

Environmental Assessment

Russell Vale Colliery Commencement of Long Wall 6



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Executive Summary

This Environmental Assessment has been prepared to support a modification application under section 75W of the *Environmental Planning and Assessment Act 1979* with respect to the project approval for the NRE No.1 Preliminary Works (as modified) (MP 10_0046). Wollongong Coal Limited (the Proponent) (formerly Gujarat NRE Coking Coal Ltd) seeks approval to modify the existing project approval to allow:

- extraction of coal from the first 400 metres of long wall 6 (LW6);
- continued operation of the site until 30 June 2015.

Modification Context

The Russell Vale Colliery (formerly the NRE No.1 Colliery) currently operates under a project approval granted by the Planning Assessment Commission (PAC) under delegation on 13 October 2011 (MP 10_00046). The project approval was modified by the PAC in 2012 to allow:

- extraction of coal using longwall mining techniques in the Wongawilli Seam for longwalls 4 and 5 (LW4 and LW5); and
- development of the main gate roads for longwall 6 (LW6) and establishment of the Wonga mains.

The project approval, as it currently exists, is limited to operate until 13 October 2014 (three years from the date that the approval was granted).

The Proponent has lodged an application for its Underground Expansion Project (MP 09_0013), which if approved would permit the continued operation of the colliery for five years and would allow extraction of 4.7 million tonnes of ROM coal. The environmental impact assessment for the Underground Expansion Project has been protracted based on the complex environment of the Russell Vale Colliery in proximity to the Cataract Reservoir and sensitive upland swamps, and the high level of community and stakeholder interest in the project. It is unlikely that determination of the application will be made until late 2014.

Extraction from LW4 and LW5 has been completed, and once the LW6 main gate roads are completed, which is expected by the end of April 2014, no further coal extraction or underground development will be permitted without further approval. At that time, the site will need to be placed into care and maintenance until such time as approval is secured to continue mining operations on the site. Placing the Russell Vale Colliery into care and maintenance will have the following implications:

- serious adverse impacts on more than 300 colliery employees as a result of reduced staffing requirements during the care and maintenance period;
- increased risks over time in relation to the Proponent's commercial ability to continue to meet its environmental and safety obligations on the site;
- increased risk that prolonged care and maintenance of the site may make it unviable to recommence mining operations once approval is secured in the future.

To avoid significant impacts on colliery employees, and to mitigate potential risks associated with a prolonged care and maintenance period, the Proponent considers it imperative to secure an interim approval for a small-scale continuation of operations pending a final decision on its larger Underground Expansion Project.

Proposed Modification

The Proponent seeks approval to extract coal from the first 400 metres of LW6 and to extend the duration of the existing project approval until 30 June 2015 to allow this extraction to occur. This will allow the colliery to continue to operate until a determination of the Underground Expansion Project is made.

No other changes to the existing project approval are proposed, and the colliery would continue to operate in accordance with the conditions of the project approval and other applicable licences and permits.

Potential Environmental Impacts

The proposed modification relates to underground extraction of coal from a short, 400 metre initial section of LW6. As a consequence, the incremental increase in environmental impacts associated with the proposed modification over and above impacts from the existing, approved colliery operations is likely to be minimal. Extraction of

400 metres of coal from LW6 represents a relatively small scale, environmentally low risk mining activity relative to existing operations and the proposed broader Underground Expansion Project.

This Environmental Assessment has relied on various specialist investigations and assessments prepared for the Underground Expansion Project, and applied findings from these assessments as relevant to the proposed modification. Based on this, potential key environmental issues associated with the proposed modification would relate to:

- subsidence;
- hydrogeology and surface water;
- Aboriginal heritage;
- ecology;
- socio-economics.

Subsidence

The assessment of potential subsidence impacts associated with the proposed modification has been based on previous subsidence modelling, which conservatively assumes full extraction of LW6 and the adjacent LW7. Subsidence predictions have therefore overestimated expected impacts from extraction of only 400 metres of LW6 (and no extraction from LW7). Based on this conservative modelling, predicted subsidence is expected to be largely contained within the area delineated by the LW6 panel and has been modelled to be no greater than 2.1 metres in areas above extraction in LW6 (compared with historical subsidence of 1.5 metres in the same area). Experience with extraction from LW4 and LW5 suggests that modelled subsidence significantly overestimates what is observed in the field. Modelled tilt in the Wongawilli Seam has been predicted to be no greater than 38 mm/m, while tensile and compressive strains in the same seam would not exceed 11 mm/m and 23 mm/m respectively.

Some closure effects have been predicted along Cataract Creek, although these impacts are proposed to be managed through an adaptive management approach to ensure that mining activities are conducted to ensure that closure does not exceed 200 mm. Closure along Cataract River is expected to be negligible, and no greater than 30 mm.

The mine layout has been designed to avoid encroachment into the Lake Cataract Marginal Zone (0.7 times the depth of the coal seam, to provide a protective barrier in line with the requirements of the Dams Safety Committee). LW6 would lie outside a further buffer, the Restricted Zone (an additional 0.5 times the depth of the coal seam), with the exception of a very small area in the south-western corner of the longwall panel. These measures, and the presence of overlying strata with low hydraulic conductivity, support the conclusion that hydraulic connection between Lake Cataract and the LW6 workings is unlikely.

Based on subsidence modelling, there is potential for limited bed cracking beneath significant upland swamps (CRUS1 and CCUS4). However, historical mining which has resulted in subsidence of around 0.8 metres below CCUS4 has not resulted in observed adverse impacts on the swamps, or their hydrology or ecology. While potential impacts on upland swamps are considered to be minimal, it is considered prudent to adopt an adaptive management approach in line with the approach to subsidence, groundwater and surface water management to ensure that proactive amendments are made to extraction activities in the event that surface monitoring indicates a deterioration in the health of upland swamps as a result of underground mining.

