



Planning &
Environment

***FINAL ASSESSMENT REPORT:
Wilpinjong Extension Project
(SSD 6764)***



Section 89E of the
Environmental Planning and Assessment Act 1979

March 2017

Cover photo:
Wilpinjong Coal Mine
Environmental Impact Statement 2016

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EXECUTIVE SUMMARY

This final assessment report for the Wilpinjong Extension Project has been prepared by the Department of Planning and Environment (the Department) for consideration by the Planning Assessment Commission (the Commission).

It focuses on the matters identified in the Commission's *Wilpinjong Extension Project Review Report* dated 20 December 2016, and responses to that report by the Applicant, Wilpinjong Coal Pty Ltd (WCPL) and relevant government agencies including the Office of Environment and Heritage (OEH) and the Environment Protection Authority (EPA).

The Commission made a number of recommendations for the Department and WCPL to consider prior to the Department finalising its assessment of the project. The key recommendations relate to biodiversity and offsets, rehabilitation and final landform, water quality, heritage, noise and blasting, and social impacts.

The majority of the Commission's recommendations either seek clarification about aspects of the project and statements in the Department's Preliminary Assessment Report (PAR) or recommend the imposition of conditions in accordance with the Department's draft conditions that were attached to the PAR.

The Department has provided a separate response to address each recommendation, and has adopted all of the Commission's recommendations, with the exception of one regarding further consultation with the Aboriginal community.

Biodiversity

The Commission made 7 recommendations relating to biodiversity, including recommendations for the biodiversity offset strategy. The Department agrees with the recommendations of the Commission and notes that its recommended conditions include a range of measures to ensure the implementation of a long term biodiversity offset strategy that incorporates progressive regeneration and rehabilitation.

As recommended by the Commission, the Department has also considered the likely impacts of mine lighting on bat movements to and from an abandoned mine adit. This assessment found that while lighting has the potential to impact bat movements, these impacts could be mitigated through a variety of measures including the use of LED lighting and measures to limit direct lighting of the adit.

The Commission also made recommendations for the Department to provide confirmation about the status of the Regent Honeyeater breeding program and whether concerns raised by the Commonwealth Department of the Environment and Energy (DEE) about derived native grasslands had been resolved. The Department has provided advice to confirm that the breeding program is operational and that derived native grasslands have been classified appropriately.

Rehabilitation and Final Landform

The Commission recommended that further opportunities be explored to limit the extent of final voids including the removal of the final void in Pit 8. To address this recommendation, WCPL has revised the final landform to eliminate the need for a final void in Pit 8. The Department has also recommended that WCPL be required to prepare a Rehabilitation Strategy for the project, including investigating opportunities to minimise the size and depth of the two remaining voids.

Water Quality

The Commission made 11 recommendations relating to the assessment of surface water and groundwater. Of these, 7 request the presentation of additional data, or clarification about project impacts. The Department has provided a response, including additional tables and figures to support its position that the project would be unlikely to have any significant impact on water resources.

The Commission also requested that WCPL update its water balance assumptions to account for changes to sediment dams. WCPL has updated the water balance in accordance with this recommendation and found that there would be no material changes.

The remaining 3 recommendations ask the Department to consider conditions for establishment of baseline data, management measures and requirements for "make good provisions" for groundwater impacts on the Wollar Public School. These were all been adopted in the Department's recommended conditions.

Heritage

The Commission made a number of recommendations with regard to Aboriginal and historic heritage.

Firstly, the Commission made 2 recommendations to establish management objectives and a regime to avoid and salvage artefacts.

The Department has adopted these recommendations by recommending the preparation and implementation of a comprehensive Aboriginal Cultural Heritage Management Plan for the project. As part of this plan, WCPL would need to establish a program to avoid impacts to rock shelters and rock art, any significant rock shelters in the Munghorn Gap Nature Reserve, and, where possible, a number of sites that were identified as being potentially impacted by the project.

Where avoidance is not possible, including the ochre quarry evidence and rock art associated with the Rocky Hill Complex, the Department has recommended that the ACHMP include a plan for undertaking salvage excavation and detailed recording, in consultation with the local Aboriginal community.

Secondly, the Commission recommended consultation with the Aboriginal Community to reach an agreement about acceptable impacts. In response to this recommendation, both the Department and OEH consider that the consultation already undertaken by WCPL has adequately met the requirements of applicable NSW Government Policy, and do not consider that further consultation at this stage of the process is warranted. Notwithstanding, the Department has carefully considered the issues raised by the Aboriginal community and addressed their concerns where possible.

Finally, the Commission recommends the Department consider opportunities to undertake further investigations into heritage within the region. While this recommendation is not necessarily related to the project, the Department has identified a number of opportunities for further investigation and research, in consultation with OEH.

Noise and Blasting

The Commission made 4 submissions about the potential noise and blasting impacts of the project. In particular, it requested WCPL extend acquisition rights to a property located outside of the Wollar Village. WCPL has offered to acquire this property in response to the Commission's recommendation, and the Department has recommended a condition to formalise this commitment.

The Department has also consulted with EPA, recommended a range of blasting performance criteria and addressed a submission from Day Design, in response to recommendations from the Commission. In summary, the Department believes that there are no residual noise assessment issues subject to the recommend noise and blasting conditions.

Finally, the Commission requested that residents along Ulan Road be appropriately informed about their noise mitigation rights under the Ulan Road Strategy. The Department is advised that these residences have previously been notified by WCPL, but has recommended a condition requiring them to be re-notified in accordance with the Commission's recommendation.

Social

The Commission made 3 recommendations regarding social impacts, particularly in relation to Wollar and the Wollar community. Together, these recommendations require a consideration of the post-mining social impacts and a strategy for community involvement and the management of mine owned assets in Wollar.

These recommendations have been adopted by requiring the preparation and implementation of a Social Impact Management Plan as part of the recommend conditions. This plan would assist in minimising social impacts and provide a framework for maintaining the built and social fabric of Wollar village to the greatest extent practicable during and following the cessation of mining.

It is also generally consistent with the Department's draft Social Impact Assessment guidelines which emphasise the need to involve affected communities in identifying and developing measures to address any negative social impacts associated with mining.

Summary

The Department has accepted all recommendations where relevant, with the exception of one about further consultation with the Aboriginal community. The Department has considered the issues raised by the Aboriginal community and implemented measures to address these concerns where possible, including a requirement for ongoing consultation with the community with respect to the management of cultural heritage sites.

The Wilpinjong Extension Project would result in significant social and economic benefits for the local area and the State of NSW, including the continued employment of up to 625 employees. It would also create a substantial number of indirect employment opportunities in related industries and economic contributions to the State through royalty and local tax revenues.

The Department believes its recommended conditions of consent provide a comprehensive, strict and precautionary approach to ensuring the project can comply with relevant performance measures and standards and ensure the predicted residual impacts can be effectively minimised.

Consequently, the Department considers that the benefits of the project outweigh its costs, and that the project is approvable subject to stringent conditions.

1 INTRODUCTION

1.1 Background

WCPL is seeking consent to expand mining operations at the Wilpinjong coal mine. The Wilpinjong Extension Project (SSD 6769) (the project) comprises the development of a new open cut pit, extensions to a number of the existing open cut mining areas and an extension to the life of the mine by 7 years.

The project also includes:

- a minor increase in coal production from 12.6 to 13 million tonnes per annum (Mtpa);
- continued use of existing coal processing and surface infrastructure; and
- development of a range of ancillary infrastructure including further alignment of Ulan-Wollar Road and relocation of a 330 kV transmission line.

This Final Assessment Report for the project and the recommended conditions have been prepared for the consideration of the Planning Assessment Commission (the Commission). This report should be read in conjunction with the Preliminary Assessment Report¹ (PAR) dated November 2016.

The PAR includes a detailed consideration of the impacts of the project, including a consideration of concerns of the local community, independent expert reviews of project's economic, noise, air and social assessments, and the economic benefits to the region and NSW as a whole. The Department considered that the benefits of the project outweigh its costs, and that the project is approvable subject to conditions.

This report considers the recommendations made in the Commission's *Wilpinjong Extension Project Review Report*, dated December 2016. It also considers additional information received from Wilpinjong Coal Pty Ltd (WCPL) in response to the Commission's merit review report, and input from Government agencies.

The two reports together comprise the Department's environmental assessment for the project (SSD 6764) and have been prepared to satisfy the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act). They have also been prepared to satisfy the requirements of the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), in accordance with the bilateral agreement between the Commonwealth and NSW Governments.

1.2 Commission's Review

On 20 October 2016, the Minister for Planning asked the Commission to carry out a review of the Wilpinjong Extension Project. The terms of reference for the Commission review are set out below (see Table 1).

Table 1: Terms of Reference for the Commission's Review of the Wilpinjong Extension Project

1.	Carry out a review of the Wilpinjong Extension Project, and:
a)	consider the EIS for the project, all issues raised in public and agency submissions, and any other information provided on the project during the course of the review;
b)	assess the merits of the project as a whole having regard to all relevant NSW Government policies, paying particular attention to the impacts of the project on Wollar Village; and if necessary;
c)	recommend appropriate measures to avoid, minimise, and/or manage significant impacts of the project.
2.	Conduct public hearings during the review as soon as practicable after the Department of Planning and Environment provides its preliminary assessment report to the Commission.
3.	Submit its final report on the review to the Department of Planning and Environment within 10 weeks of receiving the Department's preliminary assessment report, unless the Secretary agrees otherwise.

The Commission held a public hearing on 29 November 2016 at the Mudgee Town Hall. Ten verbal submissions were received from individuals, local businesses and employees of the mine. In addition, the Commission received a total of 312 written submissions before and after the public hearing.

The Commission published its review report on 20 December 2016.

¹ Referred to by the Planning Assessment Commission as the preliminary Secretary's Environmental Assessment Report

1.3 Applicant's Response

On 10 February, WCPL provided a detailed response to all the relevant recommendations of the Commission's review (**Appendix A**).

This response includes one major change to the project. WCPL has revised the final landform to reduce the number of final voids that would remain post mining. In particular, WCPL has committed to ensuring that there is no final void in the Pit 8 mining area, and that the final Pit 8 landform would drain naturally to the surrounding environment.

2 CONSIDERATION OF COMMISSION'S REVIEW

2.1 Overview of the Commission's Review

The Commission made a 31 recommendations for the Department and WCPL to consider prior to the Department finalising its assessment of the project.

The Commission's key recommendations relate to biodiversity and offsets, rehabilitation and final landform, water quality, heritage, noise and blasting, and social impacts.

Although the Department provided draft conditions as part of the PAR, the Commission did not consider these in its merit review advising that these would be more appropriately reviewed at the determination stage of the application.

Consequently, the Commission makes a number of recommendations requesting that the Department considers imposing a range of conditions to mitigate and/or manage the impacts of the project that have been addressed in the conditions that accompanied the PAR.

2.2 Summary of the Department's Response

A summary of the Department's consideration of and response to the Commission's recommendations is provided in **Table 2** below, while a more detailed discussion is provided in subsequent sections.

As part of the Department's consideration, it has consulted with the Environment Protection Authority (EPA), Office of Environment and Heritage (OEH) and the Commonwealth Department of Environment and Energy (DEE). Their responses are discussed as part of the relevant recommendations and a copy of their responses, where relevant, is provided in **Appendix B**.

The Department has adopted all of the Commission's recommendations, with the exception of one regarding further consultation with the Aboriginal community. In regard to this recommendation, the Department considers the consultation already undertaken by WCPL has adequately met the requirements of applicable NSW Government policy.

Table 2: Summary of Department's consideration of the Commission's review recommendations

Commission Recommendation	Department Response
Biodiversity and Offsets	
Recommendation 1 Should insufficient evidence be provided by the Applicant to satisfy DEE as to the identification and classification of derived native grassland, the area in question shall be deemed as satisfying the requirement for derived native grassland.	The Department is satisfied with the classification of derived native grassland (see Section 2.3).
Recommendation 2 Incorporate as a minimum the Department's recommendations listed on page 50 of the PAR within any proposed consent requirements to minimise impacts on the Nature Reserve.	Accepted (see conditions 40, 41, 42 and 63 of schedule 3 in Appendix D).
Recommendation 3 Incorporate as a minimum the Department's recommendations listed on page 51 of the PAR to minimise impacts on the abandoned adit to protect potential roosting sites of the Bentwing-bat. The Department and the Applicant should also give consideration to the impacts of mine lighting on bat movements to and from the site.	Accepted (see conditions 14 and 42 of schedule 3 in Appendix D). Consideration of lighting is provided in Section 2.3 (see also conditions 42 and 57 of schedule 3 in Appendix D).

