change to existing conditions.</p>
<i>Waste management</i>	<p>Waste generated by the construction and operation of the proposed Bore 8 would be dealt with under the Colliery's Waste Management Plan.</p> <p>A sump with appropriate erosion and sediment controls would be constructed at Bore 8 to capture all drilling fluids. On completion, drilling fluids would be pumped out by a licensed contractor for disposal.</p>	<p>The Department is satisfied that waste streams would be minimal and would be adequately managed.</p>

7 RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of consent for the modification (see **Appendix A**). These conditions are required to:

- prevent and/or minimise adverse environmental impacts of the proposed modification;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting;
- provide for a research program into *Persoonia hindii*; and
- provide for the ongoing environmental management of the development.

Springvale Coal has reviewed and accepted the recommended conditions.

The notice of modification would vary the existing consent to the form shown in **Appendix B** (the "consolidated consent").

8 CONCLUSION

The Department has assessed the EA, submissions on the proposed modification and Springvale Coal's response to submissions, in accordance with the requirements of the EP&A Act, and is satisfied that the impacts of the proposed modification would generally be minor and could be managed within the existing regulatory framework.

The Department is satisfied that there is a need to construct Bore 8, as it is an essential component of the mine's future dewatering system and is needed to allow the already approved operation of Longwalls 416 to 419 to proceed.

The proposed modification would result in the clearing of 4 ha of native vegetation, including approximately 93 stems of the endangered *Persoonia hindii*. However, Springvale Coal has committed to minimising the impacts to this population and undertaking research into its habit and range on the Newnes Plateau. The Department considers this to be an appropriate response as less than 1% of the local known population of this plant would be removed and the information gained from this Program would assist with the management and protection of

this poorly-understood species. An offset for the residual impacts caused by this clearing (ie post translocation and rehabilitation) has been proposed, along with a timing for finalisation of this mechanism that would allow for this residual offset to be aggregated with any other biodiversity offsets required of Centennial Coal in the future.

The Department considers that the proposed modification is in the public interest and should be approved, subject to conditions.

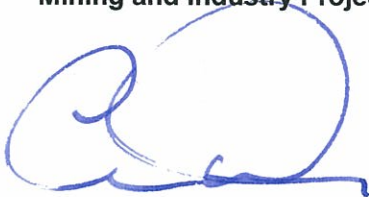
9 RECOMMENDATION

It is RECOMMENDED that the Planning Assessment Commission, as delegate for the Minister:

- **considers** the findings and recommendations of this report;
- **determines** that the proposed modification falls within the scope of section 75W of the EP&A Act;
- **approves** the application under section 75W, subject to conditions; and
- **signs** the attached Notice of Modification in Appendix A;

dkitto 27/2/13

David Kitto
Director,
Mining and Industry Projects



18. 2. 13

Chris Wilson
Executive Director,
Development Assessments, Systems & Approvals