Potential viewers from Location 5 would generally be restricted to motorists, who would be travelling at up to the speed limit of 100 km/hr. As there is no walkway along the Motorway Link Road Bridge, pedestrians are unlikely to access this location. As such, Location 5 is representative of the views that motorists would experience. The existing developments that are visible from the Motorway Link Road include limited glimpses of the Boral Montoro tile factory and (from the Motorway Link Road Bridge) the Main Northern Rail Line.

*3D Model*

**Figure 6** provides a viewpoint from the 3D Model in the vicinity of Photomontage Location 5 (which is approximately 300 m west along the Motorway Link Road from the Bridge). **Figure 6** illustrates Amended Project elements from an elevated position in the vicinity including the new overland conveyor (intermittently visible through existing vegetation), the existing Main Northern Rail Line, and the proposed rail spur and transfer station.

*Photomontage*

As shown on **Figure 7**, the proposed infrastructure components to be located in the vicinity of Location 5 include the overland conveyor and associated conveyor drive.

Although the distance from the Motorway Link Road breakdown lane to the proposed infrastructure is relatively short (between 20 and 30m), the speed and direction of travel, combined with the screening effects of vegetation to the north of the road will greatly minimise the exposure to the proposed infrastructure for the Amended Project.

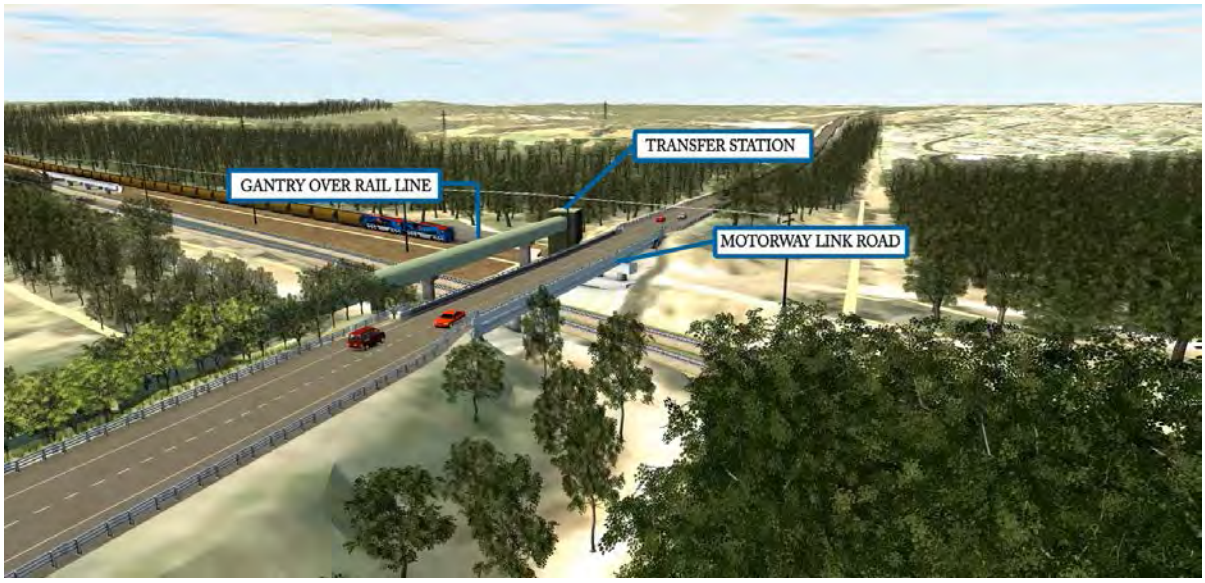


**Figure 6**
**3D Model Viewpoint in Proximity to Photomontage Location 5**

Existing View


Project

HB WALLARAH COAL 1163 F7 Indicative Photomontage - Viewpoint 5 03 11 2016

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Indicative Photomontage - Location 5

**FIGURE 7**

As the infrastructure is highly screened by thick vegetation in the vicinity of Location 5 just away from the Motorway Link Road Bridge, a depiction of the limited visibility of the proposed infrastructure in this area is shown in the oblique aerial graphic from the computer generated animation. Further to the east (around 350 m) and transverse to the Motorway Link Road lies the north-south Main Northern Rail Line and proposed transfer station, bin feed conveyor and rail spur. These components are not visible from Location 5 and as such, are not evident in the photomontage at this location but are clearly depicted in the elevated 3D graphic in **Figure 6**.

These infrastructure components, particularly the conveyor gantry crossing the Main Northern Rail Line, may be viewed (for short periods) by motorists on the Motorway Link Road immediately prior to and whilst crossing the bridge over the Main Northern Rail Line. The proposed infrastructure will be located at 90° to the motorists' direction of travel. That is, the proposed infrastructure would be visible if the motorist was looking sideways whilst passing the infrastructure or via peripheral vision. The conveyor gantry over the Main Northern Rail Line will be at a height similar to the passing vehicles on the Motorway Link Road Bridge.

**Photomontage Location 6 – Thompson Vale Road**

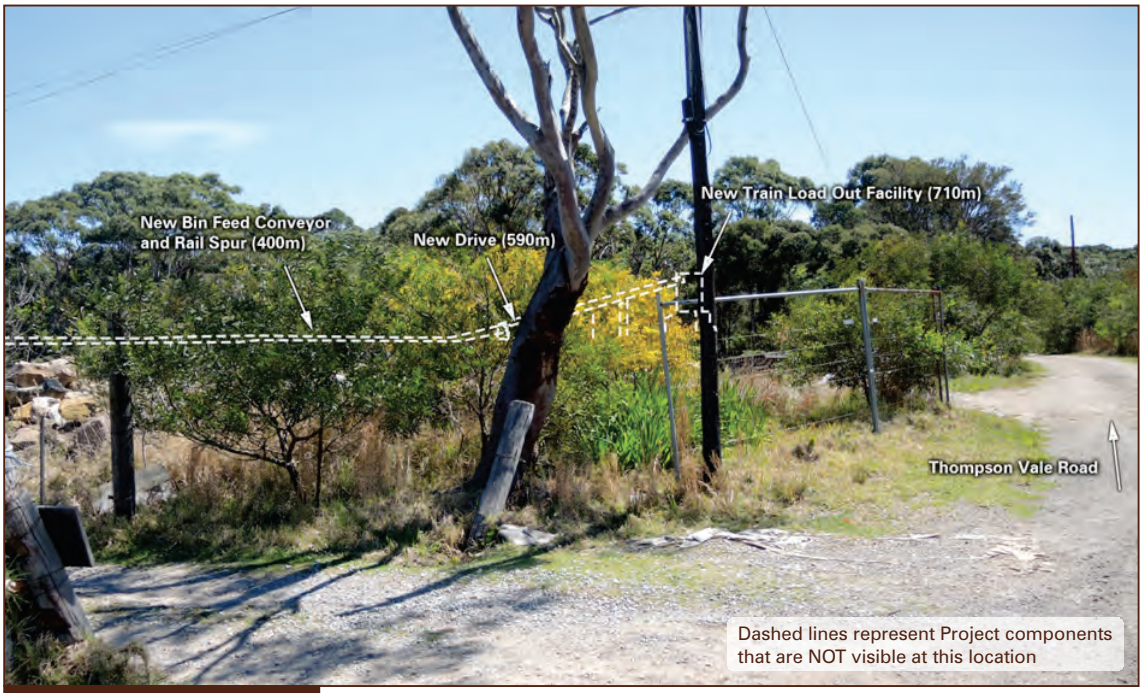
*Existing Views*

**Figure 8** includes a photomontage for Location 6**,** which provides a north-westerly view from Thompson Vale Road. Existing views from this location towards the north-west generally consist of dense vegetation on the western side of Thompson Vale Road and limited glimpses of a series of ridgelines approximately 2.5 km to the north-west.

Existing views from Thompson Vale Road would also generally be restricted to local motorists who account for relatively few traffic trips. The alignment of the Thompson Vale Road is illustrated in the eastern sector of **Figure 8**. As shown on **Figure 8**, a number of elements of the Amended Project are located alongside the Main Northern Rail Line corridor (Nikko Road) in the general vicinity of Location 6 (the closest currently trafficable part of Thompson Vale Road to the rail line). The proposed rail spur and bin feed conveyor are located 300 m west of Location 6, whilst the train load out facility adjacent to the Main Northern Rail Line is over 700 m north-west.

The Main Northern Rail Line and proposed infrastructure directly west of Location 6 is at a lower elevation than Thompson Vale Road, before grading to a slightly higher elevation toward the north-west and the train load out facility.

Existing View




Project

HB WALLARAH COAL 1163 Fx8 Indicative Photomontage - Viewpoint 6 03 11 2016

WALLARAH 2 COAL PROJECT

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Indicative Photomontage - Location 6

**FIGURE 8**

*3D Model*

**Figure 9** provides a viewpoint from the 3D Model looking to the north-east towards Photomontage Location 6 on Thompson Vale Road north of the Motorway Link Road Bridge). **Figure 9** illustrates Amended Project elements from an elevated position in the vicinity including the Rail Spur, existing Main Northern Rail Line, Crown Road Reserve and the approximate location of the noise barrier.

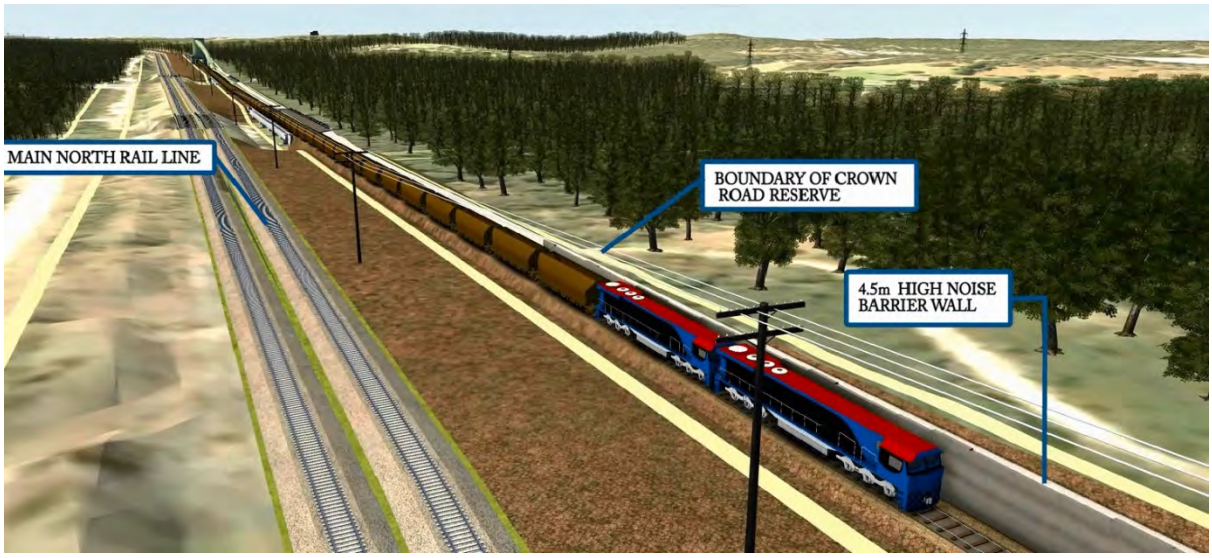



**Figure 9**
**3D Model Viewpoint in Proximity to Photomontage Location 6**

*Photomontage*

The rail spur, train load out facility and conveyor will not be visible from Location 6. However, intermittent filtered views through intervening vegetation may be possible along parts of Thompson Vale Road several hundred metres north. It should be noted however that much of this section of road is currently inaccessible to normal vehicular traffic. In particular, the train load out facility may contrast with the existing views of vegetated ridgelines to the west of Thompson Vale Road. The Design Partnership (2016) has recommended that the train load out facility be constructed using a 'natural' colour scheme to mitigate the visual impact of the structure, where views are available.

Given the lack of visibility to the proposed infrastructure from Location 6 near the existing residences, **Figure 9** shows an outline (dashed white lines) of the non-visible infrastructure from 300 m to over 700 m distant.

