ASSESSMENT REPORT

WILPINJONG COAL MINE
Pit Extensions and CHPP Optimisation Modification
(05_0021 MOD 5)

1. BACKGROUND

Wilpinjong Coal Pty Limited (WCPL), a wholly owned subsidiary of Peabody Energy Australia Pty Limited (Peabody), operates the Wilpinjong Coal Mine (Wilpinjong), located about 40 kilometres (km) northeast of Mudgee, near the village of Wollar and the Ulan and Moolarben Coal Mines (see **Figure 1**).

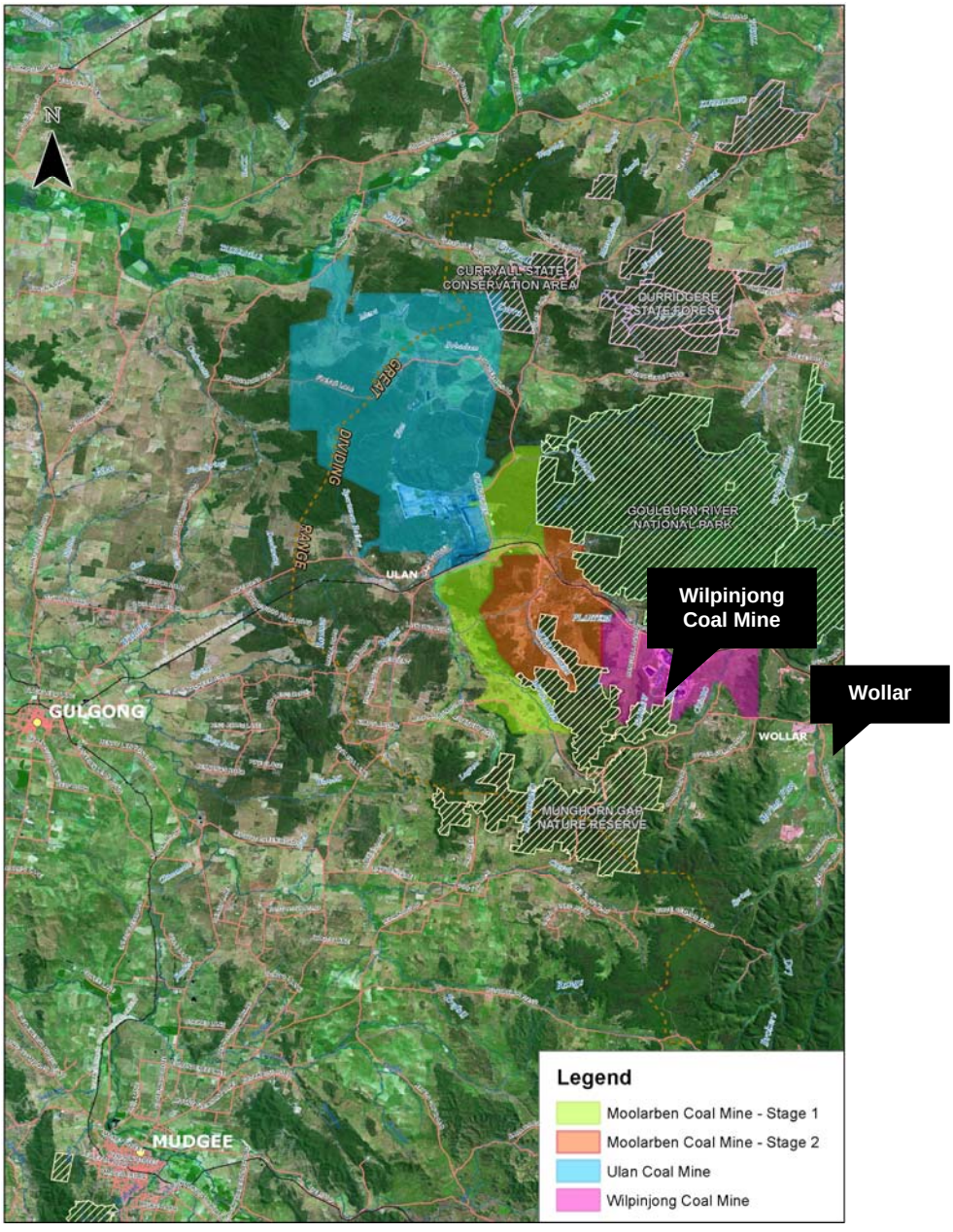

Figure 1: *Regional Context*

1.1 The Wilpinjong Mine

The Wilpinjong mine was granted project approval in February 2006 by the then Minister for Planning following an Independent Hearing and Assessment Panel (IHAP) process. This approval allowed WCPL to extract up to 13 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal, process it on site, and transport it to domestic and export markets by rail.

This approval has subsequently been modified on three occasions.

In November 2007, it was modified to allow:

- an increase in blasting frequency from one to two blasts per day; and
- a change in the mine's primary access route, from Wollar - Ulan Road.

In September 2009, it was modified to allow:

- an increase in ROM coal extraction from 13 Mtpa to 15 Mtpa;
- an increase in average number of laden coal trains leaving the site from 4 to 5 per day; and
- an expansion in the mining fleet.

In August 2012, it was modified to allow:

- an increase in the product coal allowed be transported from the site from 12 to 12.5 Mtpa;
- an increase in the maximum number of laden coal trains leaving the site from 6 to 10 per day as well as the average number of trains from of 5 to 6 per day; and
- the installation and operation of a Reverse Osmosis (RO) plant to treat excess mine water to a suitable standard prior to discharge.

The mine started operating in 2006, and extracted 14.7 Mt of ROM coal in 2012.

1.2 The Strategic Context

The mine forms part of a large coal mining complex in the region, along with the Moolarben and Ulan mines. Together, these mines have approval to extract up to 47 million tonnes of coal a year, process it at their coal handling and preparation plants, and rail it to domestic and export markets via the Gulgong to Sandy Hollow Railway line.

As a consequence of this complex, most of the land in the vicinity of the Wilpinjong is mine-owned (see **Figure 2**). The nearest settlement is the village of Wollar, which is located to the east of the mine. However, there are now only nine privately-owned residences left in the village. Population densities are generally low around the mine.