Subsidence modelling indicates that other sensitive surface features, including Aboriginal heritage sites, Mount Ousley Road and transmission lines are located outside areas likely to be affected by significant subsidence effects from the proposed modification.

Hydrogeology and Surface Water

Based on conceptual groundwater modelling, and data from existing mining operations, extraction of the first 400 metres of LW6 is expected to increase groundwater inflows into underground workings from an average of 1.1 ML/day to around 1.6 ML/day. The Proponent currently holds a groundwater licence with an extraction allocation of 365 ML/year. On this basis, acquisition of an additional groundwater allocation may be required. Groundwater extracted from longwalls will be treated and disposed through the colliery's existing surface facilities consistent with current practice, and in accordance with the requirements of existing Environment Protection Licence 12040.

There is potential for bed cracking beneath upland swamps and Cataract Creek, leading to minor loss of base flow into the subsurface. However, subsidence and groundwater assessments have indicated that the potential for these effects would be low and restricted in extent, with any loss of surface water expected to be minimal. Experience with historical mining, and more recently extraction of LW4 and LW5 supports this conclusion with no observed effects on either upland swamps or on Cataract Creek. Relevantly, extraction from LW5 encroached relatively close to Cataract Creek, and significantly closer than the proposed extraction of the first 400 metres of LW6, with no observed loss of base flow from Cataract Creek.

The Proponent intends to continue to monitor surface and groundwater flows, and to use this data in a robust adaptive management approach which would trigger review and amendment of mining activities in the event that elevated impacts are detected.

No surface works or changes to surface water management are proposed as part of this modification.

Aboriginal Heritage

The two closest Aboriginal heritage sites to the first 400 metres of LW6 are 52-3-0320 (an axe grinding groove located between LW4 and LW5) and 52-3-0325 (a rock shelter with art, located 100 metres north of LW6 and directly above proposed future LW7). Both of these sites are predicted to experience subsidence as a result of the proposed modification of less than 20 mm. On this basis, neither site is expected to be adversely affected by the proposed modification.

Ecology

The area in and around the proposed initial extraction of LW6 is inhabited by known and potential threatened species that may be susceptible to subsidence-related effects, including:

- species dependent on cliff habitats, including the Large-eared Pied Bat, the Eastern Bentwing-bat and Large-footed Myotis;
- species dependent on rocky outcrops, including the Broad-headed Snake and *Acacia bauera* ssp *aspera*;
- species dependent on upland swamp habitats, including the Giant Burrowing Frog, Littlejohn's Tree Frog and Prickly Bush-pea; and
- species dependent on local watercourse habitats, including the Stuttering Frog and several threatened aquatic species.

Subsidence modelling has indicated negligible impacts on cliff and rocky outcrop habitats as a result of the proposed modification. In particular, significant areas of these habitats above proposed future LW9 and along Cataract Creek are well beyond the extent of predicted significant subsidence effects associated with the proposed modification.

While there is potential for bed cracking beneath upland swamps and Cataract Creek, leading to minor loss of base flow into the subsurface, the risk of these impacts as a result of the proposed modification would be minimal. Provided that proposed monitoring and adaptive management measures are implemented as proposed, residual risks of surface impacts on habitats and surface and groundwater dependent ecosystems would be minor.

Overall the proposed modification is unlikely to have a significant impact on threatened species, populations, communities or their habitats. No direct disturbance of surface areas is proposed.

Socio-economic

Without approval to proceed with extraction of coal from the first 400 metres of LW6, the Russell Vale Colliery would be forced to be placed into care and maintenance. This would lead to a significant reduction in or loss of the following current benefits derived from operation of the colliery:

- ongoing employment of more than 300 employees;
- continuation of payments made to suppliers of operational inputs and materials related to site operations, including transport providers transporting coal for export to Port Kembla Coal Terminal;
- continuation of payments to consultants and contractors for operational maintenance and associated Site compliance monitoring;
- continued support of local businesses and spending on goods;

- maintenance of community development and ongoing opportunities for the Proponent to identify and support community development programs in the local and regional community; and
- continued payment of royalties to Government.

1.0 Introduction

Wollongong Coal Limited (formerly Gujarat NRE Coking Coal Ltd) (the Proponent) owns and operates the Russell Vale Colliery (formerly the NRE No.1 Colliery) near Wollongong, in the Wollongong and Wollondilly local government areas. The colliery first commenced operations in the 1880s with longwall mining introduced in the late 1960s. Coal is currently extracted from the Wongawilli and Bulli seams. Extraction from the Balgownie coal seam is no longer conducted.

The colliery currently operates under a project approval (MP 10_0046) granted on 13 October 2011 under the then Part 3A of the *Environmental Planning and Assessment Act 1979* and subsequently modified on 24 December 2012. The project approval permits underground longwall coal mining and operation of surface facilities with two key limits:

- 1) the approval operates for a period of three years from the date of issue and is therefore due to expire on 13 October 2014; and
- 2) underground development is permitted up to and including establishment of main gates for longwall panel 6 (LW6) and establishment of the Wonga mains is permitted, but no further.

Expansion of underground mining is currently the subject of a separate application (MP 09_00013) which, if approved, would allow coal mining to continue for a further five years¹. Determination of this application by the Planning and Assessment Commission (PAC) is not expected until late in 2014.

The Proponent is nearing completion of development of the main gates for LW6, with these works likely to be finished well ahead of the expiration of the current approval and expected determination of the application for expansion of underground mining. In the absence of any further approval permitting continuation of mining, the colliery would be required to cease operations and would be placed into care and maintenance. This would have a significant adverse impact on more than 300 staff currently employed at the site.

To avoid this outcome, the Proponent seeks approval to commence long wall mining from LW6, with sufficient capacity to allow continued operation of the site and employment of existing staff until such time as the underground expansion project application is determined by the PAC. Approval is sought to modify the existing project approval (MP 10_0046) to permit extraction of an initial short, 400-metre section of LW6.

