



Wallarrah 2 Coal Project

SSD 4974

Review Report

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Wallerah 2 Coal Project Review Report ©
State of New South Wales through the NSW Planning Assessment Commission 2017

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Executive Summary

In 2012 Wyong Areas Coal Joint Venture (the applicant) lodged an application to develop and operate an underground coalmine near Wyong on the Central Coast. The project was reviewed by the Planning Assessment Commission in 2014 (Commission's 2014 Review). However, the application was not able to be determined because the proposed rail spur was on land owned by the Darkinjung Local Aboriginal Land Council (DLALC). Following an unsuccessful negotiation with the DLALC to use their land for the rail spur, an amended application was lodged to relocate the rail loading facility to avoid private land.

In February 2017, the Minister for Planning requested the Planning Assessment Commission (the Commission) to review the amended application (Commission's 2017 Review). The Terms of Reference require the Commission to consider the economic, environmental and social impacts; the merits of the project as a whole; the Department of Planning and Environment's (the Department) response to the Commission's 2014 Review Report; provide recommendations on any additional measures to avoid, minimise and/or manage the potential impacts of the project; and hold a public hearing.

The Commission has carefully considered all the documents identified in the Minister's Terms of Reference and additional information provided by the applicant, the Department, government agencies, the Central Coast Council and the public. A public hearing was held on 5 April 2017. All Terms of Reference are addressed in this review report.

The Commission finds that the effective resolution of potential impacts on water supply within the catchment remains one of the most significant determinants of the merit of the project. This was again raised as a key concern in the recent public hearing and in written submissions. The issue was thoroughly examined by the Commission's 2014 Review which found that the threat is potentially significant and that obtaining a water licence would not compensate for loss of water during periods of low flow. The Commission's 2014 Review applied a more stringent standard than recommended by relevant agencies at the time and recommended a no net impact requirement on catchment water from the mining operation, through the return of suitably treated mine water to the water supply catchment. This high standard is necessary for the mine to effectively coexist in a catchment with acknowledged water supply constraints and the projected population growth of the region.

The Commission supports the conclusions of the Commission's 2014 Review on the significance of water resources to the Central Coast community as no new technical information has been provided in this current review process. The Commission also supports that the integrity of the key recommendations must be maintained for the project to meet the public interest test of section 79C of the *Environmental Planning and Assessment Act 1979*, otherwise the precautionary approach should be adopted.

In reviewing the draft conditions, the Commission finds the Department has generally addressed the Commission's 2014 Review recommendations. However, the draft conditions relating to the performance measures and compensatory mechanisms for water supply have not reflected the true intention of the Commission's 2014 Review recommendations. The Commission questions whether the draft conditions are enough to ensure the "no net impact on potential catchment yield." The compensatory arrangement condition appears to give preference to the purchase of water licences as a compensatory mechanism, when the Commission's 2014 Review is clear that it is not a suitable compensatory mechanism, particularly during periods of low flow.

The Commission recommends the draft conditions be updated to accurately reflect the recommendations of “no net impact on catchment yield” and reiterates that the preferred compensation is by return of suitably treated water to the catchment side of the water supply system. The burden of proof of any impact less than predicted rests with the applicant.

The Commission notes the ongoing contention about the estimated net economic benefits of the project among the experts and the concern in the community. The Commission shares concerns about the large variances in the predicted costs and benefits, noting the downward trend from the various economic analysis of this project. The Commission recommends that the Department clarifies the net economic benefits and the capital investment value of the project for the consent authority’s consideration.

In relation to air quality, the Commission notes the review of air quality in the Lake Macquarie-Wyong area commissioned by the EPA, concluded that the air quality was generally good to very good. The predicted emissions from the amended project will be within the relevant assessment criteria including more recently introduced particulate matter criteria.

Landowners adjacent to the proposed train load-out facility raised significant concerns about the potential impacts on their undeveloped lands, including loss of access due to the proposed closure of Nikko Road and potential economic loss due to environmental impacts from the amended project.

The Commission finds the applicant’s proposed six-metres wide all weather access road and easement is an acceptable solution to address the issue of access to adjacent private lands. The Commission recommends an access management plan be prepared in consultation with affected landowners to ensure access to private lands is maintained during the construction and operation of the mine and include details of the final design of the access road.

Regarding potential impacts on undeveloped land, the Commission finds the planning proposal to rezone some of the undeveloped lands for residential development is in its early stage of investigation. Gateway approval is the first step of the rezoning process and one of the approval conditions requires a land use capability assessment, including compatibility with mining and extractive industries. Given the timing and scope of the rezoning approval are uncertain, the consent authority can only consider the potential impacts on these adjacent lands as currently zoned, which have been adequately assessed in the Addendum Report and the applicant’s responses.

The Commission has also made additional recommendations on potential noise impacts, closure of Tooheys Road, community engagement, bushfire management, potential future mining area and the need for an integrated environmental monitoring and public reporting management plan that should be considered by the consent authority.

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NSW Planning Assessment Commission Review Report Wallahah 2 Coal Project (SSD 4974)

1. INTRODUCTION

On 7 February 2017, the Minister for Planning requested the Planning Assessment Commission (the Commission) to carry out a review of the amended Wallarah 2 Coal Project (Commission's 2017 Review). On 1 March 2017, the Department of Planning and Environment (the Department) referred its Addendum Report on the Wallarah 2 Coal Project (SSD4974) to the Commission for its review in accordance with the Minister's request.

Ms Lynelle Briggs AO, Chair of the Commission, nominated Ms Robyn Kruk AM (chair), Mr David Johnson and Mr Andrew Hutton to constitute the Commission to review the amended development application.

1.1. Background

The Wallarah 2 Coal Project has a history dating back to 2006. **Appendix 1** has been included to provide a detailed history of the planning approval process for this project. Briefly, the first application was lodged in 2006 and was the subject of a Planning Assessment Commission Review, which concluded that the application may be approved subject to a number of conditions. However, the application was refused by the then Minister for Planning in March 2011 *"because of uncertainties in relation to the subsidence predictions, ability to meet acceptable water quality outcomes and ecological and heritage impacts"*.

A second application was lodged in October 2012, which was also subjected to a Planning Assessment Commission Review in 2014 (Commission's 2014 Review). The Commission's 2014 Review provides 35 recommendations and concludes that *"if the recommendations concerning improved strategies to avoid, mitigate or manage the predicted impacts of the project are adopted, then there is merit in allowing the project to proceed. However, if the recommendations are either not adopted, or adopted only in part, then the Commission's position would probably change in favour of a precautionary approach"*.

However, the second application was unable to be determined without landowner's consent as part of the proposed rail spur was proposed to traverse land owned by the Darkinjung Local Aboriginal Land Council (DLALC).

1.2. The Amended Development Application

Following unsuccessful negotiation with the DLALC to use their land for the proposed rail spur, Wyong Areas Coal Joint Venture (the applicant) lodged an amended development application in July 2016 for the construction of a conveyor system, which would deliver product coal from the pit top to a train load out facility proposed to be located on the eastern side of the existing Main Northern Rail Line.

The amended proposal does not involve any changes to the mine site layout, positioning the pit top facilities, the mining footprint or any land owned by the DLALC. The amended development application, the subject of this review, involves:

- removal of the previously proposed rail loop alignment;
- a new rail siding to house the train load out facility on the eastern side of the Main Northern Rail Line;
- a conveyor system to deliver product coal from a stockpile at the proposed Tooheys Road site to the new location of the train load out facility; and
- realignment of a sewer connection.

A detailed description of the amended development application is in Table 3 of the Department's Addendum Report.

2. THE COMMISSION'S REVIEW TASK

2.1. Terms of Reference

On 7 February 2017, the Minister for Planning requested the Commission to review the merits of the amended development application and conduct a public hearing as part of the review. In summary, the terms of reference (see **Appendix 2**) include:

- considering the amended development application and accompanying written particulars, the issues raised in submissions, the formal response to submissions, the Department of Planning and Environment's Addendum Report on the development application, and any other information provided on the development during the course of the review or as part of the public hearings;
- considering the likely economic, environmental and social impacts of the amended development application in the locality, in the region and for the State;
- assessing the merits of the amended development application as a whole, having regard to all relevant NSW Government policies and guidelines;
- considering the Department of Planning and Environment's responses to the Commission's previous review of the development; and
- providing recommendations on any additional reasonable and feasible measures that could be implemented to avoid, minimise and/or manage the potential impacts of the development.

2.2 The Commission's Task

The Commission notes that the amended application, the subject of this review, does not involve any changes to the proposed mining area, mining methods, annual and maximum production rate, or the location or layout of the surface infrastructure area except coal loading and delivery of product coal to train. Therefore, this Commission gives significant weight to the previous findings and recommendations of the Commission's 2014 Review unless new information indicates otherwise.

In carrying out this review, this Commission is mindful that the proposed mine is a greenfield development located in an area of high potential population growth and that the project is within a water catchment area that supplies water to the Central Coast. Potential subsidence impacts on the water resources is therefore a significant concern to the community and the Central Coast Council as the water authority for the region. The urban interface is another important consideration to ensure that any potential impacts from the project are minimised and mitigated wherever possible to avoid land use conflict between the mine, the existing and any future developments in the area.

Given there are no changes to the proposed mining area or the pit top facilities, the Commission initially focussed significant attention on whether the recommendations in the Commission's 2014 Review report and their underlying rationale have been reflected fully in the draft conditions. Regarding the amended application, the focus was on the adequacy of the assessment and mitigation strategies relating to identified impacts on the environment, nearby residents and adjacent privately owned lands. All terms of reference are addressed.

3. COMMISSION'S MEETINGS AND SITE INSPECTION

In March and April 2017, as part of the review, the Commission met with the Department and the applicant, visited part of the site with the applicant with a focus on the proposed amendment, carried out a private inspection of the interface with the Blue Haven residential area, met with Central Coast Council, Darkinjung LALC, and the Department of Primary Industry (Water) via separate teleconference. In addition, the Commission conducted a public hearing in Wyong.

A short summary of each meeting is outlined below and notes from these meetings are provided in **Appendix 4**.

3.1. Briefing from the Department of Planning and Environment (the Department)

The Department briefed the Commission on 24 March 2017. The issues discussed in the meeting included the history of the applicant's efforts to reach an agreement with the DLALC and the various alternative options that have been considered following the NSW Aboriginal Land Council decision to refuse the use of the DLALC land for the rail spur. The Department also discussed how the strengthened draft conditions of consent address the recommendations in the Commission's 2014 Review report. The Commission sought clarification in relation to whether certain draft conditions represented a potential lessening of the performance measures, controls and monitoring requirements recommended in the Commission's 2014 Review report. Additional advice was requested from the Department regarding the justification to adopt consent conditions similar to those applied to the Mandalong mine in the Lake Macquarie area, and the acceptance of the predicted significant exceedance of construction noise on adjacent private residences.

3.2. Briefing from Wyong Areas Coal Joint Venture and Site Visit

The applicant briefed the Commission on 4 April 2017 in relation to the amended application and its response to the Commission's 2014 Review recommendations. The applicant outlined the potential impacts including visual, noise, air quality, water quality, proposed mitigation measures to address these impacts, current community consultation programs and its engagement with the DLALC.

A site visit was carried out after the briefing to observe topography, site perimeters and the surrounding areas. The visit included an inspection of Tooheys Road to gain a distant view of the pit top site and the proposed route of the conveyor. This was followed by a visit to the Nikko Road reserve including the existing access to adjacent private lands, the location of the proposed transfer station and the train load-out facility.

3.3. Briefing from Central Coast Council

The Commission consulted with Central Coast Council on 6 April 2017 via teleconference. Council raised various concerns including potential risks the project posed to water resources, population growth, key infrastructure and complications related to the closure of Nikko Road and Tooheys Road. Council also made suggestions to amend the recommended conditions of consent. These concerns are included in a written submission dated 13 April 2017. A revised written submission was received on 10 May 2017. These are included in **Appendix 7**.

3.4. Briefing from the Darkinjung Local Aboriginal Land Council (DLALC)

On 10 April 2017, the Commission held a teleconference with the DLALC following its presentation at the public hearing. The DLALC reiterated many of its concerns in the written submissions to the Department. The issues raised include inadequate consultation as affected landowner, validity of the amended application, potential impacts on the proposed residential developments on the DLALC lands, the strategic significance of Nikko Road, loss of road access to the DLALC lands and rail access to the employment zoned lands.

3.5. Briefing from Department of Primary Industries Water (DPI Water)

The Commission sought advice from the DPI Water in relation to a number of draft conditions proposed by the Department to address the Commission's 2014 Review recommendations including performance measures for water supply, the proposed water compensatory arrangements, and suitability of using water licences to compensate for the predicted water loss in a catchment area.

3.6. Public Hearing and Submissions

The Commission held a public hearing at the Wyong Golf Club on 5 April 2017. A list of the speakers that presented to the Commission is provided in **Appendix 5**. A summary of the issues raised by the speakers orally and in written submissions from the community is provided in Appendix 6.

4. ADDITIONAL INFORMATION

Following the public hearing, the Commission received a number of submissions and responses to questions from the Central Coast Council, the applicant, the Darkinjung LALC, the Department and the DPI Water. These additional items are attached in **Appendix 7**.

5. DEPARTMENT'S RESPONSE TO THE COMMISSION'S 2014 REVIEW

Part 2 of the Department's addendum report provides a detailed consideration of the recommendations in the Commission's 2014 Review report. A summary table was provided by the Department at the briefing meeting and is attached in **Appendix 7**.

6. COMMISSION'S CONSIDERATION OF ISSUES

In accordance with the Terms of Reference, the Commission has carefully considered all information made available by the Department, the applicant, the Central Coast Council, government agencies and the public, as well as the Commission's 2014 Review report. The Commission also sought additional comments and information from various parties to assist its review of the issues raised in the public submissions and the public hearing. The Commission believes that the Department's addendum report has generally provided an adequate assessment of many issues raised in public submissions. However, a number of the Department's responses to the findings and recommendations of the Commission's 2014 Review report and the draft conditions have been contested by the Council and certain public submissions and therefore required more detailed scrutiny to confirm their alignment with the Commission's 2014 Review report. The following sections discuss these issues in detail.

6.1 Water Resources

The potential for the project to impact on water supply to the Central Coast region was a major issue raised in the 2012 application and was the major focus of the Commission's 2014 Review report. Although the amended application does not involve any changes to the mine plan, site layout or surface facilities, concerns relating to the potential impact on water resources have not been allayed and were raised as a key concern by many speakers in the public hearing. The Central Coast Council also raised a number of concerns in relation to the draft conditions attached to the Department's addendum report.

The Commission notes that the Commission's 2014 Review thoroughly examined this issue including the bringing together of relevant technical experts commissioned by the applicant and other parties. The Commission's 2014 Review carried out a detailed analysis of the potential subsidence impacts on water resources including groundwater systems, surface waters, stream morphology, water quality, potential impacts on Porters Creek Wetland, monitoring of water related matters, and flooding impacts. It should be noted that, no new technical information has been provided in this current review process that requires a revisit of the Commission's 2014 Review report's findings and recommendations.

6.1.1 2014 Review Report

Given the importance of water resources to the region, the Commission's 2014 Review confirmed that the threat is potentially significant and should not be ignored, and made a number of recommendations to address water related issues including potential loss of baseflow; impacts on bores and wells, water supply and other users, and stream morphology; water quality monitoring; Porters Creek Wetland; and flooding.

The key findings and recommendations of the Commission's 2014 Review report include:

- *“For this project to meet the public interest test in s79C of the EP&A Act there must be **no net impact on water availability in the catchment under all climatic conditions**;*
- ***Maximum predicted impact should be offset by return of suitably treated mine water to the catchment side of the water supply system during the life of the mine;***
- *If the recommendations concerning improved strategies to avoid, mitigate or manage the predicted impacts of the project are adopted, then there is merit in allowing the project to proceed. However, if the recommendations are either not adopted, or adopted only in part, then the Commission's position would probably change in favour of a precautionary approach. This particularly applies to water related impacts.”*

6.1.2 The Applicant's Response to the Commission's 2014 Review report

The applicant responded to the Review Report recommendations on 1 July 2014. The response addresses the following issues: estimated groundwater impacts by project year, compensatory water measures, stream morphology, water quality, water treatment plant and flooding.

The applicant has committed to developing a compensatory mechanism to ensure there is **no net impact on the water supply scheme**, and confirmed the mechanism will be developed in consultation with the Central Coast Water Authority and DPI Water.

The applicant also considers it is feasible to discharge surplus treated mine water into the water supply catchment to replace water taken from the system. If this approach is adopted, it believes that there will be no need for any financial contribution to bring forward planned augmentation of the water supply infrastructure to compensate the loss.

Although the applicant considers the water quality sampling points recommended in the Commission's 2014 Review report present some practical issues, it has made a commitment to establishing a water quality monitoring network and the preparation of a water monitoring program in consultation with the water authority, DPI Water and the Environmental Protection Authority (EPA).

6.1.3 The Amended Application

The amended application does not involve any changes to the proposed mining area, or the two sites identified for surface facilities, hence the predicted rates of mine inflow or seepage from shallow groundwater systems outlined in the EIS for the 2012 application remains unchanged.

The proposed conveyor system, transfer station, train load-out facility and access road are located mainly within the catchment of Spring Creek. The amended application includes a Spring Creek Flood Impact Assessment which assesses the potential flooding impacts that may arise from the construction of the proposed infrastructure along the rail corridor.

The flood impact assessment concludes that the construction of the rail spur is expected to result in a very minor increase (0.01m to 0.03m) in flood water levels over the main stream of Spring Creek during the 1% AEP (Annual Exceedance Probability) 100 year ARI (Average Recurrence Interval) flood. It states that mitigation options are available to eliminate this negligible impact, if required, and claims there will be no change in flood hazard as a result of the changes to flow depths and velocities. Further, the rail line and rail spur would be completely inundated during the PMF (Probable Maximum Flood) with no difference between pre-development and post-development conditions.

6.1.4 The Department's Addendum Report

The addendum report assesses the potential impacts on Spring Creek (at p. 75-76). The Department notes the Central Coast Council's concern regarding the adequacy of detail provided on the proposed bridge design to allow proper assessment of the flood modelling. Notwithstanding such concern,

Council considers that the proposed infrastructure would not significantly affect the flood patterns in the area. The addendum report recommends a requirement to consult the Council and other relevant authorities in the final design of any structure and indicates that the applicant has agreed to the consultation requirement. Draft condition 17 of Schedule 7 includes a performance measure for the construction and operation of the conveyors and rail siding that require them to meet the various DPI Water guidelines including *Managing Urban Stormwater: Soils and Construction and Controlled Activities on Waterfront Land*.

Part 2 of the addendum report provides a detailed consideration of the Commission's 2014 Review report recommendations. The addendum report concludes that it has updated and strengthened some of the original draft conditions attached to the Department's Preliminary Assessment Report and that it includes new conditions and performance measures to address the issues raised in the Commission's 2014 Review report and the recommendations contained therein (See also **Section 6** of this report.)

6.1.5 Central Coast Council (Council) submissions to the Commission

Following the teleconference on 6 April 2017, Council provided written submissions to the Commission on 13 April 2017 and 10 May 2017. The key concerns in relation to water resources are:

- No net impact on the catchment water resources;
- Compensation measures need to be by replacement of a real and equivalent amount of water (particularly during low flows) and not by simply acquiring water licences;
- A minimum compensatory amount of 300ML/annum should be in place and operational before mining is permitted beyond Longwall 5N;
- Council should have an approval role in the water management plan and water monitoring program;
- The interpretation of water supply performance measures in condition 1 schedule 3 and compensatory water requirements after mine closure in condition 16 Schedule 4 are not clearly established; and
- Additional road maintenance costs associated with flood impact on public infrastructures, particularly roads due to change of ground levels and stormwater flows require to be properly addressed.

The applicant and Department's comments on Council's April 2017 submission are included in **Appendix 7**.

6.1.6 Commission's comments, findings and recommendations

The Commission's terms of reference require consideration of the **amended** application and the issues raised in the submissions and at the public hearing. They are as follows:

6.1.6.1 Potential Impacts on Spring Creek

A concern raised in relation to the amended application was the potential water quality impact on Spring Creek from the construction and operation of the infrastructure for coal transport and loading facility. The Commission noted that a section of Spring Creek near Blue Haven is used by some residents for recreation purposes.

The Council advised in the teleconference that the potential water quality impacts on Spring Creek would be managed through the development of a management plan and relevant consent conditions.

With regards to water quality control the Commission notes draft condition 17 Schedule 4 provides water management performance measures and requires the construction and operation of the

conveyors and rail siding in accordance with the various DPI Water guidelines including *Managing Urban Stormwater: Soils and Construction and Guidelines for Controlled Activities on Waterfront Land*.

The Department's assessment also concludes that the predicted minor increase in flood levels do not require specific mitigation measures. It notes the applicant's advice that there are measures that can be implemented, if required, to counterbalance the potential minor increases in flood levels including re-grading or lining of the stream.

The Commission is satisfied that the amended application will have minimal impact on the water quality of Spring Creek and that the issue has been adequately addressed in the Department's addendum report and the draft conditions.

6.1.6.2 Water resources issue raised at the public hearing and submissions

The main concern raised in the public submissions was the potential loss of water in the catchment area. The Central Coast Council raised similar concern as well as issues in relation to the draft conditions including the performance measures for water supply, the difficulty in verification of no connective cracking, the proposed compensatory mechanisms, Council's approval role in the water management plan and monitoring program and the availability of monitoring and audit reports to the Council and the public.