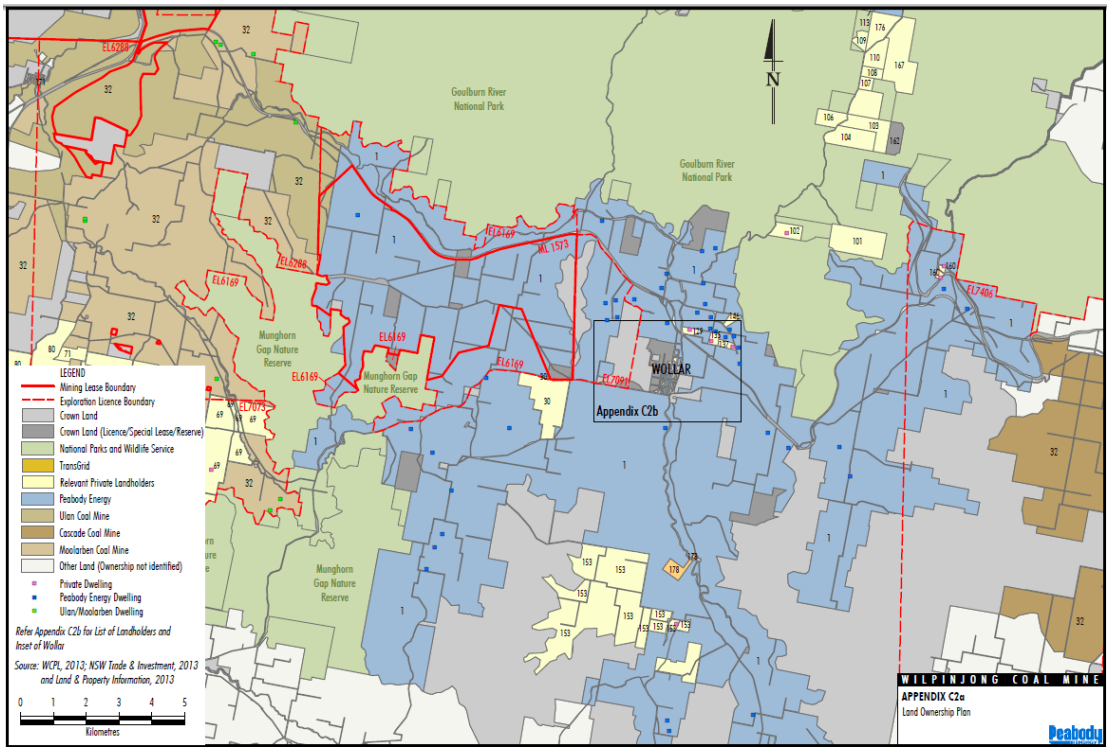

Figure 2: *Land Ownership Map – Regional*

Other significant land uses in the region include:

- the Goulburn River National Park and a number of other large stands of remnant vegetation with high conservation value, including the Munghorn Gap Nature Reserve, Curryall State Conservation Area and the Durridgere State Forest (see Figure 1) as well as about 4,000 hectares of land that has been conserved in perpetuity as biodiversity offsets by the mines; and
- large stands of agricultural land, which is used largely for grazing.

The mine is located to the east of the Great Dividing Range (see Figure 1), and drains to the Hunter River via Wilpinjong Creek, which is located to the north of the mine.

Key infrastructure in the vicinity of the mine includes:

- the Gulgong to Sandy Hollow Railway line;
- Ulan, Ulan-Wollar, Wollar and Cope Roads; and
- a large 330KV powerline that forms part of the regional electricity supply network.

2. PROPOSED MODIFICATION

WCPL is seeking approval for a further modification to its existing project approval under section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The proposed modification (see **Figure 3**) is described in detail in the attached Environmental Assessment (EA) (see **Appendix A**), and has 7 major components:

Extension of existing open cut pits

WCPL proposes to increase the footprint of its existing extraction pits by approximately 70 hectares in order to access an additional 3 million tonnes of ROM coal.

There are six extension areas in total, all comprising relatively small additions to the existing open cut pits. These areas are shown in orange in Figure 3.

Together they would increase the open cut area by approximately 5% from 1,920 to 1,990 hectares.

Waste Rock Production & Management

The mine is currently producing more waste rock than was originally predicted. This has resulted in changes to the mine's schedule, and reduced predicted production rates. It has also generated demand for increased dump space, which will be exacerbated by the proposed increases to the open cut pits.

WCPL proposes to place the additional waste rock in an elevated waste rock emplacement area in the southern end of Pit 2 (see the area shaded in light green on Figure 3). This emplacement area would be filled to a height of 450 metres (m) AHD before it is reshaped and lowered to 430 m AHD during the final rehabilitation of the mine.

Changes to Blasting Frequency Restrictions

The current conditions of approval place restrictions on the number of larger blasts WCPL can carry out on site. These restrictions were imposed on the mine's operations to minimise potential amenity impacts on nearby receivers.

WCPL has subsequently purchased several properties in the area surrounding the mine, which has created a large buffer between the mine and the nearest privately-owned residences. WCPL indicates that this buffer area has removed the need for the restrictions on larger blasts, and predicts that even with substantially larger blasts the company will be able to comply with the relevant blasting criteria in the project approval.

Consequently, WCPL is seeking approval for the removal of these restrictions.

WCPL indicates that the removal of these restrictions will improve the efficiency and cost effectiveness of the mine's operations, and result in fewer blasts on site and fewer road closures.

Improvements to the Coal Handing and Preparation Plant

WCPL proposes to make a number of improvements to its existing coal handling and preparation plant (CHPP). This includes:

- constructing a belt press filter at the CHPP with associated conveyors to allow co-disposal of CHPP tailings with coarse reject and improved recovery of water from tailings;
- installing a froth flotation recovery system to improve coal yield and water use efficiency; and

- removing the existing coal beneficiation limit to accommodate the washing of additional coal to reduce the risk of spontaneous combustion and maintain approved production rates.

Improvements to the Reverse Osmosis (RO) Plant
WCPL proposes to add pre-filtration and flocculation/dosing facilities to the existing RO plant. This would improve the mine's ability to treat and dispose of mine water.

Operation of Light Vehicle Servicing Workshop
WCPL proposes to convert an existing farm building on the mine site into a light vehicle servicing workshop.

Disposal of Inert Building & Demolition Waste
Over the next 5 years, WCPL proposes to undertake a range of renovation, building and demolition works at residences and buildings on its land around the mine.

These works would generate waste materials, including approximately 2,000 cubic metres of inert building and demolition waste. WCPL is seeking approval to dispose of this inert waste at depth in the mine's waste rock emplacements, rather than transport it by road to a local landfill.

The key elements of the approved Stage 1 project and the proposed modifications are summarised in **Table 1**.