**Photomontage Location 7 – DLALC's Proposed Residential Development (Doyalson Site)**

*Existing Views*

**Figure 11** includes a photograph taken from Location 7**,** which provides a westerly view from south-western extent of DLALC's proposed residential development at Doyalson. Existing views from this location towards the west generally consist of multi-storey vegetation in the foreground. Based on the limited information regarding DLALC's proposed residential development, these views may differ following finalisation of the design, which would confirm where vegetation will be retained and where it will be cleared to facilitate residential development.

*3D Model*

**Figure 10** provides a viewpoint from the 3D Model in the vicinity of Photomontage Location 7. **Figure 10** illustrates Amended Project elements from an elevated position from the roof of a non-existent house situated at a relatively elevated position. If it is assumed that there will be relatively extensive vegetation clearing in the vicinity of Location 9 (for activities not associated with the Amended Project), there would be some visual access to the proposed infrastructure available from the upper floor and roof height of a theoretical two storey residence at this location.

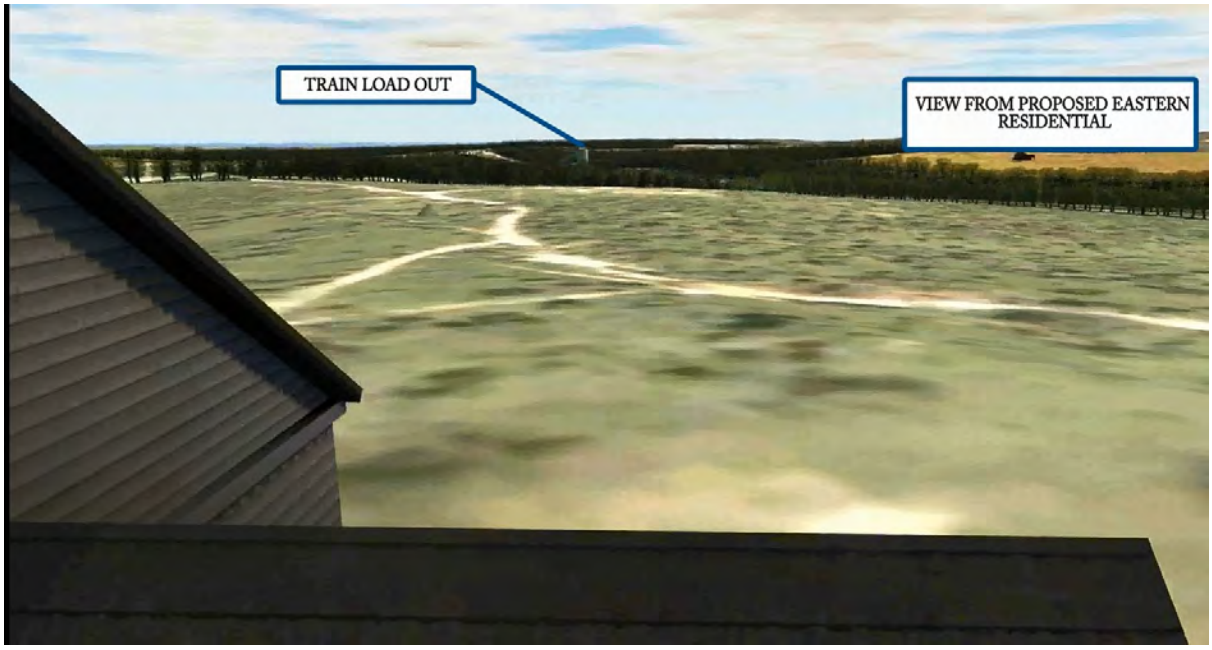
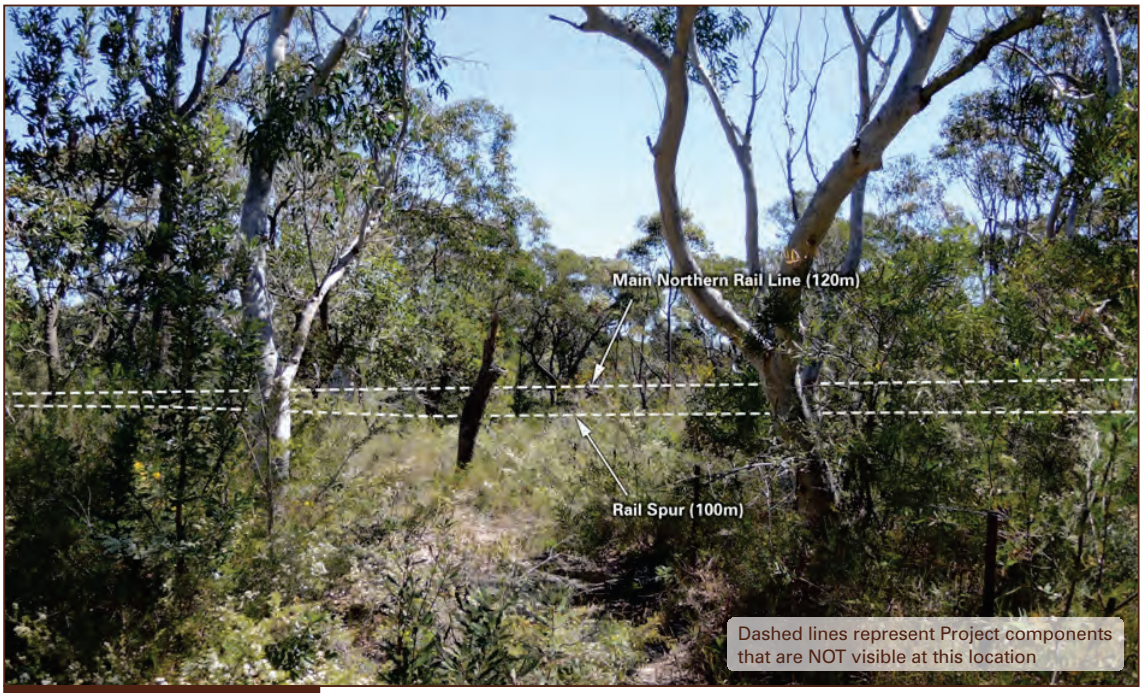



**Figure 10**
**3D Model Viewpoint in Proximity to Photomontage Location 7**

Existing View




Project

HB WALLARAH COAL 1163 F11 Indicative Photomontage - Viewpoint 7 03 11 2016

WALLARAH 2 COAL PROJECT

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Indicative Photomontage - Location 7

**FIGURE 11**

*Photomontage*

As shown on **Figure 11**, views of the Amended Project from Location 7 would be limited. If future clearing occurs in the area (associated with proposals other than the Amended Project), limited and/or intermittent views of a train on the Rail Spur, which is located adjacent to the Main Northern Rail Line. The Rail Spur will be located approximately 150 m west of Location 7.

Passing passenger and freight trains would also be potentially similarly visible on the Main Northern Line from the vicinity of Location 7. However, it is unlikely to be able to view the Rail Spur line and the overland conveyor and train load out facility are out of view being located approximately 450 m to the south (refer **Figure 4**). Accordingly, as these will be expected to be non-visible elements, the white dashed lines in **Figure 10** indicate the approximate position of the Main Northern Rail Line and the Rail Spur.

Thus, visual impacts of the Amended Project from Location 7 would generally be minimal, where the minimum setback from the Main Northern Rail line as described in the Planning Proposal associated with DLALC's proposed residential development are maintained. Where the rail carriages on the proposed rail spur may be visible through intervening vegetation, the relative height of the rail spur and trains would not result in significant visual impacts in additional to those from the Main Northern Rail Line.

**Photomontage Location 9 – DLALC's Proposed Residential Development (Bushells Ridge Site – North)**

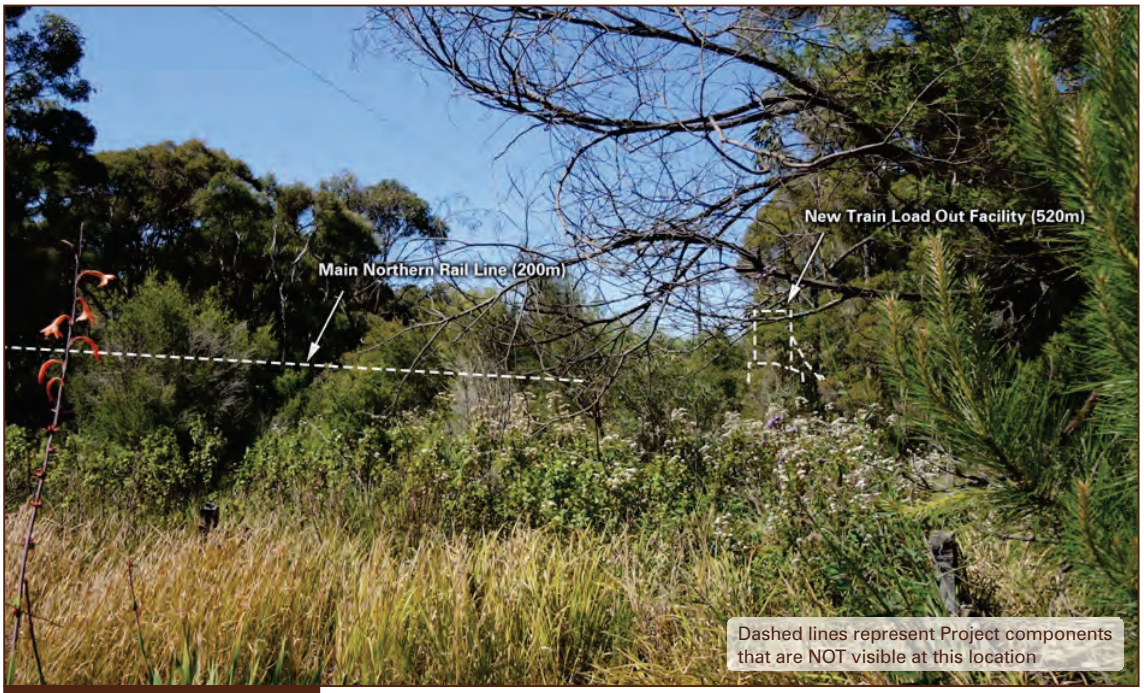
*Existing Views*

**Figure 12** includes a photograph taken from Location 9**,** which provides a southerly view from DLALC's proposed residential development at Bushells Ridge. Existing views from this location towards the Amended Project generally consist of multi-storey foreground vegetation and some parts of the Main Northern Rail Line. Based on the limited information regarding DLALC's proposed residential development, these views may differ following finalisation of the design, which would confirm where vegetation will be retained and where it will be cleared to facilitate residential development.

*3D Model*

**Figure 13** provides a viewpoint from the 3D Model generally in the vicinity of Photomontage Location 9. However, this viewpoint is located further south and is oriented towards the north-east (towards Photomontage Location 7). It shows the proposed train load out facility, drive station and rail spur. This viewpoint is generally much closer and at a higher elevation than potential viewing locations within DLALC's proposed residential development. The 3D model view also does not include existing vegetation which will assist in filtering views.

Existing View




Project

HB WALLARAH COAL 1163 F12 Indicative Photomontage - Viewpoint 9 03 11 2016

WALLARAH 2 COAL PROJECT

Wallarah 2 COAL PROJECT | Hansen Bailey ENVIRONMENTAL CONSULTANTS

Indicative Photomontage - Location 9

**FIGURE 12**


**Figure 13**
**3D Model Viewpoint in Proximity to Photomontage Location 9**

*Photomontage*

As shown on **Figure 13**, views of the Amended Project from Location 9 would generally be limited to intermittent or filtered views of the train load out facility, approximately 550 m south of Location 9.

Visual impacts of the Amended Project from Location 9 would occur where views of the train load out facility (higher than the level of the existing Main Northern Rail Line infrastructure) are available, either through gaps in or above the screening provided by foreground vegetation.

**Photomontage Location 10 – DLALC's Proposed Residential Development (Bushells Ridge Site – South)**

*Existing Views*

**Figure 15** includes a photograph taken from Location 10**,** which provides a south-easterly view from the southern extent of DLALC's proposed residential development of Bushells Ridge west of the Main Northern Rail Line. Existing views from this location towards the south-east generally consist of open woodland vegetation and a series of ridgelines to the east of the Main Northern Rail Line.

Based on the limited information regarding DLALC's proposed residential development, these views may differ following finalisation of the design, which would confirm where vegetation will be retained and where it will be cleared to facilitate residential development.