6.1.6.3 Compensation of subsidence induced water loss

The Commission's 2014 Review considers that the threat to the Central Coast Water Supply is real and cannot be ignored, particularly when regard is given to the projected increase in population in the area over the next 20-30 years. All relevant parties agreed that the predicted maximum impact would be in the order of 300ML/year. The Commission's 2014 Review finds that the burden of proving any impact less than the prediction should rest with the applicant.

In considering the suitability of purchasing existing water licences as a mechanism to compensate potential water loss related to the mine project; the Commission's 2014 Review concludes that:

*"there are complex rules for restricting access to entitlements under low flow conditions. This is important for understanding whether the proposed use of purchased entitlements to offset project impacts is, in fact, a sustainable proposition. This arises primarily because the project impacts caused by subsidence cannot be restricted by pumping rules: they will occur once subsidence occurs. The Commission discussed this issue with NOW (DPI Water). **The conclusion was that, during periods of low flow, licences would not compensate for water lost as a result of subsidence-induced reductions in baseflow to streams supplying the CCWS (p33).**"*

Having regard to the importance of the water supply system and the practicality and sustainability of loss compensation via water licences, the Commission's 2014 Review has recommended:

- No net impact on catchment water resources during the life of the mine;
- Consideration be given to compensate the loss by return of treated mine water to the system;
- Compensation mechanism be operational before mining beyond LW 5N; and
- No compensation would be required following mine closure if a review confirms the loss will be less than the predicted 36.5ML/year after mine closure.

The Commission's 2014 Review report also indicates that *"there was agreement in-principle by all agencies"* to return suitably treated water to the raw water side of the water supply system as an appropriate way to offset the potential losses. *"NOW (DPI Water) has provided formal in-principle endorsement of the (compensatory) proposal"* at that time (p.35).

The applicant advised the Department in January 2017 that it considers a flexible approach to achieving a 'no net impact' outcome should be adopted. In this regard, a comprehensive study should be carried out to evaluate the best mechanism or a combination of options, including but not being limited to water licences whilst taking into account the feasibility and cost effectiveness of the options. The applicant is of the view that a properly constructed consent condition stipulating a flexible consultative approach would promote the development of a mechanism that would achieve the no net impact recommendation.

The Department considers draft conditions 15 and 16 Schedule 4 address the Commission's 2014 Review recommendations.

Council advised that it considers the draft conditions are inadequate and that they should be amended to include explicit requirements to reflect the recommendations of the Commission's 2014 Review report, particularly the need to specifically exclude the purchase of water licences as a compensatory measure.

In response to the Commission's request for comments on the Council's submission, the applicant advises that it had responded to the issue earlier in its response to the Department's questions, and in the response to the April 2017 public hearing (RTPH2). They reiterated that they would seek licences under the *Water Management Act 2000* for its 'take' of water. At present, the applicant holds 185 units from the Jilliby Jilliby Creek Water Source. They confirmed that there are existing licences available across the area, thus allowing it to make up the required 300 ML for the worst-case prediction. It is of the view that:

"the acquisition of licences will effectively redistribute the water already 'taken' by that licence holder (i.e. the Project will not take additional water from the system). Therefore, compensation to CCC is not required for the redistribution of the water use from the existing user to WACJV for the Project. The WACJV believes it manifestly unreasonable for CCC to recommend it be treated differently to other water users (both private and business), who own and utilise share units from the Central Coast Unregulated Water Source (applicant response to CCC dated 24 April 2017 p.7)."

On this basis, the Commission sought further advice from DPI Water in relation to the draft conditions in the Department's addendum report via a teleconference on 28 April 2017. A written response was received on 4 May 2017. Briefly, the DPI advises that:

- There is a **need to clarify the intent of the Commission's 2014 Review recommendation as to whether it is to achieve 'no net impact' or 'no net loss' of catchment water because each requires a different sets of indicators, triggers and methods of measurement.**
- The performance measures for water supply in Draft Condition 1 Schedule 3 allow catchment loss of up to 300ML/year and are not considered commensurate with 'no net impact'.
- Draft conditions 15 and 16 Schedule 4 are considered to meet the intent of the Commission's 2014 Review recommendations; however, details of the compensatory arrangements would need to be clearly defined in appropriate management plans to the satisfaction of all relevant parties.
- The use of water licences to compensate for the predicted 300ML loss satisfies the requirements of the *Water Management Act 2000*, however, **it is not considered suitable compensation** to meet the intent of the Commission's 2014 Review recommendations for managing impacts on other users during low flow periods.

The Commission notes that the Commission's 2014 Review report applied a more stringent standard than recommended by relevant agencies at the time because of the relatively small water supply catchment with an expected increase in population. It notes that there was in principle an agreement

between the parties that an appropriate way to offset the potential water loss due to mining operations is to return suitably treated water to the raw water side of the water supply system. In this review the Commission has concluded that the draft conditions appear to have provided greater latitude for the applicant to rely on purchase of water licences than was initially contemplated, or apparently agreed to in this meeting as documented in the Commission's 2014 Review report. It is acknowledged that there is some difficulty in obtaining adequate background data and that there is a need to rely heavily on future monitoring data to accurately define a baseline and verify the predictions to ensure that there is no net impact. Hence, a robust adaptive management regime is required.

The Commission has concluded that the effective resolution of the water related concerns within the catchment over the life of the project remain one of the most significant determinants of the project's overall viability. The Commission's 2014 Review is clear that if the recommendations are not adopted fully, a more cautious approach would be required as the threat to the water supply system, particularly during low flow, is considered real. The Commission has not received any new information or submissions that require it to revisit the conclusions of the Commission's 2014 Review and as a result it finds that it needs to give significant weight to the 2014 findings and recommendations in considering the draft conditions. The Commission notes that the proponent has questioned the fairness of the proposed compensatory process, but does not appear to be questioning the merits of the no net impact performance outcome.

Condition 16 Schedule 4 as drafted suggests that the purchase of water licences is the first priority in the compensatory arrangement before consideration of the supply of treated water to Council or other water users. The Commission finds this could reasonably be interpreted to be inconsistent with the intent of the Commission's 2014 Review recommendations and the in-principle agreement by the relevant agencies including the DPI Water. It also leaves it up to the applicant and Council to negotiate.

In the Commission's view, a compensatory package must be a sustainable solution that will not divert the available water resources out of the water supply catchment. This is considered especially significant during periods of low flow. On this basis, a sustainable solution is a solution that does not rely unduly on the reallocation of other water licences. Although the purchase of water licences is required to meet the requirements of the *Water Management Act 2000*, it does not meet the "no net impact" recommendation. The Commission believes that the draft conditions relating to the compensatory mechanism need to be revised further to more accurately reflect the Commission's 2014 Review recommendations and respond to the concerns raised by the community and the Council regarding an undue reliance on the reallocation of water licenses from other industrial, community or environmental uses.

On this basis, the Commission considered the compensatory arrangement should more clearly give priority to the return of treated mine water back into the water supply system. Further, it also finds that the performance measures should be revised to be more prescriptive in order to reflect the intent of the Commission's 2014 Review recommendations regarding no net impact on catchment waters. The Commission acknowledges the challenges associated with this task, but believes that the ability for the mining project to effectively coexist in a catchment with acknowledged water supply constraints, combined with the projected population growth of the region make this necessary.

In addition to the above, the Commission also notes DPI Water has yet to provide its comments on the applicant's response to the Commission's 2014 Review recommendations 5(d) and 5(e), which require estimates of potential losses to baseflow from any changes to catchment flows and other potential sources of loss of water from subsidence-induced changes. This should be resolved and assessed before the application is determined by the consent authority.

Recommendation:

- *The draft conditions should be updated to accurately reflect the recommendations in the Commission's 2014 Review, particularly the no net impact on potential catchment yield and the preferred compensation mechanism is by return of sufficiently treated water to the catchment side of the water supply system. The burden of proof of any impact less than predicted rests with the applicant.*

6.1.6.4 Water loss – post mining

Council is concerned that Condition 15 Schedule 4 as drafted does not truly reflect the intent of the Commission's 2014 Review recommendation 15 which states *"that no compensation be required beyond mine closure for the predicted 36.5ML/y loss provided that a review prior to mine closure confirms that the loss does not exceed 36.5ML/y"*.

The Department's response to recommendation 15 is that it has been addressed in draft condition 9, Schedule 3 and condition 15 of Schedule 4, which requires the applicant to prepare a Central Coast Water Supply Monitoring Program within 6 months of the completion of longwall (LW) 5N and again following completion of LW9N or at other time as directed by the Secretary. The Commission finds the 2 conditions have not addressed the review requirement before mine closure. Hence condition 15 requires updating.

Recommendation:

- *Condition 15 Schedule 4 should be updated to address the review requirement before mine closure.*

6.1.6.5 Performance measures - Condition 1 Schedule 3

In relation to impacts on watercourses, the Council is concerned that verification of no connective cracking may be difficult in practice. Hence a requirement for testing following subsidence events and periodically thereafter should be included in the conditions.

In their response to the Council's concerns, the applicant considers that any amendment to the condition is not required because Condition 6 (Extraction Plan) and the requirement of trigger action response plan(s) provides detail on required monitoring and actions. Further regular reporting will be required under the *Mining Act 1992*, which will include the information required.

The Commission is satisfied that the reporting of monitoring in the Extraction Plan together with the requirement for independent audits of subsidence impacts at the end of LW 5N and LW 9N addresses this concern raised by Council. To promote transparency as well as the inclusion of any concerns that the Council may have, the Commission recommends that condition 10 Schedule 3 be amended to include the requirement that prior to undertaking the independent audit Council be consulted on any issues that it would like included in the audit scope.

In relation to water supply, the Council is concerned that the current drafting of the performance measures when considered together with condition 2 (offsets) may mean *"only CCWS water losses in excess of 300ML/annum are offset/compensated. This was not the intent of the PAC in 2014. It would be more appropriate to change the performance measure to 'no net loss of water available to the Central Coast Water Supply'"* (Council submission May 2017).

The performance measures included in draft condition 1 Schedule 3 are:

Water Supply	Performance Measures
Central Coast Water Supply, including Wyong River and Jilliby Jilliby Creek and their tributaries	<ul style="list-style-type: none"> • Combined water loss of equal to or less than 300 megalitres/year. • No greater environmental consequences greater than predicted in the EIS or as permitted under the performance measures for watercourses above.

Draft Condition 2 Schedule 3 (Offsets) reads:

If the applicant exceeds the performance measures in Table 1 and the Secretary determines that:

- a) It is not reasonable or feasible to remediate the subsidence impact or environmental consequences; or*
- b) Remediation measures implemented by the applicant have failed to satisfactorily remediate the subsidence impact or environmental consequence;*

then the applicant must provide a suitable offset to compensate for the subsidence impact or environmental consequence, to the satisfaction of the Secretary.

Notes:

- *Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.*
- *For compensatory measures relating to the Central Coast Water Supply, see condition 16 of Schedule 4.*

In response to the Commission’s question, the DPI Water advised that the draft condition is not considered commensurate with the “no net impact” recommendation. It is of the view that:

“the loss of up to 300ML/year may impact on the security of the CCWS and other users during drought periods. However, “no net impact” will be difficult to implement without clear definitions and triggers. Clear definition of ‘impacts’ is also required to ensure impacts can be identified, measured and managed. Consideration should be given to whether “not net impact” is the only acceptable level of impact. It may be determined that some level of impact is considered acceptable.”

The draft condition as proposed by the Department may be interpreted to significantly weaken the intent of the Commission’s 2014 Review recommendation as it involves a protracted process. The Commission finds the principles of the proposed water supply compensation arrangement should be further advanced before consideration by the consent authority.

6.1.6.6 Council’s approval role in water management plan and water monitoring program (Conditions 6 (g)(iii), 8 and 9 Schedule 3)

Given the implications for the ongoing monitoring review and offsets associated with the mine, Council is of the view that the management plan and monitoring program should be subject to the **approval** of Council, EPA and DPI Water, not just **consultation**. It further requires that the management plan should include the appropriate management of acid mine drainage including the development of trigger levels. In terms of Condition 9(e)(iv), Council is of the view that monitoring and reporting should be on all water losses to the water supply, not just from the base flow losses. Compensation should be based on all losses incurred.

The Department advised that *“Appendix F of the Department’s original assessment report contains information concerning the post-mining impacts on groundwater. The Department is satisfied that the potential impacts to water resources have been thoroughly assessed and conditioned for, including those post mining”* (DPE letter dated 12 May 2017 p.14)

The Commission agrees with the Department that the approval role for any management plans should remain with the consent authority (Secretary) and the preparation of the management plan and monitoring program should be in consultation with the relevant agencies and the Council. However, it notes that condition 6(g)(iii) as drafted does not include consultation with Council. This should be rectified in the draft conditions. As to the issue of acid mine drainage, the Commission finds that it has been adequately considered by the Department.

The Commission also notes Council’s concern about the availability of audit and review reports to the Council and the public. Although the draft conditions include a requirement that the applicant should make publicly available various documents and reports on its website, the Commission finds an integrated environmental monitoring and public reporting management plan will assist the public to understand the various management and monitoring requirements. The plan should provide details on what matters require monitoring/audit, frequency and when reports will be available.

It is noted that the Department is progressively seeking to standardise reference to the consent conditions on matters to be considered in management plans. However, these relate to a number of issues identified as significant to the community such as bushfire management, subsidence, air and water quality. Given their significance, there is merit in making specific reference to these in the draft conditions.

Recommendation:

- *Condition 2 Schedule 6 should be updated to include the requirement of an integrated environmental monitoring and public reporting management plan.*

6.1.6.7 Compensatory Water Supply to private land owners - Condition 14 Schedule 4

The condition relates to compensatory water supply to private land owners. The fourth paragraph in this condition states *“if the applicant is unable to provide an alternative long-term supply of water, then the applicant must provide alternative compensation to the satisfaction of the Secretary”*.

The Commission finds that if an alternative long term supply of water is to be provided, the affected landowner should be consulted before referral to the Secretary. The Commission also finds that consultation with all potentially affected land owners before being under mined should also be included in the condition. The onus of proof that damage is not due to mining operation should also rest with the applicant.

6.1.6.8 Porters Creek Wetland

Recommendation 23 of the Commission’s 2014 Review report requires that a performance measure of negligible consequences be specified for Porters Creek Wetland and a monitoring regime sufficient to alert any change that may cause greater than negligible consequences to the wetland. The Department questioned the need and reasonableness of the monitoring requirement given the potential impact would be on a small section of Hue Hue Creek when the wetland has a catchment area of 55km².

Further, the Department pointed out that the Commission’s 2014 Review report has accepted that the predicted subsidence impact would be a small change in gradient, which would have minimal implications on stream morphology and erosion potential. The Department therefore suggests that the monitoring include only catchment flows and water quality within the section of Hue Hue Creek

that would be subject to subsidence impacts. The Commission has reviewed this and considers that this is reasonable.

6.1.6.9 Matters of National Environmental Significance

On 22 October 2013, the Commonwealth Minister for Environment determined that the proposed mining project is subject to the provision of sections 24D and 24E of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This means that approval from the Commonwealth Department of Environment is required before commencement of construction and operations.

6.2 Subsidence

6.2.1 2012 Application

The EIS for the 2012 application includes a Subsidence Prediction and a Subsidence Impact Report. These outline why a hybrid subsidence prediction model was developed for the project, and provide an assessment of the potential impacts and mitigation measures to avoid, minimise, remediate and/or offset the impacts. The subsidence predictions were independently reviewed.

6.2.2 Commission's 2014 Review report

The Commission's 2014 Review carried out a detailed analysis of the potential impacts of conventional and unconventional subsidence. Its focus was on the predictions, the risk of underestimating subsidence and the performance measures recommended in the Department's draft conditions. It found that *"although there are uncertainties arising from the greenfield nature of the proposed mining area, the subsidence predictions provide an adequate basis for assessment of the project"*.

However, it also found that some of the performance measures in the draft conditions were considered unenforceable and *"the Extraction Plan provisions could be strengthened by inclusion of stronger links to non-exceedance of the performance criteria and by requiring specific assessment of remediation options and the capacity to implement them in the event of exceedance"*. To address the defects, the Commission's 2014 Review made four recommendations to ensure that the performance measures were rigorous, scientifically and legally sound, and capable of enforcement, including a requirement that *"the Extraction Plan for each longwall contains revised subsidence predictions based on experience from previous mining on the site and that these revised predictions will not allow the performance criteria to be exceeded"*.

6.2.3 Amended Application

The amended application includes the construction of a conveyor and a rail siding which does not pose any additional subsidence risks. On this basis the subsidence predictions and impacts remain unchanged.

As there is no new technical information available that requires a reassessment of the issue, the Commission accepts the Commission's 2014 Review recommendations on subsidence performance measures and impacts on natural and built infrastructure and considers the issues raised at the public hearing and submissions in that context.

6.2.4 Department's Addendum Report

The Department responded to the Commission's 2014 Review recommendations in Part 2 of the addendum report. It is a considered response to address the issues raised in the Commission's 2014 Review and where appropriate, the draft conditions have been updated to reflect the Commission's 2014 Review recommendations.

6.2.5 Issues raised at the Public Hearing

A number of speakers at the public hearing and written submissions expressed concerns in relation to potential subsidence impacts on the water resources, private properties and public infrastructure. The key concerns included:

- the Hue Hue Mine Subsidence District only allows partial extraction;
- compensation for subsidence impacts on private properties and dispute resolution;
- impacts on the Buttonderry Waste Management Facility;
- confusion in the Commission's 2014 Review report in relation to pillar yield; and
- flooding.

6.2.5.1 Hue Hue Mine Subsidence District (Hue Hue MSD)

The Hue Hue Mine Subsidence District was proclaimed in 1985. At the public hearing, a submitter contested that the partial extraction applies to the Hue Hue MSD, not full extraction as proposed by the applicant. A historic Mine Subsidence Board (MSB) Minute Paper (May 1995) was submitted to support the claim (see **Appendix 8**).

In response to the issue raised, the applicant refers to the Commission's 2014 Review report which acknowledged the suitability of the mine plan in the Hue Hue MSD area by noting *"the restricted mining parameters (narrower longwalls and reduced seam height) were designed to keep subsidence within the limits set for the Hue Hue MSD"* (Commission's 2014 Review report p.19).

The Commission finds the issue requires clarification for the consideration of the consent authority and recommends accordingly.

6.2.5.2 Compensation measures for water loss and property damage

Given the number of properties that have the potential to be impacted and the concerns raised by various property owners and businesses, the Commission's 2014 Review strongly recommended that the compensation measures should be fair and reasonable for affected property owners. It notes that *"if the consent authority cannot be satisfied that the outcomes will be fair and reasonable then the consent authority will have to consider whether the residual impacts make the project unacceptable within the terms of s79C of the EP&A Act"* (p.51).

The Department provided a detailed response to the Commission's 2014 Review recommendations including advice on changes to the *Mine Subsidence Compensation Act 1961* relating to the reform of the mine subsidence compensation system that have been proposed since the Commission's 2014 Review was completed. It should be noted that the most significant change proposed is to make underground coal mine operators **directly** responsible for the subsidence damages that they cause rather than the responsibility for the cost of repair being drawn from the MSB funds. In response to the expected changes, performance measures for privately owned residence including improvements have been included in the draft conditions. Any dispute between the applicant and landowners will be settled by the Secretary in consultation with the new Subsidence Advisory NSW.

Some speakers at the public meetings questioned the definition of 'serviceability' and 'practicable' in Condition 3 of Schedule 3 in the draft conditions and the dispute resolution in draft condition 4 of Schedule 3 that the Secretary's decision *"shall be final and not subject to further dispute resolution under this consent"*.

Draft condition 6(g)(ii) requires a Built Features Management Plan be prepared in consultation with DRE. The first dot point under Condition 6(g)(ii) requires the plan be prepared in consultation with "owner/s of potentially affected feature/s." The first dot point under "Notes" requires the applicant *"to define more detailed performance indicators for each of these performance measures in the Built Features Management Plans"* as required by Condition 6 (Schedule 3).

The Commission supports the inclusion of more detailed performance measures in the draft conditions to minimise future disputes between the applicant and landowner(s) and recommends accordingly.

6.2.5.3 Buttonderry Waste Management Facility

The Council expressed some concerns about possible subsidence impacts on the Buttonderry Waste Management Facility and questioned whether subsidence predictions have taken full account of the final capacity of the waste facility, locations of waste placement, surface loadings, future extension areas and impacts on the leachate system and landfill methane gas management systems. Council felt that the facility should be included in the draft conditions of consent as key public infrastructure.

In addition, a further concern raised by Council was the access to the Buttonderry Waste Management Facility is via Hue Hue Road. They felt that the potential increase in flooding frequency and height on this road would prevent effective access to a key facility for the Council.

The Commission sought further clarification from the applicant who advised that *“the potential future facility is over 380m from the subsidence impact limit which is outside the project’s angle of draw, and therefore outside the project’s vertical subsidence impacts. As to Hue Hue Road, it is also outside the subsidence impact limit and any impacts on the road would be managed in accordance with the relevant conditions of consent.”*

The Department considers that the inclusion of a trigger action response plan will have effect for significant public infrastructure including the Buttonderry facility.

The Commission notes the Buttonderry facility is currently not included in the definition of public infrastructure in the draft conditions. The Commission recommends that this should be rectified before the application is determined.

6.2.5.4 Pillar Yield

One of the speakers at the public hearing submitted that the Commission’s 2014 Review report is confused in terms of whether the pillars will yield or not.

The Commission’s 2014 Review report has accepted that the pillars will yield, but acknowledged that there are still some uncertainties about when the yield will occur. Given the uncertainty, the Commission’s 2014 Review includes three recommendations in relation to potential impacts on stream morphology. Further that the consent authority should give *“specific consideration”* to the risk of pillars failing to yield or not yielding uniformly.