Table 1: *Approved Project and Proposed Modifications*

Project Aspect	***Approved Project***	***Proposed Modification***
Mining reserves	223.7 million tonnes (Mt)	208.1 Mt *
Extraction rate	Up to 15 Mtpa of ROM coal	No change
Life of mine	21 years (to 2027)	No change
Mining methods	Open cut mining of 6 existing pits	No change
Total disturbance footprint	1920 ha	1990 ha
Coal Processing	Beneficiation of up to 8.5 Mtpa of ROM coal	Washing of up to 9 Mtpa of ROM coal and no beneficiation limit.
Waste Rock Management	Waste rock placed predominantly within mined-out voids	No change
Waste Rock Production	Up to 28 million bank cubic metres (Mbcm) per annum	Up to 33.3 Mbcm per annum
Total Waste Rock	366.6 Mbcm	386.4 Mbcm *
Rejects disposal	Coal rejects placed predominantly within mined-out voids	Installation of a tailings belt press filter to allow co-disposal of tailings with coarse reject
Coal Transport	Average of 6 trains (maximum of 10) per day on the Gulgong to Sandy-Hollow Railway	No change
Water Supply	Make-up water demand to be met from runoff recovered from mine operational areas, recovery from tailings disposal areas, open cut dewatering, advanced dewatering of pit areas and supply from a borefield	The addition of a belt press filter to enable the recovery of water from tailings
Water Management Infrastructure	Mine water treated in an RO plant and discharged to Wilpinjong Creek in accordance with EPL 12425.	Upgrade of the RO plant to a water treatment facility (include pre-filtration and flocculation/dosing facilities) to improve plant efficiency.
Biodiversity Offset	480 ha of native vegetation and 130 ha of endangered ecological communities (EECs). 350 ha of disturbed lands are to be regenerated with native vegetation.	Additional 211 ha of native vegetation, including 48 ha of EEC. Total of 357 ha of disturbed land to be regenerated with native vegetation.
Rehabilitation	Rehabilitate 850 ha of disturbed land to woodland and 1070 ha of land to grassland.	Additional rehabilitation of extension areas (70 ha) to woodland or mixed woodland/pasture areas
Operating hours	7 days a week, 24 hours a day	No change
Number of employees (operation only)	Up to 550 full time positions	Retention of 80 jobs for an additional year
** Based on latest geological modelling data and subject to variation.*		

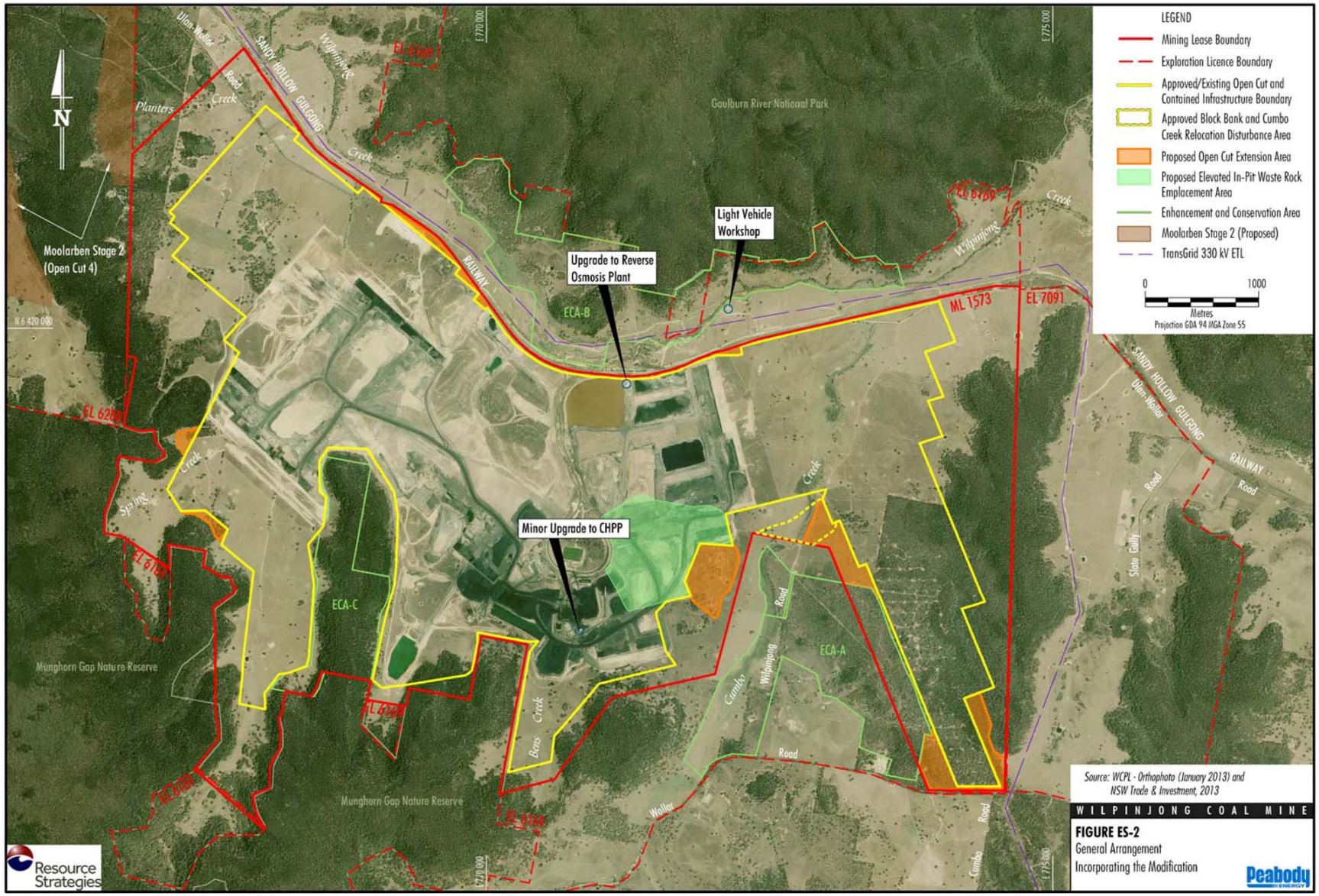

Figure 3: *Layout of Modification Proposal*

3. STATUTORY CONTEXT

3.1 The Legislative Framework

Although Part 3A of the *Environmental Planning & Assessment Act 1979* (EP&A Act) has now been repealed, the savings and transitional provisions in Schedule 6A to the Act require the Wilpinjong project approval to be modified under the former Section 75W of the Act.

The Department is satisfied that the proposed modification is within the scope of Section 75W.

