ASSESSMENT REPORT

Springvale Extension Project

Production Rate Increase Modification (SSD 5594 MOD 1)

1 BACKGROUND

The Springvale Mine is an underground coal mine located in the western coalfield of New South Wales approximately 15 kilometres (km) north-west of Lithgow (see **Figure 1**). The mine is jointly owned by Centennial Springvale and Springvale SK Kores, and is operated by Springvale Coal.

Mining at Springvale commenced in 1995 under a development consent granted in 1992. In September 2015 a new development consent for the Springvale Mine Extension Project was approved by the Planning Assessment Commission (PAC).

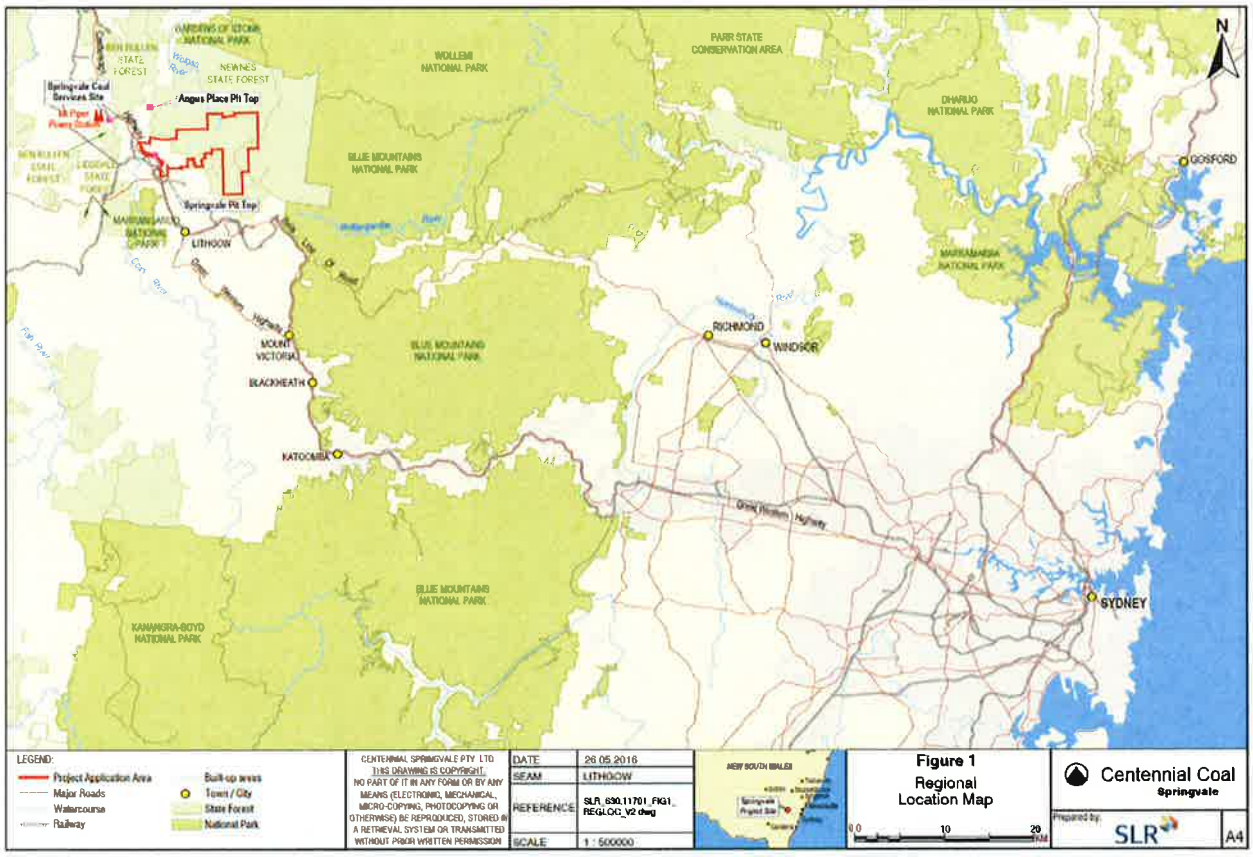

Figure 1*: Mine location*

The development consent allows mining operations to continue until 31 December 2028, and permits the:

- extraction of up to 4.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal (see **Figure 2**);
- transportation of coal:
  - by overland conveyor to Western Coal Services Site for further processing;
  - by overland conveyor to the Mt Piper Power Station; or
  - by road to local domestic customers; and
- operation of support infrastructure, including ventilation shafts, coal stockpile, mine services bores and offices (see **Figure 3**).

Coal processing occurs at a separate site (the Western Coal Services Site) and is undertaken under a separate development consent (SSD 5579).

The Springvale Mine Extension Project consent was granted following comprehensive assessments by the Department and the Planning Assessment Commission (PAC), which undertook two separate reviews.

The PAC determination imposed a stringent set of conditions, including:

- the establishment of an Independent Monitoring Panel (IMP) to provide advice on the subsidence related impacts of mining on swamps; and
- strict discharge limits to reduce salinity and the consideration of the potential transfer of mine water to Mt Piper Power Station for treatment and reuse.

2 PROPOSED MODIFICATION

Springvale Coal is proposing to modify the development consent for the Springvale Extension Project to increase the mine's ROM coal production from 4.5 Mtpa to 5.5 Mtpa. To achieve the increase in production, the company would introduce an additional longwall machine and two additional continuous miners, and would increase the mine's workforce from 310 to 450 personnel.

Springvale Coal is also proposing to increase the capacity of the ROM coal stockpile from 85,000 tonnes to 200,000 tonnes in order to handle the additional coal produced. The increased capacity would be achieved by extending the stockpile footprint 0.3 hectares to the north-east (see **Figure 3**).