This Environmental Assessment has been prepared to support an application under section 75W of the *Environmental Planning and Assessment Act 1979* to allow:

- extraction of coal from the first 400 metres of LW6; and
- continued operation of the site until 30 June 2015.

No other changes to the existing project approval or operations on the site are proposed.

¹ Note that the application as made sought approval for extraction of coal over an 18 year period. The extent of mining and consequently the duration of mining was reduced through a Preferred Project Report prepared and submitted for the Underground Expansion Project.

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2.0 Background and Existing Site

2.1 Site Context

The Russell Vale Colliery is located to the west of the suburb of Russell Vale approximately eight kilometres north of Wollongong and 70 kilometres south of Sydney as shown in **Figure 1**. The colliery site is located within the local government areas (LGAs) of Wollongong and Wollondilly in the Illawarra region.

The site is approximately 6,673 hectares in area comprising three leases: Consolidated Coal Lease (CCL) 745, Miscellaneous Purposes Licence (MPL) 271 and Mining Lease (ML) 1575. The site is located between the BHPBilliton Appin and Dendrobium collieries in the Southern Coalfields (refer to **Figure 2**).

Surface facilities for the site are located at the base of the Illawarra escarpment in the east with underground workings extending west into the escarpment towards the Wonga West area (refer to **Figure 3**). Access to the site's surface facilities is from the east via the Princes Highway. Bellambi Lane intersects the Princes Highway and provides access to the Northern Distributor (Memorial Drive) to the east of the site. Bellambi Lane acts as the main thoroughfare for coal being transported by road to the Port Kembla Coal Terminal (PKCT) approximately 10 kilometres to the south of the site. Coal from the site is loaded onto ships berthed in Port Kembla Harbour for export.

Surface land uses surrounding the site consist predominantly of the Water Catchment Special Area declared under the *Sydney Water Catchment Management Act 1998* and managed by the Sydney Catchment Authority. Abutting the south-eastern and north-eastern boundaries of the site are Illawarra Escarpment State Conservation Areas. To the east consists the medium-density residential suburbs of Bulli, Woonona, Russell Vale and Corrimal extending to the base of the escarpment.

The 400-metre initial section of LW6 the subject of this modification application lies within the Wonga East area of the site approximately four kilometres west of Russell Vale. It would be located beneath the Lake Cataract Catchment Area as shown in **Figure 3**. The proposed section of long wall would not require mining under the Cataract River. The land above and around the 400-metre section of LW6 is relatively undisturbed natural bushland, and includes several Upland Swamps of Special Significance. The two closest of these, CRUS1 and CCUS4, encroach into the area above the 400-metre section of LW6 in the south-west and north-east respectively. The south-western corner of LW6 falls within the Lake Cataract Notification Area of the NSW Dams Safety Committee for the Cataract Reservoir.

The closest sensitive receivers to the 400-metre section of LW6 are located approximately four kilometres to the east on Rixons Pass Road, Russell Vale. These receivers are located adjacent to the Russell Vale Colliery surface facilities and the Russell Vale Colliery boundary. Residential receivers located in the suburbs of Corrimal and Russell Vale also border Russell Vale Colliery surface facilities. To the north of the surface facilities is the Russell Vale Golf Club.

2.2 Existing Russell Vale Colliery

Underground mining has occurred at the Russell Vale Colliery since the 1880's with longwall mining techniques first used in the late 1960's and continuing to the present day. Utilising this technology, mining has progressed in the Balgownie and Wongawilli coal seams in the Wonga East area (refer to **Figure 3**). Extracted coal is transported to surface facilities located in the eastern most portion of the site via conveyor belt for stockpiling and transport to Port Kembla Coal Terminal. Coal is transported from the site by road as Run of Mine (ROM) coal.

The site's surface facilities span an area of approximately 100 hectares and include:

- administration offices and amenities;
- maintenance workshops;
- car parking areas and internal sealed and unsealed roads;
- two portal entries; one for personnel and materials and another for the belt road which conveys coal to the surface;
- three portal entries, one in the Wongawilli seam and the other two in the Balgownie seam. These provide access for a high capacity coal conveyor system, a rubber tyre vehicle transport road and a track road for rail mounted transport;
- Run of Mine (ROM) coal stockpile area and reclaim tunnel;

- one decline belt conveyor from the belt portal to the ROM coal stockpile area;
- breaker building and conveyor leading to the truck load-out bins;
- truck load-out facilities;
- vehicle wash;
- weigh bridge;
- water treatment and management facilities;
- fuel storage facilities;
- oil storage facilities;
- emplacement area (to the north of the surface facilities); and
- stormwater detention basins.

Supporting underground operations are:

- three ventilation shafts (No. 1, 3 and 5) and one personnel and materials access shaft (No. 4);
- an explosives compound; and
- electrical substations.

No changes to the site's surface facilities or their current operation are proposed as part of the current modification application.

2.3 Approvals Context

2.3.1 NRE No 1 Preliminary Works Project Approval (MP 10_0046) and Modifications

On 13 October 2011, project approval was granted by the Planning Assessment Commission (PAC) for the NRE No. 1 Preliminary Works Project (MP 10_00046). Prior to that time, the site had operated under various forms of continuing use rights. However, changes to the *Mining Act 1992* which removed the ability to undertake mining operations within a mining lease without the need for planning approval necessitated the NRE No. 1 Preliminary Works Project to enable ongoing operation of the site beyond 31 December 2011.

In addition to permitting continued operation of the site, the NRE No. 1 Preliminary Works Project approval included:

- augmenting, upgrading and using the existing infrastructure at the mine;
- extracting up to one million tonnes of ROM coal per year from the Bulli and Wongawilli coal seams for a period of up to three years using pillar extraction mining methods;
- extracting remnant coal reserves within existing mining areas;
- transporting ROM coal from the colliery by road; and
- rehabilitating the site.