In this regard, the Department notes:

- the proposed extension to the mine's footprint would be minor;
- the nature and intensity of operations on site would remain much the same;
- there would be no change to the approved production rate;
- the approved life of the mine would not be extended; and
- the environmental impacts associated with the proposed modification would be limited, and could largely be managed under the existing conditions of approval.

3.2 Approval Authority

The Minister was the approval authority for the original project application, and is consequently the approval authority for this modification application.

However, under the Minister's delegation of 14 September 2011, the Planning Assessment Commission (PAC) must determine the modification application because Peabody has made a previous statement declaring reportable political donations.

3.3 Environmental Planning Instruments

The Department has reviewed the proposed modification against the relevant provisions of various environmental planning instruments, including the resource significance provisions of the Mining SEPP.

Based on this assessment it is satisfied that these instruments either do not apply to the proposed modification or substantially govern the carrying out of the development.

In terms of the significance of the resource in the proposed modification, the Department has no specific advice from the Director-General of Trade and Investment, Regional Infrastructure and Services.

Nevertheless, it has carried out its own assessment of the matter, and concluded that:

- the resource in the proposed extension areas (13 million tonnes of coal) is not significant in its own right, as it represents an extremely small fraction of the coal reserves left on site;
- the resource is of some strategic importance, as its extraction will help improve the efficiency of the approved mining operations on site, enable approved production rates to be maintained, and generate some coal for domestic energy generation; and
- the extraction of the resource within the proposed extension areas would generate some economic benefits in terms of sustaining current employment rates at the mine, and producing further royalties for the State, principally by relying on the use of existing infrastructure.

4. CONSULTATION

4.1 Exhibition

The Department:

- exhibited the EA between 19th August to 9th September 2013:
  - on the Department's website;
  - at the Department's Information Centre;
  - at Mid-Western Regional Council (Council); and
  - at the Nature Conservation Council of NSW.
- referred the EA to the relevant public authorities and Mid-Western Regional Council for comment; and
- advertised the public exhibition of the EA in the Mudgee Weekly and Mudgee Guardian newspapers.

4.2 Submissions

The Department received a total of 46 submissions (**Appendix B)** on the proposal, including:

- 7 from public authorities;
- 5 from special interest groups; and
- 34 from the general public.

None of the public agencies objected to the proposal. In general, they recommended approval subject to the inclusion of some minor changes to the existing conditions of approval.

In relation to the 39 public submissions, 22 supported the proposal and 17 were opposed to it. Of the 17 who opposed the proposal: 5 were from residents of the Wollar village and its surrounds, 5 were from the Barrigan Valley (which is located some 20 kilometres away from the mine), and the remaining 7 were from areas that are located well beyond the direct impacts of the mine (Mudgee, Gulgong, Clandulla and Running Stream).

4.3 Issues Raised in Agency Submissions

The **Environment Protection Authority** (EPA) concluded the impacts of the proposal would be negligible, and could generally be managed through the existing conditions on the consent or environmental protection licence. The EPA recommended the inclusion of a condition requiring WCPL to undertake blast monitoring and reporting. This modification has been incorporated into the revised conditions of approval for the project.

In the **Department of Primary Industries'** (DPI) submission:

- **Crown Lands** noted that the proposed extension would affect Crown roads and land, and that WCPL would require the necessary authorisations under the *Crown Lands Act 1989* before carry out parts of the proposal;
- the **Office of Agricultural Sustainability & Food Security** recommended that WCPL be required to restore the additional disturbed land to grazing land; and
- the **NSW Office of Water** (NOW) recommended that WCPL be required to update the Site Water Management Plan to accommodate the proposal, and report on the groundwater monitoring and evaluation program.

The **Office of Environment & Heritage (OEH)** is satisfied with the proposed biodiversity offset for the proposal, and supports the addition of this land to the Goulburn River National Park provided this is combined with adequate funding for the ongoing management of the land. While OEH raised concerns about the proximity of proposal to the Munghorn Gap Nature Reserve and the level of Aboriginal cultural heritage assessment in the initial stages of the assessment process, it later advised that these concerns had been adequately addressed by WCPL in its Response to Submissions.

The **Roads and Maritime Services** noted the proposal would not alter the traffic impacts of the mine.

The **Division of Resources and Energy** (DRE) within the Department of Trade and Investment, Regional Infrastructure and Services asked for the conditions regulating the rehabilitation of the mine to be updated to reflect the current standard conditions for such matters.

Mid-Western Regional Council recommended a number of conditions of approval, including:

- that WCPL be required to update the Water Management Plan for the mine to outline the measures that would be implemented to adequately manage potential water spillages during high rainfall events;
- that WCPL ensure that the light vehicle servicing facility is built to comply with relevant industry standards, and that all contaminated waste associated with the facility is appropriately managed; and
- that WCPL be required to seal approximately 5.5 kilometres of Ulan-Wollar Road between the mine entrance and the village of Wollar.

The Department has adopted the first two of these recommendations, but does not believe the third is justified (see Section 5.4 below).

4.4 Issues Raised in Public Submissions

Submissions in support of the proposal generally cited the continuing employment and socio-economic benefits of the proposal as the key reasons why it should be approved.

Objectors raised a broad range of concerns about the proposal. Many of these concerns were directed more towards the ongoing operation of the mine than they were to the specifics of the proposed modification. Nevertheless, these concerns included:

- that the proposal was not adequately justified;
- criticisms of the assessment of the proposal, suggesting that previous assessments of the environmental impacts of the mine's operations had underestimated its actual impacts;
- objections to the Aboriginal heritage and biodiversity impacts of the proposal, including claims that some of the vegetation earmarked for clearing had previously been identified for regeneration, and that the proposed offset was inadequate;
- suggestions that the proposal would have adverse impacts on the health and amenity of the surrounding population, and that WCPL should be required to cover its coal trains; and

- the proposal would exacerbate the socio-economic impacts of mining in the region, which had already resulted in significant impacts on the Wollar village, including the loss of long term residents and the range of services provided by local stores.

4.5 Response to Submissions

WCPL provided a formal response to the issues raised in submissions (see **Appendix C**), which was published on the Department's website.

5. ASSESSMENT

Based on its assessment of the WCPL's current environmental performance, the EA, public and agency submissions, and WCPL's response to the issues raised in submissions, the Department considers the key issues to be noise, blasting, biodiversity and Aboriginal heritage.

5.1 Noise & Blasting

Inaccurate Predictions & Non-Compliance

Several objectors claimed WCPL had significantly underestimated the noise impacts of the mine originally, and that there had been regular exceedances of the noise limits in the project approval.