Commission Recommendation	Department Response
Recommendation 4 The Department and the Applicant shall provide additional evidence to confirm that any shortfall in species credits are available for purchase.	See Section 2.3 for the Department's consideration.
Recommendation 5 The Department should provide evidence to demonstrate that the Regent Honeyeater breeding program is operational.	OEH has advised that the breeding program commenced in 1995, and provided further information to demonstrate the operation of the breeding program. See Section 2.3 and OEH's advice in Appendix B .
Recommendation 6 The Commissions encourages the development of a progressive offset strategy that focuses on land holdings that can offer the quickest biodiversity returns for Endangered Ecological Communities (EEC's) and threatened species.	Accepted (see condition 42 of schedule 3 in Appendix D).
Recommendation 7 The Commission encourages the development of a long term strategy to provide for the maximum potential habitat outcome for the Regent Honeyeater.	Accepted (see consideration in Section 2.3 and conditions 32-39 of schedule 3 in Appendix D).
Rehabilitation and Final Landform	
Recommendation 8 The Applicant and the Department should further explore opportunities to limit the extent of the voids, unless operationally and biophysically required. The Commission considers that the void for Pit 8 is not justified.	Accepted (see condition 61 of schedule 3 in Appendix D). WCPL has removed the Pit 8 final void.
Water Quality	
Recommendation 9 The final assessment report should present the modelling and prediction information as being independent of the existing mining operations, however cumulative impacts of the whole project are still to be presented.	Additional information provided in Section 2.5 .
Recommendation 10 Where an agency raises concerns regarding existing mining impacts, the Department should describe the concerns, how they should be best managed, how they have been addressed.	Further description provided in Section 2.5 (see also condition 30 of schedule 3 in Appendix D).
Recommendation 11 The Department is to give consideration to requiring, through conditions, the establishment of baseline data to enable the development of a reference point to establish impacts within the locality.	Accepted (see condition 30 of schedule 3 in Appendix D).
Recommendation 12 The Department should ensure that the water balance assumptions are updated to ensure it is reflective of the outcomes of requiring sediment dams to be designed to cater for the 95 percentile 5 day rainfall event.	WCPL has revised the site water balance and there are no material changes resulting from these updates (see Section 2.5).
Recommendation 13 The Department is to clarify how "mine water" is captured and managed so as to not pose a risk to the environment.	See clarification in Section 2.5 .
Recommendation 14 The Department to confirm that the cumulative impact assessment of groundwater includes the existing mining operations at Wilpinjong.	The ground water model includes existing operations (see Section 2.5).
Recommendation 15 The Department is to ensure that a regulatory regime is developed with regard to the Applicant's "in-principle make good provisions" for groundwater impacts on the Wollar Public School.	Accepted (see condition 24 of schedule 3 in Appendix D).
Recommendation 16 The Department is to provide further clarification as to the full extent of the drawdown on the alluvial aquifers within and around the project site.	Further clarification is provided in Section 2.5 .
Recommendation 17 Where the Department makes statements regarding the significance of an impact it should provide a numerical description.	Accepted (see Section 2.5).

Commission Recommendation	Department Response
Recommendation 18 The Department should provide evidence to support the statement that groundwater and surface water quality is relatively poor and that this is not the result of ongoing mining operations within the locality.	Further evidence is provided in Section 2.5 .
Recommendation 19 Where a specialist expert report makes recommendations as to the ongoing management of an impact, the Department shall ensure that these are appropriately adopted through conditions of consent.	Accepted (see condition 30 of schedule 3 in Appendix D).
Heritage	
Recommendation 20 Develop clear performance management objectives to be applied to any consent which specify the acceptable level of impact on sites of significance.	Accepted (see condition 47 of schedule 3 in Appendix D).
Recommendation 21 That the Department, OEH and the Applicant take all reasonable steps to consult, and where possible reach an agreement with the local Aboriginal community as to the level of acceptable impacts on items of significance.	See the Department's consideration in Section 2.6 .
Recommendation 22 The Department should ensure that a regulatory regime is in place which puts an emphasis on impact avoidance for significant sites, and where avoidance is not possible the suitable recording and salvage of artefacts.	Accepted (condition 47 of schedule 3 in Appendix D).
Recommendation 23 The Department, in consultation with OEH should investigate opportunities to develop a regional investigation into Indigenous and non-Indigenous archaeology within the region.	The Department has identified opportunities for investigation in the region (see Section 2.6).
Noise and Blasting	
Recommendation 24 The Department should exhaust all reasonable means to reach a position of agreement with the Applicant that voluntary acquisition be extended to include the residence known as 102.	Accepted (see condition 1 of schedule 3 in Appendix D).
Recommendation 25 The Applicant should take all reasonable measures to ensure that residences along Ulan Road are aware that mitigation measures are available.	Residences have already been notified (see Section 2.7).
Recommendation 26 The Department should engage in further consultation with EPA to resolve any residual noise assessment issues.	The EPA reconfirmed that it is satisfied with the Department's recommended conditions in regard to noise (see Section 2.7 and Appendix B).
Recommendation 27 The Department should consider specific performance targets for blasting and vibration impacts on sensitive sites which would be reflected in conditions, and incorporated in a Blasting Management Plan.	Accepted (see condition 14 of schedule 3 in Appendix D).
Recommendation 28 The Department and Applicant should provide a response to the "Additional Acoustic Peer Review" by Day Design Pty Ltd.	See response in Section 2.7 .
Social Impacts and Wollar Village	
Recommendation 29 The Applicant and Department should give further consideration in establishing what the social impact on the locality, and particularly Wollar Village will be post mining closure.	Accepted (see the Department's consideration in Section 2.8 and condition 68 of schedule 3).
Recommendation 30 The Applicant, in consultation with the Department should prepare a long term strategy for the management of mine-owned assets within Wollar Village.	Accepted (see condition 68 of schedule 3 in Appendix D).
Recommendation 31 The Applicant should develop a workplace strategy that actively encourages employees to engage with the local community, particularly through the RFS.	WCPL have committed to developing a workplace strategy (see Section 2.8).

2.3 Biodiversity and Offsets

Commission Recommendation 1

Should insufficient evidence be provided by the Applicant to satisfy the Department of Environment and Energy as to the identification and classification of derived native grassland, that for the purpose of establishing an appropriate offset liability, the area in question shall be deemed as satisfying the requirement for derived native grassland.

The Commonwealth Department of the Environment and Energy (DEE) originally raised concerns about the extent of the critically endangered ecological community *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-Gum Woodland and DNG).

These concerns focused on two small patches of potential Box-Gum Woodland DNG within the footprint of the open cut extension areas. As noted in the PAR, this issue was not relevant for setting offset liabilities for the project, as these are established in accordance with the NSW Framework for Biodiversity Assessment (FBA) which is accredited under the Assessment Bilateral Agreement with the Commonwealth Government.

Nonetheless, the Department requested further information from WCPL to resolve this issue. In response, WCPL provided further details about the methodology and analysis used to determine the extent of the community, and a site visit was held with the Department, DEE and WCPL's ecological consultant on 20 December 2016 (see **Appendix C**).

DEE has considered the floristic structure of patches of Box-Gum Grassy Woodland and areas of potential derived grassland in the context of their locations in the landscape and land use history, and considers that the EPBC listed community has been mapped in accordance with the listing advice and relevant Commonwealth policy statements.

Consequently, the Department considers that impacts on Commonwealth Matters have been adequately assessed in the PAR.

Commission Recommendation 2

Incorporate as a minimum the Department's recommendations listed on page 50 of the preliminary SEAR within any proposed consent requirements to minimise impacts on the Nature Reserve.

To address the Commission's recommendation, the Department has included all the recommendations listed on page 50 of the PAR in recommended conditions 40, 41 and 63 of schedule 3 (see **Appendix D**).

These conditions require WCPL to setback the open cut at least 20 m from the Munghorn Gap Nature Reserve and survey the boundary of the reserve and provide relevant spatial data to the Department and OEH. They also require WCPL to prioritise rehabilitation of disturbed areas within 50 m of the reserve.

In addition to these requirements, the Department has recommended WCPL provide a detailed description of the measures that would be implemented to ensure that the setback distances to the reserve are met as part of the Biodiversity Management Plan required under recommended condition 42 of schedule 3 (see **Appendix D**).

Commission Recommendation 3

Incorporate as a minimum the Department's recommendations listed on page 51 of the preliminary SEAR within any proposed consent requirements to minimise impacts on the abandoned adit to protect potential roosting sites of the Bentwing Bat. In addition to this, the Applicant and the Department should give consideration to the impacts of mine lighting on bat movements to and from the adit.

To address the Commission's recommendation, the Department has included all the recommendations listed on page 51 of the PAR in recommended condition 14 and 42 of schedule 3 (see **Appendix D**).

These conditions would require WCPL to prepare and implement an Eastern Bentwing-bat Management Plan as part of the Biodiversity Management Plan to include blasting thresholds for the adit and targeted monitoring programs.

As part of this recommendation, the Commission also recommended the Department consider the impacts of mine lighting on the Eastern Bentwing-bat, particularly movements to and from an old mining that has been identified as a potential maternity roost.

The Department notes that artificial lights containing an Ultra Violet (UV) spectra have the potential to modify some bat species behaviour. This is because bats may preferentially hunt insects that are attracted to these lights, which in turn, has the potential to increase predation by nocturnal predators that feed on bat species.

The Department recognises that many bat species are known to emerge from their roost only when light levels diminishes to an acceptable level. Consequently, any direct lighting of the adit entrance would potentially alter the timing and nature of the Eastern Bentwing-bats movements from the adit as it would delay or prevent bats from emerging, thereby limiting the amount of time available for foraging.

WCPL has also considered the potential impacts of mine lighting on bat movements in its response to the Commission's recommendation (see **Appendix A**).

WCPL has committed to a number of measures to mitigate the potential impacts of mine lighting. These include directing temporary pit lighting away from the adit, using only sufficient lighting for safety purposes when in close proximity to the adit, and prioritising the use of lighting that does not contain a UV spectra.

The Department has recommended that these measures be incorporated into the Biodiversity Management Plan required under recommended condition 42 of schedule 3 (see **Appendix D**), including a monitoring program to report on and monitor the effectiveness of these measures.

To further reduce any impacts on bat movements, the Department has recommended that no direct light shines on the adit (see condition 57 of schedule 3).

With these measures in place, the Department considers that the impacts of mine lighting could be appropriately mitigated to ensure there would be no significant impacts on bat movements to and from the adit.

Commission Recommendation 4

Given the critical status of the Regent Honeyeater, the Department and the Applicant shall provide additional evidence to confirm that any shortfall in species credits are available for purchase by the Applicant. The Commission would not be supportive of any reduction in Regent Honeyeater credit liabilities.

It is important to recognise that the proposed offset strategy would fully meet the species credit requirements of the *NSW Biodiversity Offsets Policy for Major Projects 2014* (NSW Offsets Policy) with a combination of land based offsets, rehabilitation, and funding towards the Regent Honeyeater recovery program.

Table 3 provides a summary of the credit requirements and the proposed offset strategy for the Regent Honeyeater. The offset strategy is described in greater detail in the PAR.

Table 3: Offsets for Regent Honeyeater

Species Credits Required	Species Credits Offset Areas 1-5	Species Credits Rehabilitation	Species Credits Regent Honeyeater Recovery Program	Total Species Credits All Offsets
14,630	4,271	8,650	1,709 ¹	14,630

Note 1: Based on a cost per credit calculated in accordance with the NSW Offsets Policy.

WCPL would only be required to retire additional species credits if it fails to meet the rehabilitation performance or completion criteria which would be developed by WCPL under condition 37 of schedule 3, in consultation with OEH, DEE and the Department, and to the satisfaction of the Division of Resources and Energy (DRE).