In the strategic context of power supply for NSW, the Springvale Mine is now the only local mine currently supplying coal to the Mt Piper Power Station, which provides approximately 15% of NSW's electricity. While Mt Piper does not always operate at full production, it is important that the power station has a reliable source of coal to enable it to operate at full capacity during periods of increased demand.

The proposed increase in production rate and capacity of the stockpile would allow the mine to supply additional coal to the power station and ensure that it can operate at full capacity for extended periods. The increased production rate is also an important factor in ensuring the long-term viability of the mine and the continued employment of its 310 existing staff (plus an additional 140 people).

It is not proposed to operate the two longwall machines simultaneously. Currently each relocation of a longwall machine from a completed longwall panel to the next longwall panel results in the suspension of operations for approximately 6 weeks. With the additional machinery, Springvale Coal would develop and prepare the next longwall panel while extraction from the current longwall panel is ongoing, thereby eliminating downtime and increasing production efficiency.

No other changes are proposed to the operation of the mine, mining method or approved mine plan.

The proposed modification is fully described in the Statement of Environmental Effects (SEE) which accompanied the application (see **Appendix A**).

3 RELATED APPLICATIONS

Springvale Coal has a separate development application before the Department called the Springvale Water Treatment Project. This proposal involves the transfer of mine water to the Mt Piper Power Station for treatment and reuse.

The concept of transferring mine water to the power station was recommended by the PAC and would achieve the long-term salinity reductions required under the mine's development consent. The Springvale Water Treatment Project is widely supported by both government and the community as it would significantly reduce discharge into the catchment and allow beneficial water reuse at the power station.

However, given the large scale of this $100 million project and the time required to construct and commission it, Springvale has also lodged a modification application (Springvale Mod 2), which seeks to defer the shorter-term salinity reductions until the Springvale Water Treatment Project is completed.

Springvale Coal, in addition, has lodged another associated modification application (the Western Coal Services Mod 1) seeking to allow the Western Coal Services Site to receive a small amount of residual waste from the treatment of mine water at the Springvale Water Treatment Project.