The Department has investigated these claims, in consultation with the EPA, over the last few years, and has found no evidence to support the claims. In fact, regular attended monitoring shows the mine's actual noise levels are in line with the predicted noise levels. They also show the mine is complying with the noise limits in the project approval.

Nevertheless, the Department notes that there have been several complaints about the noise impacts of the mine's operations over the last year. In most cases, these complaints have tended to be due to the relative change in noise levels from the particularly quiet background levels that existed before mining, rather than due to the actual noise levels which were generally below the lowest possible noise limits under the *NSW Industrial Noise Policy*, and significantly below the recommended noise amenity criteria for rural areas under the policy.

Notwithstanding compliance with the statutory noise limits, in recent years WCPL has acquired several properties surrounding the mine at the request of various landowners, even though it was not required to do so under the conditions of approval. In the process, WCPL has given many people living around the mine the opportunity to move away from the mine, and developed a substantial buffer area around the mine.

In addition, WCPL has developed an effective real-time noise management system to minimise the noise impacts of the mine's operations on surrounding areas, particularly during adverse weather conditions. This system resulted in the stand-down of equipment equivalent to 1,193 excavator hours during 2012. The Department believes this system is consistent with best practice in the mining industry.

Operational Noise

WCPL engaged acoustic specialists SLR Consulting Pty Ltd (SLR) to carry out a noise impact assessment (NIA) of the proposal. This assessment includes conservative predictions based on optimistic operational scenarios and noise-enhancing weather conditions such as temperature inversions, a common feature of the area during the winter night-time period. In fact, based on recent meteorological monitoring results of actual inversions, it has extended the noise-enhancing weather conditions of previous assessments to consider noise impacts during temperature inversions of up to 5.5^{o}C per 100 metres (instead of 3^{o}C).

Both the Department and the EPA are satisfied that the NIA has been carried out in accordance with the requirements of the NSW INP, and represents a comprehensive assessment of the potential impacts of the proposal.

The NIA predicts that no privately-owned residences would experience noise levels above the existing approved noise impact assessment criteria during calm meteorological conditions.

However, it predicts that up to 4 privately-owned residences could experience negligible exceedances of the existing noise criteria during worst case weather conditions (see **Table 2**).

Table 2: *Predicted Operational Noise Limit Exceedances - Residences*

Receiver ID	Criteria (Night)	Predicted Worst Case Noise Level $dB(A)_{LAeq,\ 15\ min}$		
		Year 2015	Year 2018	Year 2021
69	35	34	36 (+1)	31
129	35	37 (+2)	33	36 (+1)
135	35	37 (+2)	35	38 (+3)
137	35	37 (+2)	35	35

Of the four private dwellings predicted to experience noise levels exceeding the existing noise criteria, three (129, 135 and 137) are located east of the mine, northeast of Wollar Village. The remaining dwelling (69) is located west of the mine, directly to the south of Moolarben Coal Mine.

As shown in **Table 2**, the exceedances are mainly predicted to occur during the year 2015, where mining activities are at their most intensive and year 2021, where activities are closest to certain receivers. All exceedances would only occur at night during the winter season, when noise-enhancing temperature inversions are likely to occur.

Modelling indicates that these exceedances could be managed with the stand-down of some equipment during these conditions. However, WCPL does not consider that the implementation of real-time noise controls at the mine in order to reduce impacts at these rural dwellings is feasible, given the relatively minor nature of the exceedances and the operational costs associated with the additional stand-down of equipment.

Both the Department and EPA concur with WCPL, given the relatively minor nature of the exceedances, their occasional nature and the conservative modelling approach used in the NIA. However, the Department recommends that WCPL be required to implement noise attenuation measures (such as double glazing, insulation and/or air conditioning) at any of the four private dwellings listed in **Table 2** if requested by the owner, in lieu of real-time noise controls at source.

The Department notes that property 30, the only vacant land predicted to experience exceedances >5 dB(A) above the mine's Project Specific Noise Levels (PSNLs), may already be acquired under the existing noise acquisition requirements.

Cumulative Noise

The NIA included a cumulative assessment for the project, which considered the impact of the modified project operating together with the existing Ulan and Moolarben coal mines. The assessment indicates that cumulative noise levels would comply with the most relevant cumulative (or amenity) noise criterion for all mining operations. Therefore, no additional properties are predicted to be noise affected due to combined noise emissions that are not already affected by Wilpinjong's operational noise.

Sleep Disturbance

The NIA included an assessment of the potential for sleep disturbance caused by the modified project during the night-time period. The assessment indicated that the predicted maximum noise levels during both calm meteorological conditions would be below the sleep disturbance criterion of 45 $dB(A)_{LA\ ,\ 1\ min}$ at all but 1 privately-owned receiver in the later stages of the mine's life, as shown in **Table 3**.

Table 3*: Sleep Disturbance – Private Residences*

Receiver ID	Criteria	Predicted Sleep Disturbance $dB(A)_{LA,\ 1\ min}$		
		Year 2015	Year 2018	Year 2021
135	45	45	42	**46 (+1)**

Sections 5.7 and 7.4 of the NIA contain a detailed explanation of the limitations of the EPA longstanding sleep disturbance criterion, which is essentially a "screening criterion", and conclude that any such exceedance is unlikely to cause awakening reactions.

The Department agrees with this assessment. However, it notes that the owner of this residence would have rights for additional noise mitigation measures under the conditions of approval, and that any potential sleep disturbance impacts could be avoided with the implementation of architectural noise treatments (such as double glazing, insulation and/or air conditioning).

Impacts on Residences in Barrigan Valley

One objection on behalf of 5 residents from the Barrigan Valley claimed the mine was having adverse noise and blasting impacts on the residences and agricultural operations in the valley.

WCPL provided a detailed response to the claims in this submission, highlighting that the valley was located over 20 kilometres to the south of the mine, and that all monitoring results carried out either in or close to the valley indicated that noise and blasting levels had always been well below the relevant criteria.

The Department has reviewed this matter carefully, and concluded that the risk of the mine's operations causing adverse impacts in the valley is low, principally because it is located some distance from the mine. It also notes that all the residences in the valley have the lowest possible noise limits under the NSW INP.

Nevertheless, the Department has recommended changes to the noise conditions in the project approval that would require more frequent attended noise monitoring of the mine's impacts (at least 12 times a year), and will ensure that further monitoring is carried out in the valley to confirm the actual impacts of the mine's operations.