In the event that WCPL fails to achieve these criteria, it would be required to retire the residual credits in accordance with the NSW Offsets Policy as set out in recommended condition 38 of schedule 3. This could be achieved by a number of methods including acquiring or retiring credits under the Biobanking scheme or making payments into an offset fund that has been established by the NSW Government.

Importantly, the Department's recommended conditions would ensure that there would be no reduction in credit liabilities should rehabilitation fail to meet the performance or completion criteria.

To address the Commission's recommendation, WCPL has advised that there are significant areas of Regent Honeyeater habitat in the vicinity of the Wilpinjong coal mine that could be purchased in the event that it is required to retire additional credits.

For example, OEH and WCPL have advised that there is a large property in the region that could provide some 4,444 species credits for the Regent Honeyeater. This property alone would account for almost half of the species credits generated through rehabilitation.

WCPL also advises that land owned by its parent company, Peabody Energy, could also be used to satisfy any residual species credit requirements.

Given the above, should WCPL fail to meet the performance/completion criteria in the conditions, the Department considers that there are a range of suitable options under the NSW Offsets Policy that would ensure any shortfall in credits for the Regent Honeyeater are appropriately retired. The Department also notes that regardless of the performance of the rehabilitation, there would be no reduction in Regent Honeyeater credit liabilities under the recommended conditions.

Commission Recommendation 5

The Department should provide sufficient evidence to demonstrate that the proposed Regent Honeyeater breeding program is operational, or if not already operational, provide evidence that appropriate agreements are in place with relevant stakeholders, and that the program would become operational in less than 5 years.

OEH has advised the Department that a captive breeding program has been in place at Taronga Zoo since 1995. Measures are also in place to expand the program to the Taronga Western Plains Zoo over the next few years.

OEH anticipates that the funding proposed as part of the project would support the operation of the program at the Taronga Western Plains Zoo and fund three release programs over the next 10 years.

Further details are provided in OEH's correspondence in **Appendix B**.

Commission Recommendation 6

The Commission would encourage the development and adoption of a progressive offset strategy that focuses initial efforts on those land holdings that can offer the quickest biodiversity returns for endangered ecological communities and threatened flora and fauna species, for example ECA – B.

The Department notes that WCPL is already required to regenerate native vegetation in the Environment and Conservation Areas (ECAs) under the existing conditions of consent.

However, as these areas contain Box-Gum Woodland EEC and suitable Regent Honeyeater habitat, the Department agrees that there is an opportunity to prioritise and proactively regenerate native vegetation in some of these areas, including ECA-B.

To this end, WCPL has proposed a number of proactive measures for regeneration of areas outside the project footprint and in the ECAs in the first 3 years of mining under the new consent, including:

- selective direct seeding of native grasses, herbs and shrubs;
- selective revegetation of local native over-storey and shrub species; and
- supplementary tree planting in some areas.

WCPL also considers there are opportunities to prioritise Regent Honeyeater habitat establishment within areas of the mine site that have already rehabilitated. In particular, WCPL proposes that seeding be prioritised in areas that were previously established as grassland/pasture and that existing woodland rehabilitation be evaluated against contemporary BVT classifications within the first 3 years of the project. WCPL proposes that a program of remedial measures could then be implemented to enhance and improve the habitat values of the existing rehabilitation where required.

The Department considers that these measures meet the intent of the Commission's recommendation as they would significantly accelerate the provision of suitable habitat for threatened species (particularly the Regent Honeyeater) both on the mine site and in the existing conservation areas in the immediate surrounds. Accordingly, the Department has recommended that WCPL describe the short-term measures that would be implemented in the recommended Biodiversity Management Plan (see condition 42 of schedule 3).

Commission Recommendation 7

The Commission would encourage the Department, OEH and the Applicant to give consideration to develop a long term strategy to provide for the maximum potential habitat outcome for the Regent Honeyeater within the site and land offset areas.

As discussed above, the Department's recommended conditions include a comprehensive biodiversity offset strategy targeted toward the long term security and rehabilitation of Regent Honeyeater habitat, as well as contributions to the Regent Honeyeater recovery program.

The Department considers that the proposed offset strategy provides an appropriate balance between land-based offsets, maximising the ecological benefits of rehabilitation and significant contributions toward increasing, or at least maintaining populations of Regent Honeyeater through the proposed breeding program.

The Department has recommended a range of conditions to ensure the implementation of the offset strategy in the long term.

Firstly, the Department has recommended that WCPL be required to ensure the long term security of land-based offsets areas and to use its best endeavours to transfer the land to the adjoining National Park estate (condition 35 of schedule 3). The long term measures to manage the offset properties (as long as they continue to be owned by WCPL) would be described in the Biodiversity Management Plan required under condition 42 of schedule 3.

Secondly, the Department has recommended that WCPL be required to meet performance and completion criteria to maximise the potential habitat for the Regent Honeyeater in the rehabilitated landscape (see conditions 36, 37 and 38 of schedule 3). These criteria would need to be developed in consultation with the Department, OEH and DEE, and to the satisfaction of DRE, as the relevant agency responsible for rehabilitation of mine sites.

As outlined in the PAR, OEH has advised the Department that only three BVTs² would be acceptable for rehabilitation areas (rather than a maximum of 11) to meet Regent Honeyeater species credits. This is because the three communities are known to include key feed species and are observed to be more regularly used by Regent Honeyeaters.

The Department agrees with OEH's advice in recognition that these BVTs are most likely to succeed in establishing long term habitat. Consequently, the Department has recommended condition 36 of schedule 3 requiring the rehabilitation of some 2,897 hectares of the disturbance footprint of the project using these 3 BVT's.

² These BVTs are HU697 Mugga Ironbark-Black Cypress Pine shrub/ grass open forest of the upper Hunter Valley, HU 732 Yellow Box grassy woodland on lower hillslopes and valley flats in the southern NSW Brigalow Belt South Bioregion and HU824 White Box-Black Cypress Pine shrubby woodland of the Western Slopes

That being said, the Department recognises that WCPL may be able to demonstrate that additional BVT's could also be suitable, and has afforded some flexibility in the conditions to ensure that rehabilitation is optimised in light of any new information.

Finally, the proposed offset strategy requires WCPL to contribute \$650,000 towards the Regent Honeyeater breeding program, and as discussed above, OEH has provided further details about this program (see **Appendix B**).

The Department considers the breeding program is a particularly important component of the proposed offset strategy as it directly and proactively targets increasing the population of the Regent Honeyeater in the region, in accordance with the recovery program for this species. Together with the creation and protection of large areas of suitable habitat (up to 3,499 hectares), the Department considers that a long term offset strategy has been developed to provide an appropriate habitat outcome for Regent Honeyeater in and surrounding the site.

2.4 Rehabilitation and Final Landform

Commission Recommendation 8

Whilst the Commission acknowledges that the existing mining project has approval for two final voids, the Applicant and the Department should further explore opportunities to limit the extent of the voids, in particular to keep the depth shallow enough as to not form saline sinks, unless it is operationally and biophysically required. The Commission is of the view that the proposal to create an additional long term void for Pit 8 is not justified based on the information available, including stated cost, and further consideration should be given to preventing this permanent void.

Removal of Pit 8 Void

In response to the Commission's review report, WCPL has revised the conceptual landform to eliminate the need for a final void in Pit 8. At the completion of mining, the southern end of Pit 8 would be rehabilitated to form a final depression that would drain naturally to the rehabilitated Pit 7 mining area (see Figure 1).

The final depth would be reduced from approximately 50 m to 30 m, and while the final landform would retain some steeper slopes, the majority of the area would comprise gently sloping land (i.e. between 1% and 15% gradient) (see Figure 2). The proposed design would avoid any increase to the Pit 8 disturbance footprint, generally reflect the surrounding topography, and increase the overall area that would be rehabilitated to woodland.

To formalise WCPL's commitment to remove the final void from Pit 8, the Department has recommended condition 60 of schedule 3 requiring rehabilitation to be consistent with the revised rehabilitation strategy shown in Appendix 8 of the recommended conditions (see Figure 3).

Minimising Pit 2 and Pit 6 Voids

WCPL is not proposing to remove the Pit 2 and Pit 6 final voids from the mine plan. WCPL makes a number of arguments to support its position.

Firstly, the existing approved mine plan already incorporates two final voids in the final landform. While the proposed voids are in different locations, the size and function of the voids are similar and were assessed and approved following an Independent Hearing and Assessment Panel which specifically considered the hydrological function of the voids in 2005.

Secondly, the size and depth of the final voids are relatively modest in comparison to final voids approved for most other open cut coal mines in NSW. This is achievable primarily due to the relatively shallow depth of the coal resource and the open cut pits at the Wilpinjong mine.

Thirdly, the final void in Pit 2 is currently the primary on-site water storage for the mine, and would continue to be used for water supply and on-site water management until rehabilitation is complete. Post-mining the catchment of the void would be minimised, and remain as an isolated groundwater sink that is consistent with the currently approved final void.