6.2.6 Flooding

Council raised that the potential subsidence induced flood impacts may be worse than predicted in the assessment. This was due to the uncertainty of the subsidence and the resultant flood levels.

The Commission notes that the flooding issue raised by Council was considered in the Commission’s 2014 Review. The Department’s draft conditions were accepted and the Commission’s 2014 Review also found that *“the options for mitigating the flood-related impacts of subsidence on dwellings and roads involve proven methods and that emergency access will still be available via secondary routes to most dwellings, except those in the 1% AEP flood extent (30 existing dwellings, plus four new dwellings)”* (p.48). Despite these findings, the Commission’s 2014 Review report recommends that an Emergency Evacuation Management Plan be prepared in consultation with affected landowners and relevant agencies. The plan should contain mitigation measures and *“where mitigation measures are not possible, compensation will be made by the Proponent to the effected parties e.g. individual landowners and WSC”* (p.48).

The Department's addendum report recommends the inclusion of a flood management protocol as part of the Water Management Plan under draft condition 6(g)(iii) Schedule 3. The Department considers that the inclusion of a flood management protocol will allow proper emergency planning to be left to the appropriate authorities.

This Commission finds that the draft conditions recommended by the Department, particularly the inclusion of the flood management protocol, addresses any potential flooding impacts and is satisfied the issue has been adequately addressed.

6.2.7 Commission's questions on the draft conditions

At the initial briefing, the Commission sought clarification from the Department in relation to its response to the Commission's 2014 Review report concerning performance criteria for stream morphology and potential subsidence impacts.

Draft condition 1 of Schedule 3 proposes a performance measure of 'negligible subsidence impacts and environmental consequences' for 6th order streams and their alluvium. The Commission initially questioned whether this represents a lessening of performance measure considered in the Commission's 2014 Review report, particularly in relation to the Wyong River (6th order stream). The Department advised on 20 April 2017 that the proposed performance measure focusses on '**negligible subsidence impacts**' which is defined in the conditions as "***cracking of rock mass, whether that cracking is connected to the mine workings or not***". The Department understands the main concern is connective cracking and should this occur, it confirms that this would not be considered as negligible impact and it will indicate an exceedance of the performance measures.

The Commission remains concerned about the ambiguity of the term 'negligible impact'. It notes the term negligible is defined in the draft conditions as "*small and unimportant, such as to be not worth considering*". The Commission finds the wordings of the current condition causes confusion. It needs to be made clear that connective cracking cannot be considered negligible.

Further advice was sought from the Department regarding the adequacy of Recommendation 22, which suggests water quality monitoring in response to subsidence should be subject to "*an independent audit each year at least until the Director General (Secretary) is satisfied that longer intervals can provide appropriate safeguards*" (Commission's 2014 Review report p.45). The Department advises that the draft conditions include requirements for incident reporting, annual reviews and triennial independent environmental audits as well as reporting any exceedance of the performance measures and criteria. A further safeguard is included in condition 10 which allows additional audits to be carried out if there are concerns about subsidence impacts.

The Commission is satisfied that the draft condition provides an appropriately independent and regular audit and reporting regime consistent with the Commission's 2014 Review recommendations.

The Commission also sought clarification on the scope of extraction plans from the Department and whether condition 6 of Schedule 3, which requires an extraction plan for all second workings with a note indicating each extraction plan may cover a defined area of underground workings, is consistent with the recommendation in the Commission's 2014 Review report, which requires "*the extraction plan for each longwall contains revised subsidence predictions based on experience from previous mining on the site*".

In response, the Department advised that it did not consider that the recommendation meant one Extraction Plan for one longwall. It is of the view that the intent of the Commission's 2014 Review was that all extraction plans should give individual consideration to each longwall panel and its impacts, rather than approve a single longwall which was considered impractical and have the potential to delay

mining operations. In this regard, the Department advised that the draft conditions have included a number of provisions to achieve the desired outcomes of the Commission's 2014 Review recommendation including the requirements of monitoring programs, the preparation of Trigger Action Response Plan(s), independent audits and regular reporting.

In addition, the Commission also sought further information from the Department on the comparison of the greenfield Wallarah 2 mine site and the Mandalong mine to justify the adoption of similar conditions.

In response, the Department advised that it considers that the Mandalong mine is a reasonable analogue for the Wallarah 2 project as it is located immediately to the north of Wallarah 2, is an underground mine targeting the same coal seam, at similar depths and with similar longwall geometry. The Department advised that it has developed a set of standard conditions to manage mine induced subsidence for all underground coal mines in NSW, however, that the standard conditions could be modified to reflect the particular environment where the mine is proposed.

The Commission finds its questions have been adequately addressed by the Department.

6.3 Noise Impacts

6.3.1 2012 Application

The Noise and Vibration Impact Assessment of the 2012 application predicted that noise levels at properties 57 and 58 would exceed the Project Specific Noise Levels (PSNL) due to their proximity to the proposed surface facilities at the Tooheys Road site and the rail infrastructure. The assessment also indicates that the sleep disturbance criteria will be met at all private residences providing additional noise mitigation measures are incorporated.

6.3.2 COMMISSION'S 2014 REVIEW REPORT

The Commission's 2014 Review report includes 2 recommendations to address the noise exceedances at properties 57 and 58 and potential impacts from wheel squeal.

6.3.3 The Amended Application

The amended application removes the previously proposed rail loop and relocates the rail infrastructure component to the east side of the Main Northern Railway Line. The updated Noise and Vibration Impact Assessment included with the amended application concludes that noise impacts at the Tooheys Road Site would be up to 1.1 dB(A) lower than those predicted in the original application and that wheel squeal noise is no longer considered an issue due to the relocation of the rail infrastructure.

However, the proposed rail and train load-out infrastructure in the amendment is predicted to exceed the relevant noise criteria at residences P14, P15 and P16 by up to 4 dBA during operations. Construction noise exceedances are also predicted to occur at these residences for periods of time throughout the two-year construction period, particularly during times outside standard construction hours (by up to 20dBA) as there would be requirement to work late at night due to the need to take possession of the railway easement for construction of the conveyor, bin and tying in of the railway siding when it is not being heavily used.

The noise assessment recommends a series of measures to manage, monitor and mitigate vibration and operational noise.

6.3.4 Department's Addendum Report

The Department also states that the operational noise levels at properties 57 and 58 will now be within the assessment criteria as a result of the relocation of the rail loop. It notes, however, that the applicant has indicated that it will continue to consult with these landowners to discuss the management of any noise impacts. In addition, the Department notes that the removal of the rail loop will remove any issues related to wheel squeal. On this basis, the Commission agrees that the Commission's 2014 Review recommendations 27 and 28 do not require further consideration.

The addendum report noted that the predicted operational noise exceedances for residences P14, P15 and P16 fall within the criteria for consideration of the *Voluntary Land Acquisition and Mitigation Policy* (VLAMP), hence the landowners may request mitigation measures to be implemented on their residence. With regard to construction noise, the Department concludes that the predicted exceedances "*can be reasonably managed through mitigation and management strategies*".

As the predicted exceedances of construction noise criteria are significant, particularly outside normal work hours, a draft condition of consent (condition 2 of Schedule 4) requires the preparation of an out-of-hours work protocol in consultation with the EPA and affected landowners to manage the predicted exceedances.

At the briefing meeting with the Department, the Commission sought clarification on the acceptability of the exceedances of the construction noise criteria, noting the 2-year construction period. The Department advised that most construction works will occur within standard construction hours including Saturdays. The applicant also stated that operational mitigation measures could be provided for the impacted receivers before construction commencing.

6.3.5 Issues raised at the Public Hearing and in written submissions

A number of speakers at the public hearing as well as written submissions expressed concerns regarding the noise impacts including sleep disturbance on the nearby Blue Haven community due to noise from the construction and operations of the proposed conveyor system, rail siding and train load-out facility.

The Darkinjung LALC (DLALC) also raised concerns around noise emanating from the rail siding and the coal loading facility indicating that it would have a financial impact on their proposed future residential developments. It also contests that the updated noise assessment has not addressed the EPA's concerns in terms of the classification of residential sites as 'urban' instead of 'suburban' and the application of the relevant assessment criteria.

The Kerry Mountain Pty Ltd, a landowner adjacent to the rail infrastructure, objects to the proposed amendment as it will have significant noise impact on the future development of its land.

6.3.6 Commission findings and recommendations

The Commission have reviewed the additional reports and accepts that the noise impacts at the Tooheys Road Site would be reduced from those predicted in the 2012 application as the amended application removes the proposed rail loop and spur and relocates the rail infrastructure. As a result of these changes, the recommendations in the Commission's 2014 Review in relation to noise impacts on properties 57 and 58 and wheel squeal do not require further consideration.

In considering potential noise impacts on the Blue Haven community, the Commission notes the updated noise assessment used a Blue Haven residence as a reference location for its noise measurement. The assessment concluded that the predicted impact noise levels for the reference locations and catchment areas will be within the relevant EPA criteria and as such with the proposed noise controls implemented the project would not cause exceedances of the sleep disturbance criteria.

Based on the evidence available, the Commission finds the issue has been adequately addressed.

As to the potential impact on the DLALC and Kerry Mountain Pty Ltd lands, the assessment indicates the predicted noise levels meet the criteria applicable to existing zonings of these lands.

With respect to the DLALC's claims regarding potential economic losses associated with noise on the proposed rezoning of land the Commission notes that the rezoning process which would allow residential development on the DLALC lands is in an early stage, and that further work is still required before a rezoning would be made. While the DLALC has submitted an indicative layout for their land, the final layout of the residential proposal and footprints of individual houses have yet to be informed by the gateway approval rezoning studies which are to be undertaken. On this basis, the Commission feels that at this stage they are conceptual in nature.

Regarding the applicable assessment noise criteria, the Commission notes that the EPA has accepted the applicant's justification for the adoption the urban criteria and as such the Commission accepts the EPA's advice and finds that the noise assessment in the amended application has used the appropriate criteria.

In regards to the predicted noise exceedances related to construction and operational noise levels, the Commission sought further clarification from the applicant who that the noise assessment was based on a standard cladding material for the proposed infrastructure, and subsequent to the completion of the noise assessment, it has been made aware of an alternate cladding material that could be used to further reduce noise. The applicant has also indicated that it is in discussion with the potentially affected landowners with a view to implementing satisfactory noise mitigation measures before construction commencing. This includes, but is not limited to provide alternative accommodation during the out-of-hour construction works if requested by the affected landowners.

On review, the Commission finds that the noise issues have been adequately addressed, however given public concerns and the applicant's recent advice, the Commission recommends that the draft condition be updated to incorporate the requirements to use the best available technology in noise reduction construction material for the conveyor, transfer station and train load-out facility and to require that an agreement is reached with P14, P15 and P16 on noise mitigation measures **prior** to the commencement of construction.

Recommendation:

- *an explicit requirement be included in the draft conditions that the applicant shall provide mitigation measures for residences P14, P15 and P16 before construction commences, if requested by the residents, and to use the best available technology in noise reduction construction material for the conveyor, transfer station and train load-out facility.*

6.4 Air quality and Greenhouse Gases

6.4.1 Air quality Impacts

6.4.1.1 Commission's 2014 Review report

The Commission's 2014 Review report considers that *"the air quality impacts can be managed to acceptable levels and agrees with the Department's proposed conditions of consent."* However, it also notes that *"there is a statistically significant increase of approximately 10 per cent in TSP, PM₁₀, PM_{2.5} and PM₁ air particle emissions, from movement of coal and freight trains whether the wagons are loaded or empty. The Commission draws the same conclusion for this project that these findings have broader implications for rail transport of coal and the Department and EPA should take this latest information into account before submitting a final assessment report and recommendations to a consent authority"* (Commission's 2014 Review report p.54).

6.4.1.2 The Updated Air Quality and Greenhouse Gas Assessment (PEL Report)

The amended application includes an updated air quality and greenhouse gas assessment (PEL Report) to support proposed relocation of the rail infrastructure. Although the amended application only involves a small component of the project, the updated assessment “*assesses emissions from all proposed operations*” (PEL Report p. iv). The assessment concludes that modelling indicates emission levels will be below all relevant assessment criteria and no change to the flaring of methane and use in power generation is required.

The PEL Report also recommends the conveyors to be partially enclosed (roof and one side closest to the receptors) whilst the transfer station should be fully enclosed to minimise dust emission. It also includes a commitment to use water sprays for the coal during loading, conveyance and transport. It also recommends post commissioning verification of the ventilation shaft emissions to be carried out once operational, to validate the assumptions presented in the PEL report.

6.4.1.3 The Department’s Addendum Report

The addendum report has assessed the operations and construction phases of the project, greenhouse gas management, coal transportation as well as potential impacts to the Darkinjung LALC’s residential proposals. The assessment concludes that the potential air quality impacts are well within the relevant assessment criteria and the draft conditions “*requiring the preparation, implementation and regular review of an Air Quality and Greenhouse Gas Management Plan ... would ensure the application of best practice air quality management and limit any potential air quality impacts to the surrounding area*” (AR p.55)

6.4.1.4 Public submissions

The key concerns raised in public submissions and at the public hearing include:

- Current background air quality is already at the assessment criteria levels;
- Only one monitoring station in Wyong which is located near the Wyong racecourse;
- The assessment was based on out-date criteria;
- Increase dust loadings along the rail corridor from uncovered coal wagon;
- Health impacts associated with exposure to increase particulates levels; and
- Pollution of water tanks.

6.4.1.5 NSW Health

NSW Health, in a letter to the Department dated 13 September 2016, notes that the modelling predicts that the project will meet all relevant air quality criteria. However, the increase in air pollutants remains a concern because there is no safe level of exposure to particulate matter (PM). The concern is reiterated in a second letter to the Department dated 18 November 2016 following its review of the applicant’s response to submissions (RTS2). It notes the incremental increases in particulate pollution around the conveyor and train load out facility.

The letter suggests consideration should be given to further reduce dust emissions affecting private receivers even if the predicted levels are below the assessment criteria, as there is clear scientific evidence that demonstrates a health impact with any increase in exposure to particulate pollution.

NSW Health considers additional management measures could be implemented to reduce wind speed. Measures include vegetative windbreaks, wind screens, pile shaping/orientation, and a three-sided enclosure.

6.4.1.6 Advice from Environment Protection Authority (EPA)

Following the public hearing and review of the submissions, the Commission sought advice from the EPA in relation to certain matters raised in the public hearing. The EPA's response is in **Appendix 6** and is summarised below:

- A review of the air quality in the Lake Macquarie-Wyong area was carried out between September 2013 and June 2016 and it found that the air quality in the area was generally considered good to very good;
- The location of the Wyong monitoring station meets the requirements of both the National Environment Protection Measure (NEPM) and the Australian Standard;
- The new assessment criteria apply to development application submitted after 20 January 2017; and
- The EPA is currently working with the mining industry to improve coal loading and unloading practices with a view to minimise the generation of dust from coal wagons and reduce the distribution of particles along rail corridors.

6.4.1.7 Commission's findings and recommendations

The following addresses each of the aspects summarised above.

a. Current background air quality levels

The Commission finds that both the EPA and PEL report concluded that the ambient air quality is generally good and the predicted emissions from the amended project will be within the relevant assessment criteria. The strengthened draft conditions relating to the content of the air quality management plan and the monitoring regime will further minimise any residual impacts.

b. Monitoring Stations

A submitter raised concern that there is only one EPA air pollution monitoring station in Wyong, 15 km south of the project site and recommended that the EPA establish a network of at least 3 air pollution monitors within 10km of the proposed mine site. The Commission finds the issue is a matter for the EPA. As to the subject application, the PEL Report shows that monitoring sites exist within and around the project site. These sites are considered appropriate for the assessment of the project as amended.

c. Assessment Criteria

The Commission notes that the EPA has updated the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* to **include** PM_{2.5} and **update** PM₁₀ criteria so that they are consistent with the NEPM standards. As the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2016)* was gazetted on 20 January 2017, the new criteria apply to development application lodged after the gazette date.

Table ... shows the old and new criteria.

Pollutant	Averaging period	Application submitted before 20 January 2017	Application submitted after 20 January 2017
PM _{2.5}	24-hour average	None	25µ/m ³
	Annual average	None	8µ/m ³
PM ₁₀	24-hour average	50µ/m ³	50µ/m ³
	Annual average	30µ/m ³	25µ/m ³

Although the above PM_{2.5} criteria do not apply to the 2012 application or the amended application due to the application being submitted prior to the 20 January the air quality impact assessment for the project has included the advisory PM_{2.5} criteria in the assessment.

The Commission is satisfied that the appropriate PM₁₀ and PM_{2.5} criteria have been applied in the assessment of the project, which have been reviewed by the EPA.

d. Coal Transport

The Commission's 2014 Review recommends the Department and EPA consider the broader implications for potential emissions from rail transport of coal before a final assessment report is submitted to the consent authority.

In September 2015, the Minister for the Environment asked the NSW Chief Scientist & Engineer to conduct an independent review of rail coal dust emissions management practices in the coal chain following the NSW Legislative Council's Inquiry into the performance of the EPA. The PEL Report for the amended application refers to the draft report by the NSW Chief Scientist, which concludes that there are significant gaps in knowledge about localised emissions in or around rail corridor, including the composition, source, quality, concentration and dispersion of the dust.

The Department's addendum report notes the final report by the NSW Chief Scientist and its conclusion.

The Commission has accessed the NSW Chief Scientist & Engineer final report dated Aug 2016 (Chief Scientist report) via its website on 7 April 2017 and notes the report concludes that:

"the review is unable to make a formal determination on specific mitigation techniques because there is not enough known about the amount and distribution of particulates in the rail corridor and thus no reference point against which to assess mitigation effectiveness. That said, there is a significant body of literature pointing to moisture as a major factor in reducing dust mobilisation at various components of the coal chain (including for coal trains)."

The Commission also notes the Chief Scientist's report indicates further studies will be carried out to better understanding the various components of the issue. According to the advice from the EPA, it is also working with the industry in the Hunter region to improve coal loading and unloading practices to minimise the generation and distribution of particles along the rail corridors and the outcome of such work will apply to the coal industry including the Wallarah 2 project.

e. Dust Impact on Health

The Commission finds that draft condition 10 Schedule 4 appropriately requires the preparation of an air quality and greenhouse gas management plan, an air quality monitoring program and the adoption of accepted best practice management that will adequately address the concerns.

f. Pollution of water tanks

Residents on properties adjacent to the surface facilities are concerned that their water tanks would be polluted by coal dust. The Commission sought a response from the applicant.

The applicant refers to its RTS2, which states that the predicted dust deposition levels for the Amended Project are an order of magnitude below the relevant criteria and are not expected to give rise to any risks associated with contamination of water collected in rainwater tanks. (RTPH p.45)

The Commission understands the concern raised by residents near the proposed mine. However, given that the predicted emissions will be below the relevant criteria, the Commission is satisfied that if airborne dust is appropriately managed, the water quality in residents' water tanks is unlikely to be impacted.

6.4.2 Greenhouse Gas Emissions

6.4.2.1 The Commission's 2014 Review report

The Commission's 2014 Review report discussed greenhouse gas emissions in Section 3.8.1. The report notes that:

The PAR (preliminary assessment report) says the strategic policy for greenhouse gas emissions should be made at a national and international level rather than at the project planning stage although several submissions including LMCC (Lake Macquarie City Council) and WSC (Wyong Shire Council) are critical of relying on a national approach as there is no carbon emissions trading scheme and the carbon tax is proposed to be abolished. The Commission accepts the validity of these concerns and therefore considers that all practical means should be adopted to minimise greenhouse gas emissions.

The Commission's 2014 Review report further notes *"the benefits of gas capture and flaring and beneficial use as a practical means to reduce greenhouse gas emissions from the project"*. It recommends a condition be included that will require *"the implementation of methane gas capture and flaring within a specified timeframe and that a proposal be developed for beneficial use of the captured gas within three years of the commencement of longwall operations and to be implemented within a timeframe as required by the Director General"*.

6.4.2.2 The Amended Application

In relation to greenhouse gas emissions, the Department's Addendum Report is of the view that "the nature and quantity of emissions has not materially changed between the original and amended project", hence it considers the draft conditions recommended for the original project remain appropriate.

6.4.2.3 Commission's findings and recommendations

The Commission agrees with the Department's general conclusion. In addressing the Commission's 2014 Review recommendation, the Department refers to the applicant's commitment to the capture and enclosed flaring of methane upon commencement of underground mining. It is also proposed that a beneficial use of methane feasibility study be undertaken within 3 years of commencing longwall mining. Draft conditions 9 and 10 in Schedule 4 are said to reflect this commitment.

Draft condition 10 (Schedule 4) requires a feasibility to be completed within **2 years of commencing second workings** (emphasis added). This seems to be inconsistent with the Commission's 2014 Review recommendation which requires "a proposal be developed for beneficial use of the captured gas **within three years of the commencement of longwall operations** (emphasis added)".

The Commission also notes the applicant's commitment to the implementation of the proposal is qualified by "if found viable", which appears inconsistent with the Commission's 2014 Review recommendation that the proposal *"be developed ... and to be implemented..."*.

The departure from the Commission's 2014 Review report has not been fully justified. This should be clarified before the application is determined by the consent authority.

6.5 Road Closure

6.5.1 **Nikko Road**

The amended application proposes to locate mine infrastructure within part of the Nikko Road reserve (about 20m wide) including a rail spur, train loading facility, service road and associated infrastructure to the north of the Motorway Link Road and a sewer connection to the south. The proposal is to close Nikko Road. The applicant has explained that an access road on the eastern side of the road reserve will be constructed to maintain access to adjoining private lands via easements. The width of the

access road has subsequently been increased to a 6m all weather access road in its response to submissions.