*3D Model*

**Figure 14** provides a viewpoint from the 3D Model in the vicinity of Photomontage Location 10 and illustrates Amended Project elements from an elevated position from the roof of a non-existent house. If it is assumed relatively extensive vegetation clearing (to facilitate the DLALC's proposed residential development) in the vicinity of Location 10, there would be some visual access to the proposed infrastructure available from the upper floor and roof height of a theoretical two storey residence at this location.


**Figure 14**
**3D Model Viewpoint in Proximity to Photomontage Location 10**

*Photomontage*

As shown on **Figure 15**, limited views of the train load out facility and conveyor drive may be experienced at Location 10. These components of the Amended Project will be constructed at about the level of the Main Northern Rail Line and in this area will be within a zone of excavation below current ground level in Nikko Road. The train load out facility will be located approximately 400 m from Location 10.

Where views of the Amended Project are available from Location 10, the form and outlines of the train load out facility and conveyor drive would contrast with existing foreground vegetation and longer distance views of vegetated ridgelines if the infrastructure extended above the tree line. However, the visual impacts of these views would be reduced by the screening effects provided by vegetation between the viewing location and the train load out facility as shown in **Figure 15**.

Existing View


Project

HB WALLARAH COAL 1163 F15 indicative Photomontage - Viewpoint 10 03 11 2016

WALLARAH 2 COAL PROJECT

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Indicative Photomontage - Location 10

**FIGURE 15**

**Visual Mitigation Measures**

The Design Partnership (2016) recommended a series of mitigation measures to minimise the potential visual impacts of the Amended Project. These include:

- All structures will use a colour palette that enables it to integrate with the surrounding landscape. For instance, "colorbond" type colours such as Woodland Grey are similar to the surrounding vegetation;
- Where vegetation is removed to accommodate the construction of proposed structures, new screening vegetation will be planted; and
- The proposed noise barrier will be painted a colour which enables it to integrate with the surrounding landscape.

In relation to the mitigation of lighting impacts, WACJV will ensure:

- New infrastructure associated with the Amendment is designed to minimise the need for external lighting;
- Required external lighting will be designed in accordance with 'Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting';
- To reduce light spill, new external lights will face downwards and employ low lux lamps; and
- No lighting will be directed towards public roads and any residual nuisance lighting will be shielded to minimise impacts.

### 5.1.6 Impacts on Other Land Users

***Issue 8***

*The EIS does not provide adequate consideration of the potential impacts of the amended development on potential future adjacent land uses. For example, land to the north of the proposed rail spur (240 metres) has recently been granted conditional Gateway approval for low-density residential allotments, rural residential land and a small amount of commercial development. The Department notes that 'sensitive receivers' do not currently exist on this land, nor is there any immediate likelihood of this; however the potential impacts on privately-owned land (vacant or otherwise) should be considered.*

*The Darkinjung Local Aboriginal Land Council (Darkinjung LALC) has raised a number of concerns regarding the potential impacts the proposed amendment would have on its future ability to develop its land, should the project be approved. The Department acknowledges the Darkinjung LALC as a significant landholder of land surrounding the proposed amendment area. The Department considers that the interests of the Darkinjung LALC in regards to its land surrounding the amendment proposal have not been adequately considered in the EIS.*

*Further detailed information regarding proximity of these land parcels to the proposed coal infrastructure, and potential noise, air quality and visual impacts should be provided. As discussed in Section 4, photomontages of the proposed coal infrastructure as potentially viewed from these parcels of land should be provided.*

***Response***

**Planning Policies**

The following provides a discussion regarding DLALC's proposed residential development and the Amended Project in relation to relevant planning policies.

Central Coast Regional Plan 2036

The Central Coast Regional Plan 2036 (the Regional Plan) was approved by DP&E in October 2016 and is described as "*a 20 year blueprint for the future of the Central Coast*."

The Regional Plan states that:

- *"The Regional Plan aims to increase the number of local jobs to reduce the necessity for workers to commute out of the region. The Regional Plan notes that in 2011, almost one-quarter (23.3 per cent) or more than 30,400 people travelled out of the region for work each day* (Goal 1);
- *Mineral and energy resources need to be managed and protected from incompatible development or encroachment that could prevent their ability to operate. There are competing uses for land in this region and there is a need to balance these interests in order to deliver the vision for this region* (Goal 2, Direction 10);
    - *Ensure that longer term extractive resources are not sterilised and minimise impacts on communities and the environment* (Action 10.2); and
    - *Ensure development in the north of the region takes account of the extraction of coal, clay and gravel resources* (Action 10.3*);*
- *New land releases will be focused in the Warnervale-Wadalba land release area and elsewhere in the North Wyong Shire Structure Plan (NWSSP). The NWSSP identifies a staging plan for areas in the Warnervale-Wadalba release area and surrounds, and this will be refined to reflect the timing of infrastructure delivery (*Goal 4, Direction 19*); and*
- *Employment land close to inter-regional links including Somersby, the Wyong Employment Zone, Tuggerah and Bushells Ridge will remain popular for manufacturing (engineering and food manufacturing), logistics and warehousing. (*Direction 5*)."*

Figure 6 of the Regional Plan identifies the employment zone of Bushells Ridge and the site of the Amended Project. The Regional Plan does not identify land proposed for the DLALC's proposed residential development, nor list the area as a site of a potential future housing development.

However, the Regional Plan does identify that there may be pockets of land available on the urban fringe that are suitable for development and discusses the development of land owned by DLALC as follows:

- *"The NSW Government and Central Coast Council will work with the Darkinjung Local Aboriginal Land Council to identify how its land can best be planned, managed and developed.* (Goal 1, Direction 6);

- *Encouraging Aboriginal people to gain economic benefit from their land will support broader regional development, biodiversity and social outcomes. The NSW Government and Darkinjung Local Aboriginal Land Council will work towards achieving the overall aim of the Aboriginal Land Rights Act 1983 (NSW) which lays the foundations for a more secure economic and self-reliant future for all Aboriginal people in NSW (*Goal 1, Direction 6);
- *Collaborate with the Central Coast Council and the Darkinjung Local Aboriginal Land Council to strategically assess the Land Council's landholdings and identify priority sites to create a pipeline of projects* (Direction 6, Action 6.1);and
- *The NWSSP will be updated to reflect new planning and to identify economic and conservation opportunities on land owned by the Darkinjung Local Aboriginal Land Council* (Goal 4, Direction 19)."

North Wyong Shire Structure Plan 2012

The North Wyong Shire Structure Plan (NWSSP) identifies large areas of land as "*Strategically located, constrained sites subject to further investigation and offset strategies to define conservation requirements and development potential"*. Parts of Bushells Ridge are identified in these areas as shown on Figure 30 of the document. Table 30 of the document describes the proposed development precincts & estimated development yield of NWSSP areas. Land use in the Bushells Ridge South and Bushells Ridge North East areas are described as "*Employment.*"

The NWSSP provides a precinct staging strategy for future investigation areas, based on water and sewer servicing schedules; existence of coal and/or mineral resources that are potentially viable for future extraction; and the need to support the establishment of a precinct. The staging strategy consists of short, medium and long term release areas. Table 36 highlights Bushells Ridge South as a short term priority and the Bushells Ridge North East precinct as a long term priority of the NWSSP.

The NWSSP does not identify land proposed for the DLALC's proposed residential development, nor lists the area as a site of a potential future housing development.

Wyong Shire Settlement Strategy 2013

The Wyong Shire Settlement Strategy (WSSS) supports the provisions of the NWSSP area and recognises that any future decisions in relation to sites identified as being "*Strategically Constrained*" will depend on favourable outcomes from additional land use investigations. Such investigations would be required to determine the suitability of each site for future development and/or green corridors.

The WSSS does not identify land proposed for the DLALC's proposed residential development, nor lists the area as a site of a potential future housing development.

**Rail and Powerline Proximity**

Rail Noise

DLALC's proposed residential development is in close proximity to the Main Northern Rail Line. The Planning Proposal states that "*A 50 m setback is proposed to be created by from any future development on the sites."*

The Planning Proposal states that a noise and vibration assessment will be required to confirm levels of noise exposure and establish appropriate mitigation measures.

Electricity and Gas

A major electricity transmission line crosses through the proposed Bushells Ridge residential development site. Based on the 'TransGrid Easement Guide' (undated), powerline easements can vary in width depending on the operating voltage and design of infrastructure however this is likely to be at least 60m for a 330kV power line. The Planning Proposal states that "*The availability and feasibility of connection for future residential and commercial populations will be required to be further identified with relevant infrastructure authorities."*

**DLALC's Rezoning Proposal**

DLALC lodged a multi-site rezoning proposal with Wyong Council in June 2014. The proposal is outlined in the *'Planning Proposal - 425 Bushells Ridge Road, Bushells Ridge & 10 Wyee Road, Doyalson'* (Wyong Shire Council, 2016) (the Planning Proposal). The Bushells Ridge Site is currently zoned IN1 (General Industrial) and E2 (Environmental Conservation) and is proposed to be re-zoned to R2 (Low Density Residential) and R5 (Large Lot Residential). The Doyalson Site is proposed to be rezoned from RU6 (Transitional) and E2 (Environmental Conservation) to R2 (Low Density Residential) and B1 (Neighbourhood Centre). Portions of both sites are expected to be rezoned to E2 Conservation.

The Planning Proposal references the 'Central Coast Regional Strategy' (CCRS, 2008) and the complementary NWSSP which identify the Bushells Ridge and Doyalson Sites (see **Figure 3**) as "Strategically Located Constrained Sites".

The Planning Proposal states that the staging of any future urban land rezoning within the "Strategically Located" area should be consistent with the staging identified for the adjoining land. Most of the adjoining development precincts surrounding the subject site are identified for release in the long term, therefore the early release of the subject site conflicts with NWSSP timeframes.

The Draft 2015 'Central Coast Regional Plan' (CCRP), referred to in the Planning Proposal, identifies the Bushells Ridge Employment Precinct (within which the Bushells Ridge Site is located) as a focus area to increase employment development over the medium to long term. It is acknowledged that infrastructure, mining and biodiversity issues require resolution in this location. The Doyalson Site is shown as an area of high environmental value.

Table 2 of the Planning Proposal notes that the proposal has been considered under the relevant State Environmental Planning Policies (SEPPs) and considers whether the planning proposal is consistent with the applicable SEPPs. Table 2 of the Planning Proposal references the *Mining, Petroleum Production and Extractive Industries SEPP* 2007 (Mining SEPP) and provides the following comments:

- *"Many areas within the NWSSP area are proposed for future underground coal mining. This is why a number of the future development precincts within the NWSSP are identified as long term urban development areas. The nature of mining impacts and the stance of the MSB on areas proposed to be rezoned is not known at present. It is possible that the timing of mining activities could lead to modifications being made to the Planning Proposal due to timing of mining and impacts on surface development in some locations."; and*
- *The Department of Investment – Resources and Energy and lease owners will also be required to be consulted, to determine the impact on and of coal and mineral resource extraction in the future."*

Table 3 of the Planning Proposal notes that the DLALC's proposed residential development has been considered with applicable Ministerial Directions (section 117 Directions) and considers if the planning proposal is consistent with the applicable Directions. Item 1.3, Employment and Resources, is noted as applicable and that consistency with the Ministerial Direction is "*to be determined*".

With regards to mineral resources and extraction, Section 8 of the Planning Proposal states:

> *"It is possible that the timing of mining activities could lead to modifications being made to the Planning Proposal due to timing of mining and impacts on surface development in some locations. The Department of Investment (DTI) – Resources and Energy and lease owners will also be required to be consulted, to determine the impact on and of coal and mineral resource extraction in the future."*

DLALC lodged its rezoning proposal to Wyong Council in June 2014. Wyong Council prepared a Planning Proposal (WSC, 2016) in respect of DLALC's rezoning proposal. On 24 February 2016, Wyong Council submitted the Planning Proposal to DP&E for a Gateway determination under section 56 of the EP&A Act. On 2 May 2016, DP&E provided permission for the rezoning proposal to proceed (subject to conditions). Wyong Council is required to revise the Planning Proposal to address the conditions imposed by DP&E. Wyong Council must then re-submit the Planning Proposal to DP&E prior to undertaking community consultation. The amendment to the *Wyong Local Environmental Plan 2013* (Wyong LEP) is required to be finalised within 18 months of the Gateway determination (i.e. 2 November 2017).