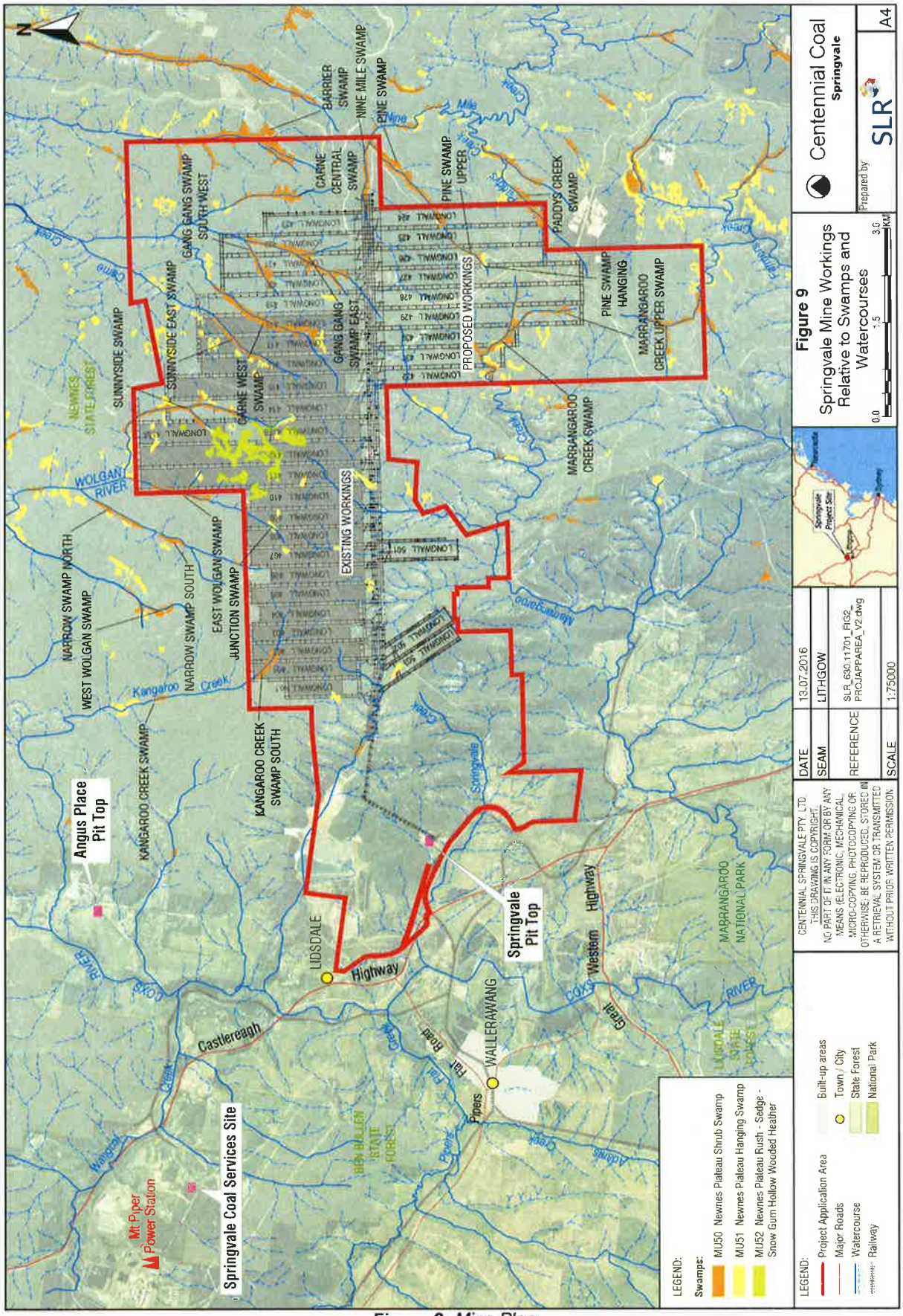

Figure 2: *Mine Plan*

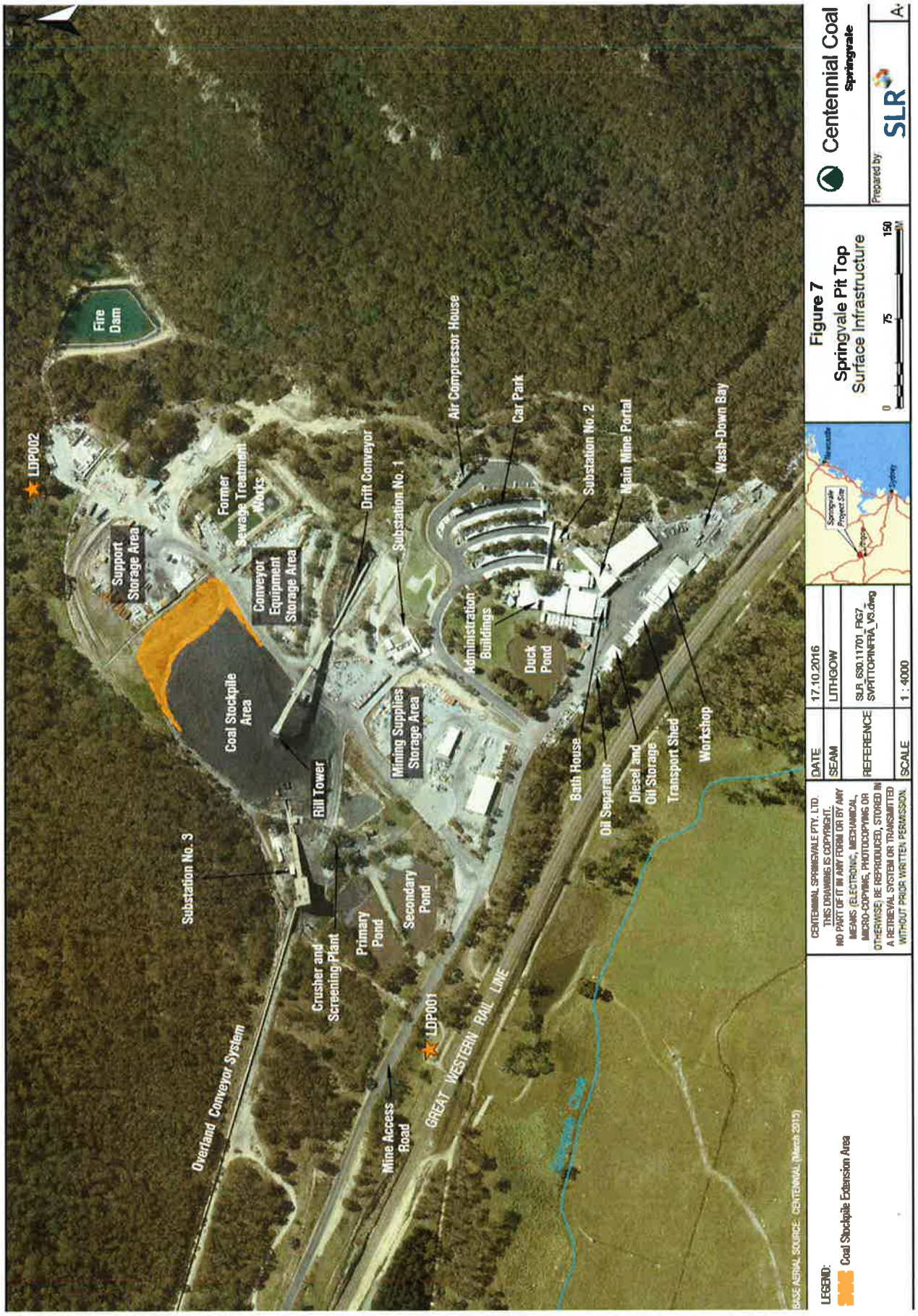

Figure 3: *Project Layout and Proposed Modified Components*

The Springvale Water Treatment Project and its two associated modifications are still under assessment and will be submitted to the PAC for determination at a later date.

The Department considers that the current modification application does not have any direct impact on the assessment of the Springvale Water Treatment Project as it would not result in any increase in mine inflows beyond those already assessed and approved (see detailed discussion in **section 6.1**).

Given the current modification application is not directly related to the Springvale Water Treatment Project and was submitted well in advance, the Department is satisfied that it can and should be dealt with separately on its own merits.

4 STATUTORY CONTEXT

The Springvale Mine Extension Project was originally granted under Part 4, Division 4.1 of the EP&A Act. Section 96 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) allows for a development consent to be modified by the authority that granted the original consent.

The proposed modification does not seek to significantly alter the nature or scale of the development and would not significantly increase its environmental impacts.

While there would be a minor increase in the intensity of coal extraction on site and additional workers, there would be no change to the mining footprint or the total amount of coal extracted. The increase in production rate would not significantly change the maximum mine inflow rates and there is not likely to be any increase in discharges beyond what was originally considered and approved (see **section 6.1**).

The proposed expansion of the stockpile would result in a minor change to the physical layout on disturbed land, however the project would continue to operate at the surface in substantially the same way and continue to comply with existing noise and air quality criteria on site.

Consequently, the Department is satisfied that the application can be characterised as a modification to the existing consent under section 96(2) of the EP&A Act as it would result in substantially the same development as the development for which consent was originally granted.

The Springvale Mine Extension Project is State significant development under the EP&A Act, and the Minister for Planning is the consent authority for the development. However, the application falls within the terms of the Minister's delegation to the Planning Assessment Commission (PAC) as more than 25 public objections were received in response to the exhibition of the SEE.