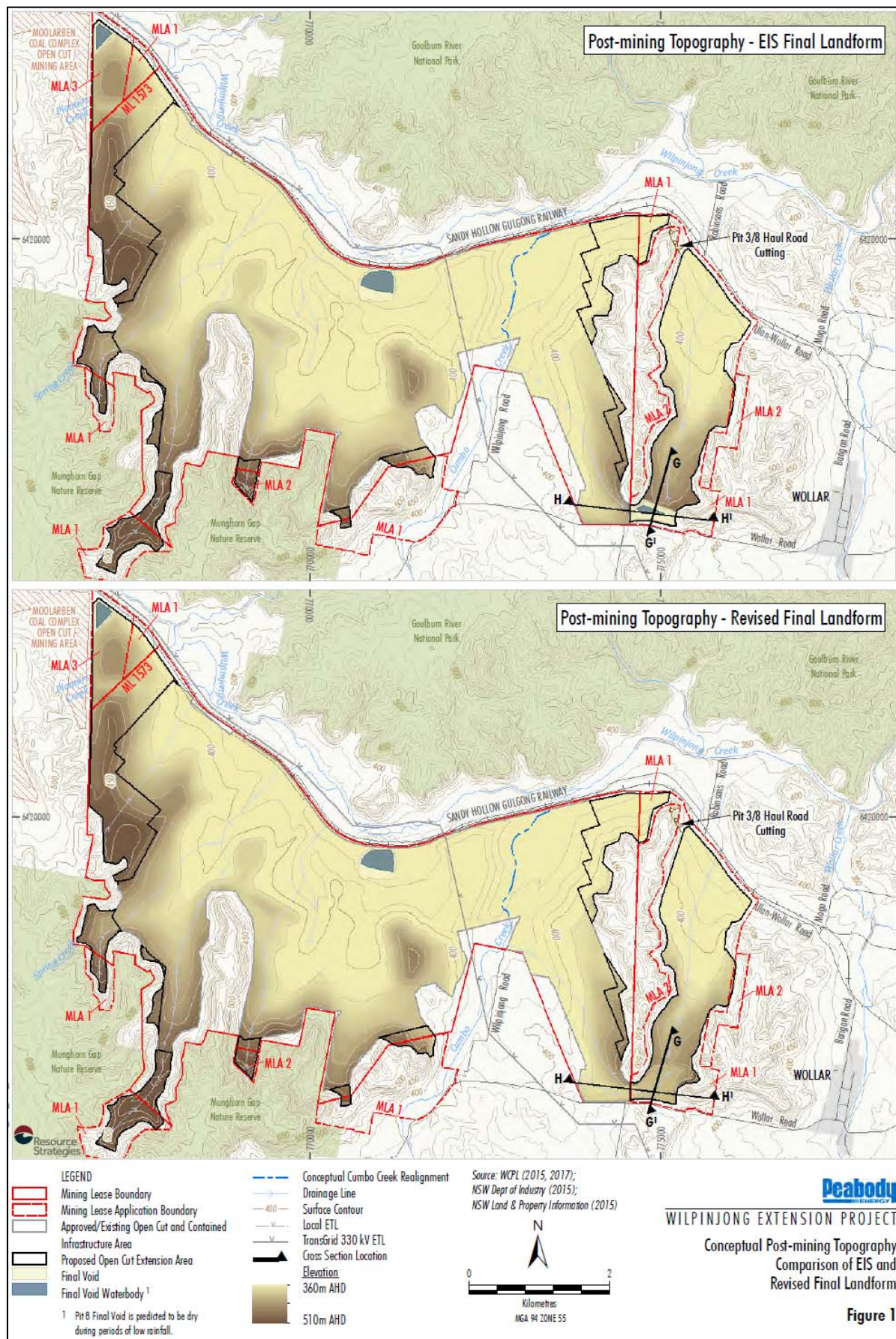


Figure 1: Revised Post-Mining Landform

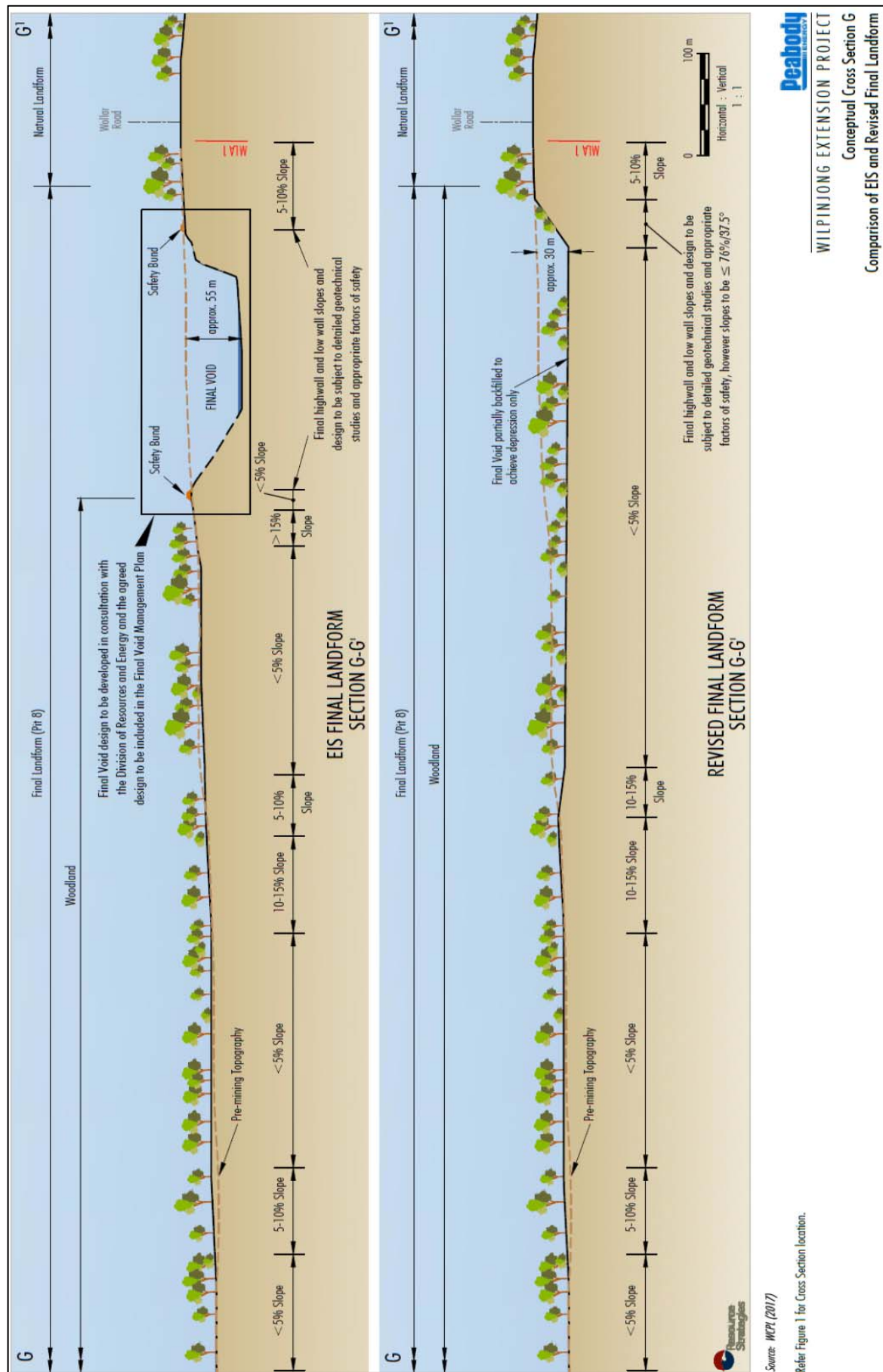
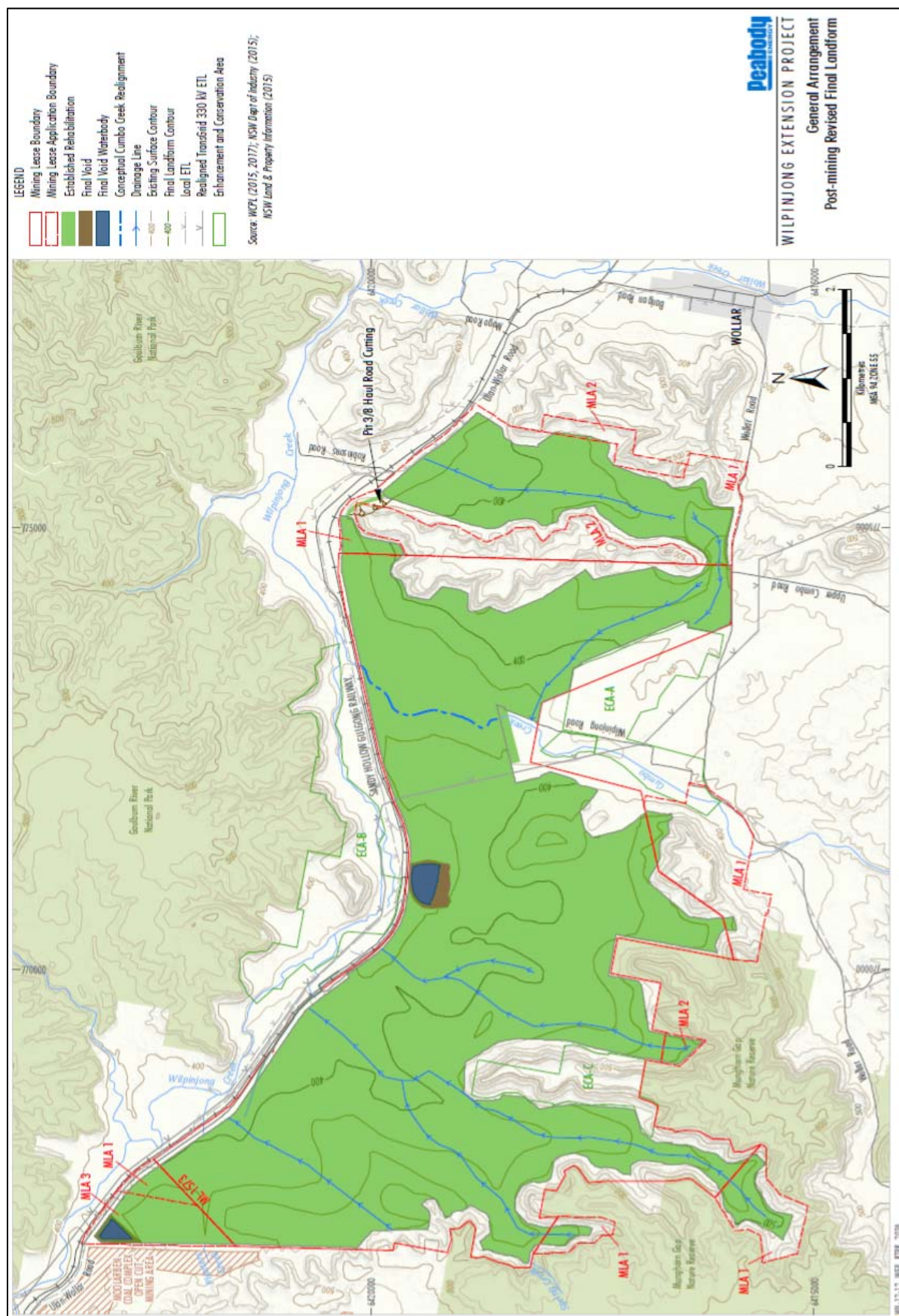


Figure 2: Cross Section of the Revised Post-Mining Landform



Fourthly, the Pit 6 final void is located at the western boundary of the mine and represents the last area of the planned sequence of mining at the Wilpinjong coal mine. It is also adjacent to the approved final void associated with the open cut at the Moolarben coal mine which was approved by the Commission in 2015. The proximal location of the two voids provides an opportunity to recover the barrier coal between the two mining operations while integrating any final voids into a suitable final landform.

Finally, WCPL highlights the advantages of the final voids from a water management perspective. In this regard, both voids would develop as long term groundwater sinks, with an overall gradient towards the voids. This would prevent salt migrating from the final voids to the surrounding environment, and is consistent with how the vast majority of final voids function from a hydrological perspective across NSW.

The groundwater modelling also found that any impacts of the saline in the voids themselves would be localised and would not have any significant impacts on the surrounding groundwater resource (i.e. the project would comply with the minimal impact considerations of the *NSW Aquifer Interference Policy*).

It is important to note that WCPL has not undertaken a detailed assessment of the hydrological impacts of backfilling the final voids above the ground water equilibrium level, including the potential risks this may pose to surrounding groundwater resources.

Given the above, the Department does not consider that it is reasonable at this stage to require the removal of the voids from the proposed mine plan, and doing so may result in additional environmental risks.

Nonetheless, the Department agrees that the potential to limit the size and depth of the voids should be further investigated during the detailed design of the project, and has recommended a condition requiring WCPL to prepare a Rehabilitation Strategy, including an assessment of the potential impacts of partially backfilling the voids above groundwater equilibrium and consideration of integrating the Pit 6 void with the final void at the Moolarben coal mine.

2.5 Water Quality

Commission Recommendation 9

The final assessment report should present the modelling and prediction information as being independent of the existing mining operations, however cumulative impacts of the whole project are still to be presented. This will permit a clear delineation of the proposed project impacts.

The incremental and cumulative water impacts of the project were assessed in detail by WCPL in the EIS, RTS, and various responses to requests for additional information from the Department during the assessment process. They were also considered in detail by Professor Thomas McMahon, Dr Franz Kalf, the Commonwealth Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC), DPI Water and the EPA.

The Department summarised the findings of its assessment in detail in the PAR, and attached a set of detailed conditions to the PAR which include conditions to incorporate the recommendations of the various experts and ensure the incremental and cumulative water impacts of the project would be appropriately managed.

To provide additional clarification for the Commission, however, the Department has summarised the incremental and cumulative “water take” impacts of the project in Tables 4 and 5 and Figures 4 and 5 below, and considered the potential water quality impacts of the project further in its response to Recommendation 17 below.

The creeks affected by the project are all ephemeral creeks with low flows. In addition, there are private water users along Wilpinjong or Wollar Creek downstream of the project up to the confluence of Wollar Creek with the Goulburn River.

The results in this table show that the incremental and cumulative surface water impacts of the project would be very minor, resulting in a small but temporary loss in catchment size, and a longer term loss of baseflow of up to 0.04 ML/day which could easily be accounted for under the surface water licences currently held by WCPL.