Potential Interactions with DLALC's Proposed Development

WACJV has considered the potential amenity impacts to the proposed residential land (as presented in the Planning Proposal).

As shown in **Figure 16**, the Amended Project will not result in any exceedances of the regulatory air quality criteria over the proposed residential land.

The potential noise impacts on DLALC's proposed development were assessed using the recommended amenity criteria in Table 2.1 of the NSW *Industrial Noise Policy* (INP) (EPA, 2000). The land that is subject of the re-zoning proposal currently experiences noise impacts from road and rail traffic. According to Section 2.2.1 of the INP, the "urban" amenity criteria are the most appropriate criteria for areas that experience noise associated with heavy or continuous traffic. The selection of suitable noise criteria is discussed further in **Section 5.7.1**. For urban land, the INP recommends maximum $L_{Aeq}$ noise levels of 60 dBA, 55 dBA and 50 dBA for the day, evening and night periods respectively.

Approximately 9.8 ha of the land subject to the rezoning proposal is expected to experience noise levels greater than the amenity criterion of 50 dBA. Approximately 3.3 ha of this land is within the area that is proposed for residential development (see **Figure 17**). This represents approximately 1.1% of the land subject to the rezoning proposal. The night period is the most sensitive period for noise, as the amenity criterion is the lowest for this period. The predicted worst case noise levels for the night period are presented in **Figure 17**.

The *Voluntary Land Acquisition and Mitigation Policy* (VLAMP) provides that rights to land acquisition will arise where the amenity criteria is exceeded over more than 25% of privately owned land. Based on the conceptual lot boundaries presented in the Planning Proposal, there are approximately 25 lots where the night time amenity criterion (50 dBA) is exceeded over more than 25% of the land area (refer to **Figure 17**).

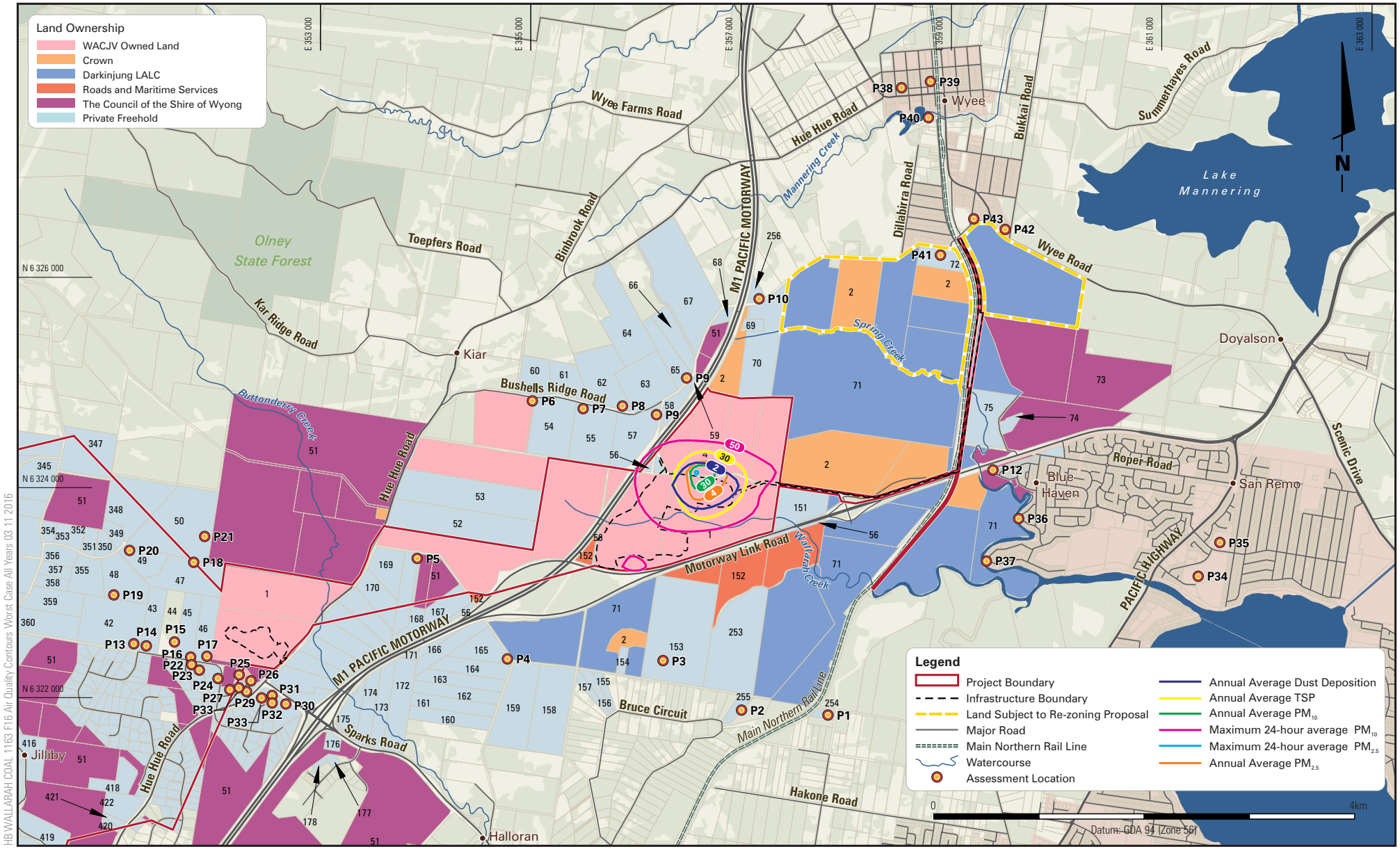
It should be noted that the areas where the noise exceedances are predicted to occur are situated near the southern extent of the proposed residential land and near the Main Northern Rail Line (see **Figure 17**). The Planning Proposal states:

> *"Portions of both sites are also expected to be rezoned to E2 Environmental Conservation to offset development impacts. Proposed zone boundaries will be subject to further refinement and will need to be supported by further investigations".*

Given that there is scope for the proposed zone boundaries to be modified, DLALC's proposed developed can be re-designed so that the potentially noise affected areas are reserved for Zone E2 (Environmental Conservation). Conversely, the proposed residential areas can be relocated to other parts of the site that are not predicted to be affected by noise.

Potential visual impacts are discussed in **Section 5.1.5.**

There are still substantial regulatory requirements that must be satisfied before DLALC's proposed residential development can proceed. Given that the noise criteria are only predicted to be exceeded over 3.3 ha of land that is proposed for residential development, DLALC will only need minor amendments to the proposed development to avoid potential noise impacts to its proposed development.

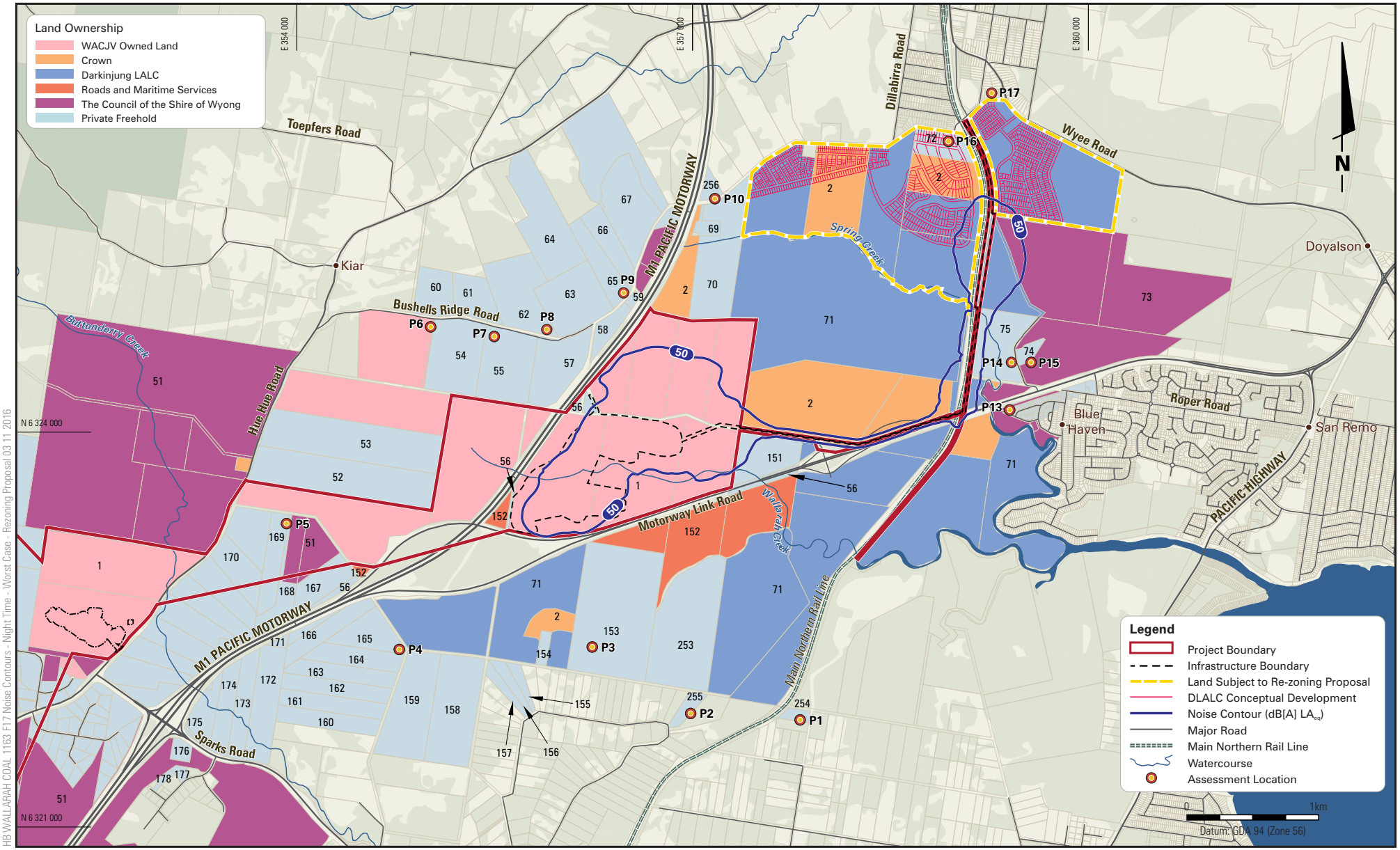



HB WALLARAH COAL 1163 F16 Air Quality Contours Worst Case All Years 03 11 2016

WALLARAH 2 COAL PROJECT

Predicted Air Quality Contours (Worst Case)

**FIGURE 16**




HB WALLARAH COAL 1163 F17 Noise Contours - Night Time - Worst Case - Rezoning Proposal 03 11 2016

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Predicted Night Time Noise Contours (Worst Case)

**FIGURE 17**

## 5.2 DEPARTMENT OF PRIMARY INDUSTRIES – WATER

### 5.2.1 New Water Sharing Plans

***Issue***

*The proponent should provide updated information on water licensing for the project, including reference to new and amended water sharing plans and information on how the predicted take of groundwater within these water sources will be licensed.*

***Response***

The licensing provisions of the *Water Management Act 2000* (NSW) (WM Act) apply to water sources that are the subject of a Water Sharing Plan (WSP).

The *Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016* (North Coast Groundwater WSP) commenced on 1 July 2016. The North Coast Groundwater WSP applies to groundwater sources within the Central Coast, Hawkesbury Nepean, Hunter, Lower North Coast, Mid North Coast, Northern Rivers and Upper North Coast water management areas.

The Amended Project is located within the plan area of the Sydney Basin-North Coast Groundwater Source. The North Coast Groundwater WSP applies to all water below the ground surface within the boundary of this water source. The Project will take water from the bedrock groundwater system via inflows to the mine workings. Accordingly, WACJV will be required to obtain the appropriate Water Access Licences (WALs) to account for the predicted inflows to the mine workings.

The North Coast Groundwater WSP does not apply to unconsolidated sediments of Quaternary and Tertiary age. As such, the North Coast Groundwater WSP does not apply to the alluvial sediments of Jilliby Jilliby Creek and Wyong River, which are Quaternary in origin.