6.5.1.1 Current conditions of Nikko Road and access to adjacent private lands

Concerns were raised in the public meeting that the amended project would deny the adjoining landholders access to their properties. This is contested by the applicant who advised that the upgraded road would in fact improve access. The applicant, in a letter to the Department dated 2 June 2016, described the current conditions of Nikko Road as substantially unformed and overgrown with trees and other vegetation and there is a gravel track within some sections of the road reserve and otherwise located outside of the road reserve. According to the applicant, the legal and practical access to the 3 large parcels of lands (2 owned by the DLALC and one by Kerry Mountains Pty Ltd) between North Gosford Road and the Link Road is currently not from Nikko Road due to its condition but rather is as follows:

- Lot 204 DP1117900 (DLALC land) is via Wyee Road and Thompson Vale Road;
- Lot 93 DP755245 (owned by Kerry Mountain Pty Ltd) is via Thompson Vale Road; and
- Lot 16 DP1210468 (DLALC land) is via Spring Creek Road.

Having regard to the legal and practical access available to the landowners, the applicant concludes that Nikko Road is not necessary to access the DLALC and other adjacent lands to the north of the Doyalson Motorway Link Road.

It was acknowledged however that part of Nikko road is the only access to the DLALC lands south of the Link Road. The existing access to the area south of the Link Road is via a gravel track from the rail underpass then travelling south passing under the Link Road. The track is partly within the Nikko Road reserve and partly on lands owned by the DLALC, Rail Corp and the Crown.

6.5.1.2 The proposed easements

The applicant has advised that they intend to establish an easement that

“would commence adjacent to the rail underpass used by DLALC and proceed in a southerly direction, under the Link Road to Lot 197 DP104536. The easement would benefit the relevant adjoining land (Lot 16 DP1210468, Lot 201 DP1064536, Lot 197 DP1064536 and nearby Lot 196 DP1064536 and existing registered easements in that land to enable continued access by DLALC and other third parties such as Ausgrid and Central Coast Council.

To the north of the Doyalson Motorway Link Road, the easement would coincide with the service road which Wyong Coal proposed to construct adjacent to its infrastructure. To the south of the Link Road, the easement would be situated alongside the proposed pipeline.”
(RTS2)

6.5.1.3 Status of Road Closure Applications

The applicant has advised that a road closure application has been lodged with the DPI Crown Lands. They indicated that their intention is to purchase the road from the Crown if approval is obtained. The applicant is also of the view that the road closure application is not part of the Amended Application as the approval of the road closure application and conditions of that approval are a matter for the Minister administering the *Roads Act 1993*. Further they advised that the carrying out of the project does not depend on closure of the road. If the road closure application is unsuccessful, they have other alternatives available in order to secure the necessary tenure over the road. No details have been provided to the Commission about the alternatives.

6.5.1.4 applicant's response to submissions

The Department sought additional information on alternate access routes to privately owned lands and clarification on the design of the proposed shared road corridor and access for emergency and telecommunication services. The applicant advises that *"an easement over the length of Nikko Road within the project boundary"* will be created *"to provide legal access to all potential users of the road including emergency services and infrastructure owners"* (RTS2 p.21).

In addition, the applicant contests the DLALC's contention that Nikko Road is important for the strategic regional road network and provides a link between Wyee and Warnervale. It noted that the Central Coast Council and other government agencies have not raised *"matters associated with any future plans regarding development of Nikko Road as a connecting road between Wyee and Warnervale ... it is also not identified in the Central Coast Regional Plan 2036 released on 14 October 2016"*. (RTS2 p.121)

6.5.1.5 The Department's Addendum Report

The Department's Addendum Report addresses Nikko Road mainly in relation to the road closure impact on access to adjacent lands. It agrees with the applicant's view that the road closure application is not a relevant consideration for the determination of the amended application and if the project is to be approved, conditions of consent would require all other necessary approvals to be in place before any works commenced.

The Department's assessment concludes that it *"is satisfied that adequate access would continue to be available to all land adjacent to Nikko Road (including the Darkinjung LALC's landholdings) and that the works proposed by WACJV would actually improve access conditions compared with current conditions"* (AR p.66).

6.5.1.6 Issues raised at public hearing

The Closure of Nikko Road was an issue raised by the Central Coast Council in the teleconference with the Commission following the Public hearing. It was also raised as a major concern to the DLALC and other landowners.

Council in its May 2017 submission advised that future urban land release planning would utilize existing road reserves, thus only construction costs require consideration as there is no need to purchase the road corridor. It believes a condition should be included to require the road reserve be reinstated to its original condition and be dedicated to the Central Coast Council free of charge following mine closure.

In addition to Council, the DLALC objects to the closure of Nikko Road as it is the only access to several of its landholdings. Of particular concern to the DLALC is the potential to landlock its property south of the Link Road. It is also an important access point for the maintenance of transmission lines and a rising sewer main.

The DLALC advised that the removal of access to their land holdings would have immediate financial impact on the value of its lands as well as limiting their future development potential. The DLALC noted that whilst the applicant has indicated that an easement will be created to allow access for adjacent landowners, the terms of the easement are unknown and it was unclear how it would work in practice. Further the DLALC advised that details of the construction of access road are not available, particularly the connections of existing access points and level changes to maintain these access points. It was also not clear to the DLALC whether the access road is 3m or 6m. In their submission, the DLALC advised that Nikko Road was also considered to have strategic importance *"to the future growth of the North Wyong and southern Lake Macquarie regions"* (DLALC April 2017 para 5.1) with an estimated population of about 19,400.

6.5.1.7 Commission's findings and recommendations

a. Loss of access to adjacent privately owned properties

The Commission finds that there is a general lack of detail relating to the terms of the easements and the design of the access road and access points to adjacent lands available to the general public and that this detail was lacking in the amendment assessment report. The Commission agrees that the information available so far is mainly conceptual and that the lack of effective engagement with the adjacent landowners has heightened the contention of this issue. It is noted however, that the applicant has indicated that "it will consult with the relevant landowners and other stakeholders to determine the most appropriate access configuration in the detailed design stage of the construction of the Project" (RTPH2 p.22). These issues need to be clarified at the time of determination by the consent authority.

Further advice from the applicant indicates that the establishment of the easements would be part of the DPI Crown Lands assessment process. It is expected the terms will be the standard terms of a right of carriageway under the Conveyancing Act 1919.

In addition to the above, the Commission finds that:

- The proposed 6m wide all weather access road with an easement is an acceptable solution to address the issue of access to adjacent privately owned lands including the section south of the Link Road, noting that access to the south of the Link Road is currently restricted by the footings of the Link Road bridge;
- A condition of consent should be included to require consultation with all adjacent private landowners **before** the final design of the access road is constructed; and
- In addition, a condition of consent should be included to require the preparation of an Access Management Plan in consultation with the adjacent landowners.

Recommendation:

- *The draft condition should include a requirement that the applicant prepare and implement a Nikko Road access management plan in consultation with affected landowners. The plan should ensure access to private lands are maintained during construction and operation of the mine. Design details of the access road should be included in the application prior to determination to ensure proper connections to existing access points. Post mining access to the road alignment may need to be included if the tenure of the Nikko Road reserve is changed following approval of this application as part of the regular update requirements of management plans.*

b. Future road network planning

The Commission notes that the Council and DLALC has not previously raised concern that Nikko Road may be required for future road network planning. The applicant also advised "DPI Crown Lands indicated that this section of road does not form a part of the future road networks plan for this locality. As a result of this consultation, DPI Crown Lands encouraged WACJV to make application to close Nikko Road" (RTPH2 p.22).

However, this is contested by the DLALC on the basis that Nikko Road will provide a vital future connection between Wyee and Warnervale town centre and linking the proposed employment and residential developments between these two centres. The DLALC has a significant number of land holdings in the area and some of them are in the process of rezoning for residential developments. Council considers the availability of the road reserve will reduce the cost of future urban release in the area.

The Commission finds:

- It agrees with the Department and the applicant that the road closure application is not a relevant consideration under the *Environmental Planning and Assessment Act 1979* as it is the responsibility of the Minister for Roads to assess and determine any road closure application. The consent authority under the EP&A Act is to consider the project as proposed and its potential impacts on the environment. Hence, the potential impact on access to the adjacent privately owned lands is a relevant consideration.
- It is not the role of the Commission to determine the strategic importance of the Nikko Road reserve in terms of any future land use planning for the area. The Central Coast Council is the planning authority for the region and is responsible for considering the strategic significance of any road reserve and the timeframe in which that the road is required to meet the demand of future population;
- The lack of identification of Nikko Road in the Central Coast Regional Plan 2036 and the North Wyong Structure Plan does not necessarily mean the road reserve is not important in future road network planning for the area, particularly when regard is given to the various planning proposals to rezone large landholdings in the area for residential developments.
- No environmental assessment or detailed planning has been carried out to assess the practicality and need of the road reserve for the future of the area.
- Approval of the current amended application does not necessarily infer there will not be a road connection in this location in the future. There are other alternatives available that could secure the road reserve for future road use, such as an enclosure permit, or a dedication of the road reserve to Council upon completion of the mining project via a VPA or through inclusion of the commitment in a Mine Closure Plan.
- Issues in relation to potential economic loss are discussed in Section 6.6 of this report.

The Commission recommends the Central Coast Council enter into further discussion with the applicant about the future of the road reserve post mining.

6.5.2 Closure of Tooheys Road

The potential closure of Tooheys Road was raised at the public hearing due to concerns that it could adversely affect emergency access.

On 20 April 2017, the applicant advised the Commission that there is no intention to remove the road. Tooheys Road is the principal access to the project site, and the proposal is to gate the road to prevent through traffic for security reasons. It also advised that during public consultation, residents of Bushells Ridge sought to close a longer section of the Tooheys Road to prevent illegal dumping and burning of motor vehicles and illicit drug taking at the M1 underpass.

The applicant indicates that it has committed to ensure emergency access would be maintained for nearby residents and emergency services. Further consideration would also be given to extending the closure application to include the M1 underpass.

The Commission considers the issue has not been adequately addressed in the addendum report. Insufficient information is available regarding the extent of the road to be closed and access arrangement for emergency vehicles and residents in emergency situations. A more comprehensive proposal should be provided by the applicant for the Department's assessment and if required, with appropriate conditions of consent to ensure appropriate emergency access is publicly available before the application is submitted for determination by the consent authority.

Recommendation:

- *The final assessment report should clarify the extent of Tooheys Road which is to be closed and access arrangement for residents and emergency vehicles in emergency situations.*

6.6 Economic and Social Impacts

6.6.1 Commission's 2014 Review report

The Commission's 2014 Review report is critical of the economic impact assessment for the 2012 application and the preliminary assessment report (PAR) prepared by the Department. It questioned not only the analysis methodology, but also individual components and the quantum of the estimated benefits. The Review found that the benefits of the project are limited to 300 direct jobs, capital investment value significantly less than the claimed \$800M, and royalty payments to NSW between \$100-\$200M. With the benefits substantially reduced, it found the applicant should ensure that the residual impacts are reduced to a level that is commensurate with the altered evaluation environment. The Review considered the key would be to convince the consent authority that the potential impacts on water supply for the Central Coast have been reduced to the level discussed in its Report (p.67). The Review recommended that *"a new economic analysis be undertaken and subjected to external rigorous independent review before a decision is made."*

6.6.2 Applicant's Response to the Commission's 2014 Review report

The applicant responded to the Commission's 2014 Review report on 1 July 2014. The response focussed on two issues raised in the Review Report. First, the question being the significant reduction of claimed benefits (over \$1 billion) between the previous application and the current application and secondly, the credibility of the claimed \$805 million capital investment value (CIV).

The applicant considers that the Review Report has not compared 'like for like' when it made comparison of the net benefit difference between the previous application and the current application. The applicant argues that a 'like for like' comparison would show the previous application's net benefit would be about \$487M while the current application would have a net benefit of \$353M (present value). The difference was due to the smaller scale of the current application with a shorter mine life after 11 of the longwall panels under the Jilliby State Conservation Area were removed from the application.

In regards to the claimed capital investment value of \$805M, the applicant states that the capital expenditure information was commercially sensitive. *"However, this value was conservatively calculated using industry standard costing procedures."*

6.6.3 Changes to Policy and Guidelines

The *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) was amended in August 2015 to provide a more balanced framework for decision making. The amendment removed the requirement that the significance of the resource should be the principal consideration in the assessment of a project but that the consent authority should also consider the environmental and economic issues. The Department has also issued the *Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals* in December 2015 (NSW Economic Guideline).

Given the amendment to the Mining SEPP and the release of the NSW Economic Guidelines, an updated Economic Impact Assessment for the amended application was required to take account of the changes in the policy and the new guidelines.

6.6.4 Updated Economic Impact Assessment (Gillespie Report 2016)

In considering the development cost of the project, the Gillespie Report 2016 states it uses the **capital costs** of \$1.5 billion over the life of the Project as provided by the applicant. The Report found a cost benefit analysis of the project indicates that it would have net production benefits to NSW of \$275M (present value) including \$200M royalties, \$70M company tax and \$5M voluntary contribution to the community. Gillespie's estimate of the cost of the residual impacts on surface water and local water supply is about \$1 million.

As per the requirement of the NSW Economic Guidelines, the Gillespie Report 2016 has also carried out a local effects analysis and found the project would generate \$25M of wage benefits of employment and \$186M non-market benefits of employment.

Based on the analysis, the report concludes that the project would *“have net social benefits to NSW of \$274M to \$485M (present value at 7%)”*.

6.6.5 BDA Group review of the Gillespie Report

The applicant engaged the BDA Group to provide an independent peer review of the Gillespie Report. The BDA review found the assessment was sound even though some assumptions *“would remain contestable”*. It concludes that *“the scale of these uncertainties is at the margin of the analysis, such that even significant changes to relevant parameter valuations would not impact the conclusions of the analysis”* (p.5).

Notwithstanding such conclusion, the BDA Review notes that although the potential particulate emissions have been assessed to be within the statutory criteria, there would still be increases in adverse health outcomes. Benefit transfer techniques could provide a valuation for these emissions. It also considers the greenhouse gas value in the Gillespie Report would be higher if a replacement cost approach is adopted for the assessment. Notwithstanding the above, *“it would not materially affect the results of the economic assessment”* (p.4).

6.6.6 Division of Resources and Energy of Department of Industry (DRE) response to Commission’s 2014 Review report

The DRE disagrees with the findings of the Commission’s 2014 Review report. It estimates the project will generate \$30M royalty per annum to the State, with a total of \$830M over the life of the mine with a net present value of \$275M. The employment multiplier derived from the 2012/13 NSW Minerals Council survey is about 5.5. Thus DRE is of the view that the 300 direct jobs would generate 1200 indirect jobs in mine and non-mine related industries.

The DRE supports the project as it considers the proposed mine is *“a responsible utilisation of the State’s coal resources that would generate employment opportunities and bring economic benefits to the local region and to the State as a whole”*.

6.6.7 Centre for International Economics Report (CIE Report)

Having regard to the recommendation in the Commission’s 2014 Review report that the updated Economic Impact Assessment be independently peer-reviewed, the Department engaged the Centre for International Economics (CIE) to carry out a peer review of the Gillespie Report 2016. The CIE found the cost benefit analysis (CBA) in the EIA (economic impact assessment) had been carried out *“in a manner that is broadly consistent”* with the NSW Economic Guidelines. However, the report notes that individual components and parameters warranted further examination and testing. It notes *“some of the information was not publicly available or difficult to get, or that it may change significantly over time”*.

The CIE report focuses on the key factors that could be readily tested. To that end it found:

- the expected net benefits would be in the order of \$32M to \$229M.
- Additional benefits are also expected. However, the quantum of these additional benefits *“is not as high as that estimated in the Gillespie Report”*.
- The quantum of benefits associated with company tax is difficult to test without additional information, however that the:
 - *“wage benefits to employment’ is higher than expected.*

- Inclusion of ‘non-market benefits of employment’ is inconsistent with the Economic Guidelines, even if this is incorporated into the analysis the estimate appears substantially higher than expected.
- The treatment of the potential social and environmental impacts is reasonable.
- Even if the company tax revenue was zero the Project would still generate net benefits due to royalty payment.
- The security deposits are designed to cover the full estimated costs of rehabilitation (pp.5-6).

The CIE review concludes “*on the benefits side, at a minimum, the NSW Government would receive royalty payments*”. However, if the residual impacts are not fully mitigated, it would change the quantum of net benefits.

6.6.8 The Department’s Addendum Report

The addendum report provides a detailed summary of the findings of the Gillespie Report 2016 and the CIE Review including the components where the two reports diverge in their view. Of particular interest to the Commission is the CIE view that the estimated cost of greenhouse gas is significantly higher than the estimated range of \$25,000 - \$114,000, ie the cost is between \$27M and \$121M.

Notwithstanding these differences, the addendum report concludes that “*while there is some dispute regarding particular inputs to the CBA and the methods used, CIE’s conclusion that the EIA is broadly consistent with the Economic Guidelines and will result in a net benefit to NSW is a substantive conclusion that should be given due weight.*” (AR p.80)

The addendum report found that:

The project as amended would provide major economic and social benefits for the Central Coast region and for NSW as a whole. These benefits include:

- *Direct employment of 300 full time equivalent staff during operations and around 450 contractors during construction;*
- *Estimated indirect employment of around 879 people across NSW during operations;*
- *Estimated annual direct and indirect household incomes across NSW of \$104M during operations; and*
- *Total estimated net economic benefit to NSW of \$275M (Net Present Value), which includes:*
 - *\$5M in voluntary contributions;*
 - *\$200M to the State of NSW in royalty revenue; and*
 - *\$70M in commonwealth, State and local tax revenue.* (p126, AR)

6.6.9 Issues raised at the Public Hearing

Divergent views were again expressed at the public meeting regarding the project’s economic and social benefits and costs. A summary is included below, with a more detailed description included in **Appendix 6**.

Those who supported the project submitted that:

- The project will provide significant economic benefit to the Wyong, the Central Coast and the wider region in terms of employment, training and business opportunities and other flow-on social benefits;
- The applicant has engaged with and shown their commitment to the local communities, particularly through their monetary contribution to various community activities, scholarship and job training programs;
- The project has already injected over \$100M into the community; and
- The mine will provide a significant boost to the local economy, which has been significantly affected by the recent mining downturn, particularly the engineering services industry.

The objections raised in the public hearing in terms of economic and social impacts include:

- The project is not financially viable and the community will bear the cost to rehabilitate the site if the operation is abandoned;
- The proposal will impact on existing agricultural businesses;
- The proximity of the proposed coal loading facility to existing and proposed residential areas will have significant impact on property values as a result of noise and air quality impacts;
- The benefits are estimated to range from \$30M to over \$200M, but the environmental cost will be more than the \$1 million adopted in the Gillespie Report;
- The proposal will cause job losses; and
- If the social cost of carbon is included, there will be no benefits.

The DLALC and the Australia Institute are key objectors to the amended application and the project on economic grounds. The DLALC contends that the proposed coal loading facility takes no account of the two residential developments proposed on DLALC lands (see also discussion in section 6.10).

The Australia Institute in its submission to the Department and the public meeting challenges the economic impact assessment on the basis that it overstates the benefits and underestimates the costs of the project. It questions the financial viability of the project, particularly around issues relating to operating costs, sensitivity analysis, and the estimate used for future coal price. The Institute is of the view that *“the project is unlikely to be financially viable and would likely result in a net cost to the NSW community.”* The Institute also stated that the applicant’s response to submissions, the peer reviews of the Gillespie Report and the Department’s Addendum Report have not addressed the financial viability of the project, including operating costs and the implications for net economic benefits; and the treatment of water issues in the economic assessment of the project.

6.6.10 Applicant’s response to submissions

The applicant’s Response to Submissions (RTS2) responded to the DLALC and the Australia Institute submissions and the comments are reiterated in its response to the public hearing (RTPH).

Regarding the DLALC’s submissions, the applicant argues that the current zoning of the DLALC lands are IN1 (General Industrial), E2 (Environmental Conservation) and RU6 (Transition) and that they have a value of about \$10,000/ha and \$5,000/ha respectively. The undeveloped residential zoned land R2 (immediately north of the DLALC lands) is valued at about \$55,000/ha by the NSW Valuer-General in 2015. Hence, it is of the view that if the rezoning proposal is approved, it will uplift the value of the DLALC land by about \$50,000/ha.

Assuming the project would impact on 9.8ha of future residential land if the rezoning had already been approved, the economic impact would be \$0.5M. The applicant contends that the impact would be lessened *“the further into the future that any rezoning occurs”*. It also argues that *“even with substantial changes in the assumed land values, the omission of this impact from the Economic Impact Assessment does not materially affect the net social benefits of the Project to NSW and certainly does not ‘serve to heavily understate the costs of the Project at a local level’ as suggested by TAI (the Australia Institute)”* (RTPH p.11).

In regard to the Australia Institute’s contention, the applicant argues that financial assessment is not a requirement of the EIS. Further that the operation will be relatively low cost because the product coal requires no washing and the mine is very close to the Port of Newcastle. Changes in operating costs have been included in sensitivity analysis. In addition, the assessment has adopted the Wood Mackenzie coal price forecast which are considered to be conservative.

6.6.11 Commission's findings and recommendations

6.6.11.1 Financial viability

The applicant's November 2016 response to submissions states "there is no requirement for the EIS to consider the financial implications of the project". The financial viability of a project is not an issue that is required to be assessed under the Economic Guidelines. It is a matter for the applicant and a commercial decision. The response also referred to the Department's view that "*the profitability of the proposal is not a relevant matter for consideration under Section 79C of the EP&A Act ... if the mine is truly not economically viable ... the project would be unlikely to proceed. This would result in the claimed benefits of the project not being realised, but would equally mean that none of the impacts of the mine would eventuate either*" (RTS2 p.157).