Table 4: Potential Surface Water Impacts

Parameter	Existing Mining Operations	Cumulative – Project and Existing Operations	Incremental Change
Catchment Area	24.1 km ² *	23.8km ² *	-0.3 km ² *
Cathment Area Final Voids	0.2 km ² *	0.3km ² #*	0.1 km ² #*
Baseflow loss – Wilpinjong Creek to Wollar Creek	0.37 ML/day	0.37 ML/day	<0.005 ML/day
Baseflow loss – Wollar Creek to Goulburn River	0.37 ML/day	0.40 ML/day	0.03 ML/day
Baseflow loss – Goulburn River to Hunter River	0.37 ML/day	0.41 ML/day	0.04 ML/day

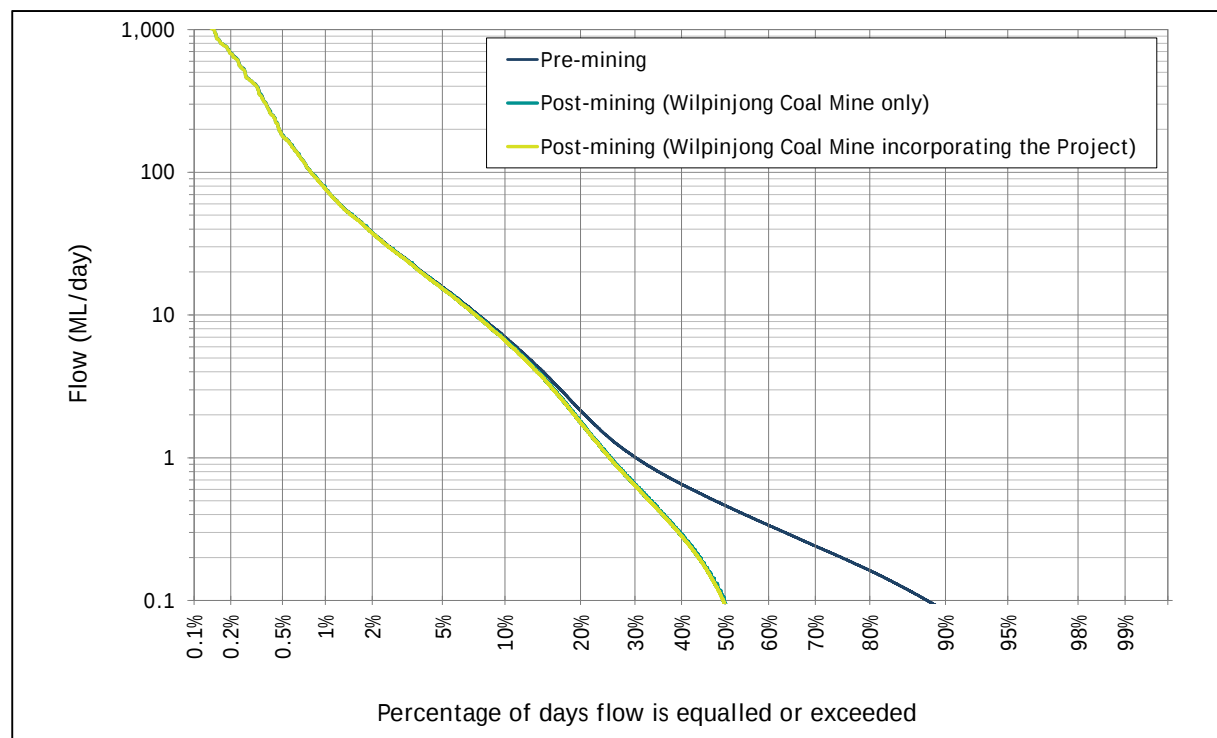
Notes:

* This should be compared to the catchment size of the catchment of the Wollar Creek Water Source, which includes Wilpinjong Cumbo, Wollar & Barigan Creeks and covers an area of around 530 km²; or Goulburn River to Hunter River Catchment, which covers an area of 7,965 km².

These figures include the void for Pit 8, which will now be reconfigured to be free draining.

The development of Pit 8 would temporarily remove an additional 0.3 km² of land from the catchment, which would be very minor in relation to the Wollar Creek Water Source or Goulburn River Catchment. However, this loss would only occur for a few years, as the mine would be progressively rehabilitated and returned to the catchment, leaving two relatively small final voids that were approved in 2006.

Modelling carried out for the EIS suggests the project would have no measureable impact on flow in Wilpinjong Creek compared to existing approved mining operations, although baseflow losses are expected to reduce the frequency of low flows (< 1ML/day) in Wilpinjong Creek for many years (see Figure 3 below). This loss would have no measurable impact on any private water users downstream of the mine or the National Park.

**Figure 4: Wilpinjong Creek Flow Frequency Predictions**

Baseflow losses would be offset to some extent during mining operations by the discharge of water from the Reverse Osmosis plant on site. This plant has a theoretical maximum capacity of 3.5ML/day, although discharges have consistently been below 1.5ML/day over the last few years, and tend to only occur during wetter periods rather than during periods of low flow.

Table 5: Predicted Groundwater Inflows and Take

Parameter	Existing Mining Operations	Cumulative – Project and Existing Operations	Incremental Change
Maximum groundwater inflow	5.4 ML/day	4.6 ML/day	-0.8 ML/day
Average groundwater inflow	2.7 ML/day	1.9 ML/day	-0.8 ML/day
Maximum Licensable take – Alluvium	185 ML/year	171 ML/year	-14 ML/year
Maximum Licensable take – Porous Hard Rock	1,979 ML/year	1,099 ML/year	-880 ML/year

While the project would marginally increase the total groundwater take of mining operations, groundwater impacts are expected to be lower than predicted when the mine was approved in 2006, principally due to improvements in the accuracy of the groundwater modelling predictions for the mine.

It should be noted that groundwater take from the alluvium would peak at 171ML/year, before reducing to between 143-147ML/year between 2033 and 2100. In other words, small amounts of water would continue to be lost from the alluvium associated with the local creeks for many years after mining operations cease, causing a minor loss of baseflow which is discussed above.

Under its existing water licences, WCPL is allowed to take around 474ML/year from this water source; and consequently, it would be able to account for the predicted groundwater take in the alluvium over time under the water legislation. Given the long period of the predicted impact, WCPL is likely to surrender part of its existing licence to account for the take. This is consistent with the approach envisaged for “perpetual inflow volumes” under the *NSW Aquifer Interference Policy* (AIP).

Groundwater take from the porous hard rock aquifer, which includes the coal seam, would peak at 1,099ML/year, before reducing to zero following the completion of mining operations and subsequent rehabilitation of the mine. There are very few beneficial uses for this water, principally due to its salinity levels. Under its existing water licences, WCPL is allowed to take around 2,021ML/year from this water source; and consequently, it would be able to account for the predicted groundwater take in the porous rock aquifer under the water legislation.

Under the final recommended conditions, WCPL is required to refine the groundwater model over time and update its predictions regularly (see condition 30 of schedule 3 in **Appendix D**). This includes implementing the IESC’s recommendations, which include carrying out additional core testing in proposed mining areas to improve the model’s predictions.

The full extent of the predicted drawdown on the alluvial aquifers is included in the EIS, and depicted in Figure 4 below.

It shows the likely drawdown effects of the cumulative impacts of the project would be confined to areas in close proximity to the site that are owned by WCPL, with a drawdown of 1 metre expected in the alluvium associated with Wilpinjong Creek, and a smaller drawdown in the alluvium associated with Wollar Creek.

This is well below the minimal impact criteria of 2 metres drawdown in the AIP.

Over the last 10 years, WCPL has acquired significant property holdings in the area surrounding the mine, including in the Wollar Village. This has resulted in there being very few privately owned bores near the mine that could be adversely affected by the groundwater drawdown impacts of the mine.

The groundwater assessment predicts the project would not result in groundwater pressure declines of more than a 2 metres at any of these bores, and concludes that the project would comply with the relevant Level 1 minimal impact criteria in the AIP.

However, it predicts that the project is likely to result in groundwater pressure declines of more than 2 metres at the bore at the Wollar Public School. WCPL has committed to make good any loss of water at this bore, and the Department has incorporated this commitment into the final recommended conditions for the project (see condition 24 in schedule 3 in **Appendix D**). This is consistent with the mitigation measures envisaged in the AIP,

In summary, both DPI Water and the Department consider that the incremental and cumulative surface and groundwater take impacts of the project would be negligible, and could be appropriately managed over time through the imposition of standard conditions of consent, and suitably accounted for under WCPL's existing surface and groundwater licences.

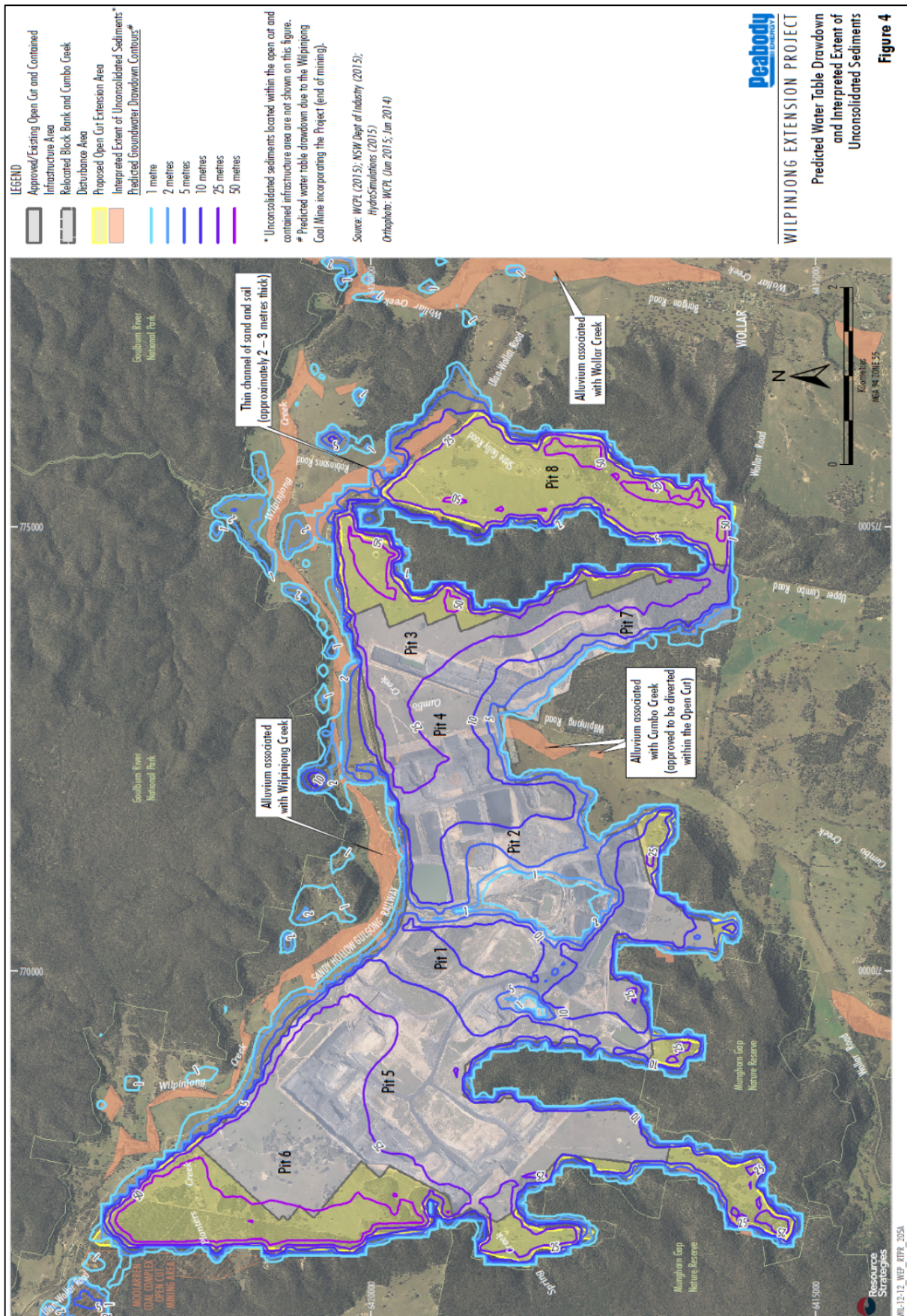


Figure 5: Predicted Drawdown

Commission Recommendation 10

Where an agency raises concerns regarding existing mining impacts, such as salinity increases within Wilpinjong Creek, the Department should in its final assessment report give significant time to clearly describe the concerns, how the concerns should be best managed, and how the Department in reaching its final conclusion has addressed those concerns, and where specific management outcomes should be referenced by the way of conditions of consent.

Consistent with past practice, the Department's PAR focussed on the residual concerns of agencies rather than on concerns raised by agencies early in the assessment process that were subsequently addressed either through the provision of additional information or recommended conditions.

In this case, there were no residual agency concerns about the existing or past water impacts of the mine's operations, and consequently the Department did not consider it necessary to spend significant time in the PAR discussing initial agency concerns that had already been resolved.

In its initial submission on the project, DPI Water noted that reasonably high salinity levels were observed in two bores in Wilpinjong Creek from 2013 to 2014, and sought clarification on whether this was due to mining operations or other factors and whether the project would be able to meet the minimal impact criteria for salinity under the AIP of "no increase of more than 1% per activity in long-term average salinity in a highly connected water source at the nearest point to the mine's operations.