The *Water Sharing Plan for the Central Coast Unregulated Water Sources 2009* (Central Coast Unregulated WSP) was amended on 1 July 2016 to include the Jilliby Jilliby Creek Water Source, which was formerly the subject of a separate WSP. The amendment also expanded the definitions of the water sources to include groundwater contained within alluvial sediments. Accordingly, the alluvial aquifers associated with Jilliby Jilliby Creek and Wyong River are subject to the Central Coast Unregulated WSP. WACJV will be required obtain the appropriate WALs to account for the predicted seepage from these alluvial aquifers as a result of mining.

The Amendment does not alter the impacts of the Project on water sources. The licensing requirements for the Project are outlined in **Table 4**.

**Table 4**
**Water Licensing Requirements**

| Aspect | Impact Mechanism | Water Source | Water Sharing Plan | Predicted Maximum Annual Take (ML/year) |
|---|---|---|---|---|
| Groundwater | Mine Inflows | Coal seam and deep bedrock | North Coast Groundwater WSP | 912.5 |
| | Seepage due to groundwater depressurisation | Alluvial aquifers | Central Coast Unregulated WSP | 7.3 |
| | | Shallow hardrock | North Coast Groundwater WSP | 29.2 |
| Surface Water | Reduction in runoff due to subsidence of alluvium | Jilliby Jilliby Creek | Central Coast Unregulated WSP | 270 |
| | | Wyong River | Central Coast Unregulated WSP | 30 |

### 5.2.2 Water Management System

***Issue***

*The proponent should provide information on the water management components of the project as a whole, including any changes that may affect the original Surface Water and Groundwater Impact Assessments, the groundwater monitoring program (including baseline data) and the proposed water management arrangements for the Project.*

***Response***

The Amendment does not involve any changes to the underground mining aspects of the Project. As a result, the Amendment will not alter the predicted rates of mine inflow or seepage from shallow groundwater systems.

The Amendment does not involve any changes to the proposed water management system for the Project. Given that the coal production rate is unchanged from the Original Project, the operational water demand will not change as a result of the Amendment. In the absence of changes to mine inflow rates and operational water requirements, the water balance for the Project will not be affected by the Amendment.

### 5.2.3 Jilliby Jilliby Creek Water Source

***Issue***

*The predicted take of surface water for the original Wallarah 2 Coal Project was 270 ML/year from the Jilliby Jilliby Creek Water Source and 30 ML/year from the Wyong River Water Source of the Central Coast Unregulated WSP. The proponent currently holds an entitlement of 185 units in the Jilliby Jilliby Creek Water Source. The proponent should provide updated information regarding how the predicted take of surface water will be accounted for in licensing.*

***Response***

The Amendment does not involve any changes to the underground mining aspects of the Project. Accordingly, the predicted impacts to the Jilliby Jilliby Creek Water Source (which arise as a result of subsidence) will not be affected by the Amendment.

WACJV will obtain the necessary licensing entitlement prior to mining beneath the alluvial sediments of Jilliby Jilliby Creek and Wyong River. Updated licensing requirements due to regulatory changes since 2013 are discussed in **Section 5.2.1**.

### 5.2.4 Waterfront Land

***Issue***

*The proponent should ensure all works on waterfront land are consistent with DPI Water 'Guidelines for Controlled Activities on Waterfront Land'.*

***Response***

'Waterfront Land' is defined under the WM Act as the bed of a watercourse and any land within 40 m of the highest bank of a watercourse. The Amended Project involves development within 40 m of Wallarah Creek and Spring Creek. The rail infrastructure for the Original Project was to be developed within 40 m of Wallarah Creek and Spring Creek.

By operation of section 89J of the EP&A Act, the Project is exempt from the requirement for a controlled activity approval under section 91 of the WM Act. Nevertheless, development on waterfront land will be undertaken in accordance with the relevant DPI-Water guidelines.

### 5.2.5 Water Licensing Strategy

***Issue***

*The proponent should liaise with DPI Water regarding the water licensing strategy for this project.*

***Response***

Consultation with DPI – Water in March 2016 was followed by an application made by WACJV under Part 5 of the Water Act to secure sufficient licensed volumes required. WACJV will continue to liaise with DPI – Water, particularly regarding the water licensing regime under the new North Coast Groundwater WSP.

### 5.2.6 Crown Roads

***Issue***

The Crown roads identified by the Proponent as being required for the development, being part Nikko Road and part Tooheys Road, must be closed and acquired by WACJV prior to WACJV undertaking any works on this land.

***Response***

WACJV has lodged a road closure application (W562973) in respect of the section of Nikko and Tooheys Roads within the Project Boundary.

## 5.3 DEPARTMENT OF INDUSTRY – DIVISION OF RESOURCES AND ENERGY

### 5.3.1 Rehabilitation Outcomes

***Issue***

*Under the Conditions of the Mining Lease (ML), the Division requires a title holder to adopt a risk-based approach to achieving the required rehabilitation outcomes. The applicability of the controls to achieve effective and sustainable rehabilitation is to be determined based on the site specific risk assessments conducted by the title holder. This risk assessment should be used to not only establish a basis for managing risk when planning an activity, but it should also be used and updated (as required) to continuously evaluate risk and the effectiveness of controls used to prevent or minimise impacts. A title holder may also be directed by the Division to implement further measures, where it is considered that a risk assessment and associated controls are unlikely to result in effective rehabilitation outcomes.*

***Response***

As outlined in Section 6 of the EIS, a Risk Assessment was undertaken to identify potential environmental issues associated with the Project. The Risk Assessment will be updated by WACJV, if approval is received and prior to the commencement of operations. The risk assessment will consider the potential risks to achieving successful rehabilitation outcomes.

### 5.3.2 Review of Subsidence Effects

***Issue***

*The effects of subsidence have not been considered in this assessment. DPE should refer to the Department's Resource Regulator for separate advice.*

***Response***

The Amendment does not involve any changes to the underground mining aspects of the Project. As a result, the effects of subsidence due to the Amended Project will be as assessed in the EIS and RTS1. No additional advice has been provided by DRE's Resource Regulator in this regard.

### 5.3.3 Mining Titles

***Issue***

*As coal is a prescribed mineral under the Mining Act 1992, the proponent is required to hold the appropriate mining titles from the Division in order to mine this mineral.*

*The Division notes the proposed mining activities are within the existing Authorisations 405 and EL 4911 held by the proponent and MLA 342, 343, 346, 350, 462 and 522 submitted by the proponent.*

***Response***

Noted. Applications for all required mining areas and mining related purpose areas have been submitted. WACJV will obtain the appropriate Mining Titles following Development Application Approval and prior to mining.

### 5.3.4 Sustainable Rehabilitation Outcomes

***Issue***

*The Division recommends that sustainable rehabilitation outcomes can be achieved as a result of the project.*

***Response***

Noted. WACJV has lodged Mining Lease Applications in respect of all areas within the Project Boundary where mining and mining purposes are proposed. WACJV will obtain the appropriate Mining Titles following the grant of any development consent prior to mining.

### 5.3.5 Recommended Conditions of Approval

***Issue***

*The recommended draft conditions of approval have been reviewed by consistency and standardization with other project assessments and the draft Development Consent Conditions for SSD4974 (as originally proposed in 2013).*

*Pending granting of the Development Consent, the Division recommends that the following conditions be incorporated.*

*Rehabilitation Objectives and Commitments*

*Rehabilitation must be substantially consistent with the Rehabilitation Objectives as described in the EIS and the Statement of Commitments outlined below.*

*Progressive Rehabilitation*

*The Proponent shall carry out all surface disturbing activities in a manner that, as far is reasonable practicable, minimizes potential for dust emissions and shall carry out rehabilitation of disturbed areas progressively, as soon as reasonably practicable.*

*Rehabilitation Plan*

*The Proponent must prepare and implement a Rehabilitation Plan. The Rehabilitation Plan must:*

- *Be prepared in accordance with Division guidelines and in consultation with the Division, Office of Environment and Heritage, Environmental Protection Authority, Department of Primary Industry – Water, Wyong Council and the Community Consultation Committee;*
- *Be approved by the division prior to carrying out any surface disturbing activities of the development, unless otherwise agreed by the Secretary, DPE.*

- *Incorporate and be consistent with the rehabilitation objectives in the EA, the statement of commitments and the above table.*
- *Integrate and build on, to the maximum extent practicable, the other management plans required under this approval.*
- *Address all aspects on mine closure and rehabilitation, including post mining land use domains, rehabilitation objectives, completion criteria and rehabilitation monitoring and management.*

***Response***

The conditions noted above are generally consistent with those included in the Recommended Development Consent, as provided in Appendix A of the Director-General's Environmental Assessment Report (EAR) for the Original Project.

Specifically, Conditions 27, 28 and 29 under Schedule 4 refer to rehabilitation objectives and outcomes, progressive rehabilitation and the preparation of a Rehabilitation Management Plan. These conditions are considered by WACJV to be appropriate and achievable.

## 5.4 MINE SUBSIDENCE BOARD

### 5.4.1 Mine Subsidence Board Approval

***Issue***

*As the proposed development is located in the Hue Hue and Wyong Mine Subsidence Districts, in accordance with S15 of the Mine Subsidence Compensation Act, 1961 (MSC Act) the MSB's approval is required to subdivide, erect or alter any improvements on land within a Mine Subsidence District.*

***Response***

WACJV will obtain the approval of MSB prior to construction of infrastructure within the Hue Hue and Wyong mine subsidence districts in accordance with the relevant legislation.

### 5.4.2 Conditions of Consent

***Issue***

*The MSC Act has recently been reviewed. In light of this review, the Mine Subsidence Board proposes that a clear condition of consent requires the Colliery to accept responsibility for any damage to existing surface improvements by mine subsidence and the associated cost of repair, due to its extractive works. This requirement is in consideration of;*

- *This proposed development, including recent changes;*
- *The large number of existing structures not owned by the Colliery, which are located within the project area and expected to be damaged by mine subsidence;*
- *The reliability of predicting the impacts and damage caused by mine subsidence; and*
- *Imminent changes to MSC Act.*

***Response***

WACJV notes that no additional condition of consent in this regard is required. WACJV will adhere to its legal requirements of any relevant legislation in place.

Further, Condition 4 under Schedule 3 of the Recommended Development Consent, as provided in Appendix A of the EAR for the Original Project requires the preparation of an Extraction Plan for secondary workings. The Extraction Plan must include a Built Features Management Plan, which will include details of appropriate remediation measures and commitments to mitigate, repair, replace or compensate all predicted impacts on potentially affected built features.

### 5.4.3 Relocation of Surface Improvements

***Issue***

*Where the Colliery proposes to relocate surface improvements such as telecommunication, transmission or pipelines, to eliminate the risk of mine subsidence the MSB's approval is required under S15 of the MSC Act. In consideration of this, it would be necessary to demonstrate the relocation would eliminate the risk of mine subsidence.*

***Response***

WACJV does not anticipate the relocation of any surface improvements. However, the MSB's approval will be sought if any surface improvements need to be relocated.

## 5.5 HERITAGE COUNCIL OF NSW

### 5.5.1 Historic Heritage Management Plan

***Issue***

*The revised application has not identified any additional historic heritage issues which required additional consideration as part of this amendment. The Heritage Division recommends the application of the previous advice provided to the Department of Planning and Environment in February 2013 for this project is still valid. This advice recommended conditioning a Historic Heritage Management Plan (HHMP) for this project.*

*The HHMP should include:*

*Stop works procedures for any unexpected archaeological relics/objects within the project land which were not identified and considered in the original EIS. This procedure should identify the input of an appropriately qualified heritage professional to identify and advise on management of the item by heritage significance should occur, where it will be impacted by the project. The HHMP should contain a map with all known and potential heritage items within the subject area. It should also include a summary of the proposed mitigation measures for the known impacted items.*

***Response***

WACJV will prepare a Historic Heritage Management Plan, as committed to previously in Section 7.14.4 of the EIS and reiterated in Section 3.14.6 of RTS1.