Low Frequency Noise

Several objectors claimed they were being affected by low frequency noise, and suggested the NIA had not properly considered the potential low frequency noise impacts of the proposal. This claim is becoming increasingly common in submissions on mining proposals in NSW, despite the lack of evidence to support such claims.

Nevertheless, Section 5.3 of the NIA contains an assessment of the potential low frequency impacts of the mine in accordance with the requirements in the NSW INP, and concludes the current noise emissions of the mine do not "contain a low frequency content".

The Department accepts this conclusion, but notes that under the conditions of approval WCPL will be required to carry out monthly attended monitoring of the noise impacts of the mine's operations, and apply the low frequency noise modifying factor to any monitoring data, in accordance with the requirements of the NSW INP.

Finally, it should be noted that the Department has identified a number of potential limitations in the NSW INP's current approach to dealing with low frequency noise, particularly where receivers are often located several kilometres away from the mine. This can lead to perverse outcomes in some cases where the modifying factors (penalties) in the NSW INP are applied to the monitoring results of mines when there is little or no low frequency noise impact. This, along with a range of other reasons, has prompted the EPA to carry out a detailed review of the low frequency noise provisions of the NSW INP. This review should be completed in 2014, and could lead to changes to the way low frequency noise is regulated in NSW.

Blasting

The NIA included a blast impact assessment prepared by SLR in accordance with the relevant blasting guidelines, including the *ANZECC Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration*.

The blast impact assessment demonstrates that large blasts, with MICs far greater than 400 kg, would not cause any exceedances of the relevant human comfort criteria.

Consequently, the Department accepts WCPL's argument that there is no need to retain the current restriction on larger blasts at the mine, and has recommended its removal.

Further, the Department considers that the proposal to conduct multiple blasts in quick succession, as a single blast event, is not in itself an additional impact. Indeed, contemporary conditions of approval include a definition of a 'blast' that incorporates multiple blasts.

Nevertheless, the Department believes the current conditions regulating blasting on site should be updated to reflect contemporary blasting conditions at other mines, and has accordingly recommended a number of changes to the current conditions.

Conclusion

The Department has recommended that the existing noise and blasting conditions be fully updated to reflect the conditions in contemporary mining approvals.

These updated conditions would require WCPL to:
- continue to implement best practice noise mitigation onsite, including the real-time management system, to proactively manage and minimise the noise impacts of the project;
- implement noise mitigation measures at the four private dwellings not subject to real-time noise controls; and
- update the existing Noise Management Plan and Blast Management Plan.

With these measures in place the Department considers that noise and blasting associated with the proposal could be managed effectively, even during adverse meteorological conditions.

5.2 Biodiversity

WCPL engaged Hunter Eco and Biodiversity Monitoring Services to undertake flora and fauna assessments of the modification proposal, respectively.

The proposal would disturb 51.7 ha of native vegetation, containing 9 vegetation communities (see **Table 4**).

Table 4: *Summary of Direct Impacts on Vegetation Communities*

Native Vegetation Community	**Impact Area (ha)**
Grassy White Box Woodland	2.2
Derived Native Grassland – box-gum grassy	8.4
EEC TOTAL	**10.6**
Coast Grey Box Woodland	3.5
Narrow-leaved Ironbark Forest	5.3
Caley's Ironbark Woodland	3.0
Shrubby White Box Woodland	14.5
Sandstone Range Shrubby Woodland	1.3
Derived Native Grassland – box-gum shrubby	1.1
Derived Native Grassland – other native	12.4
NON-EEC TOTAL	**41.1**
COMBINED TOTAL*	**51.7**
**excludes land previously disturbed and/or approved for disturbance and grassland with greater than 50% weed cover.*	

Two of these vegetation types (totaling 10.6 ha) contain EECs and/or critically endangered ecological communities (CEECs) as defined by the *Threatened Species Conservation Act 1995* (TSC Act) and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), respectively. The remaining vegetation does not have any particular conservation significance in its own right, apart from the fact that it provides habitat and potential habitat for a range of fauna species.

A total of 124 fauna species were recorded during surveys of the extension areas, including 6 amphibians, 6 reptiles, 85 birds (including one introduced species) and 27 mammals (including 7 introduced species). Of these species, 9 are listed as vulnerable under the TSC Act.

To offset the potential impacts of the proposal, WCPL proposes to permanently add two parcels of land, one located approximately 3 km east of the site and the and 12 km northeast of the site, to the adjoining Goulburn River National Park (see **Figure 4**).

These parcels have 210.8 ha of native vegetation, including:
- 192.8 ha of woodland;
- 13.6 ha of shrubby regeneration; and
- 4.4 ha of derived native grassland.

Some objectors claimed this offset was inadequate. Nevertheless, both the Department and the OEH are satisfied that the proposed offset would result in a net improvement in the biodiversity value of the region, and would adequately offset any residual impacts of the proposal. This is primarily because the offset:
- has at least 47.8 hectares of existing Box Gum Woodland EEC, compared to the 2.2 hectares of woodland and 8.4 hectares of derived grassland that would be cleared, and probably includes additional areas of the EEC in grassland form (although these have been excluded from the EEC calculations to ensure they are conservative);
- has similar vegetation communities to those that would be cleared, which could be enhanced over time with suitable management;
- includes habitat or potential habitat for all the threatened fauna species recorded within or near the areas to be cleared; and
- is ideally located, adjacent to the Goulburn River National Park, and could easily be added to the national reserve system.