5 CONSULTATION

The Department publicly exhibited the SEE from 2 August 2016 until 23 August 2016. During the exhibition period, the Department received 96 submissions comprising:

- 8 from public authorities;
- 5 from special interest groups (3 objecting, 2 in support); and
- 83 from the general public (79 objecting, 4 in support).

Of the 79 objections from the general public, 72 were submitted using a form letter. The supporting submission made by one of the special interest groups was in the form of a petition with 228 signatures.

Springvale Coal provided a Response to Submissions (RTS) document to address concerns raised in these submissions. The submissions and RTS are provided as **Appendix B** and **C**.

The Department forwarded the RTS to the relevant agencies and requested further comments. The agency comments on the RTS are provided in **Appendix D**.

The Department also sought additional information about potential fluctuations in mine inflows, which was provided on 3 February 2017 (see **Appendix E**). It was forwarded to WaterNSW for further comments, which were provided on 7 February 2017 (see **Appendix F**).

Agency Submissions

The **Division of Water within the Department of Primary Industries** (DPI Water) initially raised concerns about inconsistencies between the numerical groundwater modelling in the SEE and the 2013 modelling in the EIS for the original project. However, these matters were clarified to the satisfaction of DPI Water in the RTS.

The **Environmental Protection Authority** (EPA) noted that Springvale Coal would need to seek a minor variation to the Environmental Protection Licence (EPL) as it currently states that the total production range is 3.5 to 5 Mtpa. If the modification application is approved, EPA advised that it would not have any concerns about making an administrative variation to the EPL to allow a total production range of up to 5.5 Mtpa.

The EPA and the **Division of Resources and Energy** (DRE) within the Department of Industry raised concerns about potential slumping of the ROM stockpile and discharge of coal fines into the clean water diversion system. This was addressed in the RTS, and both DRE and EPA have no residual concerns (see detailed discussion in **section 6.1**).

The **Office of Environment and Heritage** (OEH) initially noted that the elimination of changeover periods would reduce the time available between the extraction of each longwall to install monitoring equipment and undertake associate management activities. The Department agrees with OEH that this would require revisions to the approved monitoring and management plans. However, the Department also notes that Springvale Coal is required to update its monitoring and management plans prior to the extraction of any coal, under the Extraction Plan process in the conditions of consent. In the RTS, the company acknowledged the need to update its management plans and OEH has no residual concerns on this matter.

WaterNSW initially raised concerns about potential changes to water quality from discharges, which were addressed in the RTS and further information dated 3 February 2017. WaterNSW has reviewed this additional information and has raised no residual concerns (see detailed discussion in **section 6.1**).

WaterNSW initially had concerns about whether the mine's wastewater management system would adequately handle the increased number of staff. In its RTS, Springvale Coal confirmed the mine's wastewater system was established with a design capacity for 450 staff and WaterNSW has no residual concerns about this matter.

WaterNSW also questioned whether the life of the consent should be reduced, given the increase in production rate. While Springvale Coal is seeking an increase to their maximum production limit, the company requires flexibility to manage its operations in response to market needs as it does not necessarily anticipate mining at the higher rate every year. Consequently, no change to the mine life is proposed.

The **Roads and Maritime Services** (RMS) recommended an amendment to the existing conditions of consent to require an upgrade to Castlereagh Highway at its intersection with the mine access road. However, the existing consent conditions already require this, and Springvale Coal has confirmed that it has commenced detailed design of the intersection and will submit this to the RMS when complete. RMS has no residual concerns about this matter.

The **Forestry Corporation of NSW** (ForestryNSW) raised no concerns.

Lithgow City Council supported the modification citing the importance of the mining industry to the economy of the local region.

A number of agencies also advised that if the modification is approved, various management plans should be updated to reflect the proposed modification. Under the existing conditions of consent, Springvale Coal is required to update all relevant management plans within three months of any modification of the consent.

Special Interest Group and Community Submissions

The **Colong Foundation for Wilderness** (Colong Foundation), the **Blue Mountains Conservation Society Inc.** (BMC Society) and **4Nature** all raised concerns about the quality of water discharged to the Coxs River, the impacts to swamps and the adequacy of swamp monitoring.

The Department agrees that the key issue is whether this modification application would result in any additional impacts on the water quality of the drinking water catchment. For that reason, the Department has twice requested additional information from Springvale Coal about this issue and sought comments from WaterNSW on both occasions. This issue is discussed in detail in **section 6.1**.

The Colong Foundation and the BMC Society noted that the observed impacts to swamps have been greater than the impacts predicted in the original EIS for the Springvale Mine Extension Project. Both of these groups suggested that changes should be made to the approved performance criteria and mine layout. While these issues were not raised by OEH, they are addressed in detail in **section 6.2**, with specific reference to the findings and recommendations of the Independent Monitoring Panel (IMP).

The BMC Society also raised concerns about a possible collapse of the coal stockpile. This issue was addressed in the RTS to the satisfaction of EPA and DRE, and is discussed in **section 6.2**.

4Nature raised concerns about greenhouse gas emissions, which are addressed in **section 6.4**.

The key issues raised in submissions from other community objectors were the potential subsidence-related impacts on swamps and waterfalls, and potential mine water discharge impacts on the Coxs River catchment.

The concerns raised in community and special interest group submissions are considered in detail in **sections 6.1** and **6.2** of this report, with a particular focus on surface water and swamps.

The public and special interest group submissions in support of the proposal cited the mine's continued employment and socio-economic benefits for the Lithgow region, as the main reasons for their support.

6 ASSESSMENT

In assessing the merits of the proposal, the Department has considered the:

- modification application and accompanying SEE;
- government agency and community submissions;
- the RTS and additional information from Springvale Coal dated 3 February 2017;
- existing conditions of consent;
- relevant environmental planning instruments, policies and guidelines; and
- relevant requirements of the EP&A Act.