The Commission finds the main concern allied with financial viability raised in the Australia Institute's submission and other objectors is that the public will bear the rehabilitation cost if the operator abandons the mine due to economic reasons before fulfilling its obligation. The legacy of derelict mine sites around NSW was cited to support such concern.

In the Commission's view, there are two separate issues here. First, is the financial viability or profitability of the proposed project. Secondly, the cost of rehabilitation in the event the operator walks away from the project without appropriately rehabilitating the mine site to prevent/minimise future residual impacts.

The Commission agrees with the Department that financial viability is not a relevant consideration under the EP&A Act. As identified by the Australia Institute and accepted by the Commission that some corporations may proceed with a project for reasons other than profitability.

The Commission finds that the consent authority's main consideration is whether it is in the public interest to allow the project to proceed having regard to the identified economic and social costs and benefits, and potential residual environmental impacts arising from the operation of the mine on the environment. The concern that the operator may default and abandon the mine without proper rehabilitation is a separate matter as it deals with the adequacy of the security bond required under the *Mining Act 1992*.

Part 12A of the *Mining Act 1992* deals with security deposits that a decision maker may impose as a condition on an authorisation "*to provide and maintain a security deposit to secure funding for the fulfilment of obligations under the authorisation...*"

The quantum of a security deposit is not a matter to be included in a development consent issued under the *Environmental Planning and Assessment Act 1979*. In addition the draft conditions proposed by the Department include requirements for the preparation and implementation of a rehabilitation management plan to meet the objectives outlined in the conditions. There is also a requirement for progressive rehabilitation following disturbance (Conditions 33 to 35, Schedule 4). The Commission supports these conditions and considers monitoring the compliance of the progressive rehabilitation requirement is a task that should be taken rigorously and consistently, with the security deposit regularly updated to account for the disturbance throughout the life of the project.

During the preparation of this report, the NSW Auditor-General released a report on *Mining Rehabilitation Security Deposits*. The Commission notes the Department is now responsible for the administration of mining rehabilitation security deposits. The Auditor-General's Report also recommends actions to be taken by the Department to:

1. Improve the quality of rehabilitation and closure plans;
2. Improve assurance that security deposits are sufficient;
3. Enhance oversight of mine rehabilitation; and

4. Collaborate with relevant agencies to establish a financial assurance mechanism.

The Commission finds these recommendations address the community's concern on the issue.

6.6.11.2 Capital Investment Value (CIV)

The Commission's 2014 Review report found the CIV of the project is significantly less than the \$800 million stated in the 2012 application. The only comment in the applicant's response to the matter was that capital expenditure information is 'commercially sensitive'. The Gillespie Report 2016 has not discussed or considered the issue. Instead it refers to the project's capital cost of \$1.5 billion. The Commission finds the reference further confuses the matter. The Department's Planning Circular (PS 10-008) makes it clear that the calculation of CIV is "a matter of fact" and any dispute about the CIV should be objectively resolved by an independent quantity surveyor.

The Commission also questions the claim that the CIV remains unchanged for the amended application without any supporting information. Although the cost of the proposed new infrastructure of a conveyor system, transfer station and coal loading facility may be balanced by the removal of the rail loop and the cost to use the DLALC land for the rail spur, this should be clarified.

As discussed in the water resources section of this report, the implementation of the water supply compensatory system that will return treated water to the supply catchment may have an impact on the CIV. Given the variance of the figures, the Commission finds the issue needs to be clarified prior to the time of determination.

6.6.11.3 Economic Benefits

The Department in its addendum report states that "*while there is some dispute regarding particular inputs to the CBA and the methods used, CIE's conclusion that the EIS is broadly consistent with the Economic Guidelines and will result in a net benefit to NSW is a substantive conclusion that should be given due weight*" (AR p.80). The Commission had some difficulty understanding why the addendum report accepts the full economic benefits claimed in the Gillespie Report 2016, but seemingly ignores the CIE estimates without a full explanation of the preference, also noting that the CIE was the independent consultant engaged by the Department.

The following table has been provided to summarise the key differences between the Gillespie Report 2016 and the CIE Review Report.

	Gillespie Report	CIE Review Report
Net Economic Benefits	\$274 million to \$485 million	\$32 million to \$229 million
Royalty	\$200 million	\$156 million to \$259 million
Company tax	\$70 million	The Gillespie estimate should be treated as the upper bound.
Greenhouse gas cost	\$25,000 - \$114,000	\$27 million to \$121 million
Market employment benefits	\$25 million	\$3.7 million to \$7.4 million
Residual environmental costs	\$1 million	
Employment	<ul style="list-style-type: none"> • 300 full time operation jobs, • 450 construction jobs, and • 879 indirect employment jobs during operation 	
Regional economic benefits		The multipliers are likely to overstate the economic benefits, thus the regional economic analysis should be used with caution.

Of particular concern to the Commission is the significant discrepancy of the estimated greenhouse gas cost between Gillespie and the CIE. The Gillespie Report 2016 argues that the cost of greenhouse gas emissions estimate should be scaled downwards as Australia comprises 0.3% of the world population and NSW 32% of that. However, CIE pointed out that such approach is inconsistent with the NSW Economic Guidelines, noting that there is debate in economic literature regarding the extent to which the global social cost of carbon is appropriate for the use in benefit cost analysis of domestic policy options. In the Commission's view, this is a matter that should be brought to the attention of the consent authority so that it can make an informed determination of the application as the economic benefits of the project could be as low as \$32 million. The applicant may wish to provide clarification on this issue prior to determination.

6.6.11.4 Economic impact on the DLALC lands

A planning proposal to rezone two large parcels of land owned by the DLALC received gateway approval to proceed in May 2016. The rezoning proposal is to allow the development of 900 residential lots on the two sites (Bushells Ridge and Doyalson) (DLALC Aug 2016 para 16). The DLALC contends that the proposed infrastructure, particularly the noise and visual impact associated with the train load-out facility will adversely impact on the value of its residential proposal. They estimate that the loss is about \$10,000 per lot, equal to about "\$8,700,000 loss over the life of the project". A letter from MDA dated 23 August 2016 is provided to support the contention.

The Commission finds that the MDA letter does not provide enough information to support the claimed potential loss. There is a lack of consideration and analysis provided around the existing environmental and planning constraints that would already apply, especially the proximity of the existing rail corridor and rail noise. Further, the uniform application of \$10,000 per lot takes no account of the distance between an individual lot and the proposed infrastructure. As discussed in other sections of this report, the sites are yet to be rezoned for residential development, and the subdivision layout and orientation of individual houses are yet to be finalised. In the Commission's view, proper consultation and continuous engagement between the DLALC and the applicant throughout the rezoning process will benefit both parties and minimise any unintended consequences. It is noted by the Commission that the current rezoning gateway approvals have a specific condition in place that requires the planning proposal to address the compatibility with mining and extractive industries.

With respect to the economic impact on the loss of rail access to the DLALC owned industrial and employment lands on the western side of the Main North- South Rail Line, the Commission notes that the applicant refers to its consultation with Transport for NSW and that the amended application will not impact on any future rail access from the DLALC lands, if and when required. Any access would be subject to normal application and assessment processes.

6.6.11.5 Employment Benefits

The Commission's 2014 Review report accepts only the employment benefit of 300 direct operational jobs noting at page 63 "*the flow-on employment creation is thoroughly discredited*". The DRE and the Department disagree with the Commission's 2014 Review report. The DRE contends that the 300 direct jobs would generate 1200 indirect jobs whilst the Department accepts the Gillespie Report's estimate of 879 indirect jobs.

The Commission notes the applicable level of multiplier effects of flow-on employment benefits is a highly contested matter in economic impact assessment and the CIE's view is that the market employment benefits would be significantly less than those estimated in the Gillespie Report. Having regard to available information, the Commission finds the employment benefits of the project is the 300 direct operational jobs and 450 contractor jobs during construction. There will be indirect flow-on employment benefits. However, the quantum of indirect employment benefit is unknown and is likely

to be less than that estimated by the DRE and Gillespie Report given the highly contested multiplier effect.

6.6.11.6 Contributions to the local community

The signed Voluntary Planning Agreement indicates a total value of \$17 million, which includes about \$13 million of works in kind or monetary contribution to public infrastructure. About \$4 million will be for community infrastructure and environmental improvement over the life of the project. In addition to the VPA, the applicant has also committed to other contributions about \$1 million to the local area. Thus the total value of contributions to the community is \$5 million.

6.6.11.7 Conclusion

The Commission generally agrees with the Department that the project, if approved, would have certain economic benefits to the region and NSW. However, due to the variations identified between the applicant's consultant and the Department engaged independent reviewer, the quantum of the benefits is highly contested. The Addendum Report accepts the applicant's claimed benefits without explaining its preference, despite a third party review.

Recommendation:

- *The Department in consultation with the applicant should provide greater clarity in its conclusion on the net economic benefits of the project to the consent authority, having regard to the conclusion of its consultant that the economic benefits of the project are likely to be less than those claimed by the applicant.*

6.7 Visual Impacts

The updated visual impact assessment (VIA) identifies the new infrastructure that may cause impacts and this includes:

- the conveyors and gantries;
- transfer stations – about 8m high;
- train load out facility – about 28m high and 13.5m wide; and
- the noise barrier – about 50m long and 4.5m high.

The VIA concludes that the visual impact rating of the new infrastructure is 'moderate'. Although potential views of the proposed infrastructure will be limited in duration, it recommends management and mitigation measures be implemented to minimise the visual contrast between the proposed structures and the surrounding landscape. These include the exterior colours of the proposed structures and replanting cleared areas to provide a visual screen. To minimise light spill, external lighting be restricted to that which is essential, and will be designed in accordance with the relevant Australian Standard.

The Department's assessment concludes that:

While parts of the conveyor and rail facilities would be visible to passing motorists and train passengers, the Department considers the overall visual impact to existing road and rail users would be low. The Department has also carefully considered the potential for the amended project to affect future residents in Darkinjung LALC's two proposed residential developments at its Bushells Ridge and Doyalson sites. Overall, these potential visual impacts are considered to be limited and acceptable.

A draft condition (condition 28, Schedule 4) is included that requires the applicant to implement mitigation measures to minimise or reduce visual impacts of the development.

6.7.1 Objection raised at the public hearing

The DLALC objects to the amended application as the infrastructure, particularly the train load-out facility, will visually impact on its residential development proposal on its lands, given the proposed train loading facility will be 29m high and will be well above the tree line. Kerry Mountain Pty Ltd lodged an objection with the Department because the applicant has not assessed the potential visual impact on its property, which is located adjacent to the proposed infrastructure. A Blue Haven resident also considers the proposal will visually impact on his community.

6.7.2 Commission's findings

On 4 April 2017, the Commission visited the Tooheys Road area and the Nikko road reserve corridor, in particular the locations where the transfer station and the train load out facility are proposed to be located. This enabled the Commissioners to gain a better understanding of the topography and existing landscape of the area. After the site visit with the applicant, one of the Commission members also inspected the Blue Haven area, including the area adjacent to Spring Creek.

The Commission finds:

- it agrees with the applicant that the transfer station is visually and topographically separated from the Blue Haven area by the elevated Link Road.
- The view from any future residences in the proposed Doyalson site would be a distant view over existing vegetation noting that the rezoning and layout of the residential area along with the orientation of individual residences is yet to be finalised and approved following rezoning.
- The proposed trainload-out facility and the transfer station are not located in the section of Nikko Road that is adjacent to the Kerry Mountain Pty Ltd land. The direct line of sight from this land would be along the access road and rail line, and there is intervening vegetation in its view to the north and south where the facilities are located.
- The updated Visual Impact Assessment and the Department's Addendum Report have adequately addressed the issue and the proposed mitigation measure and the draft condition are appropriate.

6.8 Biodiversity

The Commission's 2014 Review report concluded that the biodiversity and aquatic ecology issues for the 2012 application have been addressed adequately and the Department's recommended conditions were appropriate.

The amended application includes an updated Ecological Impact Assessment prepared by Cumberland Ecology, the same consulting firm which carried out the original assessment for the 2012 application. The conclusion of the assessment is that the amendment will reduce the disturbance associated with the Tooheys Road Site from 89ha to 63ha, of which about 11ha is native vegetation. *"By reducing the extent of disturbance to native vegetation, the Amendment will result in less impact to potential habitat for flora and fauna species, including threatened and migratory species"*.

The OEH, in its submissions to the Department, acknowledges that the amended application will provide a higher offset ratio and reduced impacts compared to the original application due to less disturbance. It also recommends conditions of consent to (1) secure the offset land, (2) index the funding of the frog research program, and (3) review and index the funding for conservation projects in the Jilliby State Conservation Area to ensure sufficient funding is available in the future.

6.8.1 The Department's Addendum Report

The addendum report adequately assesses the potential impacts in terms of threatened flora and fauna, aquatic ecology, mitigation measures and management, offsets and matters of national environmental significance. It has also addressed issues raised by the Central Coast Council concerning

the adequacy of the survey period and inconsistency with Council's guidelines. The OEH recommended conditions have also been included in the draft conditions attached to the addendum report.

The Commonwealth Department of Energy and Environment (DoEE) has determined that the project is a Controlled Action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the Charmhaven Apple and Black-eyed Susan (listed as vulnerable), and Spotted-tailed Quoll and Giant Barred Frog (listed as endangered).

The addendum report concludes that:

- The amended project would result in a decrease in direct disturbance from 40.4ha to 31.0ha for the Charmhaven Apple and from 48.7ha to 41.1ha for the Black-eyed Susan;
- With the implementation of the proposed mitigation and offset measures, the project would not result in a significant impact to the Spotted-tailed Quoll;
- Breeding habitat for the Giant Barred Frog is highly unlikely to be affected and no fragmentation of habitat is expected to occur, with significant areas of suitable native vegetation being provided in the proposed offset areas;
- The adequacy of the biodiversity offset was assessed in accordance with the EPBC Act (*Environmental Offsets Policy*) and the applicant's proposed Biodiversity Offset Strategy satisfied the offset requirements for all listed species that have potential to be impacted by the project; and
- The project is unlikely to have a significant impact on other listed species of interest to DoEE and is highly unlikely to place any of the species at risk of local extinction (AR p.73-74).

The addendum report also recommends conditions of consent requiring the preparation and implementation of a Biodiversity Management Plan before construction commencing, and that the offsets be permanently protected.

6.8.2 Submission made at the public hearing

Concern was raised that a number of additional species identified in other EISs prepared for other developments in the area have not been included in the assessment of the amendment application.

On 10 May 2017 Council advised that:

All relevant species have been included in the assessment of the amended application, i.e. there have not been any new or updated studies that have identified additional species in the locality that Council is aware of.

The applicant also confirms that it is not aware of any studies that have identified species not included in its assessment.

Council also requested any loss of vegetation as a result of the APZ should be considered as part of the biodiversity offsetting requirements.

6.8.3 Commission's findings and recommendations

The Commission agrees with the applicant and the Department that the amended application is an improvement over the original application in terms of reduction of impacts on flora, fauna and aquatic ecology, particularly the threatened species. It also increases the offset ratio, however the Commission also notes that the quality of the offset is now a more important consideration than the numerical value of the offset ratio.

As to offsetting potential loss in clearing of the Australian Protection Zone (APZ), the Department advised that this has already been included in the Biodiversity Offset Strategy agreed by the OEH.

The draft conditions have incorporated the recommendations from the OEH. Having regard to the information available, the Commission finds the issues of biodiversity and aquatic ecology have been adequately addressed and the draft conditions are appropriate.

6.9 Heritage – Aboriginal and Non Aboriginal

The Commission's 2014 Review report has considered the heritage issues and the draft conditions attached to the Department's preliminary assessment report. It raised a concern about the potential disagreement between the applicant and the local Aboriginal community or the Central Coast Council on the interpretation of the performance measures and recommended the inclusion of a mediation process in the draft condition.

The Commission's 2014 Review report recommended that a trigger action plan be included in the heritage management plan to manage unexpected subsidence impacts and any dispute in relation to impacts on Aboriginal heritage sites be referred to the OEH for a final determination.

The Commission notes the amended application indicates that additional archaeological surveys along the proposed infrastructure corridor did not identify any further Aboriginal sites or areas that are likely to contain subsurface archaeological deposits. Therefore, the Amendment is not expected to result in any impacts to additional Aboriginal items (amended application p. viii).

The amended application states that the removal of the rail loop from the design of the Tooheys Road site is expected to have a net positive impact as it will reduce impacts to WC-OS2, an open site, which was identified in the original archaeological studies for the 2012 application.

The Department's addendum report also refers to comments and recommendations provided by the Darkinjung LALC, Guringai Tribal link aboriginal Corporation and Mr Duncan (Traditional Awaba Custodian) and considers that the development of the management plan would address their recommendations. The Department has accepted the OEH recommendations and updated the draft conditions prepared for the 2012 application to reflect contemporary practice.

Regarding the recommendations in the Commission's 2014 Review report, the Department advises that a trigger action response plan to manage unexpected subsidence impacts has been included in the Aboriginal Cultural Heritage Management Plan in condition 25, Schedule 4.

As to the dispute resolution, the Department notes:

"It is not standard practice for another agency to determine disputes where it is not the consent authority. Given the mitigation proposed by WACJV, and the draft conditions, the Department is satisfied that registered or newly discovered Aboriginal heritage sites would be appropriately managed to minimise potential impacts. The draft consent also requires WACJV to consult with OEH on matters relating to Aboriginal heritage through the development of an Aboriginal Cultural Heritage Management Plan (see condition 25 of Schedule 4)". (AR p.117)

The Commission finds the issue has been adequately addressed.

6.10 Potential Impacts on Adjacent Undeveloped Lands

The DLALC is the largest landowner in the area. Its land holdings adjacent to the proposed mine site and the coal transport infrastructure are shown in Figure 3 of the amended application. The other

private landowner adjacent to the proposed infrastructure is Kerry Mountain Pty Ltd, whose land is sandwiched between Nikko Road and Thompson Vale Road north of the unformed Spring Creek Road.

The lands owned by the DLALC and Kerry Mountain Pty Ltd near the proposal coal transport infrastructure are zoned 'general industrial', 'environmental conservation' and 'transition' in the Wyong Local Environmental Plan 2013 as shown in Figure 7 of the amended application.

Both landowners object to the amended application because it will have significant economic, noise, air and visual impacts on the future uses of their lands. Other impacts include the closure of Nikko Road resulting in loss of access to their properties, the loss of economic opportunity to develop their lands and the need to provide the APZ for the project on their lands.

6.10.1 The Gateway Determination

The Central Coast Council, the planning authority for the Central Coast region, lodged a planning proposal with the Department to rezone 2 parcels of land owned by the DLALC to allow residential development. The sites are known as the Bushells Ridge site and Doyalson site. The first step for the rezoning process is to lodge a planning proposal with the Department for a gateway approval which determines whether a planning proposal has merit to proceed to the next stage.

The gateway approval determination in May 2016 allows the planning proposal to proceed to the next stage subject to a number of conditions. One of which is that council should be satisfied that sufficient information has been provided for the planning proposal to address the 17 issues identified in the determination. These included ecological investigations, land use capability assessment including compatibility with mining and extractive industries, noise and vibration, and land use conflicts and impacts of residential development on existing and proposed non-residential land uses in proximity, including the rail line, proposed CASAR motor sports park, proposed Wallarah 2 coal mine and rail spur and existing clay quarry and tile manufacturing facility.

The Department also advised council that further investigations and consultation should be carried out to determine the final development footprint, appropriateness of proposed planning provisions and the location of zone boundaries.

6.10.2 Commission's Comments and Findings

The Commission has carefully considered the information made available to it by the Central Coast Council, DLALC, the applicant and the department including a teleconference with the DLALC on 10 April 2017 and its subsequent written submission. The Commission notes the gateway approval was determined on 2 May 2016 and the timeframe for completing the local environmental plan is 18 months following the gateway determination.

The Commission understands the DLALC is now preparing the required environmental studies to support its rezoning proposal. The Commission sought advice from the Central Coast Council and the DLALC during separate teleconferences as to the progress of the background studies for the rezoning proposal given the time line in the gateway determination. The Council advises that they are yet to receive any documentations from the landowners. The DLALC advises that they are making good progress and the current residential layouts are the basis for the environmental studies. The Commission requested environmental information from the DLALC that could assist its consideration of the matter. The DLALC provided 4 plans in its written submission. One of them shows mapping of vegetation, threatened fauna and flora, but with no accompanying analysis of the significance of the identified information as it is in its early stage of investigation.

The Commission notes the gateway approval is the first step of the rezoning process. The approval includes a number of conditions, which will have to be met before the next step. There are still a few steps before the rezoning application will be considered for approval including the acceptance of the environmental studies by Council addressing the 17 issues identified in the gateway determination, public consultation, approval by the planning authority and gazettal. Hence, the timing of the final approval is not certain at this time, notwithstanding the timeline indicated in the gateway approval documents.

Both the Bushells Ridge site and the Doyalson site are adjacent to the Main Northern Rail Line, which presents a significant environmental constraint to any future residential development on these lands. They have also been identified in the North Wyong Structure plan 2012 as strategically located, constrained sites subject to further investigation and offset strategies to define conservation requirements and development potential. The Commission notes the draft layouts for the residential rezoning have already included a setback from the railway line. However, it is not clear whether such setback together with any proposed mitigation measures on individual houses will be adequate to meet the relevant noise criteria. It is also not clear whether the biodiversity, flora and fauna studies will support residential development in the part of the site which is potentially impacted by the amended application. The environmental constraints of these sites may require a significant modification to the layouts presented in the planning proposal resulting in another uncertainty.