## 5.6 ROADS AND MARITIME SERVICES

### 5.6.1 Motorway Link Road

***Issues***

*Roads and Maritime understands the application involves modifications to the existing approval for the Wallarah 2 Coal Project including a new connection to rail infrastructure through a rail spur and conveyor system and construction of a sewer connection. No change is proposed to the road network however the proposed rail spur and conveyor system are to run east, parallel to theMotorway Link Road to the Main Northern Rail Line and the sewer connection is to be constructed underneath the Motorway Link Road following the rail line to the south. It is unclear from the plans provided whether the new conveyor infrastructure is to be provided within the road reserve.*

*Roads and Maritime has no proposal that requires any part of the property.*

*The property has common boundaries with the Pacific Motorway M1 (former F3 Freeway), which is declared Freeway, and Doyalson Motorway Link (MR675), which is declared Controlled Access Road. Direct access across these common boundaries is restricted.*

*The applicant shall undertake a risk assessment consistent with the requirements of the RMS Draft "Technical Guide to Mine Risk Assessment IAM-AM-TP1-160-G01 - Version 1 draft with cover page February 2015" for works within the road corridor.*

*Prior to the issue of any construction certificate the applicant shall consult with Roads and Maritime Asset Network Management to arrange and enter into a deed with regards to any works within the classified road corridor.*

*Comment: The deed should stipulate terms and conditions in relation to the construction, operations/maintenance and disposal of all works within the classified road corridor.*

***Response***

The proposed overland conveyor will transport coal from the product stockpile to a transfer station on the eastern side of the Main Northern Rail Line. A very short section of the overland conveyor will be constructed within the road reserve for the Motorway Link Road, near the overpass crossing of the Main Northern Rail Line. WACJV has undertaken considerable consultation with RMS to define access and construction requirements associated with its proposed infrastructure (see **Table 14**).

Prior to undertaking works within the Motorway Link Road reserve, WACJV will undertake a comprehensive risk assessment in consultation with the asset owner consistent with the draft *"Technical Guide to Mine Risk Assessment IAM-AM-TP1-160-G01 - Version 1"* (RMS, 2015). WACJV will also enter into a deed with RMS as discussed during consultation.

The Motorway Link Road (also known as the Doyalson Link Road) is a controlled access road. Section 67 of the *Roads Act 1993* (Roads Act) states that the order declaring a road to be a controlled access road may restrict access to or from that road. The Amended Project does not require any access to or from Motorway Link Road. The overland conveyor will be constructed alongside the Motorway Link Road but will not interact with the road.

### 5.6.2 Development of Drift

***Issue***

*As previously advised by the Roads and Maritime M1 Pacific Motorway Replacement and Widening: Tuggerah to Doyalson Project team, bridges in the vicinity of the proposed "drift tunnel" have been designed to cater for lateral ground strains of +/-2mm/m due to adjacent mining activities. The Wallarah 2 Coal Project have previously committed to zero ground settlement from the proposed drift tunnel and, accordingly the bridges have been designed to allow for 0mm vertical, 0mm horizontal and 0 rads rotational displacements.*

*The applicant shall undertake background vibration monitoring and ensure that vibration at the bridge supports for the existing Doyalson Link Rd M1 overbridge resulting from the excavation and reinstatement of the proposed drift tunnel shall not exceed that expected under normal operational service.*

*The applicant shall design and construct the proposed drift tunnel so as to avoid direct or consequential interaction with existing bridge piles or any effect on the bridge structures. Regarding piles for the Doyalson Link Rd M1 overbridges, Roads and Maritime advises:*

- *Piles for the existing Doyalson Link Rd M1 overbridge are believed to be founded at approximately R.L 28.00m or below with some uncertainty.*
- *Piles for the proposed Doyalson Link Rd M1 overbridge duplication are designed to be founded at approximately RL 20.70m +/-5m.*

***Response***

The inclined tunnel (or "drift") will act as the primary access to the underground mine for materials and equipment. As such, the drift has been designed to be stable and non-subsiding. The drift has also been designed so that it will not intersect any piles associated with surface structures. Therefore, the development of the drift will not result in any impacts to surface infrastructure.

The Construction Noise and Vibration Management Plan for the Amended Project will include commitments to monitor vibration at the bridge supports for the Motorway Link Road overpass.

## 5.7 ENVIRONMENT PROTECTION AUTHORITY

### 5.7.1 Noise Impacts

***Issue 1***

*EPA notes that the operational noise impacts at assessment locations P1 to P10 are reduced by between 0.1 and 1.1 dB in comparison to the previously proposed rail loop (Table 14). The NVIAA needs, however, to include predicted noise emission levels from the revised proposal at these locations, to inform the recommendation of general terms of approval.*

***Response***

Atkins Acoustics has prepared **Table 5**, which presents the predicted noise levels at assessment locations P1 to P10 (see **Figure 17**) as a result of the Amended Project. Predicted noise levels are presented for all assessed meteorological conditions. The predicted noise levels at assessment locations P1 to P10 are within the Project Specific Noise Criteria (PSNC) for these locations.

**Table 5**
**Predicted Noise Levels Resulting from the Amended Project**

| Assessment Location | Predicted $L_{Aeq, 15min}$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Calm | NE (3m/s) | E (3m/s) | SE (3m/s) | S (3m/s) | SW (3m/s) | W (3m/s) | Temperature Inversion (3°C/100m) |
| P1 | 23 | 32 | 26 | 19 | 19 | 22 | 32 | 33 |
| P2 | 32 | 35 | 31 | 28 | 27 | 29 | 34 | 34 |
| P3 | 34 | 40 | 36 | 30 | 29 | 30 | 34 | 38 |
| P4 | 19 | 31 | 28 | 20 | 17 | 15 | 16 | 23 |
| P5 | 14 | 27 | 31 | 22 | 14 | 14 | 14 | 19 |
| P6 | 32 | 34 | 38 | 39 | 37 | 32 | 28 | 36 |
| P7 | 36 | 36 | 40 | 42 | 40 | 36 | 32 | 39 |
| P8 | 34 | 34 | 42 | 44 | 43 | 36 | 31 | 39 |
| P9 | 31 | 29 | 33 | 39 | 42 | 39 | 32 | 35 |
| P10 | 28 | 27 | 31 | 35 | 37 | 36 | 31 | 33 |

***Issue 2***

*The relocation of the rail spur and load-out facility will result in exceedances of the project-specific noise level at assessment locations P14, P15, P16 and P17 by up to 4 dB under some prevailing meteorological conditions (Tables 15 and 16), which in some cases will trigger a requirement for mitigation under the NSW Government Voluntary Land Acquisition and Mitigation Policy (VLAMP).*

***Response***

The applicability of the VLAMP was discussed in Section 6.4.3 of the Amendment Document. Noise levels at three residences (assessment locations P14, P15 and P16) are predicted to exceed the PSNC by up to 4 dBA. In accordance with the VLAMP, WACJV has consulted with these landowners and has notified them of their right to request acoustic treatments at their residences.

Noise levels at assessment location P17 are predicted to exceed the PSNC by up to 2 dBA. The VLAMP does not require any mitigation requirements for exceedances of 0-2 dBA.

As discussed in Section 8.1 of the Noise and Vibration Impact Assessment (Appendix N of the EIS), the Original Project was predicted to generate noise levels exceeding the PSNC over more than 25% of Properties 57 and 58. However, The Original Project was predicted to comply with the PSNC at the residences on these properties. The two private properties are located immediately west of the M1 Motorway (see **Figure 17**).

Since the preparation of the EIS for the Original Project, the NSW Government has introduced the VLAMP. The VLAMP provides that impacts to privately owned land should be assessed using the amenity criteria in Table 2.1 of the INP. Due to their proximity to the M1 Motorway, the 'urban' amenity criteria are the most appropriate noise criteria for Properties 57 and 58. The night time amenity criterion for 'urban' receptors is 50 dBA. The predicted night time noise levels at Properties 57 and 58 are less than the criterion of 50 dBA. Therefore, under a strict application of the VLAMP, the Amended Project is not expected to cause any noise exceedances at Properties 57 and 58. Nevertheless, WACJV will consult with these landowners to discuss management of noise impacts.

***Issue 3***

*The NVIAA sets amenity noise criteria for assessment locations P13, P14 and P15 based on a 'urban' amenity category under the NSW Industrial Noise Policy (INP). The EPA does not accept this to be an appropriate amenity category for these receivers based on the information in the Wyong Council Local Environmental Plan 2013. The EPA considers that appropriate amenity categories for the above assessment locations under the INP would be P13 - 'Suburban', P14 - 'Rural' and P15- 'Rural'. The NVIAA should revise the assessment to account for these changed categories and provide justification to support other amenity categories being considered more appropriate for these locations.*

***Response***

Measurement locations M13 and M14 are representative of assessment locations P13, P14 and P15. As indicated in Table 1 of the Noise and Vibration Impact Assessment Addendum (Atkins Acoustics, 2016) (NVIAA), the existing ambient noise at M13 and M14 is dominated by road and rail traffic noise.

Atkins Acoustics explains that Section 2.2.2 of the INP states that "*Areas near noise generators (for example roads, railways and industry) would normally be considered to be urban-receiver type for the purpose of the amenity criteria".* Further, Section 2.2.1 of the INP explains that 'Urban' areas *"may be located in either a rural, rural-residential or residential zone as defined on an LEP or other planning instrument"*. Accordingly, it was concluded that for the purposes of an assessment under the INP, "Urban" is the most appropriate receiver type for P13, P14 and P15. On 21 October 2016, WACJV made a request to EPA for a meeting to discuss this issue, but this request was declined.

It is important to note that intrusive noise is assessed in terms of $L_{Aeq}$ levels referenced to 15 minute assessment periods ($L_{Aeq,\ 15min}$). In contrast, amenity noise levels are referenced to day and night assessment periods. (i.e. $L_{Aeq\ 15\ hours}$ and $L_{Aeq,\ 9\ hours}$). The noise contours shown in **Figure 17** represent the predicted $L_{Aeq,\ 15min}$ levels. With respect to noise generated by the Project, amenity levels are expected to be less than the predicted $L_{Aeq\ 15\ min}$ levels.

***Issue 4***

*Table 10 of the NVIAA assigns meteorological conditions of 20 degrees C and 60% relative humidity for night-time noise modelling, these values are identical to those for the daytime scenarios and their use should be justified or more appropriate night-time values used.*

***Response***

Noise modelling for the Project is referenced to the Environmental Noise Model (ENM) developed by RTA Software Pty Ltd. The ENM attenuation factors referenced to atmospheric absorption (temperature and humidity) refer to 'CONCAWE'. CONCAWE (Report No. 4/81) provides 1/3 Octave dB/1000m absorption values referenced to temperature and relative humidity (RH).

For review purposes, the acoustic energy of noise generated from the proposal is generally controlled in the mid-frequency range between 125 Hz and 500 Hz. Referring to CONCAWE, at 250Hz and 20°C, the difference in the dB value per 1000 m for 60% RH and 85% RH is 0.1dB. At 60% RH, the dB/1000 m difference between 15°C and 25°C is also 0.1dB. Compared to the effects of temperature inversions and prevailing winds, which affect noise levels by 9-10 dBA, the effects of relative humidity and temperature for the Project are considered to be minimal. Section 5 of the INP recognises that meteorological effects can typically increase noise levels by 5-10 dB, and recommends procedures for assessing wind and temperature inversion effects. The INP provides no procedure or recommendation for assessing or reporting the effects of temperature or relative humidity.

***Issue 5***

*The NVIAA predicts significant construction noise impacts at surrounding receivers, particularly during out of hours activities. Any works outside the standard hours in the Interim Construction Noise Guideline (lCNG) should be supported by clear justification as per Section 2.3 of the ICNG.*

*The EPA also considers that the NVIAA should include more detailed information regarding how the predicted construction noise impacts will be mitigated and managed, together with their expected effectiveness in reducing overall construction noise emissions from the proposal. The EPA considers that the impacts of traffic associated with construction noise will not be significant, based on the vehicle numbers provided in Section 7.2 of the NVIAA.*

***Response***

The NVIAA presents an assessment of the envisaged range of construction activities associated with the Amended Project. Other than works associated with and controlled by State Rail and operational requirements of the Main Northern Rail Line, standard construction works will generally be undertaken during daytime hours.

As stated in Section 10.7.2 of the NVIAA, a Construction Noise and Vibration Management Plan (CNVMP) and Monitoring Program will be developed and implemented. Specific details of the CNVMP including plant and equipment, construction schedules and management measures will be developed to address the requirements of the *Interim Construction Noise Guideline* (DECCW, 2009) (ICNG).