The Department considers the key issues are the potential impacts on surface water in the catchment and swamps, which are discussed in **sections 6.1** and **6.2** below. The socio-economic impacts are considered in **section 6.3** and other minor issues are summarised in table format in **section 6.4**.

6.1 Water

The fundamental issue that needs to be addressed is whether or not the proposed increase in production rate would result in any additional impacts on the water quality of the drinking water catchment.

6.1.1 Background

The removal of groundwater is an essential aspect of underground mining, whether it is 'dewatering' in advance of mining operations or the ongoing removal of inflows that occur during mining.

At the Springvale Mine, the mine water that is removed is subsequently discharged via a licensed discharge point (LDP009) located in Sawyers Swamp Creek. This creek is a tributary of the Coxs River, which forms part of Sydney's drinking water catchment.

The potential for additional impacts from increased mine water discharges on the Coxs River and the drinking water catchment was raised as a major concern in a number of the community submissions for this modification application.

6.1.2 Drinking Water Catchment SEPP

Under clause 10 of the *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (the Drinking Water Catchment SEPP), the consent authority must not "*grant consent to the carrying out of development*" in the drinking water catchment unless it would have a 'neutral or beneficial effect' on water quality (the 'NorBe test').

The potential impacts on the drinking water catchment was one of the key considerations in the PAC's review and later approval of the Springvale Mine Extension Project. Following careful review, and based on advice from WaterNSW, the PAC was ultimately satisfied that the project passed the NorBe test.

While the consent authority must apply the NorBe test in "*grant(ing) consent to the carrying out of development*", section 96(4) of the EP&A Act provides that the modification of a development consent is "*taken not to be the granting of development consent*" (emphasis added).

The Department has therefore sought legal advice about the applicability of the Drinking Water Catchment SEPP and the NorBe test to this modification application.

The legal advice confirms that the SEPP as a whole must be considered as part of the broader considerations required under section 79C of the EP&A Act. In particular, section 79C requires consideration of any environmental planning instrument (e.g. a SEPP) and the environmental impacts on both the natural and built environments.

However, the legal advice also confirms that the specific clause in the SEPP containing the NorBe test (i.e. clause 10) does not strictly apply to the modification of a development consent in the same way as it does to the granting of a development consent. As a result, the NorBe test does not necessarily operate to constrain the determination of a modification application as it does for the granting of development consent.

Nevertheless, it is clear that the intention behind clause 10 of the SEPP is to protect Sydney's drinking water catchment, and the Department believes that this should be given significant weight in considering whether to approve the modification application.

Furthermore, the modification of a development consent must be substantially the same development as the development for which consent was originally granted.

Consequently, the Department has carefully considered whether the proposed increase in production rates would result in mine water discharges that are substantially the same as those that were originally assessed and approved.

6.1.3 Existing Approved Discharges

In order to determine whether the impacts on the drinking water catchment are substantially the same as originally assessed and approved, it is first necessary to determine whether there would be any increased discharges resulting from increased mine inflows.

Under the EPL issued by the EPA, Springvale Coal is currently allowed to discharge up to 30 megalitres (ML) of mine water per day into the Coxs River at LDP009 with a maximum electrical conductivity (i.e. salinity) level of 1,200 µS/cm.

The quantity and salinity limits under the existing EPL include discharges from both the Springvale Mine and the Angus Place Mine. As the Angus Place Mine is currently under care-and-maintenance and will not be mined until after Springvale Mine ceases to operate, the EPL limits are not likely to ever be exceeded.

However, in its approval of Springvale Mine Extension Project, the PAC agreed with the EPA that the EPL limits should only be considered 'interim'. For that reason, the Department and the PAC carefully considered the predicted mine water discharges from the Springvale Mine Extension Project alone.

The modelling in the EIS and RTS for the Springvale Mine Extension Project predicted maximum mine water discharges of 18.6 ML/day.

These predictions were based on a numerical groundwater model prepared by CSIRO (2013), which was peer reviewed by MSEC (2015). In its review of that project, the PAC acknowledged that the groundwater model "*cannot provide accurate, site-specific predictions*" but ultimately agreed with the Department that the groundwater model is likely to provide conservative predictions.

The Department's Assessment Report on this project (dated April 2015) noted the inherent uncertainty in the modelling and stated that discharges would amount to "*around 18-19 ML/day*". Similarly, the PAC's Review Report on the project (dated June 2015) stated that the discharges into Coxs River from Springvale Mine would be "*up to 19 ML/day*".

The PAC did not specify an average daily maximum limit on mine water discharges in the development consent. However, based on the reports mentioned above, it is reasonable to conclude that the PAC was satisfied that a maximum average discharge level of up to 19 ML/day was expected from the Springvale Mine Extension Project.

6.1.4 Predicted Discharges and Catchment Impacts

For this modification application, the SEE, RTS and additional information dated 3 February 2017 all include further groundwater assessments undertaken by Jacobs, which are based on the numerical groundwater model prepared by CSIRO.

These groundwater assessments provide predictions of mine inflows based on updated modelling that take into account the proposed 5.5 Mtpa coal extraction rate. The updated modelling indicates that mine inflows at the higher rate of production would be very similar to those at the current production rate (see **Figure 4**).