In early 2012, a modification application was lodged with respect to the NRE No. 1 Preliminary Works Project approval, seeking approval for:

- extraction of coal using longwall mining techniques in the Wongawilli Seam for longwalls 4 and 5 (LW4 and LW5); and
- development of the main gate roads for longwalls 6, 7 and 8 (LW6, LW7 and LW8).

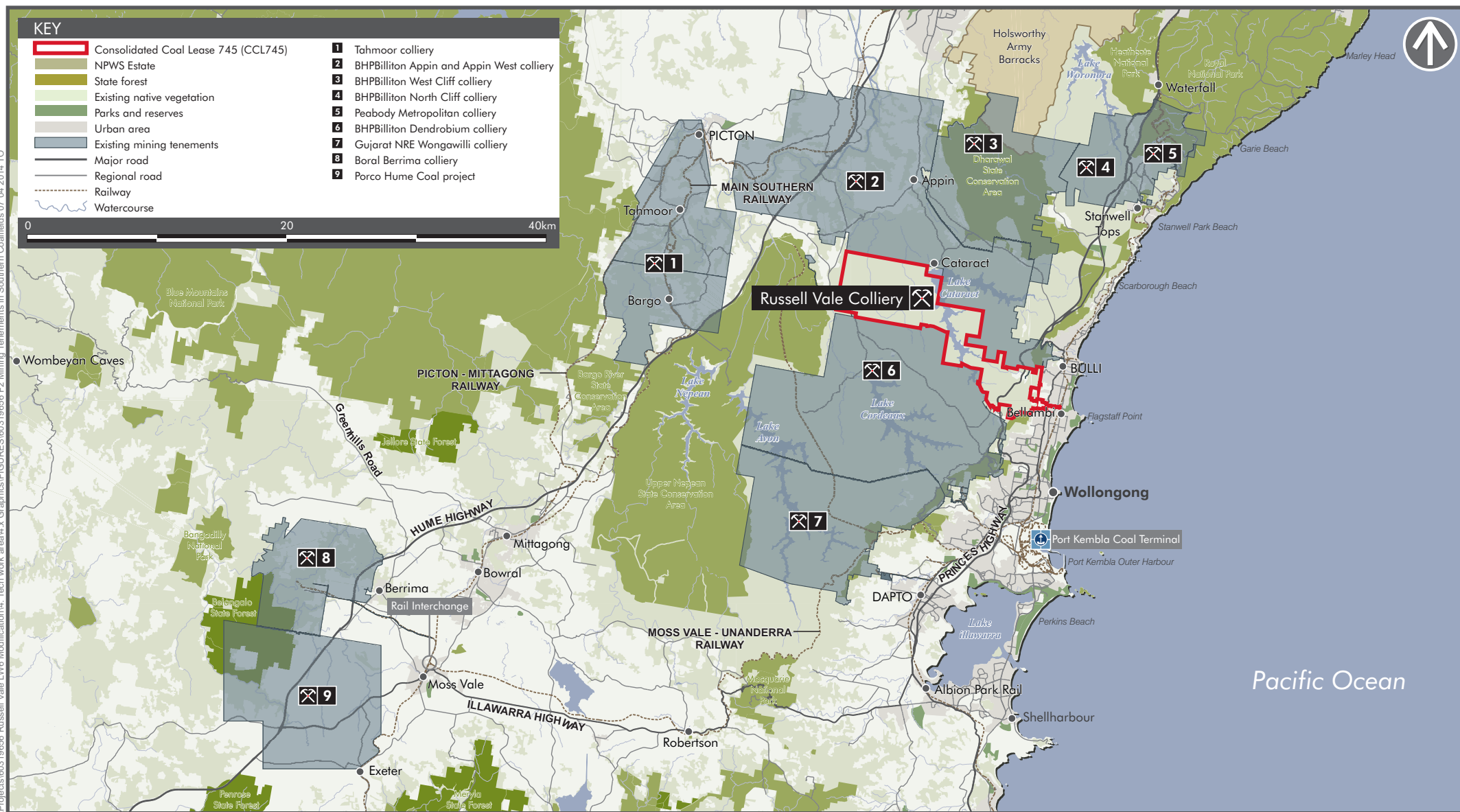
Extraction of LW4 was completed under the existing approved Subsidence Management Plan prior to determination of the modification. In determining the modification application, the PAC expressly excluded development of the main gate roads to LW7 and LW8 (but approved the main gate road for LW6).

Extraction of LW5 was completed on 12 January 2014 and the main gate for LW6 is currently nearing completion (expected in April 2014).