During the assessment process, WCPL provided additional information to address these matters. On 16 July 2016, DPI Water wrote to the Department confirming that this information had addressed its initial concerns, and that it was satisfied with WCPL's predictions that the project would only result in a long term salinity increase of 0.8% in Wilpinjong Creek, and therefore comply with the relevant minimal impact criteria in the AIP. DPI Water recommended conditions requiring WCPL to carry out further statistical analysis of salinity levels over time to improve the understanding of the drivers of salinity fluctuations in Wilpinjong Creek. These conditions were incorporated into the proposed conditions attached to the PAR (see Condition 30(d)(iii) of schedule 3), and endorsed by DPI Water.

The PAR includes copies of the additional information that was provided by WCPL, DPI's response, and the proposed conditions. In addition, WCPL's response to the Commission's review (see pages 13-15 in **Appendix A**) includes a useful summary of how the issue was resolved.

The conditions has been included unchanged in the final recommended conditions for the project (see **Appendix D**).

Commission Recommendation 11

The Department is to give consideration to requiring, through the conditions of consent, the establishment of baseline surface water and groundwater data to enable the development of a reference point to establish the impacts of mining on water resources within the locality.

This is a standard condition of all mining consents in NSW.

Under the conditions for existing mining operations at Wilpinjong, WCPL was required to establish detailed baseline surface water and groundwater data for the area prior to the commencement of mining operations.

This baseline data was documented in the Water Management Plan for the mine, which is available on WCPL's website, and was incorporated into the various water studies that were carried out to assess the potential impacts of the project.

None of the relevant state agencies raised concerns about this baseline data during the assessment process, however the IESC asked for the existing baseline to be extended to include better data on certain metals.

The conditions attached to the PAR required WCPL to prepare a detailed Water Management Plan for the project prior to carrying out any development under the consent with detailed baseline data of:

- surface water flows and quality in creeks and other waterbodies that could potentially be affected by the development; and

- groundwater levels, yield and quality in the region that could be affected by the development, including privately-owned groundwater bores and groundwater dependent ecosystems.

They also required WCPL to incorporate the monitoring recommendations outlined in the IESC's advice to the Department, dated 2 September 2016.

These conditions have been included unchanged in the final recommended conditions for the project (see **Appendix D**).

Commission Recommendation 12

The Department should ensure that the water balance assumptions are updated prior to finalising the preliminary SEAR to ensure it is reflective of the outcomes of requiring sediment dams to be designed to cater for the 95 percentile 5 day rainfall event.

WCPL has revised the site water balance, incorporating the updated requirements for sediment dams to include a design capacity for a 5 day 95th percentile rainfall depth (see WRM Water & Environment's advice in **Appendix A**).

The analysis indicates that increasing the capacity of the sediment dams would reduce the frequency and volume of sediment dam overflows. For example, under wet conditions climatic conditions, the annual sediment dam overflows would reduce by approximately 7%. However, these changes would not materially change any other aspects of the site water balance.

The final recommended conditions for the project (see **Appendix D**) require WCPL to provide a revised site water balance for the project prior carrying out any development under the consent, and update this water balance every year as mining operations are progressively carried out.

Commission Recommendation 13

The Department is to clarify how "mine water" as referenced on page 60 of the preliminary SEAR is captured and managed so as to not pose a risk to the environment.

Mine water at Wilpinjong includes groundwater inflows to the mine workings; runoff from mine workings; process water (including recycled water from the coal waste areas) from the Coal Handling and Preparation Plant; and surface drainage from catchment areas containing mine infrastructure (e.g. workshop areas and coal stockpiles).

This mine water is handled on site in much the same way as it is handled at all other open cut coal mining operations in NSW.

It is captured on site, and diverted to a range of on-site detention storages for reuse on site. Excess water is treated in an onsite Reverse Osmosis Plant before being discharged via a single licensed discharge point to Wilpinjong Creek. The environment protection licence for the mine sets clear limits for the volume and quality of water that may be discharged from the mine.

The water management strategy for the existing mine and project are described in detail in the EIS (see sections 2.1.6 and 2.12 of the EIS). WCPL would continue to implement its existing water management strategy with some slight augmentations for the project.

WCPL's revised site water balance, which has considered both the mine water storage inventory and discharge limits, indicates there would be no uncontrolled release of mine water under all climatic conditions.

Commission Recommendation 14

The Department to confirm that the cumulative impact assessment of groundwater includes what has occurred/been approved by the existing mining operations at Wilpinjong, or alternatively it clearly delineates the two projects and provides information on the experienced drawdown against what was predicted for the existing operation.

The groundwater assessment includes detailed consideration of the potential cumulative impacts of the approved and proposed mining operations at Wilpinjong, as well as the approved operations at the adjoining Moolarben mine (see **Appendix C** of the EIS).

In its initial advice to the Department, the IESC questioned whether the assessment should include the predicted impacts of the approved operations at the Ulan mine. However, after further consultation, the IESC concluded this was unnecessary, principally because any impacts of the Ulan mine would be absorbed into the predicted impacts of the Moolarben mine.

All relevant agencies were satisfied that the predictions of cumulative groundwater impacts were reasonable, but recommended that the groundwater model be refined over time to incorporate new information.

This recommendation was included in the proposed conditions attached to the PAR, and has been included unchanged in the final recommended conditions (see conditions 30(c) and 30(d)(iv) of schedule 3 in the **Appendix D**).

Commission Recommendation 15

The Department is to ensure that an appropriate regulatory regime is developed through either a statement of commitment or conditions of consent with regard to the Applicant's "in-principle make good provisions" with regard to groundwater impacts on the Wollar Public School.

The Department has updated its standard condition on compensatory water supply, to make it explicit that these provisions also apply to the Wollar Public School (see condition 24 of schedule 3 in **Appendix D**).

Commission Recommendation 16

The Department is to provide further clarification as to the full extent of the drawdown on the alluvial aquifers within and around the project site to enable a full assessment of the predicted impacts.

See the response to Recommendation 10.

Commission Recommendation 17

Where the Department elects to make statements regarding the significance of an impact it should provide a numerical description as to the extent of that impact.

The Department has clarified a number of conclusions in the PAR in this report, and confirmed the findings in the PAR that the incremental and cumulative surface and groundwater impacts of the project would be negligible, and could be appropriately managed over time through the imposition of standard conditions of consent (see **Appendix D**), and suitably accounted for under WCPL's existing surface and groundwater licences.

Commission Recommendation 18

In determining the impact of mining on groundwater quality, the Department should provide evidence to support the statement that groundwater and surface water quality is relatively poor and that this is not the result of ongoing mining operations within the locality.

The EIS for the project and Water Management Plan for the existing mining operations (<http://www.peabodyenergy.com/content/427/australia-mining/new-south-wales/wilpinjong-mine/approvals-plans-and-reports-wilpinjong-mine>) contain extensive summaries of the baseline data on surface and groundwater quality in the area before mining operations started on site. They also include a detailed analysis of the surface and groundwater quality monitoring results that have been collected since mining operations began.

In summary, prior to mining local creeks in the area (Wilpinjong, Cumbo and Wollar Creeks) were degraded and highly modified by land clearing and grazing. Water quality in these creeks was poor and highly saline, with salinity levels significantly exceeding the average EC values in the Australian and New Zealand Environment Conservation Council (ANZECC) guideline trigger values for protection of aquatic ecosystems (30-350 $\mu\text{S/cm}$) and primary industries (<950 $\mu\text{S/cm}$). Average pH levels in the creeks were slightly alkaline.

Average salinity values ranged from 1,700 $\mu\text{S/cm}$ to 7,500 $\mu\text{S/cm}$, with Cumbo Creek having the highest salinity values due to there being several coal seam outcrops in the area, however some baseline readings were as high as 16,000 $\mu\text{S/cm}$.

Groundwater quality in the area was highly variable but also generally poor, with average salinity levels ranging from around 2,300 $\mu\text{S/cm}$ to 3,200 $\mu\text{S/cm}$ in the alluvium and porous hard rock aquifers, and several readings exceeding 8,000 $\mu\text{S/cm}$ in the alluvium around certain creeks.

Monitoring undertaken between 2006 and 2015 indicates that salinity levels in Wilpinjong Creek varied between 150 $\mu\text{S/cm}$ and 12,190 $\mu\text{S/cm}$, downstream of the confluence with Cumbo Creek. Ground water monitoring also shows that average salinity is relatively high in both the alluvial aquifer (2,780 $\mu\text{S/cm}$) and hard rock aquifer (2,290 $\mu\text{S/cm}$) and that salinity levels are also highly variable in these water sources (i.e. an EC range of 30 $\mu\text{S/cm}$ to 13,220 $\mu\text{S/cm}$ in an alluvial monitoring bore).

These monitoring results are well within the range of the baseline data, and tend to confirm that mining operations have not had an adverse impact on the quality of surface or groundwater resources in the area. While DPI Water sought clarification about some of the salinity levels measured in some bores, additional information provided to DPI Water during the assessment process shows that there is a strong correlation between salinity and rainfall, indicating that salinity generally reduces with stream flow and is unlikely to be attributed to the Wilpinjong mine.

WCPL proposes to continue to implement the key controls it currently implements at the mine to protect surface and groundwater quality in the area, which include:

- capturing and storing dirty water on site;
- treating excess water to a suitable standard – with salinity levels less than 500 $\mu\text{S/cm}$ - and discharging it to Wilpinjong Creek; and
- identifying, handling and storing various material on site – such as tailings and potentially acid forming or sodic materials – in accordance with standard codes of practice to minimise any seepage of polluted groundwater into the surrounding environment.

With these measures in place, the project is expected to have negligible impact on the quality of surface and groundwater resources in the area, and is predicted to result in a long-term increase in salinity levels of 0.8% in Wilpinjong Creek, which is below the minimal impact criteria in the AIP.

Several experts recommended conditions to improve the monitoring and management of water impacts at the mine over time (see below), and the Department has included these recommendations into the final recommended conditions (see **Appendix D**).

Commission Recommendation 19

Where a specialist expert report makes recommendations as to the ongoing management of an impact, the Department shall ensure that these are appropriately adopted through conditions of consent.

During the assessment process, the Department received expert advice from DPI Water, the EPA, Dr Franz Kalf and the IESC.

The recommendations in this advice were appropriately incorporated into the proposed conditions attached to the PAR, and have been included in the final recommended conditions (see **Appendix D**).

This includes the:

- IESC's requests for additional core testing to further elucidate aquifer properties, more groundwater monitoring in backfill areas and between the mine and Wilpinjong Creek, more metals monitoring including additional solubility testing of arsenic, selenium and molybdenum in waste and tailings material;
- Geo-Environmental's recommendations for the management of potentially acid-forming and sodic materials on site; and
- DPI Water's request for additional statistical analysis of salinity in Wilpinjong Creek.

2.6 Heritage

Commission Recommendation 20

Develop clear performance management objectives to be applied to any development consent which specify the acceptable level of impact on sites of significance.

The Department recognises that there are a range of sites of significance in the area that require some form of management if the project is approved. However, the management objectives for the different sites need to be customised depending on whether they would be directly impacted by the project, in proximity to the project, or sufficiently removed from the project area such that no ongoing management and monitoring is necessary.

The Department recommended conditions in its PAR that require WCPL to prepare an updated and comprehensive Aboriginal Cultural Heritage Management Plan for the project, in consultation with Aboriginal stakeholders, to ensure that Aboriginal heritage sites and cultural values are appropriately protected, managed and monitored.

In particular, the ACHMP would require (see condition 47 of schedule 3):

- ongoing consultation with Registered Aboriginal Parties and OEH;
- a description of the measures to be implemented for:
 - o management of sites not impacted by the project;
 - o reasonable and feasible measures to avoid direct impacts on sites within ancillary infrastructure areas;
 - o management of rock shelter sites in the Munghorn Gap Nature Reserve;
 - o surface collection and salvage of sites prior to disturbance;
 - o test and salvage excavation;
 - o recording of the ochre quarry evidence and rock art to inform archaeological research;
 - o reasonable access to heritage sites, including offset areas, for the Aboriginal community;
 - o managing the discovery of human remains or new sites;
 - o adequate training and induction of personnel; and
 - o the storage, management and conservation of salvaged artefacts.