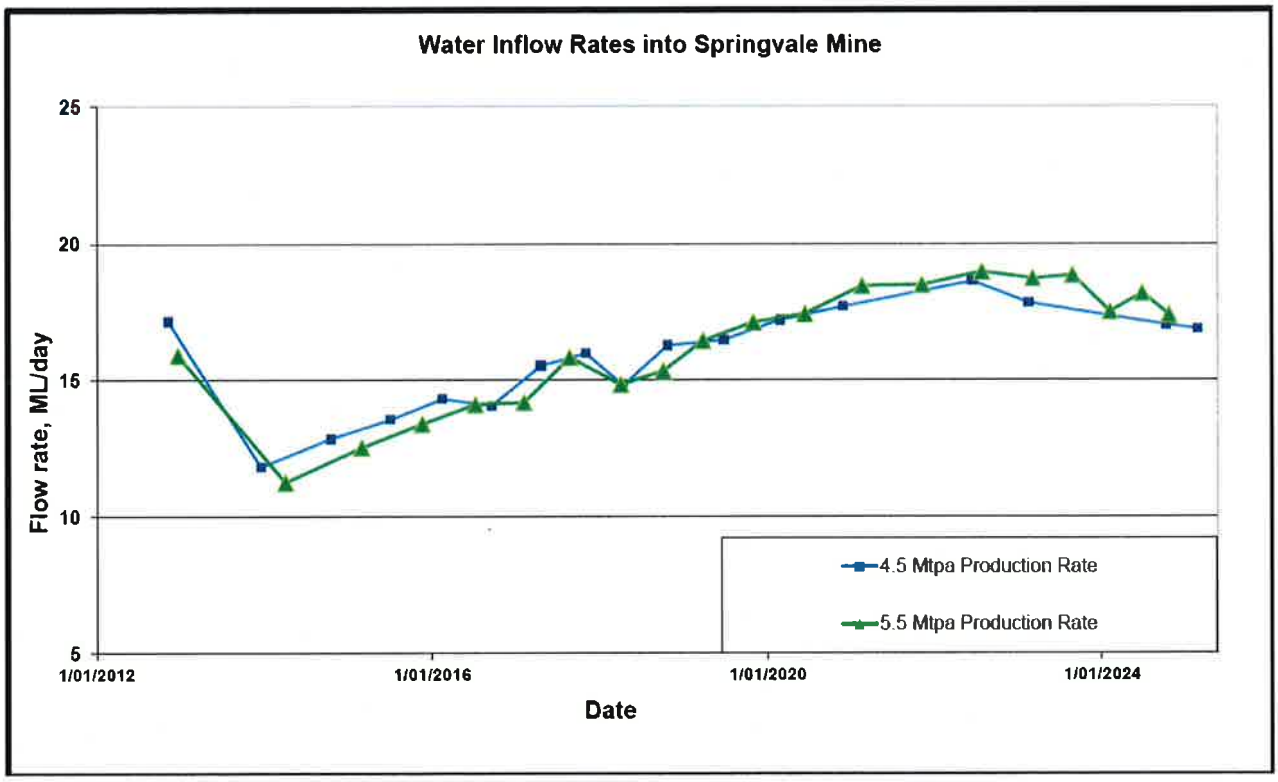

Figure 4: *Comparison of Predicted Mine Water Inflows*

Figure 4 illustrates that peak mine inflows at the higher production rate would be 0.4 ML/day more than predicted in the original project's EIS under the currently approved production rate i.e. 19.0 ML/day in 2022 compared with a peak inflow rate of 18.6 ML/day in 2022 at the current production rate.

However, the Department considers the predicted maximum mine inflow rates are consistent with the predicted inflow rates that were assessed by the PAC for the original project i.e. "*up to 19 ML/day*".

The modelled inflows in **Figure 4** also predict that a maximum increase in inflow rate of 0.4 ML/day more than that predicted in the original project's EIS would have negligible additional impacts on the water quality of the drinking water catchment.

This is based on the model's prediction of no changes in the water quality at Lake Burragorang and Lake Wallace, which are the key points downstream of LDP009 that WaterNSW have advised should be used to assess impacts in the drinking water catchment.

The Department is satisfied that there is not likely to be any increase in discharges beyond what was originally considered and approved (i.e. up to 19 ML/day). Consequently, the Department is satisfied that the potential impacts on Sydney's drinking water catchment would remain substantially the same as those that were approved under the original project.

6.1.5 Short-Term Variability in Mine Inflows

During the assessment of this modification and the associated Springvale Water Treatment Project, the Department has become aware of the possibility for short-term (i.e. daily to weekly) variability in inflow rates. This is a common issue across all underground mining operations as groundwater is not evenly dispersed underground. Neither the Department nor the PAC expressly considered the potential short-term variability of mine inflows during the assessment of the original project.

However, it should be noted that it is standard practice for the prediction of inflow rates to be expressed as a daily maximum based on an annual average, and it is not ordinarily necessary to consider short-term fluctuations. Nevertheless, the Department has adopted a precautionary approach in this case and considered further analysis was warranted.

Consequently, WaterNSW requested that Springvale Coal provide a 'sensitivity analysis' taking into account potential fluctuations of 1 ML/day in the discharge rates (i.e. more than double the predicted rate increase). The 'sensitivity analysis' found that a 1 ML/day increase would still lead to a negligible increase in salinity (i.e. less than 1%) within the catchment at Lake Burragorang and Lake Wallace.

The Department also requested an even more conservative 'uncertainty analysis' to address worst-case fluctuations in mine inflows of up to 6 ML/day above the modelled inflows (i.e. 15 times the predicted rate increase). This information was provided on 7 February and has been reviewed by WaterNSW. It found that even a constant and maximum increase of 6 ML/day would only lead to a maximum 2% increase in salinity at Lake Burragorang and 7% increase at Lake Wallace over short periods (see **Appendix E**).

However, this 'uncertainty analysis' is extremely conservative and captures the absolute worst-case scenario of elevated mine inflows. It assumes the mine inflows would increase by a factor of 15 above the modelled rate over a prolonged period of time, which is highly unlikely to occur. Furthermore, WaterNSW has confirmed that even under the modelled worst-case scenario, the maximum increases are still within historical observed measurements in the catchment (see advice in **Appendix F**).