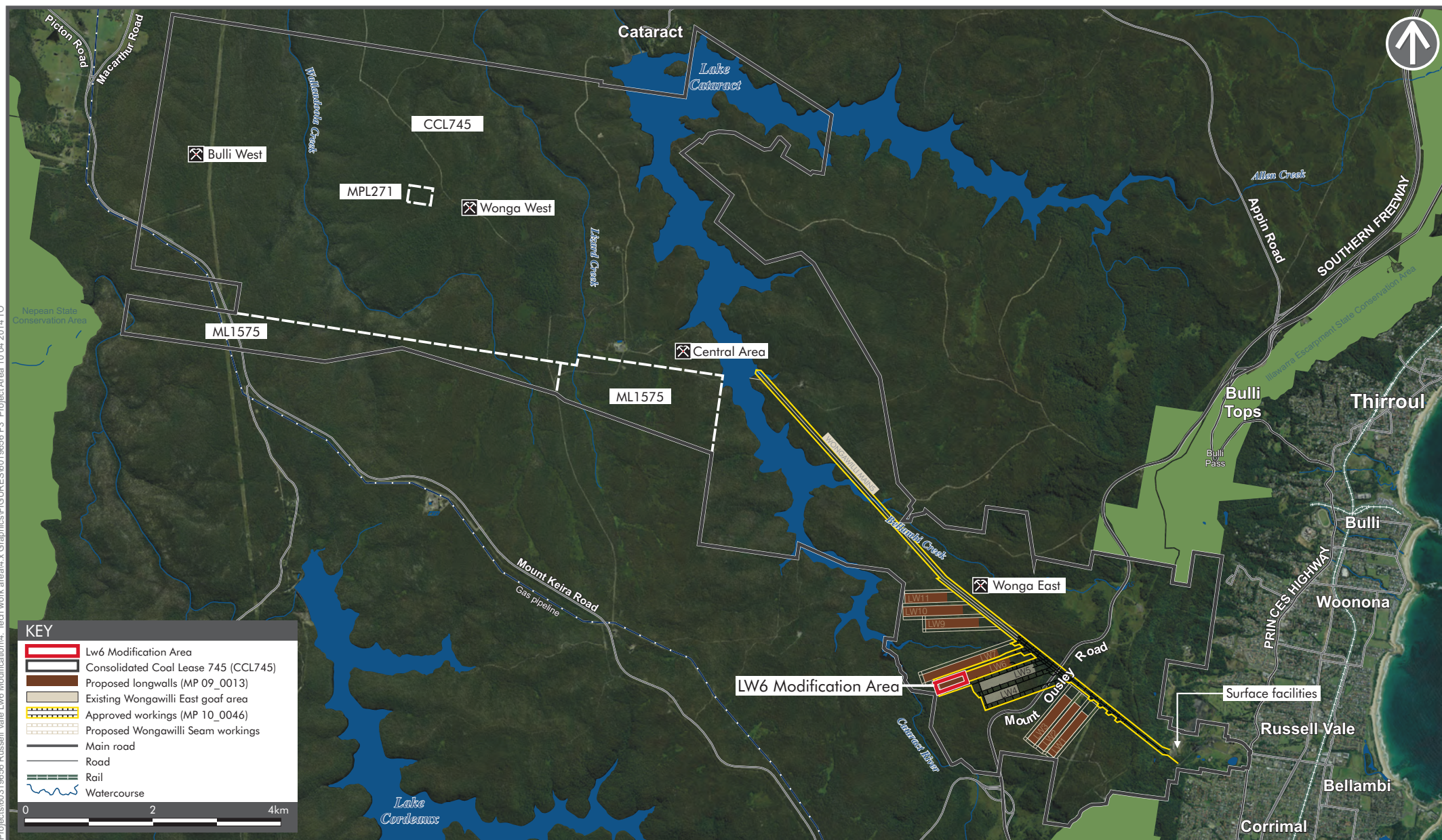
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2.3.2 Underground Expansion Project (MP 09_0013)

In 2009, an application was lodged under the then Part 3A of the *Environmental Planning and Assessment Act 1979* for an underground expansion of the Russell Vale Colliery (MP 09_0013). The application as made included sixteen longwall panels across the Wonga East and Wonga West areas, to extract around 31 million tonnes of ROM coal over an 18 year period. As part of the assessment process and in response to issues raised in public submissions, the Proponent reviewed the scope of the Underground Expansion Project and submitted a Preferred Project which:

- reduced the project to eight longwall panels in only the Wonga East area;
- reduced the total ROM coal production from the project to 4.7 million tonnes;
- reduced the total life of the project to five years; and
- reorientated some of the proposed longwalls within the Wonga East area.

The short 400-metre section of LW6 the subject of this modification application is consistent with the proposed extraction of that longwall as part of the Underground Expansion Project. As such, assessments undertaken for the Underground Expansion Project have been relied on for the purpose of this modification application to the extent that those assessments are relevant to the initial extraction of LW6.

A draft summary of key issues raised by public authorities in response to the public exhibition of the Environmental Assessment for the Underground Expansion Project is included in **Appendix B**, in addition to a response to the issues raised. To the extent that they are relevant to the current modification application, the issues raised by public authorities have been considered as part of the proposed modification.

2.4 Current Adaptive Management Measures

The Russell Vale Colliery currently operates under a series of environmental management plans that have been developed and applied to provide an 'adaptive management approach' to coal extraction. These plans provide a 'trigger, action, response' framework through which the Proponent uses monitoring data to identify situations in which acceptable environmental outcomes are being approached, or exceeded, and developing and implementing appropriate responses to ensure that impacts are reduced to an acceptable level. Depending on the nature and extent of the particular environmental issue, this approach may require modification of the configuration, rate or extent of coal extraction. Key environmental management plans that have been applied to the extraction of coal from LW4 and LW5 include:

- *LW 5 Biodiversity Management Plan* (Gujarat NRE, 2012);
- *LW5 Public Safety Management Plan* (Gujarat NRE, 2012);
- *LW5 Subsidence Monitoring Plan* (Gujarat NRE, 2013);
- *LW5 Built Features Management Plan (RMS)* (Gujarat NRE, 2012);
- *Heritage Management Plan* (Gujarat NRE, 2012);
- *LW5 Electricity Transmission Lines Management Plan* (Gujarat NRE, 2013); and
- *LW5 Water Management Plan* (Gujarat NRE, 2013).

Copies of these plans are provided in **Appendix A**.

Should the modification application the subject of this Environmental Assessment be approved, it is proposed that these plans would be updated as relevant to reflect the extraction of the first 400 metres of LW6. This approach would ensure continuation of the successful adaptive management approach employed during extraction of LW4 and LW5 to further extraction of coal from LW6.

2.5 Proposed Modification

2.5.1 Need and Context

As outlined in **Section 1.0**, the Proponent is currently seeking approval to implement its Underground Expansion Project (MP 09_0013) which, if approved, would permit the continued operation of the site for five years and would allow extraction of 4.7 million tonnes of ROM coal. The environmental impact assessment for the project has been protracted, based on the complex environment of the Russell Vale Colliery in proximity to the Cataract Reservoir and sensitive upland swamps, and the high level of community and stakeholder interest in the project. The Proponent

has recently submitted a Preferred Project Report and Submissions Report for the project, and it is expected that the project application will shortly proceed to consideration by the Planning and Assessment Commission (PAC). Based on statutory environmental assessment and administrative timeframes, it is unlikely that the PAC will be in a position to determine the application until later in 2014.