It is also noted that WCPL already operates in accordance with a range of performance measures designed to protect Aboriginal sites in the vicinity of the mine, including in regard to dust and blasting. These measures are incorporated into the relevant Air Quality and Blast Management Plans, and the Department considers that through the development of updated plans that appropriate measures can be developed for any additional heritage sites that are likely to be impacted by the project, as discussed in more detail under Recommendation 27 below.

Commission Recommendation 21

That the Department, OEH and the Applicant take all reasonable steps to consult, and where possible reach an agreement with the local Aboriginal community as to the level of acceptable impacts on items of significance.

The Department notes that the assessment regime for Aboriginal heritage in NSW does not require agreement to be reached with the local Aboriginal community in regard to the level of acceptable impacts associated with a particular project.

Rather the assessment regime focuses on consulting with Registered Aboriginal Parties (RAPs), and involving these RAPs in the identification, management and monitoring of archaeological and cultural heritage values that may be impacted.

The determination of whether the predicted impacts are acceptable is a matter for consideration by the consent authority in determining the overall merits of the project.

In this instance, while no agreement with RAPs has been reached (nor is it required), WCPL has undertaken extensive consultation with the local Aboriginal community, both during the preparation of the EIS and during the assessment process as outlined below.

WCPL initially wrote to Aboriginal persons and groups seeking an expression of interest in being involved in the heritage impact assessment process. As a result, 7 parties registered an interest in being involved with the project.

WCPL has undertaken significant consultation with these Registered Aboriginal Parties (RAPs) in accordance with OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010 and the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005), including:

- review and information sessions on the proposed assessment methodology;
- seeking input on known Aboriginal objects and places of cultural value;
- participation in field surveys; and
- seeking input on the draft Aboriginal Cultural Heritage Assessment including potential management strategies.

As part of this process, the RAPs identified the high cultural significance of the complex referred to as the Rocky Hill Complex which comprises rock shelters with artefacts and art. While a number of RAPs raised concerns that the project would impact the Rocky Hill Complex (WCP578 and WCP579), some also acknowledged that the impacts would be unavoidable, and requested all possible salvage methods be implemented.

In addition to the consultation undertaken by WCPL, the Department formally notified Mudgee Local Aboriginal Land Council (LALC) and Wanaruah LALC about the project as part of its assessment process and requested comments on the EIS.

During the exhibition period, the Department received submissions from Mudgee LALC and the Murong Gialinga Aboriginal and Torres Strait Islander Corporation. These submissions also raised concerns about the impacts on the Rocky Hill Complex and also the potential for indirect impacts on rock shelters in the Munghorn Gap Nature Reserve.

The Department considered whether the impacts to the Rocky Hill Complex could be avoided or minimised and determined that there are no viable alternatives. This is because avoidance would significantly reduce the revenue of the project, estimated at approximately \$127 million, and would also reduce other benefits of the project including approximately \$10 million in revenue to the State of NSW. There would also be additional operational costs given the significant changes to mine scheduling that would be required to avoid the Rocky Hill Complex.

The Department has recommended condition 47 of schedule 3 to ensure that the Rocky Hill Complex is recorded in detail and that any findings from the salvage operations inform an archaeological research program about the complex.

Importantly, the RAPs would need be consulted with regard to these measures (as well as conservation and management measures for all other cultural heritage on site) as part of recommended condition 47 of schedule 3.

The Department has addressed concerns about rock shelters in the Munghorn Gap Nature Reserve by recommending condition 12 of schedule 3. This condition would require WCPL to ensure that blasting does not damage any rock shelters with moderate to high significance in the Nature Reserve and negligible damage to rock shelters with low significance.

The Department acknowledges that the project would result in impacts on Aboriginal heritage sites of significance, and has carefully considered the issues raised by the Aboriginal community and addressed their concerns where possible. Given the extensive consultation undertaken to date, and the fact that some impacts are unavoidable, the Department does not consider that further consultation with the Aboriginal community (apart from that required under the ACHMP) would achieve any material outcome.

Commission Recommendation 22

The Department should ensure that a strong regulatory regime is in place which puts an emphasis on impact avoidance for significant sites, and where avoidance is not possible the suitable recording and salvage of artefacts.

The current regulatory regime for the assessment of Aboriginal heritage for all mining projects emphasises avoidance of significant sites wherever practicable, as well as, recording and salvaging artefacts in consultation with Aboriginal stakeholders where avoidance is not possible.

The Department's PAR discusses these matters in detail, including the preparation of a comprehensive ACHMP for the project which requires the avoidance of a number of sites, and a plan for undertaking salvage excavation and detailed recording of artefacts, including the ochre quarry evidence and rock art associated with the Rocky Hill Complex (see condition 47 of schedule 3)

Commission Recommendation 23

The Department, in consultation with OEH should engage in discussions with mine operators within the western coalfields regarding participating in a voluntary capacity to the contribution to a regional investigation into Indigenous and non-Indigenous archaeology within the region.

The Department recognises that mining in the Western Coalfield has had a cumulative impact on Aboriginal cultural heritage, and has recommended a range of measures to avoid, minimise and monitor the impacts of the project in the recommended conditions.

It has also recommended that WCPL be required to undertake additional archaeological investigations of its proposed biodiversity offset areas. This additional research would contribute to understanding the regional archaeological resource, and importantly, would focus on areas that would be protected in perpetuity.

The Department also notes that the various investigations undertaken for the development of the Wilpinjong, Ulan, Moolarben, and Bylong coal mines have contributed significantly to regional Aboriginal and historic heritage knowledge.

The Department considers there is an opportunity to collate this information to provide a more complete knowledge base of heritage values in the region, and that WCPL has agreed to share this information as required.

There may also be further opportunities for mining companies to contribute to targeted studies to expand the knowledge of heritage values in the region. For example, the Applicant for the Bylong Coal Project has committed to undertaking a specialist rock art study, should the Bylong Coal Project be approved.

There may be an opportunity for WCPL to contribute and/or extend the scope of this study providing funding or the results of its own archaeological investigations.

The Department commits to consulting further with OEH (as the lead NSW Government agency in regard to heritage) to consider the most appropriate approach to address this issue as a matter of policy.

2.7 Noise and Blasting

Commission Recommendation 24

The Department should exhaust all reasonable means to reach a position of agreement with the Applicant that the voluntary acquisition of private residences within Wollar be extended to include the residence known as 102 within the preliminary SEAR. In the absence of this, consideration should be given to setting a noise level of 35 dB(A), rather than 37 dB(A) as recommended by the Department given the reference in the INP (see 6.5.1 above) that 2 dB(A) above the statutory limit is deemed to be in compliance.

This recommendation is inconsistent with the NSW policy framework for assessing and evaluating the noise impacts of mining projects set out in the:

- *NSW Industrial Noise Policy (INP)*; and
- *Voluntary Land Acquisition and Mitigation Policy (VLAMP)*.

Under this framework noise levels should be set at achievable levels, in this case 38dB(A), even if these levels are slightly higher than the project specific noise levels established under the INP provided:

- all reasonable and feasible noise mitigation measures are to be employed;
- absolute or total noise levels would be acceptable, or below the recommended amenity criteria for rural areas in the INP;
- the project as a whole has merit; and
- suitable conditions are included granting the landowner additional noise mitigation rights.

The 2dB(A) referred to in the Commission's recommendation outlines the EPA's proposed approach to compliance, and is not relevant to setting noise limits for projects.

The Department's recommendations in the PAR for property 102 were developed in consultation with the EPA, and are consistent with the approach outlined under the NSW policy framework and with past practice on other mining projects in NSW.

However, in its response to the Commission's view, WCPL advised that it had previously offered to acquire property 102, and would be willing to extend the voluntary acquisition rights it has offered to the remaining private landowners in the Wollar Village to the owner of property 102.

The Department has updated the recommended conditions to reflect this commitment, and added property 102 to list of properties with acquisition rights (see condition 1 of schedule 3 in **Appendix D**).

Commission Recommendation 25

The Applicant should take all reasonable measures to ensure that private residences along the Ulan Road are aware that mitigation measures are available where road noise exceedances occur and information on how this is conducted should be reflected through a statement of commitments or other means as considered appropriate by the Department.

The final recommended conditions require WCPL to write to the owners that are entitled to additional road noise mitigation works under the Ulan Road Strategy who have not sought these works yet, and remind them that they are entitled to additional road noise mitigation works under the strategy (see condition 55 of schedule 3 in **Appendix D**).

Commission Recommendation 26

The Department should engage in further consultation with EPA to resolve any residual noise assessment issues.

The Department has consulted further with the EPA in accordance with the Commission's recommendation. The EPA has re-confirmed the Department that its residual concerns have been addressed satisfactorily by the Department's final recommended conditions (refer **Appendix B**). These conditions include a contemporary approach for regulating low frequency noise, including a

methodology for assessing whether excessive levels of low frequency noise are being generated by the project and applying suitable penalties to any monitoring results if this is found to be the case (see Appendix 6 in **Appendix D**).

Commission Recommendation 27

The Department should give consideration to the creation of specific performance targets for blasting and vibration impacts on sensitive sites which would then be reflected by conditions of consent, and incorporated in an appropriate Blasting Management Plan for the site.

The Department notes that there are a number of sensitive sites in the vicinity of the project that have the potential to be impacted by blasting. These include the old mining adit adjacent to the Pit 8 open cut area, which provides habitat for the Eastern Bentwing-bat, and a number of rock shelters with Aboriginal heritage significance. The potential impacts on these sites have been assessed in detail in the PAR.

To address the Commission's recommendation, the Department has recommended condition 14 of schedule 3 (**Appendix D**) which would require WCPL to prepare a comprehensive Blast Management Plan. Importantly, this condition requires the establishment of preliminary blasting ground vibration thresholds of no more than 80mm/s to protect the Shale Oil Mining Adit and minimise disturbance to the Eastern Bent-wing Bat. The plan must also:

- evaluate and report on blast vibration and overpressure at the Shale Oil Mine Adit and monitor disturbance of the Eastern Bent-wing Bat roosting site;
- includes an annual program for reviewing and revising blasting thresholds; and
- describes other measures to minimise impacts consistent with the Biodiversity Management Plan (see condition 42 of schedule 3).

In recognition of the significance of rock art sites, WCPL has set a performance measure of managing ground vibration to 80 mm/s at these sites, well below that recommended in the EIS (250 mm/s). As discussed under Commission Recommendation 20 above, WCPL would be required to implement a plan to protect, monitor and manage the impacts associated with ground vibration as part of the ACHMP recommended under condition 47 of schedule 3.

In addition to the above measures, the Department has recommended its standard criteria for blasting thresholds for any residence on privately-owned land and all public infrastructure (see condition 7 of schedule 3).

Commission Recommendation 28

The Department and Applicant should provide a response which addresses the "Additional Acoustic Peer Review" prepared by Day Design Pty Ltd on behalf of the Wollar Progress Association.

The Department has reviewed the report titled "Additional Acoustic Peer Review Wilpinjong Mine Extension Project" dated 30 November, and considered WCPL's response to the Commission's review report (see **Appendix A**).

The PAR includes a consideration of all the matters raised by Day Design, including a consideration of the Rating Background Level (RBL) adopted for the project, low frequency noise, and whether WCPL propose to implement all reasonable and feasible mitigation measures as part of the project. However, it does not expressly address each of the matters raised by Day Design.

The Department has provided a specific response to each of these matters below.

Background Noise Levels

Background noise levels were established for the project prior to any mining operations being carried out in the area in accordance with the requirements in the INP.

These levels were set at 30dB(A), the lowest possible level under the INP, at all private residences in the area. The only exception to this was in the Wollar Village where levels were set at 31dB(A) during the day and 30dB(A) during the evening and night. This makes sense, given it would be expected that there would be more activity in a village during the day. It also makes sense that these levels were at the lower end of the noise spectrum, as the Wollar Village is reasonably small and there would be less daytime activity in Wollar compared with a larger rural village.

These levels were accepted by both the Department and the EPA, and have formed the basis for all subsequent regulation of mining operations in the area.