It is important to note that while short-term fluctuations in mine inflows were not expressly considered by the Department or the PAC during the assessment of the original project, they have always been a possibility and may already occur under the currently approved project.

Consequently, the Department considers the potential catchment impacts from short-term variability in mine inflows are substantially the same as approved under the original consent. The Department has nevertheless taken a precautionary approach and is satisfied that under a worst-case scenario the potential impacts would be within historical measurements.

6.1.6 Relationship to the Springvale Water Treatment Project

The Department also notes that the existing conditions of consent for the Springvale Mine Extension project include a series of water management performance measures to reduce salinity in mine water discharges at LDP009. As discussed in **section 3**, Springvale Coal has proposed the Springvale Water Treatment Project to achieve these long-term performance measures.

The Springvale Water Treatment Project would allow up to 42 ML/day of dewatered mine water to be transferred to the Mt Piper Power for treatment and re-use in the power station's cooling tower system, rather than being discharged.

Importantly, the proposed increased in production rate under this modification application would not affect the proposed operation of the Springvale Water Treatment Project. The Springvale Water Treatment Project's proposed capacity of 42 ML/day takes into account the proposed modification for increased production rate, including potential short-term fluctuations in mine inflows.

The Department considers that the Springvale Water Treatment Project would significantly reduce discharges and achieve the long-term salinity reductions in the catchment, as envisaged by the PAC in its approval of the Springvale Mine Extension Project.

If the Springvale Water Treatment Project is approved and constructed, the maximum inflow rates of 19 ML/day (as predicted in 2023) would never be reached as this water would instead be transferred for treatment and reuse at the Mt Piper Power Station.

6.1.7 Site Water Management

The Blue Mountains Conservation Society Inc, DRE and EPA all raised some concerns about potential slumping of the expanded coal stockpile and resulting discharge of coal fines into the clean water system.

In its RTS, Springvale Coal has committed to providing a buffer around the expanded stockpile area to ensure coal is contained within a clearly demarcated area. Furthermore, the RTS provides further information confirming that the stockpile has been designed with dirty water diversion drains and dams that are sized to handle any potential increase in runoff from the stockpile.

The Department, DRE and the EPA are satisfied that there would be a sufficient buffer and appropriate site water management measures to prevent the discharge of coal fines into the clean water diversion system.

6.2 Biodiversity

6.2.1 Swamp Impacts

There is no change proposed to the mine layout or the mining method and therefore there would be no additional environmental consequences to swamps from conventional subsidence effects (i.e. vertical subsidence, strains or tilts). Furthermore, while the increased production rate would slightly *accelerate* the occurrence of subsidence effects, there would be no increase in the predicted *overall* subsidence effects.

In terms of groundwater levels and baseflows, the rate and volume of groundwater inflows to the mine would be consistent with the rate and volume already approved for the project. Changes to groundwater levels or baseflows to swamps from the modification would therefore be negligible.

Concern about the impacts of mining on the Newnes Plateau Shrub Swamps and the Newnes Plateau Hanging Swamps formed the basis for many of the objections to the modification. However, OEH and WaterNSW did not raise concerns about increased impacts to swamps, and the Department is satisfied that impacts to swamps would be generally consistent with the approved impacts.

6.2.3 Existing performance criteria and offset provisions

In its approval of the Springvale Mine Extension Project, the PAC acknowledged there is uncertainty about the extent and severity of mining impacts on swamps, and therefore ensured there is a sufficiently robust framework to manage any such impacts as mining progresses.

In particular, the existing conditions require:

- a comprehensive monitoring program directed towards identifying whether performance measures have been met or whether offsets have been triggered; and
- the establishment of an Independent Monitoring Panel (IMP) to provide advice on the subsidence related impacts of mining on swamps.

The Colong Foundation has drawn attention to recent swamp impacts in its submission and referred to the findings in the IMP's reports on the Extraction Plans for Longwalls 419 to 422. Over the past year, the IMP has noted a significant drop in the water levels of two of the swamps above the current mining areas.

The Department acknowledges that there have been impacts on swamps from mining at Springvale and is concerned that these may be long term impacts requiring offsets. However, the Department also notes that impacts to these swamps were predicted and are allowed under the existing consent, subject to the strict regulatory framework described above.

Based on the IMP's findings and recommendations on the impacts to these swamps, the Department has required Springvale Coal to strengthen the mine's swamp monitoring network and provide additional bonds to cover the offset liabilities. To date, Springvale Coal has installed all additional monitoring equipment recommended by the IMP and has also lodged $4 million in bonds with the Department to secure any future swamp offset liabilities.

The Department also agrees with the Colong Foundation that any swamps located outside the approved project area must not experience any impacts from mining. The IMP's most recent report has warned the company about this potential risk for the longwalls at the eastern end of the mine plan. The Department continues to closely monitor all the swamps, in consultation with the IMP, and will not approve any future Extraction Plan if there is likely to be any risk to swamps outside the project area.

6.2.3 Stockpile Extension

An ecological survey of the proposed stockpile expansion area was undertaken. The survey found that the area is highly modified and predominantly comprised of exotic grass and herb species including common weeds. There are no native vegetation communities or threatened flora or fauna species present, and no important habitat features such as hollow-bearing trees.

OEH raised no concerns in this regard and the Department is satisfied that there would be no impact to native vegetation or species from the stockpile extension.

6.3 Socio-Economic Impacts

The Springvale Mine is the only local mine currently supplying coal to the Mt Piper Power Station, which provides approximately 15% of NSW's electricity.

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 at full capacity during periods of increased demand. The proposed increase in production rate and capacity of the stockpile would allow the mine to supply additional coal to the power station and ensure that it can operate at full capacity for extended periods. The increased stockpile size would also ensure that coal can be supplied to the power station during any mining outages.