***Issue 6***

*The notes that rock hammering is proposed where required, however a rock hammer is not listed as an item in Table 2.4 of the NVIAA.*

*It is also not clear whether a 5 dB penalty has been added to some construction activities with increased potential for annoyance as per Section 4.5 of the ICNG, such as rail saws, grinders, rail tamping and regulating, vibratory rollers, etc. The proponent should also check the exceedance entries for work stages 2, 3 and 10 in Table 27 of the NVIAA for accuracy.*

***Response***

Rock hammers will not be utilised during the construction phase of the Amended Project. Accordingly, rock hammers have not been considered in the noise modelling undertaken for the NVIAA.

Noise from construction activities may have annoying characteristics when measured in close proximity to the activity. However, at greater distances, the construction noise reduces and blends with the ambient background noise, thus reducing the annoying characteristic of the noise.

The equipment that may be used during construction was listed in Table 25 (Construction Scenarios) of the NVIAA. Of these noise sources, potential sources of tonal noise include the mulcher/chipper (during site establishment), vibrating roller (during bulk earth works), tampering and rail grinding (during track construction). Predicted construction noise levels were presented in Table 27 of the NVIAA. Even if a +5 dB allowance for tonal characteristics was added to the predicted levels for the site establishment stage of construction, the predicted construction noise levels would still be less than the recommended daytime construction noise management levels. For the bulk earth works stage, the predicted levels for assessment location P13 (Blue Haven) would still satisfy the daytime construction noise management level despite the addition of a +5 dB allowance. However, the +5 dB allowance would result in exceedances of the daytime construction noise management levels at locations P14, P15 and P16 during bulk earth works. For the track construction stage, the predicted levels for assessment location P13 (Blue Haven) would still satisfy the daytime construction noise management level despite the addition of a 5 dB allowance for tonal characteristics. However, addition of the tonal allowance would result in exceedances of the daytime construction noise management levels at locations P14, P15 and P16. Work outside standard working hours (WOSH) would only occur during track possession and works associated with the crossovers at the northern end of the rail spur.

Therefore, exceedances of the construction noise management levels are predicted to occur at locations P14, P15 and P16 regardless of whether a 5 dB allowance for tonal characteristics is included. A Construction Noise and Vibration Management Plan will be developed to mitigate and manage these predicted exceedances.

Predicted construction noise levels were presented in Table 27 of the NVIAA. However, this table contained typographical errors. These have since been corrected by Atkins Acoustics and the revised values are presented in **Table 6**.

## Table 6
## Predicted Construction Noise Levels

| Stage | Description | Reference Receiver | RBL Day/Evening/Night | Construction Noise Management Level (LAeq 15 min) | | Predicted Noise Level (LAeq 15 min) | Predicted Exceedance of Noise Management Level (dB) | |
|---|---|---|---|---|---|---|---|---|
| | | | | Day | WOSH* | | Standard Hours Day | WOSH* Day/Evening/Night |
| 1 | Site Establishment east MNRL | P13 | 49/45/39 | 59 | 54/50/44 | 13-38 | - | - |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 14-42 | - | - |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 13-40 | - | - |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 12-16 | - | - |
| 2 | Conveyor Construction (CH 00 to CH 2280) | P13 | 49/45/39 | 59 | 54/50/44 | 14-39 | - | - |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 15-43 | - | 1/-/1 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 14-41 | - | - |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 13-17 | - | - |
| 3 | Conveyor Construction over MNRL | P13 | 49/45/39 | 59 | 54/50/44 | 45 | - | -/-/1 |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 43 | - | 1/-/1 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 42 | - | - |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 17 | - | - |
| 4 | Bridge at CH 112080 | P13 | 49/45/39 | 59 | 54/50/44 | 48 | - | -/-/4 |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 58 | 11 | 16/14/16 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 56 | 9 | 14/12/14 |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 28 | - | - |
| 5 | Bridge at CH 112480 | P13 | 49/45/39 | 59 | 54/50/44 | 44 | - | - |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 53 | 6 | 11/9/11 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 52 | 5 | 10/8/10 |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 35 | - | - |
| 6 | Bulk Earth Works | P13 | 49/45/39 | 59 | 54/50/44 | 28-54 | - | -/4/10 |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 57-62 | 10-15 | 20/18/20 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 56-59 | 9-12 | 17/15/17 |

| Stage | Description | Reference Receiver | RBL Day/Evening/Night | Construction Noise Management Level (LAeq 15 min) | | Predicted Noise Level (LAeq 15 min) | Predicted Exceedance of Noise Management Level (dB) | |
|---|---|---|---|---|---|---|---|---|
| | | | | Day | WOSH* | | Standard Hours Day | WOSH* Day/Evening/Night |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 25-49 | 6 | 11/5/11 |
| 7 | Construction Train Load Out CH 112780 | P13 | 49/45/39 | 59 | 54/50/44 | 24 | - | - |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 47 | - | 5/3/5 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 47 | - | 5/3/5 |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 39 | - | 1/-/1 |
| 8 | Conveyor Construction along MNRL | P13 | 49/45/39 | 59 | 54/50/44 | 23-41 | - | - |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 41-54 | 7 | 12/10/12 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 41-51 | 4 | 9/7/9 |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 17-28 | - | - |
| 9 | Track Construction | P13 | 49/45/39 | 59 | 54/50/44 | 27-48 | - | -/-/4 |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 44-61 | 14 | 19/17/19 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 44-58 | 11 | 16/14/16 |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 24-48 | 5 | 10/4/10 |
| 10 | Decommissioning | P13 | 49/45/39 | 59 | 54/50/44 | 21-42 | - | - |
| | | P14 | 37/39/37 | 47 | 42/44/42 | 38-53 | 6 | 11/9/11 |
| | | P15 | 37/39/37 | 47 | 42/44/42 | 38-52 | 5 | 10/8/10 |
| | | P16 | 33/39/33 | 43 | 38/44/38 | 18-42 | - | 4/-/4 |

** WOSH – Work Outside Standard Hours*

*Standard construction hours are defined as 7am to 6pm on weekdays and 8 am to 1 pm on Saturdays.*

### 5.7.2 Air Quality Impacts

***Issue***

*Table 7.1 of the assessment presents a summary of modelling results for $PM_{2.5}$, $PM_{10}$ and TSP. In some instances, maximum $PM_{2.5}$ predictions are marginally higher than the maximum $PM_{10}$ predictions. As $PM_{2.5}$ is a sub-fraction of $PM_{10}$, these results appear to be in error. The proponent should check and confirm the modelling results presented in the air assessment are correct.*

***Response***

In Table 7.1 of the *Air Quality and Greenhouse Gas Assessment – Addendum* (Pacific Environment, 2016) (AQGGAA), annual average $PM_{2.5}$ concentrations were presented to two decimal places, whereas annual average $PM_{10}$ concentrations were presented to one decimal place.

As shown in **Table 7**, when the $PM_{10}$ concentrations are presented to two decimal places, the $PM_{10}$ concentrations are greater than the $PM_{2.5}$ concentrations at all representative receptor locations.

**Table 7**
**Incremental $PM_{2.5}$ and $PM_{10}$ Annual Averages**

| Receptor ID | Easting (m) | Northing (m) | $PM_{2.5}$ Annual Average ($\mu g/m^3$) | $PM_{10}$ Annual Average ($\mu g/m^3$) |
|---|---|---|---|---|
| P1 | 357855 | 6322289 | 0.03 | 0.17 |
| P2 | 357021 | 6322338 | 0.05 | 0.22 |
| P3 | 356284 | 6322807 | 0.09 | 0.51 |
| P4 | 354803 | 6322823 | 0.07 | 0.30 |
| P5 | 353943 | 6323781 | 0.05 | 0.15 |
| P6 | 355040 | 6325280 | 0.06 | 0.23 |
| P7 | 355524 | 6325206 | 0.09 | 0.43 |
| P8 | 355898 | 6325231 | 0.14 | 0.78 |
| P9 | 356509 | 6325499 | 0.22 | 1.28 |
| P10 | 357203 | 6326257 | 0.08 | 0.46 |
| P11 | 356222 | 6325149 | 0.28 | 1.72 |
| P12 | 359426 | 6324622 | 0.06 | 0.35 |
| P13 | 351245 | 6322968 | 0.08 | 0.10 |
| P14 | 351364 | 6322948 | 0.10 | 0.12 |
| P15 | 351632 | 6322985 | 0.19 | 0.21 |
| P16 | 351783 | 6322837 | 0.32 | 0.34 |
| P17 | 351940 | 6322848 | 0.47 | 0.50 |
| P18 | 351815 | 6323743 | 0.15 | 0.18 |
| P19 | 351054 | 6323433 | 0.07 | 0.09 |
| P20 | 351205 | 6323857 | 0.07 | 0.09 |
| P21 | 351920 | 6323989 | 0.10 | 0.13 |
| P22 | 351795 | 6322769 | 0.28 | 0.31 |
| P23 | 351869 | 6322717 | 0.24 | 0.27 |
| P24 | 352046 | 6322637 | 0.20 | 0.24 |
| P25 | 352248 | 6322672 | 0.17 | 0.21 |

| Receptor ID | Easting (m) | Northing (m) | $PM_{2.5}$ Annual Average ($\mu g/m^3$) | $PM_{10}$ Annual Average ($\mu g/m^3$) |
|---|---|---|---|---|
| P26 | 352359 | 6322615 | 0.13 | 0.17 |
| P27 | 352154 | 6322523 | 0.11 | 0.15 |
| P28 | 352245 | 6322549 | 0.11 | 0.15 |
| P29 | 352319 | 6322512 | 0.10 | 0.14 |
| P30 | 352693 | 6322395 | 0.08 | 0.13 |
| P31 | 352562 | 6322475 | 0.09 | 0.13 |
| P32 | 352562 | 6322404 | 0.08 | 0.12 |
| P33 | 352462 | 6322452 | 0.08 | 0.13 |
| P34 | 361381 | 6323610 | 0.02 | 0.09 |
| P35 | 361587 | 6323932 | 0.02 | 0.09 |
| P36 | 359671 | 6324160 | 0.05 | 0.26 |
| P37 | 359364 | 6323755 | 0.05 | 0.26 |
| P38 | 358556 | 6328262 | 0.02 | 0.09 |
| P39 | 358831 | 6328322 | 0.02 | 0.08 |
| P40 | 358813 | 6327963 | 0.02 | 0.09 |
| P41 | 358926 | 6326668 | 0.04 | 0.18 |
| P42 | 359543 | 6326914 | 0.03 | 0.12 |
| P43 | 359243 | 6327014 | 0.03 | 0.12 |

The predicted 24-hour average concentrations (average daily production scenario) are presented in **Table 8**. There are five receptors (P18, P24, P25, P26, and P29) where the modelled $PM_{2.5}$ concentrations are 0.01 $\mu g/m^3$ greater than the modelled $PM_{10}$ concentrations. As shown on **Figure 18**, all five of these receptors are in close proximity to the ventilation shaft at the Buttonderry Site. Other receptors (P13 – P33) in the vicinity of the Buttonderry Site also have very similar or identical predictions for both $PM_{2.5}$ and $PM_{10.}$