In the interim, the Proponent has continued to operate under its existing project approval for the NRE No. 1 Preliminary Works Project (MP 10_0046) (as modified to include extraction of LW4 and LW5, and establishment of the main gate roads for LW6). The Proponent is currently in the latter stages of establishing the main gate roads for LW6, after which the spatial extent of its existing approval will be exhausted (although the approval itself currently operates until 13 October 2014). Once the LW6 main gate roads are completed, which is expected by the end of April 2014, no further coal extraction or underground development will be permitted without further approval. At that time, the site will need to be placed into care and maintenance until such time as approval is secured to continue mining operations on the site.

Placing the Russell Vale Colliery into care and maintenance will have the following implications:

- serious adverse impacts on more than 300 colliery employees as a result of reduced staffing requirements during the care and maintenance period;
- increased risks over time in relation to the Proponent's commercial ability to continue to meet its environmental and safety obligations on the site;
- increased risk that prolonged care and maintenance of the site may make it unviable to recommence mining operations once approval is secured in the future.

To avoid significant impacts on colliery employees, and to mitigate potential risks associated with a prolonged care and maintenance period, the Proponent considers it imperative to secure an interim approval for a small-scale continuation of operations pending a final decision on its larger Underground Expansion Project. To this end, the Proponent seeks approval to allow coal extraction from an initial short section of LW6 (up to 400 metres), which it expects will be sufficient to support continued operation of the site and employment of existing staff until such time as the application for the Underground Expansion Project is approved.

2.5.2 Description of Modification

The Proponent seeks approval to modify the existing the NRE No. 1 Preliminary Works Project (as modified), to permit:

- extraction of coal from the first 400 metres of longwall 6;
- continued operation of the Russell Vale Colliery until 30 June 2015.

The Russell Vale Colliery would continue to operate as it currently does (with a maximum extraction rate of one million tonnes per annum of ROM coal), and in compliance with the existing conditions of approval applicable to the site.

The physical extent of works proposed as part of this modification application is shown in **Figure 4**.

2.5.3 Justification for the Scope of the Modification

This modification application relates to the extraction of coal from the first 400 metres of LW6 based on:

- consideration of the revenue required to sustain the site and its operations until expected determination of the Underground Expansion Project later in 2014; and
- avoidance of key sensitive environmental features identified through the assessment of the current Underground Expansion Project. Relevantly, a short section of LW6 has been identified to avoid mining under the majority of upland swamp CCUS4. Potential impacts on CCUS4 would continue to be assessed as part of the larger Underground Expansion Project.

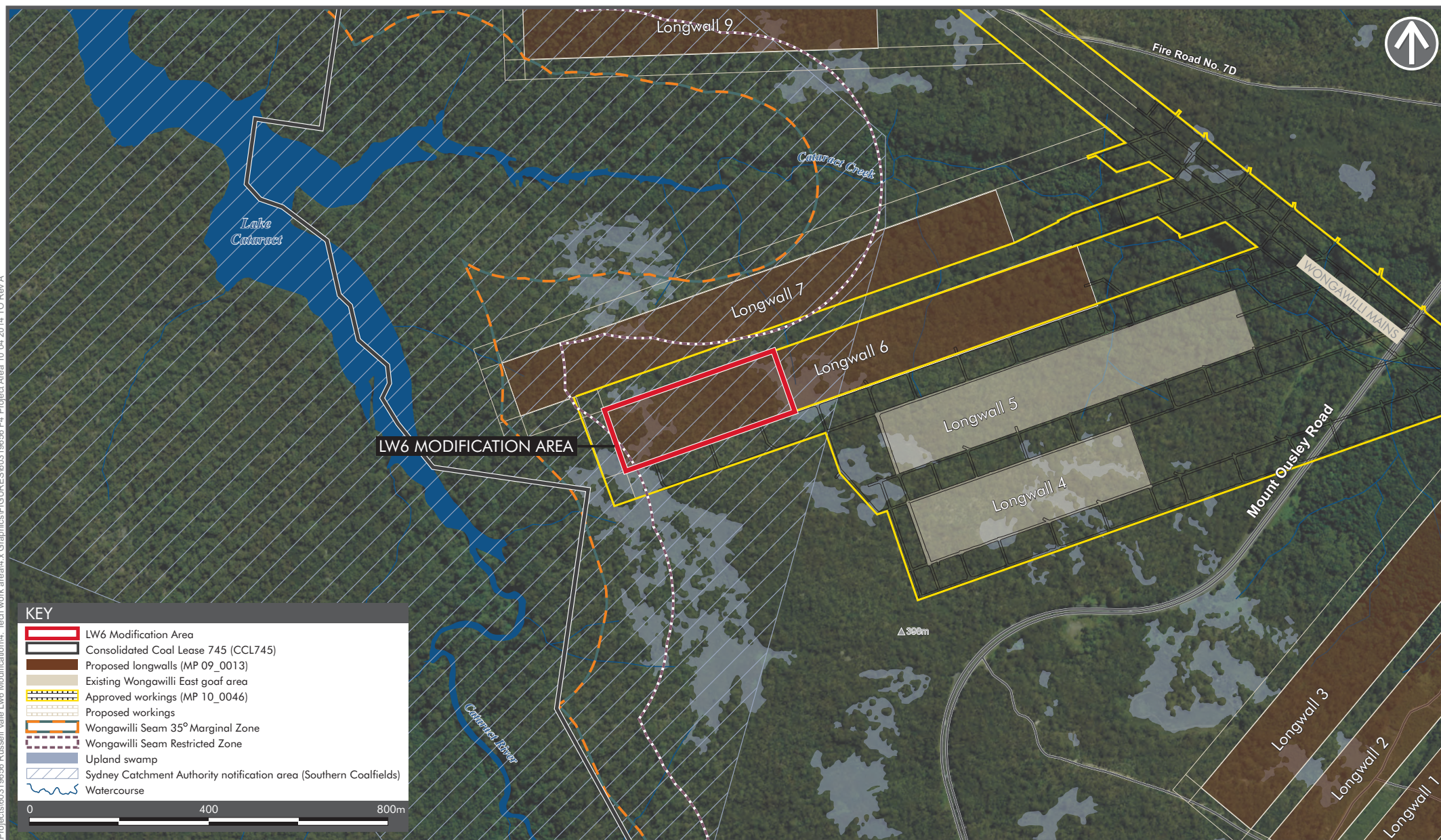
An extension to the completion date of the existing NRE No.1 Preliminary Works approval has been sought until 30 June 2015 based on:

- an estimate of the potential time taken to assess and determine this modification application (two to three months);
- an estimate of the time required to extract coal from the first 400 metres of LW6 (two to three months, depending on operational requirements);

- the need to extend the life of the approval to allow completion of the Wonga Mains;
- provision for necessary care and maintenance works to be completed under the terms of the existing approvals for the site, should this modification and/ or the Underground Expansion Project not be approved within necessary timeframes.

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3.0 Statutory Planning

3.1 Environmental Planning and Assessment Act 1979

3.1.1 Permissibility

The existing Russell Vale Colliery and the proposed modification constitute permissible uses (with consent) under *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, being development for the purpose of underground coal mining (clause 7(1)(a)).

3.1.2 Transitional Part 3A Project

The NRE No. 1 Preliminary Works Project (MP 10_0046) constitutes a 'transitional Part 3A project' within the meaning of Schedule 6A of the *Environmental Planning and Assessment Act 1979*. In particular, it is a project that was approved subject to the provisions of the then Part 3A of the Act (clause 2, Schedule 6A).

Pursuant to clause 3(1), Schedule 6A of the *Environmental Planning and Assessment Act 1979*, the provisions of the now repealed Part 3A continue to apply with respect to the approved project. This includes the power to modify the project approval under section 75W.

3.1.3 Section 75W Modification

The extraction of coal from LW6 and extension of the life of the Russell Vale Colliery beyond 13 October 2014 is not consistent with existing project approval MP 10_0046. Under (the now repealed) section 75W of the *Environmental Planning and Assessment Act 1979*, the approval of the Minister for Planning and Infrastructure is therefore required to modify the existing project approval to allow these additional works.

The Proponent does not consider the scope and extent of the proposed modification is such that it would warrant the submission of a fresh development application, noting that:

- with the exception of a short 400 metre section of coal extraction from LW6, the physical scope of the approved project would not change;
- extraction of coal from LW6 would represent only a minor increase in the extent of environmental impacts associated with the approved project;
- the site would continue to operate under the environmental standards specified in the current project approval.

3.1.4 Environmental Planning Instruments

The following environmental planning instruments are relevant to the assessment of the proposed modification:

- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*;
- *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011*;
- *Illawarra Regional Environmental Plan No. 1*; and
- *Wollongong Local Environmental Plan 2009*.

3.1.4.1 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

Part 3 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) specifies various matters that must be considered by a consent authority (in relation to determination of a development application). These heads of consideration are outlined in **Table 1** in the context of the proposed modification.

Table 1 - Heads of Consideration under the Mining SEPP

Head of Consideration	Comment
Clause 12: compatibility of the proposed development with other land uses.	The proposed modification involves underground coal mining and would therefore not have a direct impact on surface land uses. It may, however, indirectly affect the surface through subsidence effects and consequential impacts on hydrogeology, surface water and ecology. The assessment of key issues in Section 4.0 demonstrates that the proposed modification would not adversely affect permissible surface land uses (within the E2

Head of Consideration	Comment
	Environmental Conservation zone under <i>Wollongong Local Environmental Plan 2009</i>). The proposed extraction of the first 400 metres of LW6 would not be incompatible with continued use of the overlying land for the purpose of environmental conservation.
Clause 13: Compatibility of proposed development with mining, petroleum production or extractive industry.	The propose modification is for the purpose of underground coal mining in an existing mining lease area. It is therefore compatible with mining, petroleum production and extractive industry.
Clause 14: Natural resource management and environmental management	The proposed modification does not seek to change current natural resource management and environmental management requirements applicable to the Russell Vale Colliery through existing conditions of approval. Where relevant, existing environmental management plans and systems would be updated to reflect the amended scope of the site to include the first 400 metres of LW6. The assessment presented in Section 4.0 demonstrates that the proposed modification would not have a significant impact on natural resources, including surface and groundwater, ecology and landscape values.
Clause 15: Resource recovery	The proposed modification is based on part of the current mine plan for the Underground Expansion Project (MP 09_0013), which has been developed to optimise resource recovery within the context of environmental and geological constraints.
Clause 16: Transport	The proposed modification would not affect currently-approved arrangements for the transport of materials to and from the Russell Vale Colliery. The site is currently authorised to transport ROM coal from the site by road to the Port Kembla Coal Terminal.
Clause 17: Rehabilitation	The current approval for the site requires development and implementation of a Rehabilitation Plan for the site. The Plan would be updated as relevant to reflect inclusion of coal extraction from the first 400 metres of LW6. The proposed modification seeks approval to extend the life of the current project approval until 30 June 2015, which would delay closure and rehabilitation of the site by a commensurate period.

3.1.4.2 State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

The proposed modification would be located within Sydney's Drinking Water Catchment, below land to which *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (Sydney Drinking Water Catchment SEPP) applies.