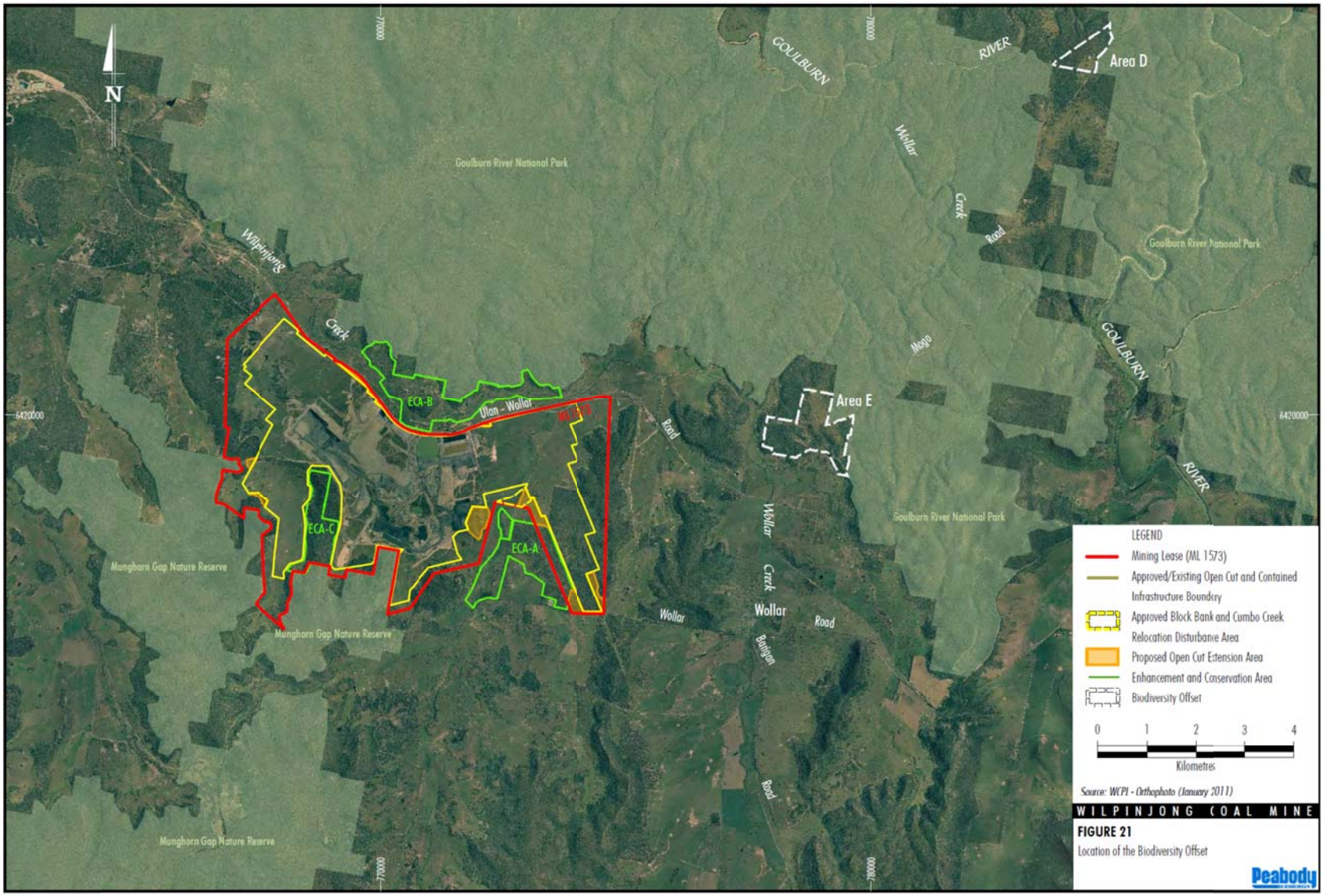

Figure 4: *Location of the Proposed Biodiversity Offset Areas*

Consequently, the Department has recommended that WCPL be required to implement the proposed offset strategy, and use its best endeavours to add this land to the National Park.

Objectors were also critical of the fact that the proposal would result in the disturbance of 20 hectares of land in the "regeneration areas" of the mine. These are parts of the mine that are comprised largely of cleared agricultural land that are being regenerated to provide links in the long term between the rehabilitated mine site, which will include the creation of woodland vegetation, and the Goulburn River National Park, Munghorn Gap Nature Reserve and the existing offset areas of the mine.

To address this impact, WCPL proposes to regenerate another 27 ha of land adjacent to the Goulburn River national Park, which would provide a similar function to the regenerations areas that would now be cleared.

The Department has no objection to the proposed replacement, because the:

- regeneration areas earmarked for clearing have limited conservation value at this stage;
- mining of these areas would generate social and economic benefits; and
- proposed replacement would deliver similar benefits and result in a slight increase in the size of the larger regeneration areas.

5.3 Aboriginal Cultural Heritage

South East Archaeology carried out an assessment of the potential Aboriginal cultural heritage impacts (ACHA) of the proposal in accordance with relevant guidelines. This assessment included a comprehensive site survey of the modification areas and consultation with the relevant Aboriginal groups. OEH has indicated that the level of consultation undertaken was satisfactory.

The ACHA identified 21 Aboriginal cultural heritage sites in the extension areas. The majority of these sites were considered to have nil to low archaeological local significance. However, three of these sites (comprising open artefact scatters) were considered to be of potential moderate local significance, and one scarred tree (WCP 64) was found, although its origin remains undetermined.

Notwithstanding this conclusion, several registered Aboriginal parties expressed the view during the ACHA's site surveys that all Aboriginal sites, places and objects are of high contemporary cultural significance.

To minimise the Aboriginal heritage impacts of the proposal, WCPL proposes to do the following in accordance with the standard procedures in its existing Aboriginal Cultural Heritage Management Plan:

- salvage artefacts in the three open artefact sites; and
- carry out further assessment of the scarred tree in consultation with Aboriginal groups, and salvage it if an Aboriginal origin is confirmed.

With the implementation of these measures, both the Department and OEH are satisfied that the Aboriginal cultural heritage impacts of the proposal would be relatively minor.

The Department is also satisfied that these impacts are unavoidable, and justified when the broader social and economic benefits of the proposal are taken into consideration. The existing conditions of approval require the Aboriginal Cultural Heritage Management Plan to be updated following the approval of any modification application, and the Department will ensure that the updated plan includes suitable management measures to minimise the Aboriginal cultural heritage impacts of the proposal.

5.4 Other Issues

Other residual issues associated with the proposal are examined in **Table 5** below.