The Commission notes that the consent authority in determining a development application must consider **existing zonings and uses of adjacent lands and potential impacts on them**. Future residential developments on these lands will require consideration if the rezoning applications are in an advanced stage and approval of the rezoning is imminent. Given the uncertainty presented by the planning proposal, the Commission finds it is not within its power to recommend the acquisition of affected residential lots or providing mitigation measures for residences when it is uncertain what will be affected and the extent of the affectation.

The potential impacts relating to noise, air, visual, economic, asset protection zone, existing access and the strategic importance of the Nikko Road reserve are discussed in the relevant sections of this report. In conclusion, the Commission finds the potential impacts on adjacent lands as currently zoned have been adequately assessed.

6.11 Other Issues

6.11.1 Consideration of Alternatives

The DLALC contends that the applicant has not given sufficient consideration to possible alternatives to the current proposed amendment, particularly, Option C, which involves

...a conveyor system to transport coal under the Motorway Link road, across land owned by Darkinjung to a rail line that would sit in an old redundant rail line corridor and coal loader along the western side of the existing rail line. This proposal would result in the coal loader being sited over 1km away from residential development (existing Blue Haven), within the buffer zone of the existing Charmhaven Sewer Treatment Plant where other development is restricted and surrounded by land that is zoned industrial. This siting could, potentially, also accommodate future rail access to Darkinjung's industrial rezoning proposal on the southern side of the Motorway Link Road. This option (called Option C) would not require any roads to be closed or loss to public access. (p22, DLALC submission to PAC dated 12 April 2017)

The Commission notes that the applicant in its RTS2 responded to the DLALC submission in relation to an option involving a location south of the M1 Motorway Link Road. The RTS2 indicated that the option presents a significant number of issues including proximity to existing and proposed residential areas, potential impacts on existing and future residents, potential impacts on the riparian corridor and the need for environmental studies, lands subject to native title claim, and extended delays of up to two years.

The Department's Addendum Report in section 2.2.2 outlined the alternatives that have been considered by the applicant. In section 4.4.4, the Department also notes the applicant is willing to continue its consideration of alternatives proposed by the DLALC, but such consideration should not delay the progressing of the current amended application. In response to the DLALC suggestion of a negotiated regional planning outcome the Department notes such documents usually take at least 12 months, and usually longer, to develop. It is bound by the EP&A Act to assess the merits of the application before it, which is the amended project.

Commission's findings

The Commission notes that the applicant indicates its major consideration in selecting a location for the rail spur and coal loading facility is that the infrastructure should avoid privately owned land (Amended Application p.8).

On the evidence, the Commission finds the applicant has given due consideration to all available alternatives, however, this should not stop any further discussion between the applicant and the DLALC to develop a "negotiated regional planning outcome" that could potentially benefit both parties.

6.11.2 Bushfire

The DLALC and the community raised concerns about bushfire risk of the proposed infrastructure in a bushfire prone area and the need for an Asset Protection Zone for the coal loading facility. They contend that there is insufficient land within the 20m corridor to provide an APZ and are concerned that the APZ will be on lands not owned by the applicant. The DLALC concerns are reiterated in its letter to the Commission dated 12 April 2017 including that the original Preliminary Hazard Analysis has not been updated, there is a lack of emergency access and contacts, no fire breaks have been considered around the surface facilities and the proposal is inconsistent with the Mandalong South Extension project which had consideration for bushfire.

The risk assessment for the 2012 application (Appendix F, EIS) rated the fire hazard (bushfire) as low risk. The recommended control measures include the development of a Bushfire Management Plan for the project and the review and consolidation of the project management procedures in consultation with relevant regulators to the satisfaction of the Department.

With respect to the amended application, the applicant's response to submissions (RTS2) states that the conveyor system and the coal loading facility:

will be fitted with a water pipeline to address operational requirements, and supplemented to include fire fighting off take points able to be accessed by emergency services.

Furthermore, prior to construction and then again prior to operation of the amended Project, WACJV will conduct constructability and operational risks assessments and put in place all subsequently identified safety measures to ensure the safety of its workforce, the local community and its equipment in the event of bushfire.

The Department's assessment concludes that the proposed infrastructure along the rail corridor would not increase bushfire potential. Further that *"vegetation clearing and construction of the all-weather access road on Nikko Road would reduce the potential fuel load in this location, provide improved access for RFS and other emergency vehicles"*.

The Central Coast Council notes that all APZ/bushfire reduction measures should be located within the mine site [assumed to mean land owned by the applicant] and that a bushfire management plan should be developed outlining *"how the mine will responding to bushfire events and the assistance that will be provided to the RFS during these events"*.

Commission's findings and recommendations

On this issue, the Commission notes that the requirement for the development to conform to the specifications and requirements of the *Planning for Bush Fire Protection* does not apply to State Significant Development under Section 79BA of the *Environmental Planning and Assessment Act 1979*. The Commission's 2014 Review report has not raised bushfire risk as an issue of concern for the original application (2012 application).

The Commission agrees with the Department that the proposed 6m wide all weather access road will be beneficial to bushfire management by clearing some of the vegetation within the 20m corridor, thus increasing the buffer zone provided by the existing rail corridor. The applicant also proposes to construct the structures along Nikko Road using non-flammable material, and to install fire detection and suppression systems that meet Australian Standards and requirements. It indicated that the design elements will be consistent with RFS guidelines. The applicant also directed attention to similar local structures along Ruttley's Road in Wyong and Lake Macquarie, which are *"classed as buffers in both the Lake Macquarie City Council and Wyong Shire LGA 'Bush Fire Prone Land maps'"* (Response to DPE Jan 2017).

The Commission notes draft condition No. 30 in schedule 4 requires the development to be *"suitably equipped to respond to fires on site; and assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site"*. The Commission finds that the draft condition lacks details as to how these requirements are to be met. There is no mention of a requirement to prepare and implement a Bushfire Management Plan as recommended in the Preliminary Hazard Assessment. Although the applicant points out that the Environmental Management Strategy (condition 1, Schedule 6) will include a bush fire management plan. The Commission finds the condition as drafted lacks detail as to what is included in the Strategy. In the Commission's view, an explicit condition requiring the preparation of a Bushfire Management Plan prepared in consultation with the RFS should be included as part of condition 30 Schedule 4, and recommends accordingly.

6.11.3 Community Consultation and Engagement

A number of speakers at the Public Hearing and written submissions expressed concerns that the community has not been adequately consulted on the amended application. Most concerning to the Commission was a resident claim there was no consultation with the Blue Haven community and that they were generally not aware of the proposed rail infrastructure or any potential water quality impacts on Spring Creek, which they use for recreation purposes.

The Darkinjung LALC also contends that the applicant failed to consult them as the 'affected landowner'. Although the applicant has maintained communication and correspondence with them during the negotiation process, no attempt has been made to engage the DLALC in a specific consultation process for the amended application. Record logs of the correspondence and communications have been provided to the Commission by both the applicant and the DLALC.

The Department's Addendum Report provides a detailed account of the engagement between the applicant and the DLALC and how the DLALC concerns have been addressed by the applicant and the Department's consideration of the response.

The Commission notes Section 4 of the Amended Application discusses stakeholder consultations that have been carried out by the applicant. It indicates a community newsletter was distributed in May 2016 to notify the community and local business about the "recent mining lease application" and "an update on the project" and direct consultation with adjoining landowners and businesses.

The Commission also notes that in the EIS for the 2012 Application, reference was made to the establishment of a Community Reference Group, which met bi-monthly. However, there are no details as to the membership of the Group or its terms of reference. There appears to be no mention of the Group in the Amended Application documentations. It is not clear whether the Group is still active or whether they were consulted as part of the amended application.

In response to public submissions about the lack of community consultation, the application in its response to submissions includes a community and regulatory consultation register (RTS2 Table 14) to demonstrate its continuous engagement with the community. The register details the meetings and contacts that the applicant has carried out with stakeholders between January 2015 and October 2016. Regarding engagement with the community, the Commission notes community consultation sessions were held at the Doyalson RSL on 1 August, 2016, 4 August 2016 and 13 August 2016 and two sessions held in the applicant's office. The register shows that the attendances to these community consultation sessions were very low.

The applicant indicated that a letter drop was carried out for the general community in Blue Haven and surrounds. The applicant has also met with certain individual landowners with follow-up email or phone contacts. The register also includes meetings and correspondence with community groups as well as Kerry Mountain Pty Ltd, whose land is adjacent to the proposed infrastructure corridor.

Although the evidence indicates that the applicant has carried out some public consultation, from the submissions provided, the effectiveness of such consultation does appear to be in question. This may also be evidenced by the low turnout to the community consultation sessions. Further the records provided also show that no specific consultation session (other than letter box drops) was held in the Blue Haven area despite this being the closest residential area to the proposed infrastructure in the amended application.

The first objective of the current proposed updates to the NSW planning legislation is to enhance community involvement in major planning and development proposals. It sets out a number of principles, including that a community participation plan must be considered. These include effective and on-going partnership with the community, opportunities for the community and affected landowners to participate early in the process, the need to be proactive in seeking community views and consultation should be inclusive. On this basis, the Commission encourages the applicant to engage in effective stakeholder consultation in accordance with the Departments guidelines with an emphasis on those areas closest to the proposed development.

Recommendation:

- *A more proactive and inclusive engagement program, that aligns with the community participation plan principles proposed by the Department in the updates to the planning legislation, should be adopted by the applicant prior to the consideration by the consent authority.*

6.11.4 Potential Future Mining Area

Figure 1 of the Addendum Report (page 9) shows the mine layout with reference to the location of proposed longwalls. Within the diagram, there is a hatched area on the western side of the mine site with 11 longwalls under the Jilliby State Conservation Area shown as “potential future mining areas” that are not the subject of the current development application. In other words, the development of these 11 longwalls would require a new development application.

The OEH in its letter dated 6 September 2016 to the Department requests that these 11 longwalls not be shown in the diagram and that only an outline of the proposed future mining in this application area be shown. The reasons included are:

- *there is no certainty that these longwalls will be approved in the future;*
- *if longwalls are proposed in the future, their dimensions and location may be different; and*
- *should mining proceed in the western section, sensitive areas need to be avoided.*

The Department has considered the applicant’s response that the layout for the 11 longwalls is indicative, not definitive or certain and agrees that:

(T)hese 11 longwall panels are not in any way included in the current application and assessment process and would be subject to a separate development application and assessment process. Their inclusion in figures is acceptable provided it is clearly shown they are a potential future mining area not subject to this application (Addendum Report p27).

Commission’s findings and recommendations

The Commission finds there is no benefit in including any areas outside of the areas proposed in the application. In fact it has caused unnecessary confusion in the public’s mind as to whether the western part of the mine site is part of the current application or not. This was evident when submissions referred to potential impacts on the water resources, biodiversity and the life of the proposed mine being 42 years, not 28 years as proposed in the current application.

The Commission agrees with the OEH that the 11 Longwalls outside the current application should be removed from the figures included in the draft conditions. Any proposal to mine any part of this area in the future will be the subject of a new development application subject to a comprehensive impact assessment, particularly in relation to potential impacts on water resources, flora, fauna and biodiversity.

Recommendation:

- *The eleven indicative longwall panels shown in the potential future mining areas be removed from the figure in Appendix 2 of the draft conditions.*

6.11.5 Other Matters Raised in the Public Hearing and Written Submissions

A number of other issues were raised in the submissions to the Department and at the public hearing. These included issues relating to climate change, impacts on agricultural resources and business, rail transport and capacity, the Awaba rail loop, road haulage, validity of amended application, Aboriginal Land Rights Act, brine disposal, intergenerational equity and the precautionary principle.

The Commission has given regard to these issue in this review and finds these issues have been addressed in at least one of the multiple documents that have been presented to the Commission for consideration including:

- The applicant’s response to submission (September 2013) – 2012 Application
- Department’s 2014 Preliminary Assessment Report (February 2014)
- the Commission’s 2014 Review report (June 2014)
- the applicant’s response to submissions (November 2016) – Amended Application (RTS2)

- the applicant’s response to the Department of Planning and Environment (January 2017) (RTS2)
- The Department’s Addendum Report (February 2017)
- Other documents as reported in Section 7 of this report.

The Commission is satisfied these issues have been adequately addressed in these documents and where relevant a draft condition has been included to address the residual issues.

7. COMMISSION’S FINDINGS AND RECOMMENDATIONS

The major issues raised in written submissions and the public hearing can be broadly divided into those related to the project as a whole (including potential impacts on water supply; predicted economic benefits; air pollution and potential health impacts); those associated with the amended application (including potential impacts on adjacent undeveloped lands; loss of access to private lands; noise; visual impact; bushfire; biodiversity; consideration of alternatives, etc.) There is also a miscellaneous group including issues such as validity of the amended application, adequacy of documents supporting the amended application; rail transport; climate change; impacts on agricultural resources and business; the Awaba rail loop; road haulage; Aboriginal Land Rights Act and brine disposal, etc. These issues are discussed in Section 5 above.

In considering the merits of the project as a whole, the Commission finds it supports the broad conclusion of the Commission’s 2014 Review on the significance of the water resources to the Central Coast community. The Commission’s 2014 Review made a number of recommendations that seek to ensure that the object of “no net impact on potential catchment yield from the mining operation” is to be achieved through the proposed compensatory mechanism. The Commission shares the view expressed by the Commission’s 2014 Review that the integrity of the key recommendations, especially those related to water resources and subsidence, must be maintained for the project to meet the public interest test of section 79C of the EP&A Act, otherwise a precautionary approach should be adopted. They should not be left solely to the applicant to negotiate with the Central Coast Council.

The Commission has reviewed the updated economic impact assessment and the independent review commissioned by the Department and notes the ongoing contention about the estimated net economic benefits of the project among the experts and the disquiet in the community. The Commission shares concerns about the large variances in the predicted costs and benefits noting the downward trend of projected benefits. The Commission recommends that the economic assessment be updated prior to consideration by the consent authority to inter alia reflect any potential impacts on the CIV as a result of the stringent conditions that are recommended to protect catchment health, management of water resources, other changes in the operating environment and the variance in estimated greenhouse gas cost. The Commission has also made additional recommendations on impacts specifically associated with the proposed amendments relating to noise, access to adjacent privately owned lands and community engagement that should be considered by the consent authority.

Part 2 of the Department’s Addendum Report provides a detailed consideration of the recommendations of the Commission’s 2014 Review report. The Commission finds the Department has generally addressed the recommendations and the updated draft conditions are appropriate. However, greater specificity is warranted in relation to subsidence performance measures, potential impacts on the Central Coast Water Supply and air quality impacts.

The principle findings and recommendations of this review are summarised below. **Appendix 9** provides a summary of the Commission’s consideration of the draft conditions.

7.1 Water Resources

The Commission supports the recommendations of the Commission's 2014 Review report that *"there be no net impact on potential catchment yield from the mining operation and that the maximum predicted impact should be offset by return of suitably treated water to the catchment side of the CCWS system for the period during which subsidence may impact on the Project area catchments"*. Mining beyond longwall panel (LW) 5N should not be permitted until the compensatory mechanism is operational. No compensation is required after mine closure for the predicted loss of 36.5ML/y, subject to the confirmation of an independent review before mine closure. These recommendations have not been accurately or sufficiently reflected in the draft conditions.

Although the Commission's 2014 Review accepted the maximum predicted water loss is 300ML/year, this may change in future as the water model is refined based on monitoring results. The burden of proving any impact less than 300ML/y rests with the applicant.

The purchase of water licences may meet the requirements of the *Water Management Act 2000*. However, they do not compensate the loss of water particularly during low flow periods as the subsidence induced loss cannot be controlled by access restrictions. The draft condition has not accurately reflected this finding and recommendation in the Commission's 2014 Review report.

Recommendation 1:

- *The draft conditions should be updated to accurately reflect the recommendations in the Commission's 2014 Review, particularly the no net impact on potential catchment yield and the preferred compensation mechanism is by return of sufficiently treated water to the catchment side of the water supply system. The burden of proof of any impact being less than predicted rests with the applicant.*

7.2 Subsidence

The Commission supports the Commission's 2014 Review recommendation that requires a rigorous set of subsidence impact performance measures to be included in any consent. The draft conditions prepared by the Department have been updated to take account of the recommendations, except that the performance measures for water supply should also include the "no net impact on potential catchment yield".

The proposed changes to the *Mine Subsidence Compensation Act 1961* has created uncertainty in the community about what process is to be followed to deal with subsidence related damage and the extent of cover. The inclusion of performance measures in the draft conditions is necessary to address this uncertainty. The performance measures should be explicit to avoid dispute in interpretation. However, the applicant should also address this uncertainty proactively in accordance with the accepted best practice in the industry.

Recommendation 2:

- *The performance measures for water supply should be updated to also reflect the recommendation in the Commission's 2014 Review of "no net impact on potential catchment yield from the mining operation".*

7.3 Economic and Social

The applicant's economic impact assessment has been carried out in a way that is broadly consistent with the NSW Economic Guidelines, based on independent peer reviews. However, there is a significant variance among the experts in terms of the predicted net economic benefits, which may reflect different assumptions and scope. Although there is general agreement on the direct employment benefit, the indirect flow-on employment benefit is highly contested. Hence, the quantum of the benefit is not certain. The Addendum Report has not sufficiently explained the

Department's preference to accept the applicant's claimed economic benefits over the findings of its own consultant.

Recommendation 3:

- *The Department, in consultation with the applicant, should provide greater clarity in its conclusion on the net economic benefits of the project to the consent authority, having regard to the conclusion of its consultant that the economic benefits of the project are likely to be less than those claimed by the applicant.*

7.4 Air

The EPA commissioned review of air quality in the Lake Macquarie-Wyong area was carried out between September 2013 and June 2014 and found that air quality in the area was generally good to very good. The potential impacts of the amended project will be within the relevant assessment criteria including PM_{2.5}, noting the PM_{2.5} criteria do not apply to the 2012 application or the amended application.

Additional studies are currently being carried out by the Chief Scientist and Engineer and the NSW EPA to address the issue of dust generated by coal wagons along rail corridors. These will be relevant to the consent authority's consideration at the time of determination.

7.5 Noise

Two of the recommendations in the Commission's 2014 Review do not require further consideration in relation to potential impacts on properties 57 and 58 and wheel squeal from trains, which will no longer be an issue due to the relocation of the rail spur and train load-out facility and the removal of the rail loop.

The noise assessment for the amended application predicted operational noise exceedances at Residences P14, P15 and P16 by up to 4dBA, and up to 20dBA for construction noise, noting the 2-year construction period. The applicant is in discussion with the affected residents with a view to bringing forward the mitigation measures to minimise impacts from construction noise, if requested.

Recommendation 4:

- *An explicit requirement be included in the draft conditions that the applicant shall provide mitigation measures for residences P14, P15 and P16 before construction commencing, if requested by the residents and to use the best available technology in noise reduction construction material for the conveyor, transfer station and train load out facility.*

7.6 Potential impacts on adjacent undeveloped lands

The planning proposal to rezone the two parcels of DLALC land for residential development is in its early stage. The potential environmental constraints of these two sites may require a significant modification to the layouts currently presented in the current planning proposal. One of the conditions of the gateway determination requires the planning proposal to adequately address the issue of compatibility with mining and extractive industries. The Commission is not in a position to recommend any acquisition of affected residential lots or providing mitigation measures for residences when the timing and scope of the rezoning approval are uncertain, noting the Department has attempted to consider the proposed land use planning issue as outlined in its Addendum Report.

The potential impacts on adjacent lands as currently zoned have been adequately assessed and the issues raised in public submissions and at the public hearing have been satisfactorily addressed in the Addendum Report and the applicant's responses.

7.7 Road Closure

The road closure applications relating to Nikko Road and Tooheys Road are not a relevant consideration under the *Environmental Planning Assessment Act 1979* as it is the responsibility of the Minister for Roads to assess and determine any road closure application. However, the potential impact on access to adjacent privately owned lands and in emergency situations are relevant considerations for the consent authority.

There is insufficient information available in relation to the proposed closure of Tooheys Road in terms of the extent of the road to be closed and access arrangements for emergency vehicles and residents in emergency situations. This should be rectified before the application is determined.

Recommendations 5 and 6:

- *The draft condition should include a requirement that the applicant prepare and implement a Nikko Road access management plan in consultation with affected landowners. The plan should ensure access to private lands are maintained during construction and operation of the mine. Design details of the access road should be included in the application prior to determination to ensure proper connections to existing access points. Post mining access to the road alignment may need to be included if the tenure of the Nikko Road reserve is changed following approval of this application as part of the regular update requirements of management plans.*
- *The final assessment report should clarify the extent of Tooheys Road which is to be closed and access arrangement for residents and emergency vehicles in emergency situations.*

7.8 Community Engagement

The applicant's community consultation and engagement programs have been ongoing and documented, however the Commission has concluded that they have not been as effective as they could have been and need to be brought in line with adopted best practice in the industry.