The Department noted Day Design's request for a re-examination of the daytime background noise levels in the Wollar, but did not pursue this request for the following reasons:

- background levels were set in accordance with the requirements of the INP;
- these levels have not been seriously questioned for over a decade now and are consistent with the levels that would be expected for a small rural village, and limited evidence was produced to justify a serious examination of these background levels;
- the levels are at the lower end of the spectrum, and are only 1dB(A) higher than the lowest possible background level under the INP;
- the levels only apply during the day, the least sensitive period, and are several orders of magnitude below the recommended daytime amenity criteria for a rural area under the INP of 55dB(A);
- the slightly higher daytime levels have no bearing on any sleep disturbance assessment;
- a re-examination of the data would make no material difference to the assessment or evaluation of the noise impacts of the project as:
 - it could only result in 1dB(A) reduction in background levels or the project specific noise levels in the Wollar Village during the day;
 - a change of 1dB(A) would be indiscernible to most people, particularly during the day;
 - if the levels were reduced to 30dB(A), then the project would exceed the relevant project specific noise level in the Wollar Village by 1dB(A), which is considered to be marginal under the VLAMP and acceptable during the day; and
 - all private residences in the Wollar Village would have additional noise mitigation rights and voluntary acquisition rights under the proposed conditions of consent for the project.

Low Frequency Noise

Day Design criticised WCPL's assessment of low frequency noise impacts in the EIS. Both the EPA and the Department raised similar concerns during the assessment process.

To address these concerns, WCPL carried out further assessment of the LFN impacts of the project, and concluded that project noise would not contain a dominant low frequency noise content. Both the Department and its expert noise consultant, Wilkinson Murray, accept this conclusion even though the assessment provided to support this conclusion was not carried out strictly in accordance with the INP.

As the Commission knows, both the EPA and the Department have identified flaws in the strict application of the LFN methodology in the INP to the assessment of mining and other projects, such as gas-fired power stations, in that it leads to the imposition of a noise penalties at residences that are located a long way from the actual activity even though low frequency noise impacts at these locations are likely to be low or indiscernible.

This flaw is currently being addressed in the proposed update of the INP, which was publicly exhibited last year.

As discussed above (under Recommendation 26 above), the EPA and the Department have agreed to address any residual concerns about the LFN impacts of the project through the imposition of suitable conditions (see **Appendix D**), in a similar manner to other recently approved mines in NSW.

The conditions in the final recommended conditions require WCPL to comply with strict noise limits at all privately-owned residences. In assessing compliance, WCPL would need to determine whether excessive low frequency noise is being generated by the project (in accordance with Appendix 6 of the recommend conditions); and if it is, apply a suitable penalty to the measured noise levels. If these measured levels are higher than the noise limits, then WCPL would need to report a breach of the noise limits to both the Department and the EPA.

Finally, while the Department does not anticipate there would be any material LFN generated by the project, all the residences in the village and property 102 would have acquisition rights and be able to re-locate if they wish to do so, in accordance with the Department's acquisition procedures.

Voluntary Acquisition

Day Design says predicted noise levels would be above the minimum acquisition noise level at the privately owned residences in the Wollar Village, and that no noise limit would be applied to these residences.

Both statements are incorrect.

Noise levels are predicted to be 37dB(A) in the village at night, which is well below the voluntary acquisition criteria of 40dB(A). Further, both the proposed conditions attached to the PAR and the final recommended conditions include noise limits for all privately-owned residences in the Wollar Village and its surrounds.

The Department notes these conditions also give the owners of all privately-owned residences within Wollar Village additional noise mitigation rights and voluntary acquisition rights, even though they would not normally be entitled to such rights under a strict application of the VLAMP.

It also notes these rights would be extended to the owner of property 102 under the final recommended conditions.

Noise Controls

Under the INP, proponents are required to implement all reasonable and feasible noise mitigation measures.

During the assessment process, the Department, EPA and the Department's independent noise expert - Wilkinson Murray – examined this matter in some detail, and concluded that it would be unreasonable to require WCPL to spend \$42 million to reduce the noise levels of the project by 2dB(A), given the minor nature of the improvement and the small number of residences that would benefit.

Day Design says the comparison of whether the cost was reasonable should have been made against the expected profits of the project rather than the benefits resulting from the additional mitigation.

This is an incorrect interpretation of the reasonable and feasible test, which was initially defined by the NSW Land and Environment Court, and has subsequently been incorporated into the Department's standard conditions of consent for several years now.

Day Design also says the noise levels in the Wollar Village should be set at 35dB(A) instead of 37dB(A), given the INP defines a non-compliance with any limit to be 2dB(A) above the limit to account for margins or error in the measurement of noise, particularly over large distances.

This is an incorrect application of the INP (see the response to Recommendation 24 above), and conflates the setting of noise limits with the evaluation of compliance against these limits, under the development consent.

2.8 Social Impacts and Wollar Village

Commission Recommendation 29

The Applicant and Department should give further consideration in establishing what the social impact on the locality, and particularly Wollar Village will be post mining closure.

Commission Recommendation 30

The Applicant, in consultation with the Department should prepare a long term strategy for the management of mine owned assets within Wollar Village. The strategy should include details on maintenance or replacement of assets where possible, or the timely removal and remediation of assets should maintenance or replacement not be a viable option on public safety grounds. The Applicant would be encouraged to take all possible and reasonable measures to preserve the village fabric.

In the PAR, the Department carefully considered the potential social impacts of the project. This was informed by an independent peer review prepared by Elton Consulting and a community workshop focussed on the potential social impacts of the project.

The Department considers that it would be reasonable to assume that existing negative social impacts would continue post mining in the Wollar village. This is because population decline is likely to continue given current trends of small town decline and the lack of available community services and facilities in the village.

Given that the majority of the workforce resides in areas other than Wollar, the social impacts of mine closure, including impacts on local employment and accommodation demand, are more likely to be experienced in other areas including the major centres of Mudgee and Gulgong.

Nevertheless, the Department considers that any further reductions in population could affect Wollar by further reducing the viability of services and facilities including the Wollar Public School.

To address the social impacts of mine closure, WCPL proposes to develop a Mine Closure Plan that would consider the potential social impacts on Wollar, including those associated with reduction of employment and residency in the village.

WCPL also proposes to prepare a Village of Wollar Plan describing the measures that would be implemented to

- assist postal services to the local community;
- provide access to ablution facilities in the village;
- assist the amenity of the village;
- provide public access to cemeteries on company owned land; and
- maintain company owned assets; and
- ensure timely removal of derelict or unsafe company owned assets.

The Department generally supports the measures proposed by WCPL, and considers they would ensure the long term management of mine assets as recommended by the Commission and would assist in reducing impacts on the built fabric of Wollar Village.

However, the Department considers that both the Mine Closure Plan and the Village of Wollar Plan should be incorporated into a Social Impact Management Plan for the project. The Department also considers that the plan should not be restricted to a list of specific measures, but should require ongoing consultation with the local community to identify negative social impacts and implementation of adaptive management measures to address these impacts over time.

Accordingly, the Department has recommended the following conditions be imposed:

Social Impact Management Plan

68. *Within 12 months of the commencement of development under this consent, unless the Secretary agrees otherwise, the Applicant must prepare a Social Impact Management Plan for the development to the satisfaction of the Secretary. This plan must*
 - (a) *be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;*
 - (b) *be prepared in consultation with Council, the CCC and the local community of Wollar;*
 - (c) *identify negative social impacts resulting from the project during operations and following closure in both a local and regional context;*
 - (d) *include an adaptive management and mitigation program to minimise and/or mitigate negative social impacts during operations and following closure;*
 - (e) *include a detailed description of the measures that would be implemented to:*
 - *maintain and manage land and assets owned by the Applicant in Wollar Village;*
 - *assist in maintaining services for the local community, including postal services, public ablution facilities, and the Rural Fire Service; and*
 - *minimise the adverse social impacts associated with mine closure;*
 - (f) *include a program to monitor, review and report on the effectiveness of these measures, including updating the plan 3 years prior to mine closure.*
69. *The Applicant must implement the approved Social Impact Management Plan for the development.*

While acknowledging the social impacts of the project on the local community, the Department considers that the implementation of the SIMP would assist in minimising these impacts and would provide a framework for maintaining the built and social fabric of Wollar village to the greatest extent practicable following the cessation of mining. It is also generally consistent with the Department's draft Social Impact Assessment policy which emphasises the need to involve affected communities in identifying and developing measures to address any negative social impacts associated with mining.

Commission Recommendation 31

The Applicant should develop a workplace strategy that actively encourages employees at the mine to become engaged within the local community, particularly through organisations such as the RFS who rely heavily on volunteers.

WCPL has committed to implement measures to encourage participation in the community, including with the Rural Fire Service (see **Appendix A**).

3 BILATERAL ASSESSMENT

The Department has consulted with the Commonwealth Department of the Environment and Energy (DEE) on the recommended conditions of consent. DEE advised the Department on 2 March 2017 that it had no comments in relation to the conditions.

The Department included a detailed consideration of MNES in Appendix M of the PAR. The Department is satisfied that the recommended conditions would provide suitable protection for those Matters of National Environmental Significance (MNES) applicable to the proposal under the EPBC Act.

The Department notes that, if approved by the Commission, the proposal would be referred to the Commonwealth Minister for the Environment and Energy for determination under the EPBC Act.

4 RECOMMENDED CONDITIONS

The Department has prepared final recommended conditions of consent for the project that largely mirror the draft conditions attached to the PAR (see **Appendix D**), with applicable updates to incorporate the recommendations of the Commission and relevant government agencies.

The Department considers that they reflect best practice and provide a sound basis for preventing, minimising and/or offsetting the impacts of the project.

5 CONCLUSION

The Department has accepted all the Commission's recommendations where relevant, with the exception of one regarding further consultation and potential agreement with the Aboriginal community.

Given the extensive consultation undertaken with the Aboriginal community to date, and the fact that some impacts are unavoidable, the Department considers that further consultation is not likely to result in any agreement. The Department also notes there is no requirement for WCPL to reach agreement with Aboriginal representatives under the current regulatory regime in NSW.

Notwithstanding, the Department has thoroughly considered the issues raised by the Aboriginal community and implemented measures to address their concerns where possible, including avoiding impacts on a number of sites and a requirement for ongoing consultation with the community with respect to the salvage and management of cultural heritage sites.

While the Department attached a comprehensive suite of conditions to its PAR, it has made a number of changes to address the recommendations of the Commission and commitments made by WCPL in response to the Commission's review.

In particular, the Department has recommended that WCPL be required to:

- remove the final void in Pit 8 from the proposed mine plan;
- purchase property 102 in accordance with the Department's voluntary acquisition procedures, at the request of the landowner;
- manage and monitor potential lighting impacts on the Eastern Bentwing-bat; and
- prepare and implement a Social Impact Management Plan to maintain the built fabric and reduce the potential social impacts on Wollar village, both during and following the cessation of mining.

The Wilpinjong Extension Project would result in significant social and economic benefits for the local area and the State of NSW, including the continued employment of up to 625 employees. It would also

create a substantial number of indirect employment opportunities in related industries and economic contributions to the State through royalty and local tax revenues.

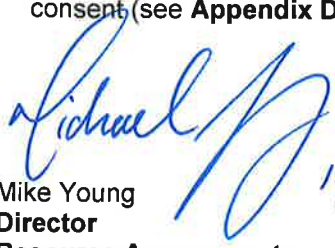
The Department believes its recommended conditions of consent provide a comprehensive, strict and precautionary approach to ensuring the project can comply with relevant performance measures and standards and ensure the predicted residual impacts can be effectively minimised.

Consequently, the Department considers that the benefits of the project outweigh its costs, and that the project is approvable subject to stringent conditions.

6 RECOMMENDATION

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

- **considers** the findings and recommendations of this report, noting that the Department considers the application is approvable, subject to conditions; and
- if the Commission determines to grant consent to the application, **signs** the attached development consent (see **Appendix D**).


Mike Young
Director
Resource Assessments

14/3/17.


David Kitto
Executive Director
Resource Assessments & Business Systems

14/3/17

APPENDIX A: WCPL'S RESPONSE TO THE COMMISSION'S REVIEW REPORT

APPENDIX B: ADDITIONAL AGENCY RESPONSES

APPENDIX C: ADDITIONAL INFORMATION PROVIDED BY WCPL

APPENDIX D: RECOMMENDED CONDITIONS