Table 5: *Assessment of Other Issues*

Issue	***Impacts and Consideration***	***Conclusion / Recommendation***
Spontaneous Combustion	▪ There have been a number of significant spontaneous combustion events at Wilpinjong. Several submissions raised concerns over these events, and raised concerns that the proposal would lead to further events. ▪ However, over the past 12 months, WCPL has implemented and developed a detailed spontaneous combustion management strategy for the mine. This strategy includes a risk identification system to closely monitor stockpiles at higher risk of spontaneous combustion. WCPL also now prioritises the washing of select ROM coal types based on risk of combustion. ▪ The proposed removal of the beneficiation limit would allow WCPL to wash more coal, and further reduce the risk of additional spontaneous combustion events. ▪ However, in order to ensure that management of spontaneous combustion continues to be carried out effectively, the Department recommends that WCPL be required to prepare a Waste Management Plan that includes detailed spontaneous combustion management measures.	The Department recommends that WCPL be required to prepare a Waste Management Plan that includes detailed spontaneous combustion management measures.
Waste Management	▪ WCPL proposes to dispose of approximately 2,000 cubic metres of inert building and demolition waste at depth in the mine's waste rock emplacements. ▪ The Department supports this proposal as it would result in less heavy vehicle movements on the local road network, and preserve the capacity of local landfill. ▪ Waste disposal of this volume of inert building waste would not require a licence under the *Protection of the Environment Operations Act 1997.* The EPA did not raise any concerns.	The Department recommends that WCPL be required to prepare a Waste Management Plan that includes suitable measures to manage the receipt and disposal of this inert building waste on site.
Water Resources	▪ The modification would not have a major impact on ground and surface water, beyond that of the existing approved operations. ▪ However, the installation of a belt press filter would lead to increased water recovery at the mine, and therefore less process water demand. ▪ The upgrading of the RO plant would also allow for improved water treatment and enable WCPL to comply with the water discharge criteria in the mine's EPL. ▪ NOW and DRE are satisfied that the modification would not result in unacceptable impacts to water resources. Both agencies recommended that the existing surface and groundwater management plans be updated to accommodate the proposal. ▪ The Department considers that additional impacts to water resources would be low, and generally able to be managed under the existing conditions of approval.	The Department recommends that WCPL be required to include a life-of-mine Coal Tailings Strategy within the mine's the Waste Management Plan to address a range of aspects associated with managing coal tailings on site.
Socio-Economic Issues	▪ The proposal has a capital cost of $16 million and would ensure the retention of approximately 80 jobs for another year. ▪ A Socio-Economic Assessment (SEA) was undertaken by Gillespie Economics as part of the EA. The SEA includes a benefit cost analysis (BCA) which was undertaken in accordance with the NSW Government's draft *Guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals* (2012). ▪ The BCA concludes that the proposal would result in net socio-economic benefits valued at $28 million. ▪ The SEA also includes a regional economic assessment that quantifies the economic benefits that would be injected into the regional economy as a result of the proposal. These benefits are estimated to be worth up to: - $243 million in annual direct and indirect regional output or business turnover; - $127 million in annual direct and indirect value added; - $19 million in annual direct and indirect household income; and - 80 direct and 77 indirect jobs. ▪ A number of submissions raised concerns over the adverse socio-economic impacts to the local area as a result of land	No changes to the existing conditions of approval.

Issue	Impacts and Consideration	Conclusion / Recommendation
	acquisition by the Wilpinjong, Moolarben and Ulan Coal mines. ▪ However, the proposed modification would not result in additional properties being subject to acquisition rights beyond the existing approval. Nor would it result in any significant health or amenity impacts on any of the privately-owned properties around the mine. ▪ Under the existing conditions, Council would continue to receive financial contributions for community infrastructure. ▪ In summary, the Department is satisfied that the proposal would provide economic benefits to the State and region without causing any significant adverse socio-economic impacts.	
Upgrade of Ulan-Wollar Road	▪ Council recommended that WCPL be required to seal a 5.5 km section of the Ullan-Wollar Road between the entrance of the mine and Wollar Village. ▪ The Department notes that Council has made the same request during the assessment of previous modification proposals. On each occasion, the Department has considered the request to be neither reasonable nor justified. ▪ The current proposal would not result in any additional employees or contractors, and would therefore not result in any changes to the mine's existing operational traffic movements along the local road network. In addition, the traffic survey count referred to by Council in support of the recommendation is considered to be unrepresentative of mine-related traffic. ▪ Most significantly, this section of road does not form part of Wilpinjong's primary access route. ▪ For these reasons, the Department again considers the recommendation to be unjustified.	No changes to the existing conditions of approval.
Visual Impacts	▪ The proposal involves small extensions to existing open cut pits and removal of a minor ridgeline as a result of the elevated waste rock emplacement area. ▪ These changes would not be visible from any privately-owned residences in the vicinity of the mine. ▪ Further, WCPL proposes to establish additional native vegetation screening along Wollar Road to limit potential views, and temporarily rehabilitate the elevated waste rock emplacement area with aerial seeding following construction and prior to reshaping and final rehabilitation. ▪ With the implementation of these measures, the Department is satisfied that the proposal would not result in any significant visual impacts.	No changes to the existing conditions of approval.

6. RECOMMENDED CONDITIONS

The Department has prepared a notice of modification (see **Appendix D)** for the proposal, and provided a consolidated version of the project approval as it would be modified in **Appendix E**.

While the existing approval has been modified previously on 3 different occasions, the existing noise, blasting, air quality, biodiversity management and rehabilitation conditions are considered to be out-of-date when compared with more contemporary open cut mining approvals. Consequently, the recommended changes to existing conditions are quite extensive with the aim of ensuring that the project approval remains up-to-date and consistent with the approvals of other major open cut mines in the region, particularly the neighbouring Moolarben and Ulan Coal mines.

WCPL has reviewed and accepted the Department's proposed conditions.

7. CONCLUSION

The Department has assessed the merits of the proposal in accordance with the relevant requirements of the EP&A Act, including the objects of the EP&A Act and the principles of ecologically sustainable development.

This assessment has found that the environmental impacts of the proposal would generally be minor, and could be suitably managed or offset to ensure an acceptable level of environmental performance. It particular, it has found that the proposed biodiversity offset strategy would make a positive contribution to conservation values in the region by potentially adding a further 210 hectares to the Goulburn River National Park.

In addition, this assessment has found that the proposal would result in economic benefits to the State and region, principally by generating further royalties and providing continued employment for up to 80 employees, and enable WCPL to improve the handling of materials on site and maintain its approved production rates.

Based on this assessment, the Department is satisfied that the benefits of the proposal would outweigh any residual impacts, and that it is in the public interest. Consequently, the Department believes it should be approved subject to a range of conditions that would ensure the mine is operated in accordance with best management practice.

8. RECOMMENDATION

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

- **consider** the findings and recommendations of this report;
- **determine** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approve** the modification application subject to conditions, under section 75W of the EP&A Act; and
- **sign** the attached notice of modification (**Appendix D**).

3/2/14

David Kitto
Director
Mining Projects

4. 2. 14

Chris Wilson
Executive Director
Development Assessment Systems & Approvals

APPENDIX A
ENVIRONMENTAL ASSESSMENT

See attached CD ROM.

APPENDIX B
SUBMISSIONS

See attached CD ROM.

APPENDIX C
RESPONSE TO SUBMISSIONS

See attached CD ROM.

APPENDIX D
NOTICE OF MODIFICATION

APPENDIX E
CONSOLIDATED PROJECT APPROVAL