Recommendation 7:

- *A more proactive and inclusive engagement program, that aligns with the community participation plan principles proposed by the Department in the updates to the planning legislation, should be adopted by the applicant prior to the consideration by the consent authority.*



Ms Robyn Kruk AM
Member of the Commission



Mr David Johnson
Member of the Commission



Mr Andrew Hutton
Member of the Commission

APPENDIX 1 BRIEF HISTORY OF THE PROJECT

Late 2006	Project application lodged under the former Part 3A of the EP&A Act
Feb 2007	A Strategic Land Review was carried out by an independent expert panel. Its report included specific comments on the Wallarah 2 project. Of the 13 recommendations in the report, one directed to the Wallarah 2 project.
July 2010	The Minister for Planning requested that the Planning Assessment Commission review the Wallarah 2 project and conduct a public hearing.
Nov 2010	The Planning Assessment Commission review report concluded that “the application may be approved subject to the imposition of a substantial number of conditions covering the full range of issues”.
Mar 2011	The project was refused by a former Minister for Planning “because of uncertainties in relation to the subsidence predictions, ability to meet acceptable water quality outcomes, and ecological and heritage impacts.”
Oct 2012	A State Significant development application for a modified Wallarah 2 project was lodged with the then Department of Planning and Infrastructure. Although there are many similarities between this application and the earlier one lodged in 2006. There are also significant differences including the exclusion of the 11 longwalls in the western part of the site, which is now marked as potential future mining areas.
Jan 2014	The Planning Assessment Commission was requested to review the October 2012 application including the holding of public hearings. A review report was submitted to the then Minister for Planning in June 2014. This report will be referred to as the 2014 review report. The report concluded that “if the recommendations concerning improved strategies to avoid, mitigate or manage the predicted impacts of the project are adopted, then there is merit in allowing the project to proceed”.
June 2014	The Land and Environment Court ruled that landowner’s consent (from the NSW Aboriginal Land Council) for the proposed rail spur is required before a consent for the project to proceed can be granted.
June 2015	The NSW Aboriginal Land Council advised the Minister for Planning that it would not give consent for the development application to proceed.
June 2016	An amended development application with supporting documents were lodged with the Department. This application involved the removal of the rail loop originally proposed on the land owned by the Darkinjung Local Aboriginal Land Council. In its place, it is now proposed to construct a conveyor system to deliver product coal from the stockpile on the Tooheys Road site to a train load out facility and a new rail siding on the eastern side of the Main Northern Rail Line to the north of the Motorway Link Road overpass. This application also proposes to realign the sewer connection.
Feb 2017	The Minister for Planning requested the Planning Assessment Commission to carry out a review of the Wallarah 2 project by considering the amended development application including conducting a public hearing during the review.

APPENDIX 2

MINISTER FOR PLANNING'S TERMS OF REFERENCE FOR THE COMMISSION'S REVIEW

Request to the Planning Assessment Commission Wallarrah 2 Coal Project

**Section 23D of the *Environmental Planning and Assessment Act 1979*.
Clauses 268R and 268V of the *Environmental Planning & Assessment Regulation 2000*.**

I, the Minister for Planning, request the Planning Assessment Commission to:

1. Carry out a review of the Wallarrah 2 Coal Project, by:
 - a) considering the amended development application and accompanying written particulars, the issues raised in submissions, the formal response to submissions, the Department of Planning and Environment's addendum report on the development application, and any other information provided on the development during the course of the review or as part of the public hearings;
 - b) considering the likely economic, environmental and social impacts of the amended development application in the locality, in the region and for the State;
 - c) assessing the merits of the amended development application as a whole, having regard to all relevant NSW Government policies and guidelines;
 - d) considering the Department of Planning and Environment's responses to the Commission's previous review of the development; and
 - e) providing recommendations on any additional reasonable and feasible measures that could be implemented to avoid, minimise and/or manage the potential impacts of the development;
2. Hold a public hearing during the review as soon as practicable after the Department of Planning and Environment provides its addendum assessment report to the Commission; and
3. Submit its final report on the review to the Department of Planning and Environment within 8 weeks of receiving the Department's addendum assessment report, unless otherwise agreed with the Secretary of the Department.



**The Hon Anthony Roberts MP
Minister for Planning**

Sydney 7 February 2017

APPENDIX 3 2014 REVIEW RECOMMENDATIONS

Conventional Subsidence

- that a rigorous set of performance measures be included in any consent. Rigorous in this context means able to be measured or assessed in a scientifically and legally sound manner and be capable of enforcement. These performance measures must be supported by:
 - (i) a requirement that the Extraction Plan for each longwall contains revised subsidence predictions based on experience from previous mining on the site and that these revised predictions will not allow the performance criteria to be exceeded;
 - (ii) a requirement that the Extraction Plan for each longwall contains:
 - (a) appropriate triggers to warn of the development of an increasing risk of exceedance of the performance criteria (e.g. the subsidence predictions themselves and/or other relevant subsidence-related measurements);
 - (b) specific action plans to respond to increased risk of exceedance that will ensure the criteria are not exceeded (e.g. cessation of mining, narrowing the longwall, altering seam height, etc.); and
 - (c) an assessment of remediation measures that may be required if exceedance does occur and the capacity to implement the measures;
- although the risks to the significant public infrastructure such as the M1 Motorway and the Buttonderry Waste Management Facility appear small, the necessary steps to prevent impacts should be included in any consent and the consent authority should be satisfied that these steps will in fact, ensure the safety and/or integrity of the infrastructure; and
- that at least two formal reviews of the predicted subsidence impacts should be required: one after the first 5 longwalls have been completed (LW 1N-5N) and one after the next four have been completed (LW 6N-9N)

Non-Conventional Subsidence

- that appropriate monitoring of non-conventional subsidence effects be included as a requirement in any consent and that the relevant Extraction Plan be required to contain appropriate measures to control the risks from non-conventional subsidence so as to ensure that the environmental performance criteria are not exceeded.

Potential Losses of Baseflow from Impacts on Groundwater

- Before submission of the project for determination the consent authority be provided with revised estimates by year for:
 - (i) increased storage in the alluvium as a result of subsidence;
 - (ii) losses to the alluvium from near-surface cracking of bedrock and movement of water into fracture zones;
 - (iii) losses to the alluvium from leakage through the constrained zone to the zone of depressurisation;
 - (iv) losses to baseflow from any changes to catchment flows (i.e. loss of catchment area) for streams potentially supplying the CCWS; and
 - (v) any other potential sources of loss of water from subsidence-induced changes to either the streams or the alluvial aquifers.These estimates must indicate whether the losses are expected to be temporary or extend beyond the life of the mine. The estimates should also have been reviewed by NOW.
- Given the sensitivity of the CCWS to drought, both temporary and permanent potential losses of baseflow are to be treated as potential impacts on the CCWS.

- Potential impacts on shallow groundwater systems be included in the performance criteria in Schedule 3 of any consent, particularly in relation to potential losses that could contribute to decreases in baseflow to streams supplying CCWS. The maximum predicted impacts of 300 ML/y should not be allowed to be exceeded unless the environmental impacts remain within existing predictions and any loss can be compensated.
- Appropriate monitoring arrangements, satisfactory to NOW, be incorporated into the conditions of any consent to ensure that all potential losses of baseflow be accounted for.

Subsidence Impacts on Privately-Owned Bores and Wells

- pre-mining testing of privately owned registered bores and wells be required to establish their performance characteristics; and
- the burden of proof that any declines in performance were not due to mining impacts rest with the Proponent.

Potential Impacts on the Central Coast Water Supply (CCWS)

- the project be required to meet a no net impact performance outcome on catchment water resources during the life of the mine;
- consideration be given to augmentation of CCWS supply by return of sufficient minewater treated to the required standards for raw water supply to compensate for estimated losses during the life of the mine;
- the principles governing this augmentation of CCWS supply be as described in section 3.3.1.4 of this review report; and
- that mining beyond LW 5N not be permitted until the mechanism to compensate for potential impacts on water availability for CCWS is operational; and
- that no compensation be required beyond mine closure for the predicted 36.5 ML/y loss provided that a review prior to mine closure confirms that the loss does not exceed 36.5 ML/y.

Potential Impacts on Water Availability for Users Other Than CCWS

- specific provision be made in the conditions of any consent to ensure that landholders whose access to surface waters is negatively affected by the project have compensatory supply provided within 24 hours and that the Proponent be responsible for restoring access as soon as practicable; and
- the Proponent bear the onus of proof in the event of a dispute over subsidence-induced impacts on surface water access.

Potential Impacts on Stream Morphology

- Before the project is submitted to the consent authority, the risks to stream morphology of interaction between significant rainfall event(s) and the interface between subsided and unsubsidied sections of a stream be assessed with a view to properly describing the risk (and quantifying it if possible), and providing a detailed assessment of the options available to deal with any such eventuality and an assessment of the capacity to implement any such options on the Project Area streams.
- That the performance criteria for stream morphology for streams in the Project Area underlain by alluvium be:

- (i) no more than minor consequences in any part of the stream at any time; and
- (ii) post-subsidence, stream sections be returned to a condition equivalent or better than their pre-subsided condition.
- Rigorous conditions be included in the Extraction Plan for each longwall to ensure that:
 - (i) the previous experience of impacts on stream morphology are incorporated;
 - (ii) there are appropriate triggers to warn of developing problems;
 - (iii) there is a clear response plan to prevent exceedance of the criteria; and
 - (iv) clear strategies are identified to address any exceedance that might occur despite the adaptive management requirements.

Water Quality Monitoring in Response to Subsidence Impacts

- that before extraction of longwall 6N commences a program of water quality monitoring that can differentiate subsidence-induced impacts from background variation be implemented. The program is to be developed in consultation with the Water Supply Authority, EPA and NOW and be approved by the Director-General before implementation; and
- that the program be subject to independent audit each year at least until the Director-General is satisfied that longer intervals can provide appropriate safeguards.

Porters Creek Wetland

- that a performance measure of negligible consequences should be specified for Porters Creek Wetland in any consent and that this should be supported by a monitoring regime sufficient to alert the Proponent and regulators to any change that may cause greater than negligible consequences to the wetland.

Water Monitoring Generally

- that the consent authority review water-related monitoring requirements carefully to ensure that they will provide (a) the information necessary to assess performance of the project against performance criteria in any consent and (b) also provide the information necessary to support the adaptive management requirements in Extraction Plans for individual longwalls.

Flooding

- that an Emergency Evacuation Management Plan be prepared. This plan should include clearly identified secondary access routes for those properties that will be adversely impacted by the 1% AEP flood. For those properties that do not have either a primary or secondary access route as a result of flooding, the Proponent must consult/negotiate with the individual landowners to reach a mutually agreed resolution for emergency evacuations before extraction of any longwalls that could create altered flood conditions for these properties occurs. In the situation where no agreement can be reached, either party may refer the matter to the Director-General for resolution.

Infrastructure and Improvements Impacted by Subsidence

- that before granting any consent, the consent authority satisfy itself that proposed compensation measures for subsidence-related damage to privately-owned built features will deliver a fair and reasonable outcome for affected property owners. If the consent authority cannot be satisfied that the outcomes will be fair and reasonable then the consent authority will have to consider whether the residual impacts make the project unacceptable within the terms of s79C of the Act.

Noise

- that the predicted noise levels be re-assessed for properties 57 and 58 and a condition be attached to any consent that provides for noise mitigation or acquisition for privately owned properties when noise is predicted to exceed the PSNL on more than 25 percent of privately owned land. (Note that the requirement for mitigation or acquisition should depend on the degree of exceedance of the noise criteria consistent with normal practice); and
- that a requirement for monitoring of wheel squeal noise from use of the rail loop be included in any consent and that additional mitigation measures be implemented if the noise becomes an on-going issue.

Air Impacts

- that a condition be added requiring the implementation of methane gas capture and flaring within a specified timeframe and that a proposal be developed for beneficial use of the captured gas within three years of the commencement of longwall operations and to be implemented within a timeframe as required by the Director General.

Impacts Associated with the Surface Facilities

- that the water treatment system, including the reverse osmosis and brine treatment plants be designed to meet the discharge criteria specified by the EPA; and
- that a requirement for construction of a reverse osmosis plant be inserted in 15 (c) of Schedule 3 of the proposed conditions of consent.

Aboriginal and Non-Aboriginal Heritage

- that the Heritage Management Plan included in the Department's draft recommended conditions (condition 5(k), Schedule 3) should include a trigger action response plan to manage unexpected subsidence impacts (similar to condition 21, Schedule 4); and
- that a note should be included in condition 1, Schedule 3 that any dispute in relation to impacts on Aboriginal heritage sites should be referred to the OEH for a final determination, and dispute in relation to impacts on historic sites should be referred to the Secretary of the Department of Planning and Environment for a final determination.

Estimates of Project Benefits

- that, for the purposes of assessment under cl.12AA of the Mining SEPP, the significance of the resource is limited to the creation of 300 direct jobs, royalty payments of between \$100m and \$200m and capital investment significantly less than \$800m. If this becomes crucial in the consent authority's task of assessing the project under s.79C of the Act, then the Commission recommends that the consent authority require that a new economic analysis be undertaken and subjected to external rigorous independent review before a decision is made.

Agricultural Businesses

- that the performance measures included in the Department's draft conditions of consent for built features (condition 3 Schedule 3) be amended to include a wider range of improvements relevant to agriculture that may be impacted by subsidence (e.g. those relevant to the turf farm) and that the relevance of the listed performance measures to each of the categories of other infrastructure that might be impacted by subsidence be reviewed.

**APPENDIX 4
RECORDS OF COMMISSION MEETINGS WITH STAKEHOLDERS**

Notes of Briefing from the Department of Planning and Environment

This meeting is part of the review process.	
Date: Friday, 24 March 2017	Time: 12:00am
Project: Wallarah 2 Coal Project	
Meeting place: Commission's Office	
<p>Attendees: PAC Members: Robyn Kruk AM (Chair); Andrew Hutton and David Johnson. PAC Secretariat: Jorge Van Den Brande (Planning Officer) and Paula Poon</p> <p>The Department of Planning and Environment (the Department): Howard Reed – Director Resource Assessments 2A Michelle Kirkman – Senior Planning Officer</p>	
The purpose of the meeting was for the Department to brief the Commission on its addendum assessment report.	
<p>The Department briefed the Commission on the following matters:</p> <ul style="list-style-type: none"> • The history of the project application • Amended application <ul style="list-style-type: none"> - The amended application is a result of the unsuccessful negotiations between the applicant and the Darkinjung LALC. - Rail loop is removed from the development application thus reducing the noise impacts on properties 57 and 58. - Relocation of rail infrastructure will result in noise impacts on properties P14, P15 and P16 - Biodiversity impacts will be less than those predicted in the 2012 application. • 2014 Review Recommendations. <ul style="list-style-type: none"> - The Department adopted most of the Commission's 2014 Review recommendations except those related to noise on properties 57 and 58 as the train load-out facility has been relocated and the rail loop removed. - The recommendations on subsidence performance measures and water related issues made by the Commission's 2014 Review have been incorporated into the Department's draft conditions. The Department also took the opportunity to update the original draft conditions to align with the conditions in recent approvals and best industry practices. • The Commission requested clarification on matters relating to whether certain draft conditions represent a potential lessening of the performance measures, controls and monitoring requirements recommended in the Commission's 2014 Review, the justification to adopt consent conditions similar to those applied to the Mandalong mine in the Lake Macquarie area and the acceptance of the predicted significant exceedances of construction noise on adjacent private residences. 	
Documents tabled at meeting: Maps	
Meeting closed at: 1:30pm	

Notes of Briefing from the applicant and site visit.

This meeting is part of the review process.	
Date: Tuesday, 4 April 2017	Time: 11:30 am
Project: Wallarah 2 Coal Project	
Meeting place: Applicant's Site Offices, 25 Bryant Drive, Tuggerah NSW	
Attendees: PAC Members: Robyn Kruk AM (Chair); Andrew Hutton and David Johnson. PAC Secretariat: Jorge Van Den Brande and Paula Poon	
Applicant: Peter Allonby – Wyong Coal General Manager Sang Park – Wyong Coal Managing Director Kenny Barry – Wyong Coal Project Manager Peter Smith – Wyong Coal Environment and Community Kevin Reed – Wyong Coal Engineering and Technical Dianne Munro – Hansen Bailey Consultants James Bailey – Hansen Bailey Consultants	
The purpose of the meeting was for the applicant to provide comments to the Commission on the Department's Addendum Report and the draft conditions.	
Applicant briefed the Commission on the following matters: <ul style="list-style-type: none">• A brief history of the project, the identity of the applicant, and community support• Community engagement<ul style="list-style-type: none">- applicant maintains good relationship with the Darkinjung LALC despite unsuccessful negotiations.- Support and involvement in various local community groups.- Continuous communication with the community and affected residents and landowners through newsletters, open days, face to face meeting.• The amended application<ul style="list-style-type: none">- No change to mining area, surface infrastructure, construction schedule, coal handling or rail loading methods.- Described proposed changes, particularly the photomontages and computer modelling that illustrate the potential views of the infrastructure from various viewing locations.- Landownership surrounding the site, potential noise impact and application of VLAMP, social and economic benefits and project viability.• The Commission's 2014 Review recommendations<ul style="list-style-type: none">- applicant is comfortable with the Commission's 2014 Review recommendations and the Department's draft conditions.- The proposed 6m all weather access road will provide improved access to adjacent private lands and other services and public infrastructure.	
A site visit was carried out after the briefing to observe topography, site perimeters and the surrounding areas.	
Documents to tabled: Company presentation and project maps.	
Meeting closed at: 4:00 pm	

Notes of Teleconference with the Central Coast City Council

This meeting is part of the review process.	
Date: Thursday, 6 April 2017	Time: 9:30 am
Project: Wallarah 2 Coal Project	
Meeting place: Teleconference at Commission's Office	
<p>Attendees: PAC Members: Robyn Kruk AM (Chair); Andrew Hutton and David Johnson. PAC Secretariat: Jorge Van Den Brande and Paula Poon</p> <p>Council: Brian Glendenning - Acting CEO Scott Cox - Group Leader Environment & Planning Mike Dowling - Group Leader Assets, Infrastructure & Business Peter Stokes - Senior Manager Property & Asset Management Bileen Nel - Senior Manager Water & Sewer Boris Bolgoff - Senior Manager Roads & Drainage Tanya O'Brien - Manager Development Assessment</p>	
The purpose of the teleconference was for Council to provide their comments to the Commission on the Department's Addendum Report and the draft conditions	
<p>Council raised the following key matters:</p> <ul style="list-style-type: none"> • Water Resources <ul style="list-style-type: none"> - Given the large and growing community of the Central Coast with limited water resource available to water supply, any loss of water will impact on Council's ability to supply water to meet the community's growing needs, particularly during drought conditions. - The key recommendations in the Commission's 2014 Review that address Council's concerns include no net impact performance outcome on the catchment water resources available to the Central Coast Water Supply; compensation will need to provide a real and equivalent amount of water to the water supply system; water licences should be excluded as a compensatory mechanism; alternative mechanism is to provide funding to augment the water supply infrastructure and a compensatory water amount of 300ML/y should be in place and operational before mining is permitted beyond LW 5N. - The draft conditions in relation to performance measures for water supply and compensation for loss of water are inconsistent with the Commission's 2014 Review recommendations. - Council should have an approval role on the water management plan, monitoring program and review of same given the implications for the ongoing monitoring review and offsets associated with the potential impacts of the mine. • Subsidence <ul style="list-style-type: none"> - Council is concerned that verification of no connective cracking will be difficult in practice and considers there should be a requirement for testing following subsidence events and periodically thereafter. - Potential subsidence impacts on the Buttonderry Waste Management Facility is a concern and it should be included in the definition of public infrastructure so that it is protected. - Flooding and related issues including potential increase in maintenance cost as a result of repair on roads following subsidence impacts. • Roads <ul style="list-style-type: none"> - The need of Nikko Road in future planning and connectivity to the existing road network requires consideration. - Compensation should be paid for the loss of a public asset. • Voluntary Planning Agreement (VPA) <ul style="list-style-type: none"> - Council is of the view that the Voluntary Planning Agreement signed in 2014 warrant an update to reflect the amendments to the development application. 	
Documents tabled: NA	
Meeting closed at: 11:30am	

Notes of Teleconference with the Darkinjung Local Aboriginal Land Council (DLALC)

This meeting is part of the review process.	
Date: Monday, 10 April 2017	Time: 03:00 pm
Project: Wallarah 2 Coal Project	
Meeting place: Teleconference at Commission's Office	
<p>Attendees: PAC Members: Robyn Kruk AM (Chair); Andrew Hutton and David Johnson. PAC Secretariat: Jorge Van Den Brande and Paula Poon</p> <p>Darkinjung LALC Sean Gordon – General Manager Tony Simpson – Legal Advisor Lynne Hamilton – Planning & Development Manager</p>	
The purpose of the meeting was for the DLALC to provide their comments to the Commission on the Department's Addendum Report and the draft conditions.	
<p>The Darkinjung LALC raised the following matters:</p> <ul style="list-style-type: none"> • applicant has not engaged with the Darkinjung as an affected landowner. Newsletters, phone message and email correspondences are not considered to be an appropriate method for community engagement. • The amended development application is a new project and not an amendment to the 2012 application. There is no EIS to support the amendment. Further that the amended application does not meet the Director General's Requirements. • The planning proposal to rezone 2 large parcels of DLALC land for residential development has received gateway approval and the proposal is consistent with the objectives of the Central Coast Regional Plan 2036 in providing housing to meet the expected population growth in the region. • Nikko Road is an important connector between Wyee and Warnervale town centre. There is no details as to how access to privately owned lands will be maintained when Nikko Road is closed as it is the only access to the DLALC lands in the area. • The applicant has not given serious consideration of the DLALC proposed option to relocate the rail infrastructure south of the Link Road, which in the DLALC's view is the best option that would benefit both parties. • The project, if approved, will impact on potential rail access from the DLALC employment zoned lands. • The Addendum Report has not considered the impacts on DLALC lands and not one of its concerns has been addressed in the 78 draft conditions. • applicant is not interested in further commercial negotiations with the Darkinjung LALC. The Community Automotive Sport and Recreation (CASAR) agreement was cited as an example of the outcome that the DLALC considers reasonable and fair. • The DLALC does not oppose the development nor the mine but the negative impacts on current and future development proposals on the DLALC lands. It is willing to work out a 'negotiated regional outcome' with the application for the benefits of all concerned parties. 	
The Commission sought clarification on the progress of the planning proposal and was advised that environmental studies are being carried out and are based on the layouts shown in the planning proposal. The DLALC also undertook to provide environmental information that would assist the Commission's consideration of the matter.	
Documents to be provided: DLALC to provide further details on rezoning application, the third option proposal and records of correspondence in support of no community engagement.	
Meeting closed at 04:30pm	