The Springvale Mine and Mt Piper Power Station are also now the main employers locally. The modification would ensure the ongoing viability of the mine, and provide 140 additional full time equivalent jobs. The mining company has estimated that the increased workforce would represent an $8 million increase in the net present value of the Springvale Mine Extension Project.

An accelerated rate of mine is also likely to accelerate payment of royalties and taxes to the NSW government and increase the value of those payments due to the time value of money.

6.4 Other Issues

The Department has assessed other issues relating to the proposed modification in accordance with the requirements of the EP&A Act, and summarised the findings of this assessment in **Table 1** below.

Table 1: *Assessment of Other Issues*

Issue	*Consideration and Assessment*
Noise	• The modified operation would involve minor additional equipment operating underground, however noise generating changes proposed to surface operations would be limited to the construction of a diversion drain (approximately 100 m in length) around the coal stockpile area and the noise from the additional traffic. • The Department is satisfied that the noise impacts from construction of the drain would be minimal and temporary in nature. • The additional traffic would not exceed the road noise criteria. • The EPA raised no concerns about noise impacts.

Issue	Consideration and Assessment
Traffic and Transport	• The modification would involve an increase in staff numbers commuting to site by private vehicle. However, the mine operates different shifts with varying start and finish times, and consequently arrival and departure peaks are offset. • A peak period traffic flow assessment undertaken at the intersection of Castlereagh Highway and Springvale Access Road identified that the modification would not significantly impact the operation of the intersection, and the Department is satisfied that there is sufficient parking to cater for the additional cars. • Notwithstanding the above, the existing conditions of consent require Springvale Coal to upgrade the intersection when traffic flows along Castlereagh Highway exceed 400 vehicle trips per hour. This trigger point has already been reached, and Springvale Coal has commenced planning for a channelized treatment in consultation with RMS. • RMS has no residual concerns about traffic impacts.
Air Quality and Greenhouse Gas Emissions	• Overall emissions from the mine would remain well below the relevant air quality criteria at sensitive receptors. • The modification would result in an annual increase in direct greenhouse gas emissions of 15%, and a 22% annual increase in indirect greenhouse gas emissions associated with combustion of the additional 1 Mtpa of product coal by end users. The Department notes that this represents approximately 0.0032% of annual NSW greenhouse gas emissions, and 0.0008% of annual national emissions. • The EPA raised no concerns about air quality impacts.
Aboriginal Cultural Heritage	• No Aboriginal objects were identified during a due diligence archaeology assessment of the proposed stockpile extension area. • The Department is satisfied that impacts to Aboriginal sites or artefacts are unlikely and that the approved Aboriginal Cultural Heritage Management Plan includes a protocol for managing unexpected Aboriginal items should they be found. • The OEH raised no concerns about impacts to Aboriginal and cultural heritage.
Visual	• There would be no change to the stockpile height, and the stockpile area is surrounded by dense vegetation that would continue to provide a visual buffer. The Department is satisfied that the stockpile extension would not be visible from publically accessible vantage points, including from Springvale Lane where the two closest residential receivers are located.

7 CONCLUSION

Springvale Coal has applied to modify its development consent to increase the rate of coal production and expand the coal stockpile area.

The Department considers that many of the issues raised in submissions actually relate to the ongoing operations of the mine rather than the modification proposal *per se*. However, the Department must consider the proposed modification before it and has therefore focussed on any additional environmental impacts from the modification.

The key issue for this modification is whether there would be any additional impacts on water quality in the catchment. The proposed increase in production rates would not significantly change the mine inflow rates and there is not likely to be any increase in discharges beyond what was originally considered and approved (i.e. up to 19 ML/day).

Nevertheless, the Department has adopted a precautionary approach and requested further analysis of potential short-term fluctuations in mine inflows. These fluctuations were always a possibility and even under a very conservative, worst-case scenario, both WaterNSW and the Department are satisfied that the potential impacts on water quality in the drinking water catchment would be within historical measurements.

Consequently, the Department is satisfied the potential impacts on Sydney's drinking water catchment would remain substantially the same as those that were assessed and approved by the PAC under the original project.

There would also be negligible additional impacts on swamps from the proposed modification. While the Department notes there are ongoing impacts on swamps at the mine, it is satisfied that these are consistent with the approved project and that the existing consent framework is sufficiently robust to manage or offset these impacts.

From a strategic perspective, the Springvale Mine is now the only local mine currently supplying coal to the Mt Piper Power Station, which provides approximately 15% of NSW's electricity and is extremely important to the State's energy security. The Department considers that the proposed increase in production rate would allow the mine to supply additional coal to the power station and ensure that it can operate at full capacity for extended periods, particularly when there is increased demand from consumers.

The Department also believes that the modification would provide a positive socio-economic contribution to the Lithgow region and the State economy by providing an additional 140 employment opportunities with consequent flow on effects. This represents an important contribution to the local economy as the Springvale Mine and Mt Piper Power Station are now the main employers locally.

Consequently, the Department is satisfied that the proposed modification is in the public interest and recommends that it is approved, subject to the proposed changes in the conditions of consent.

8 CONDITIONS

The Department has prepared a Notice of Modification and consolidated development consent (see **Appendices G and H**). The Department has recommended minor changes to the conditions of consent to regulate the expanded ROM coal stockpile area and to update the names of government agencies.

Springvale Coal has reviewed and accepted the recommended conditions of consent.

9 RECOMMENDATION

It is recommended that the Planning Assessment Commissions, as delegate of the Minister:

- **considers** the findings and recommendations of this report, noting that the Department considers the application is approvable, subject to conditions; and
- if the Commission determines to grant consent to the modification under section 96(2**), signs** the notice of modification in **Appendix G**.

Clay Preshaw
A/Director
Resource Assessments

David Kitto
Executive Director
Resource Assessments and Business Systems