The Sydney Drinking Water Catchment SEPP specifies that development within the drinking water catchment should incorporate Sydney Catchment Authority's current recommended practices and standards. In relation to the proposed modification, the following current recommended practices and standards are relevant:

- Preparation of environmental management plans: *Guideline for the Preparation of Environmental Management Plans* (Department of Infrastructure, Planning and Natural Resources, 2004); and
- Management of water quality: *Developments in Sydney's Drinking Water Catchment – Water Quality Information Requirements* (Sydney Catchment Authority, 2011).

The existing project approval for the Russell Vale Colliery requires development and implementation of surface water management and monitoring programs for the site, which would be updated to reflect the additional extraction of coal from the first 400 metres of LW6. As part of this update, relevant monitoring programs and management plans would be reviewed to ensure that they are consistent with the guidelines listed above.

Clause 10 of the Sydney Drinking Water Catchment SEPP requires a consent authority, when determining a development application under Part 4 of the *Environmental Planning and Assessment Act 1979*, to consider whether the development would have a neutral or beneficial effect on water quality. The proposed modification, not being an application for development consent under Part 4, is not bound by this requirement. Notwithstanding, potential

surface water impacts have been assessed in **Section 4.3**, with the conclusion formed that extraction of the first 400 metres of coal from LW6 is unlikely to have a significant impact on water quality.

3.1.4.3 Illawarra Regional Environmental Plan No. 1

The proposed modification would be located under land the subject of *Illawarra Regional Environmental Plan No. 1* (Illawarra REP).

Clause 37 of the Illawarra REP requires a consent authority (in relation to a development application for a coal mine) to satisfy itself that:

- there is a proposed environmentally acceptable mode of transport associated with the development which is, or is capable of being, integrated into a comprehensive system for handling all coal movements within the region; and
- if public road haulage is the only feasible mode of transport, it is restricted to the most environmentally acceptable route.

The proposed modification does not seek to alter the approved transport arrangements for coal (or any other materials) from the Russell Vale Colliery. ROM coal is currently approved to be hauled by road from the colliery to the Port Kembla Coal Terminal for export.

Clause 41 of the Illawarra REP relates to coal washery refuse emplacements. Coal washing does not currently occur at the Russell Vale Colliery and this situation would not change as a result of the proposed modification.

3.1.4.4 Wollongong Local Environmental Plan 2009

The proposed modification involving extraction of the first 400 metres of LW6 would be located beneath land zoned E2 Environmental Conservation under the *Wollongong Local Environmental Plan 2009*. Development for the purpose of underground coal mining is permissible with development consent under *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* despite otherwise being an innominate prohibited use in zone E2 Environmental Conservation under the *Wollongong Local Environmental Plan 2009*.

The objectives of the E2 Environmental Conservation zone are to:

- protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values;
- prevent development that could destroy, damage or otherwise have an adverse effect on those values;
- retain and enhance the visual and scenic qualities of the Illawarra Escarpment; and
- maintain the quality of the water supply for Sydney and the Illawarra by protecting land forming part of the Sydney drinking water catchment (within the meaning of *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011*) to enable the management and appropriate use of the land by the Sydney Catchment Authority.

The proposed modification would not involve surface works, and is therefore only relevant in the context of potential indirect impacts (through subsidence effects and consequential impacts on landscape, hydrology, hydrogeology and ecology) on surface environmental values and the pursuance of the abovementioned zone objectives. **Section 4.0** considers potential impacts of the proposed modification in key areas including subsidence, hydrogeology, surface water and ecology, and concludes that the proposed modification is unlikely to have a significant impact in these areas. As a consequence, it is anticipated that the proposed modification would not be inconsistent the objectives of the E2 Environmental Conservation zone.

There are no other provisions of the *Wollongong Local Environmental Plan 2009* that are relevant to the assessment of the proposed modification.

3.2 Other NSW Environmental Approvals

In addition to approval under the *Environmental Planning and Assessment Act 1979*, the following separate approvals are relevant to the proposed modification:

- an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997*. The Russell Vale Colliery currently operates under EPL 12040, which is not proposed to alter as a consequence of the proposed modification;
- a Mining Lease under the *Mining Act 1992*. The Russell Vale Colliery currently holds Consolidated Coal Lease (CCL) 745, Miscellaneous Purposes Licence (MPL) 271 and Mining Lease (ML) 1575. These existing leases and licence are not proposed to be amended as a consequence of the proposed modification, although relevant documents, including the currently-approved Mine Operations Plan (MOP) would be updated to reflect the addition of the first 400 metres of coal extraction from LW6;
- the proposed modification falls within the Lake Cataract Notification Area for the Cataract Reservoir. Consultation has already been conducted with the NSW Dam Safety Committee in relation to the Underground Expansion Project (MP 09_0013) with respect to mining in proximity to the Cataract Reservoir, including the first 400 metres of LW6 proposed to be extracted as part of this modification; and
- a groundwater licence to take groundwater under the *Water Act 1912/ Water Management Act 2000*. The Russell Vale Colliery currently operates under groundwater licence 10BL602992 with an annual groundwater extraction limit of 365 ML. Based on current groundwater extraction and predicted additional groundwater inflows associated with the first 400 metres of LW6 (refer to **Section 4.2**), it is likely that an additional groundwater allocation will need to be acquired.

3.3 Environment Protection and Biodiversity Conservation Act 1999

The proposed modification may constitute a 'large coal mining development' within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999* which includes:

any coal mining activity that has, or is likely to have, a significant impact on water resources (including any impacts associated with salt production and/ or salinity):

(a) in its own right; or

(b) when considered with other developments, whether past, present or reasonably foreseeable developments.

While extraction of coal from the first 400 metres of LW6 is unlikely to have a significant impact on a water resource in isolation, it may be considered to have such an impact when considered together with the existing Russell Vale Colliery and the proposed Underground Expansion Project. The Proponent is currently progressing consideration of the need for a referral and/ or approval under the *Environment Protection and Biodiversity Conservation Act 1999* separately to this modification application.