Notes of Briefing from the Department of Primary Industries – DPI Water

This meeting is part of the review process.	
Date: Friday, 28 April 2017	Time: 03:00pm
Project: Wallarah 2 Coal Project	
Meeting place: Teleconference at Commission's Office	
<p>Attendees: PAC Members: Robyn Kruk AM (Chair); Andrew Hutton and David Johnson. PAC Secretariat: Jorge Van Den Brande and Paula Poon</p> <p>Department of Primary Industries – Water (DPI Water) Mitchell Isaacs - DPI Strategy & Policy Alison Collaros - DPI Strategy & Policy Irene Zinger - DPI Water Fabienne D'Hautefeuille - DPI Water JohnPaul Williams - DPI Water</p>	
The purpose of the meeting was for DPI to provide its comments to the Commission on the Department's Addendum Report and the draft conditions.	
<p>The Commission sought advice from the DPI Water with a focus on water supply performance measures, the proposed water compensatory arrangements for the Central Coast Water Supply, and suitability of using water licences to compensate for the predicted loss in a water catchment area.</p> <p>The DPI advised that:</p> <ul style="list-style-type: none"> • The Commission's 2014 Review applies a more stringent standard than those recommended by the agencies. • The accepted 300ML/y predicted loss is derived from the model prepared for the EIS and this value may change in future as the model is refined having regard to monitoring results. The performance measures for water supply in the draft condition that allows loss of up to 300ML/y are not considered commensurate with the Commission's 2014 Review recommendation of 'no net impact'. • The draft conditions for water supply compensatory arrangements are considered to meet the intent of the Commission's 2014 Review recommendations. However, details of the arrangements would need to be clearly defined in an appropriate management plan and to the satisfaction of all relevant parties. • The use of water licences to compensate for the predicted loss of 300ML/y satisfied the requirements of the <i>Water Management Act 2000</i>, but is not considered suitable compensation to meet the intent of the Commission's 2014 Review recommendations particularly during low flow periods. 	
Documents to be provided: DPI to provide further comments on the matters discussed.	
Meeting closed at 04:00pm	

**APPENDIX 5
PUBLIC HEARING LIST OF SPEAKERS**

Date and Time: Wednesday 5 April 2017, 9:00am
Place: Wyong Golf Club, 319 Pacific Highway, Wyong NSW 2259

1. Tanya Obrien Unit Manager Development Assessments & Bileen Nel Senior Manager Water & Sewer (Central Coast Council)
2. Sean Gordon (Darkinjung Aboriginal Land Council)
3. Martin Hodgson (Hodgson Quarries & Plant)
4. Laurie Eyes
5. Kelia Keogh
6. Mathew Stidolph
7. Lynne Hamilton
8. Craig Dunshea (CS Trade PTY LTD)
9. Ken Greenwald
10. Alan Hayes (Australian Coal Alliance)
11. Roderick Campbell (The Australia Institute)
12. Paul Robert Burton (Our Land Our Water Our Future)
13. Abigail Boyd (Central Coast Greens)
14. Steve Philips (Lock The Gate Alliance)
15. Mike Campbell (Community Environment Network)
16. Robert Monteath (Newcastle Progress Association)
17. Tina West
18. Bruce Cross
19. Michael Clark (HATCH)
20. Bruce Gibbs (Pathfinder)
21. Tony Sager
22. Wayne Diemar (Hunter Net)
23. Mark Jones
24. Bruce McDonald AM (The McDonald Group)
25. Andrew Thomson
26. Ronald E Sokolowski (Did not speak)
27. Matthew Harding
28. Stuart Durie (Central Coast Group Training a Community)
29. Robert Stacy
30. Ian Hayes
31. Grant Roach (Hardy Brothers Mining)
32. James Whelan (Environmental Justice Australia)
33. Joanne Cross
34. Doug Williamson

APPENDIX 6
SUMMARY OF ISSUES FROM WRITTEN SUBMISSIONS AND VERBAL PRESENTATION AT THE PUBLIC HEARING

Subsidence

- Uncertainty of impacts on the Buttonderry Waste Management Facility and Hue Hue Road.
- Access to the valley may be cut-off particularly during an emergency.
- Ministerial Minute only allows first workings under the Hue Hue Mine Subsidence District.
- Subsidence predictions are conservative and could be much worse.
- Potential damages to private and public property.

Water Resources

- Mine operations would reduce surface flows in local aquifers and water quality.
- Not enough is known about the applicant's subsidence performance in the 'Greenfields' and the risks of loss of water on the catchment cannot be ignored.
- Coal dust and Uranium Oxide contamination could wash into the local waterways.
- Wyong water catchment supplies about 50% of water to the Wyong and Gosford communities and for the population growth as projected in the Regional Plan 2036.
- applicant's willingness to compensate damaged properties and water contamination is questionable.
- Brine disposal in the Wallarah Creek and in to sewer need further investigation.
- Impact on the alluvial aquifers will affect usable water in the catchment.
- Groundwater in the valley is a backup water system and used for bottlers and agriculture.
- River Care report declared Jilliby Jilliby system among the most pristine in New South Wales.
- Potential damage to the Jilliby Jilliby system from longwall coal mining directly beneath the creek system and within the catchment area.
- 68% of the water recharge into Wyong Creek comes from the aquifers that flow beneath the Dooralong Valley.
- The applicant should compensate with the same quantity of water if water is lost and compensation should cover both private and public resources.
- Groundwater in the area will take 500 years to recharge.

Consultation

- Blue Haven residents suggests that there has been no face to face consultation from the applicant.
- Bushells Ridge, Toohey and Hue Hue Roads residents claim that they have not been consulted and potential impacts on their community have not been considered in the assessment.
- No meaningful discussion about the potential impact on the community such as exposure to coal dust and the resultant debilitating health problems, constant noise exposure and loss of drinking water.
- The proposed coal conveyor belt and coal loading area are unacceptably close to existing residential neighbourhoods, Blue Haven and Wye.
- applicant has no social license to mine the valley.

Road Closures

- Closure of Tooheys Road will limit access in the event of an emergency.
- Closure of Nikko Road will restrict access to the Darkinjung land holdings, particularly south of the Link Road and a loss of a future strategic transport route.
- Loss of access to other privately owned lands.

Socio-economic

- The Environmental Impact Statement inflated employment figures. Objectors consider jobs in the area will be lost if mine is approved.
- The estimated economic benefits could be as low as \$32M. This is not worth the risk of loss of water in the catchment area.
- Economic benefits have diminished from \$1.5B to \$485M in the applicant's economic impact assessment.
- Economic model is questioned in relation to the assumptions of operating expenditure.
- Cost of environmental and public health have not been adequately considered and if social cost of carbon is included, there will be no benefits.
- The project provides job security and brings economic benefits to the area.
- The project benefits outweigh its impact only if the valley is valued as a resource for coal instead of the most important water source for the Central Coast.
- The project is not financially viable and the community will bear the cost to rehabilitate the site if the operation is abandoned.
- The applicant has engaged with and shown their commitment to the community through its contribution to community activities, scholarship and job training programs.

Air Quality

- Air quality assessment based on outdated criteria.
- The suitability and reliance on one monitoring station in Wyong located near the racecourse.
- Current air quality background is already at the recommended criteria and as such health impacts of any additional contribution would be significant.
- Trains taking coal to the Newcastle, coal loading and stockpiles will emanate dust.
- Increase dust loadings along the rail corridor from uncovered coal wagon;
- Pollution of water tanks.

Rehabilitation Bond

- Applicant does not have the financial capacity to meet the required rehabilitation bond.
- The applicant would sell the asset to avoid the rehabilitation commitment as it does not have capacity to carry out any remedial work or rehabilitation.

General Concerns

- Disconnection between the Commission's concerns and the Department's draft conditions.
- Concern that the Secretary is the final arbitrator of any dispute between the applicant and landowner.
- Objections that the Asset Protection Zone (APZ) around the rail siding and coal load-out facility will be on DLALC lands.
- The proposal is a new project and not an amendment.
- The proposal does not meet the Director General's Requirements.
- No consideration has been given to the principle of intergenerational equity and precautionary principle.
- Reliance on Management Plans makes the conditions of consent weaker rather than strong.
- The applicant confuses the community as it references a 42-year mine life when the approval is for 28 years.
- Agencies responses and their concerns have not been adequately addressed.
- Concern about coal and its contribution to climate change and flooding estimates.
- Coal conveyor, ROM and stockpile will have noise impacts on Blue Haven residents.
- Additional species were identified in the area and have not been assessed.

APPENDIX 7
Additional information provided to the Commission
(see separate document)

24 March 2017	Department's Summary of Commission's Recommendations and revised draft conditions, tabled at meeting on 24 March 2017
12 April 2017	Central Coast Council submission to the Commission
12 April 2017	Darkinjung Local Aboriginal Land Council submission to the Commission
12 April 2017	EPA response to Commission's request for clarification on air quality.
18 April 2017	Applicant's email to the Commission re Option 3
20 April 2017	Department response to Commission's request for clarification on the Addendum Report
20 April 2017	Applicant's response to the Commission and second Public Hearing issues
24 April 2017	Applicant's response to the Central Coast Council's submission to the Commission
4 May 2017	DPI Water advice on draft water conditions for the project
10 May 2017	Central Coast Council revised submission to the Commission
12 May 2017	Department's response to the Central Coast Council's submission to the Commission

APPENDIX 8
Mine Subsidence Board Minute Paper (May 1995)

Mine Subsidence Board 6.55 GCC:JR
NEWCASTLE

Minute Paper

MS 2719 V. C. H. Public Government Po

APERS:

SUBJECT:—

Policy for Partial Extraction in the Varnervale/Wadalba Area and Hue Hue Mine Subsidence District

Ministerial policy for the above areas of the Swansea-North Entrance and Hue Hue Mine Subsidence Districts was determined in 1988.

As the desire to develop these areas is increasing, it is appropriate for clarity of guidelines, that the detail of the Ministerial policy is reiterated. Attached for reference are:

- (i) A submission from the Department of Mineral Resources and signed by the Manager Coal Resources Administration Branch, Mr A Ramsland, and the Subsidence Engineer, Dr Holla, to the then Minister for Minerals and Energy dated 23rd September 1988. The memorandum makes three recommendations.
- (ii) A memo from the Assistant Secretary (Coal), Mr J N Cramsie, and dated 10th October 1988, the then Minister for Minerals and Energy submitting the details contained in Item (i) to the Minister for approval. This memorandum was stamped and approved by the Minister on 31st October 1988.

The important directions are therefore contained in the initial memorandum dated 23rd September 1988 and signed by Mr Ramsland and Dr Holla.

In summary:

- (i) The Minister directed that only partial extraction take place.
- (ii) Partial extraction only applies to the proclaimed Hue Hue Mine Subsidence District and Precincts 6, 7 and 8 (excluding 6(iii) and 6(iv)).

(iii) Partial extraction shall have the definition as proposed in Dr Holla's report attached as an appendix to the Ministerial Committee report, which will have the following ground movement parameters:

- Maximum ground strain - 3 mm/m
- Maximum ground tilt - 4 mm

These figures are highlighted on Paged 6 and 7 of that report.

Accordingly, surface development in the designated areas should be designed to accommodate subsidence parameters of 3 mm/m strain and 4 mm/m tilt. Should you require any further information regarding this matter, please do not hesitate to contact me.



15th May 1995

Distribution:

District Supervisor Wyong
Subsidence Risk Engineer
Manager Finance and Administration - For information only

Noted [Signature] 25-5-95

**APPENDIX 9
SUMMARY OF COMMISSION'S CONSIDERATION OF RELEVANT DRAFT CONDITIONS**

	DEPARTMENT RECOMMENDED DRAFT CONDITIONS	COMMISSION'S FINDINGS AND RECOMMENDATIONS
Definition	Public Infrastructure – Linear and related infrastructure and the like that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.	The Buttonderry Waste Management Facility should be included as a public infrastructure so that it will be included in the Trigger Action Response Plan as proposed by the Department.
Schedule 3	Condition 1 – Water Courses Performance Measures for 6th Order Streams and their alluvium <ul style="list-style-type: none"> Negligible subsidence impacts and environmental consequences 	The wordings cause confusion. It needs to be made clear that connective cracking cannot be considered negligible.
	Condition 1 – Water Supply Performance Measures for the Central Coast Water Supply including Wyong river and Jiliby Jiliby Creek and their tributaries <ul style="list-style-type: none"> Combined water loss of equal to or less than 300 megalitres/year. No greater environmental consequences greater than predicted in the EIS or as permitted under the performance measures for watercourse above. 	The draft condition does not reflect the Commission's 2014 Review recommendation that there be no net impact on potential catchment yield from the mining operation (2014 Review Report p.ii and p.75).
	Condition 4 – Built Features Performance Measures Any dispute between the applicant and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Secretary, following consultation with DRE. Any decision by the Secretary shall be final and not subject to further dispute resolution under this consent.	The Commission supports the inclusion of more detailed performance measures in the draft conditions and a proactive engagement program to reduce uncertainty and minimise future dispute between the applicant and landowners.
	Condition 6(g)(iii) Extraction Plan Water Management Plan which has been prepared in consultation with EPA and DPI Water, which provides for the management of potential impacts ...	This should include consultation with the Central Coast Council.
	Condition 10 – Independent Audits of Subsidence Impacts Within six months of the completion of Longwall 5N and then again within six months of the completion of Longwall 9N, and at any other time directed by the Secretary, the applicant must commission a suitably qualified person, whose appointment has been approved by the Secretary, to conduct an independent audit of the subsidence, surface water, and ground water impacts of the development. This audit must: (a) review the monitoring data for the development; (b) Identify any trends in the monitoring data' (c) examine the subsidence, surface water, and ground water impacts of the development; (d) compare these impacts against the relevant impact assessment criteria and predictions in the EIS; and if necessary; (e) recommend measures to reduce, mitigate, or remediate these impacts.	The independent audits should include a review of the Trigger Action Response Plan and where appropriate update the performance measures.

<p>Schedule 4</p>	<p>Condition 3 – Additional Mitigation Upon Request</p> <p><i>Upon receiving a written request from the owner of any residence listed in Table 3, the applicant must implement additional mitigation measures at the residence, in consultation with the landowner, in respect of the basis on which that residence is identified in Table 3.</i></p> <p><i>These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the development on the residence. In the case of noise, mitigation may include measures such as double-glazing, insulation and/or air conditioning.</i></p> <p><i>If within 3 months of receiving this request from the owner, the applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</i></p> <p><i>Table 3: land subject to additional mitigation upon request</i></p> <table border="1" data-bbox="338 619 949 719"> <thead> <tr> <th>Mitigation basis</th> <th>Residence</th> </tr> </thead> <tbody> <tr> <td>Noise</td> <td>R72(P16), R74(P15), R75(P14)</td> </tr> </tbody> </table> <p><i>Note: The location of the land referred to in Table 3 is shown on the figure in Appendix 6.</i></p>	Mitigation basis	Residence	Noise	R72(P16), R74(P15), R75(P14)	<p>Given the predicted exceedance of construction noise by up to 20dBA and a 2-year construction period, the condition should be updated to require the mitigation measures to be implemented before construction begins, and alternative accommodations should be provided during out-of-hour works, if requested by the residents.</p>
Mitigation basis	Residence					
Noise	R72(P16), R74(P15), R75(P14)					
	<p>Condition 14 – Compensatory Water Supply</p> <p><i>The applicant must provide a compensatory water supply to any owner of privately-owned land whose water supply is adversely and directly impacted (other than a negligible impact) as a result of the development, in consultation with DPI Water and to the satisfaction of the Secretary.</i></p> <p><i>The Compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributed to the development. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.</i></p> <p><i>If the applicant and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</i></p> <p><i>If the applicant is unable to provide an alternative long-term supply of water, then the applicant must provide alternative compensation to the satisfaction of the Secretary.</i></p> <p><i>Note: The burden of proof that any loss of surface water or groundwater access was not due to mining impacts rests with the applicant.</i></p>	<p>The affected landowner(s) must be consulted if the applicant is to provide alternative compensation because it is unable to provide an alternative long-term supply of water before referral to the Secretary.</p> <p>Consultation with all potentially affected land owners before undermining should be included in the draft conditions. The onus of proof that damage is not due to mining operations rests with the applicant.</p>				
	<p>Condition 15 – Central Coast Water Supply Compensatory Arrangement</p> <p><i>Prior to the approval of any Extraction Plan that authorises extraction of Longwall 6N, the applicant must, in consultation with Council and DPI Water, develop a Central Coast Water</i></p>	<p>This condition does not fully reflect recommendation 15 of the Commission’s 2014 Review, which states “that no compensation be required beyond mine closure for the</p>				

	<p><i>Supply Compensatory Arrangement to compensate for the measured losses of water to the Central Coast Water Supply caused by underground coal mining on the site until the cessation of mining operations (see condition 5 of Schedule 2), to the satisfaction of the Secretary.</i></p>	<p>predicted 36.5ML/y loss provided that a review prior to mine closure confirms that the loss does not exceed 36.5ML/y”.</p>
	<p>Condition 16 – Central Coast Water Supply Compensatory Arrangement <i>The Compensatory Arrangement must consider all reasonable and feasible measures to compensate for the measured losses of water to the Central Coast Water Supply until the cessation of mining, including, but not limited to the</i> <i>(a) purchase of appropriate water licences;</i> <i>(b) supply of treated mine water to Council or directly to other water users; and</i> <i>(c) Contribution of funds to Council to assist in funding scheduled works,</i> <i>to the satisfaction of the Secretary.</i> <i>Any dispute over the implementation of the Arrangement may be referred by either party to the Secretary for resolution.</i></p>	<p>This condition is inconsistent with the findings and recommendations of the Commission’s 2014 Review. The preferred compensatory mechanism is “by return of suitably treated water to the catchment side of the CCWS for the period during which subsidence may impact on the project Area catchments (2014 Review Report p.75).</p> <p>The Review also notes there was agreement in-principle by all agencies that the return of treated water to the supply system would be an appropriate way to offset the losses potentially caused by the project. DPI Water (then known as NOW) has provided formal in-principle endorsement of the proposal (2014 Review Report p.35).</p> <p>During periods of low flow, licences would not compensate for water lost as a result of subsidence-induced reductions in baseflow to streams supplying the CCWS. (2014 Review Report p.33)</p>
	<p>Condition 30 – Bushfire Management <i>The applicant must:</i> <i>(a) ensure that the development is suitably equipped to respond to fires on site; and</i> <i>(b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site.</i></p>	<p>The Preliminary Hazard Analysis (Appendix AB) of the EIS for the 2012 Application recommends the preparation of a Bushfire Management Plan to be prepared. This should be reflected in this condition.</p>
	<p>New condition – Access Management Plan</p> <ul style="list-style-type: none"> • Adjacent landowners should be consulted before finalizing design of the access road on the Nikko Road reserve; • Maintain access during construction and operation of the mine; and • Post mining access arrangement. 	<p>Maintaining existing access to adjacent privately owned lands is a major issue raised in the submissions and at the public hearing. An explicit condition is required to ensure access to adjacent private lands are maintained during construction and operation of the mine and post mining if the tenure of the road reserve is changed.</p>
Schedule 6	<p>Condition 2 – Management Plan Requirements The applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines.</p>	<p>It is noted that the Department is progressively seeking to standardise reference to the consent conditions on matters to be considered in management plans. However, these relate to a number of issues identified as significant to the community</p>

		<p>such as bushfire management, subsidence, air and water quality. Given their significance, there is merit in making specific reference to these in the draft conditions.</p> <p>A condition should also be included to require the preparation of an integrated environmental monitoring and public reporting plan, which should provide details on what matters require monitoring/audit, the frequency of monitoring/audit and when reports will be available to the public.</p>
	<p>Condition 8 – Regular Report <i>The applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent.</i></p>	<p>Should be explicit as to the frequency of reporting.</p>
	<p>Condition 10 – Independent Environmental Audit <i>Within 12 months of the date of commencing development under this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the applicant must commission, commence and pay the full cost of an Independent Environmental audit of the development. This audit must:</i></p> <ul style="list-style-type: none"> <i>(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;</i> <i>(b) include consultation with the relevant agencies and the CCC;</i> <i>(c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL, necessary water licences for the development or Mining Lease (including any assessment, strategy, plan or program required under these approvals);</i> <i>(d) Review the adequacy of strategies, plans or programs required under the abovementioned approvals;</i> <i>(e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and</i> <i>(f) be conducted and reported to the satisfaction of the Secretary.</i> 	<p>Condition 10(a) should specify the team should include a subsidence expert and a hydrogeologist.</p> <p>10(b) should include pre-audit consultation with the Central Coast Council and DPI Water to ensure any concerns they have will be included in the audit.</p>
	<p>Condition 11 – Independent Environmental Audit <i>Within 12 weeks of commencing each audit, or as otherwise agreed by the Secretary, the applicant must submit a copy of the audit report to the Secretary and any other NSW agency that requests it, together with its response to any recommendations contained in the audit</i></p>	<p>A copy of the audit report should be provided to the Central Coast Council, EPA and DPI Water as part of the reporting regime and other agencies upon request.</p>

	<i>report, and a timetable for the implementation of any measures proposed to address the recommendations.</i>	
Appendix 2	Figure showing the development area	The indicative longwall layout in the potential future mining area should be deleted.