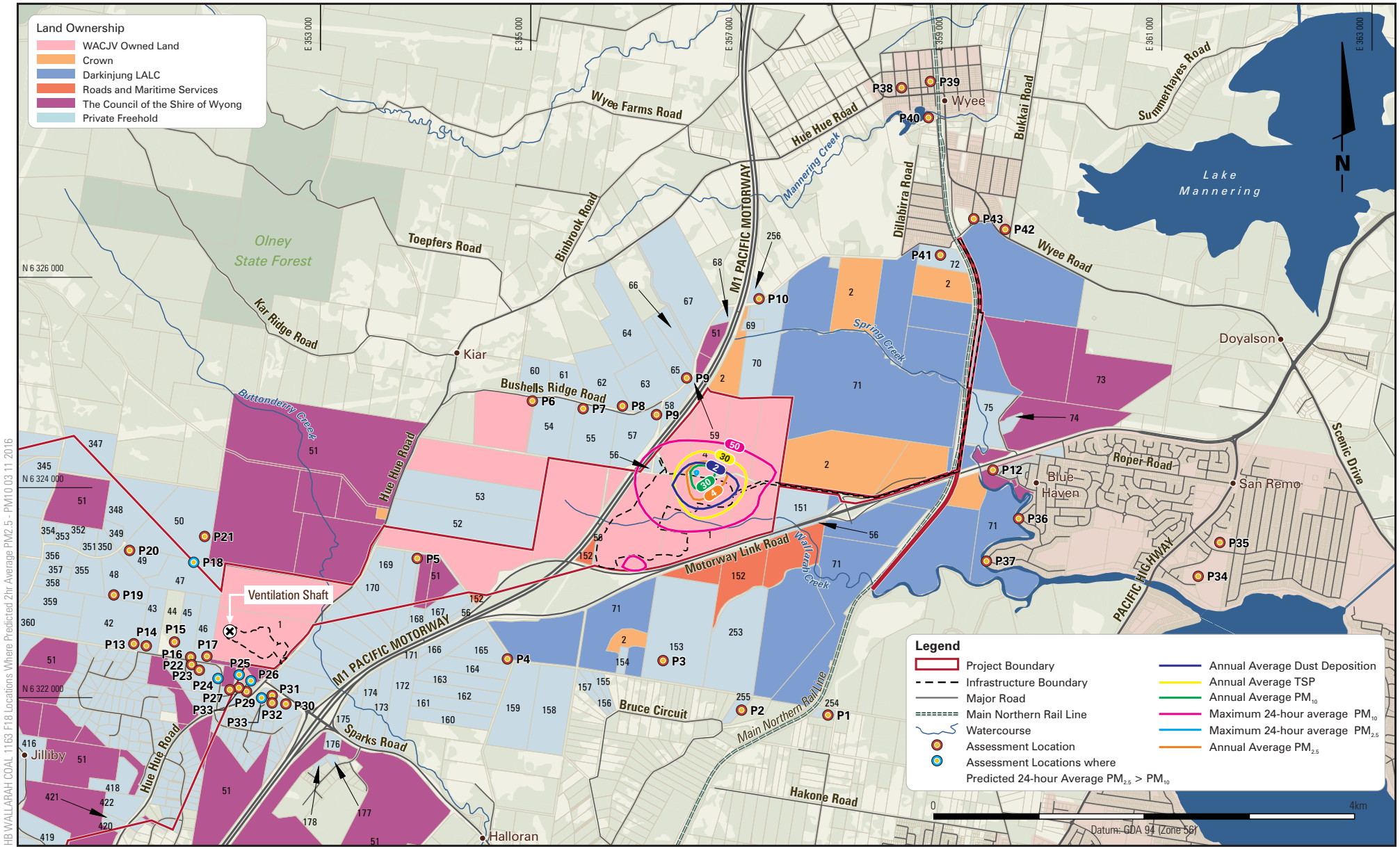
Pacific Environment Limited (PEL) advises that as there were no in-stack $PM_{2.5}$ data available for the ventilation stack, it was conservatively assumed that $PM_{10}$ and $PM_{2.5}$ emissions rates are identical. This assumption accounts for the instances of modelled $PM_{2.5}$ concentrations being greater than modelled $PM_{10}$ concentrations. These results are anomalies emanating from the modelling, rather than a reflection on the nature of particulate emissions from the Project. Actual $PM_{2.5}$ concentrations will be less than the corresponding $PM_{10}$ concentrations.

Whilst emissions from the ventilation shaft have not been explicitly modelled separately from the other dust-generating activities, PEL expects that the ventilation shaft will be the dominant source of particulate matter for receptors near the Buttonderry Site. Predicted ground-level concentrations of $PM_{10}$ and $PM_{2.5}$ due to the ventilation shaft alone would be similar to the total concentrations presented in **Table 8**, albeit with slight differences due to different particle densities applied in the modelling. It is apparent from the values in **Table 8** that receptors located a greater distance from the ventilation shaft have a far higher contribution due to other activities (both Project and non-Project related) and as a result, there is a much larger difference between the predicted concentrations of $PM_{10}$ and $PM_{2.5}$ at these receptors.

## Table 8
## Incremental $PM_{2.5}$ and $PM_{10}$ 24-hour Averages

| Receptor ID | Easting (m) | Northing (m) | $PM_{2.5}$ 24-hour Average ($\mu g/m^3$) | $PM_{10}$ 24-hour Average ($\mu g/m^3$) |
|---|---|---|---|---|
| P1 | 357855 | 6322289 | 0.32 | 1.72 |
| P2 | 357021 | 6322338 | 0.62 | 3.21 |
| P3 | 356284 | 6322807 | 0.82 | 5.32 |
| P4 | 354803 | 6322823 | 0.49 | 3.11 |
| P5 | 353943 | 6323781 | 0.46 | 2.91 |
| P6 | 355040 | 6325280 | 0.67 | 3.01 |
| P7 | 355524 | 6325206 | 0.79 | 4.90 |
| P8 | 355898 | 6325231 | 1.43 | 9.25 |
| P9 | 356509 | 6325499 | 2.11 | 13.04 |
| P10 | 357203 | 6326257 | 0.95 | 5.50 |
| P11 | 356222 | 6325149 | 3.68 | 24.08 |
| P12 | 359426 | 6324622 | 0.48 | 3.01 |
| P13 | 351245 | 6322968 | 0.94 | 1.31 |
| P14 | 351364 | 6322948 | 0.97 | 1.59 |
| P15 | 351632 | 6322985 | 1.55 | 2.30 |
| P16 | 351783 | 6322837 | 3.23 | 3.26 |
| P17 | 351940 | 6322848 | 5.22 | 5.22 |
| P18 | 351815 | 6323743 | **3.68** | **3.67** |
| P19 | 351054 | 6323433 | 0.78 | 0.97 |
| P20 | 351205 | 6323857 | 0.74 | 1.11 |
| P21 | 351920 | 6323989 | 0.99 | 1.43 |
| P22 | 351795 | 6322769 | 3.05 | 3.05 |
| P23 | 351869 | 6322717 | 2.46 | 2.46 |
| P24 | 352046 | 6322637 | **2.73** | **2.72** |
| P25 | 352248 | 6322672 | **2.10** | **2.09** |
| P26 | 352359 | 6322615 | **1.85** | **1.84** |
| P27 | 352154 | 6322523 | 1.47 | 1.48 |
| P28 | 352245 | 6322549 | 1.29 | 1.30 |
| P29 | 352319 | 6322512 | **1.24** | **1.23** |
| P30 | 352693 | 6322395 | 0.77 | 1.28 |
| P31 | 352562 | 6322475 | 0.97 | 1.15 |
| P32 | 352562 | 6322404 | 0.95 | 1.20 |
| P33 | 352462 | 6322452 | 1.17 | 1.17 |
| P34 | 361381 | 6323610 | 0.25 | 1.20 |
| P35 | 361587 | 6323932 | 0.24 | 1.27 |
| P36 | 359671 | 6324160 | 0.42 | 2.46 |
| P37 | 359364 | 6323755 | 0.48 | 2.75 |
| P38 | 358556 | 6328262 | 0.33 | 1.40 |
| P39 | 358831 | 6328322 | 0.28 | 1.18 |
| P40 | 358813 | 6327963 | 0.30 | 1.29 |
| P41 | 358926 | 6326668 | 0.42 | 1.77 |
| P42 | 359543 | 6326914 | 0.39 | 1.52 |
| P43 | 359243 | 6327014 | 0.38 | 1.36 |

** Values in **bold** indicate locations where predicted PM2.5 > PM10*




HB WALLARAH COAL 1163 F18 Locations Where Predicted 2hr Average PM2.5 - PM10 03 11 2016

WALLARAH 2 COAL PROJECT

Wallarah 2 COAL PROJECT | HansenBailey ENVIRONMENTAL CONSULTANTS

Locations where Predicted 24-hour Average $PM_{2.5}$ > $PM_{10}$

**FIGURE 18**

### 5.7.3 Consent Conditions

***Issue***

*The EPA provides the following advice that remains under consideration as part of the previous consent condition including suitable water quality discharge limits. In general the previous consent conditions are appropriate and consideration should be given to the issues set out below to update the conditions for the amended development.*

***Response***

Noted.

### 5.7.4 Stormwater Management

***Issue***

*The sizing and management of stormwater systems appear to be appropriate which aims to avoid managed overflows from the site.*

*Any flocculants or coagulants discharged that may cause actual or potential pollution (non-trivial risk of harm) and affect downstream water uses or the environment should be appropriately regulated by licence limits and other standard section 45 considerations apply such as the practical measures that can be taken to prevent, control, abate or mitigate the pollution and protect the environment from harm, e.g. low toxicity flocculent options.*

***Response***

The Amendment does not involve any changes to the Water Management System for the Project.

The water balance undertaken for the Project determined that the Entrance Dam at the Buttonderry Site is the only dam at the site that is designed to allow for overflows during heavy rain events. This dam is a sediment dam and will be designed in accordance with '*Managing Urban Stormwater: Soils and Construction'* (DECC, 2008). Provided that the Entrance Dam is appropriately designed, it is not anticipated that the addition of coagulants or flocculants will be necessary to assist in the sediment settlement process.

### 5.7.5 Discharges from Water Treatment Plant

***Issue***

*Discharge limits should be derived with reference to the ANZECC (2000) guidelines and the full range of considerations under section 45 of the Protection of the Environment Operations Act.*

*The background water quality in Wallarah Creek has not been demonstrated to provide suitable reference conditions for developing site specific trigger values consistent with ANZECC (2000) requirements as the current water quality at the monitoring location may be adversely affected by mining or other catchment activities.*

*ANZECC (2000) states that: "the reference condition should represent a substantial achievement in environmental protection that is agreeable to the majority of stakeholders", and, "It is not acceptable to allow poor environmental performance or water pollution, simply because a waterway is degraded". In accordance with the ANZECC (2000) guidelines, for a slightly to moderately disturbed system (which is level of protection goal that should apply in this case), the reference site(s) should be only slightly modified. In the absence of appropriate reference conditions the default trigger values should be used.*

*For toxicants such as metals, the trigger values can be adjusted using the decision tree for toxicants in the ANZECC (2000) guidelines.*

*Where ANZECC (2000) Volume 1 does not provide an aquatic ecosystem trigger value for a particular analyte, then reference should be made to Volume 2 to determine if an interim trigger value is available as a basis for decision making, or international literature can be reviewed. The use of 99% species protection levels applies to some analytes for slightly to moderately disturbed ecosystems to account for potential bioaccumulation effects, e.g. mercury, selenium. The EPA in the absences of compelling reasoning proposes to set the discharge limits from the Water Treatment Plant in the table below.*

**Proposed Discharge Environmental Protection Limits for WTP**

| Parameter | Unit | Detection Limit (mg/L) | Wallarah Creek (W6) 80th Percentile Value[1] | ANZECC Guidelines Default Trigger Value[2] | EPA Revised Maximum Allowable Discharge Limit |
|---|---|---|---|---|---|
| Electrical Conductivity | µS/cm | 1 | 516 | 300 | 300 |
| pH | pH units | 0.01 | 5.9 – 6.8 | 6.5 – 8.5 | 6.5-8.5 |
| TSS | Mg/L | 5 | 24 | - | 24 |
| Dissolved Oxygen | % Sat | 0.1 | 67.8 | 85 | 68 |
| Calcium | mg/L | 1 | 13.6 | 1,000 | 14 |
| Sodium | mg/L | 1 | 81.4 | 115 | 80 |
| Magnesium | mg/L | 1 | 9.8 | 2,000 | 10 |
| Potassium | mg/L | 1 | 3 | - | 3 |
| Sulphate | mg/L | 0.25 | 19.9 | 400 | 20 |
| Chloride | mg/L | 1 | 141.8 | 175 | 140 |
| Arsenic | mg/L | 0.001 | 0.0005 | 0.013 | 0.0005 |
| Barium | mg/L | 0.001 | 0.15 | 1 | 0.15 |
| Cadmium | mg/L | 0.0001 | 0.0001 | 0.00006 | 0.00006 |
| Chromium | mg/L | 0.001 | 0.001 | 0.001 | 0.001 |
| Copper | mg/L | 0.001 | 0.003 | 0.0014 | 0.0014 |
| Lead | mg/L | 0.001 | 0.0008 | 0.0034 | 0.0008 |
| Manganese | mg/L | 0.001 | 0.105 | 0.1 | 0.1 |
| Nickel | mg/L | 0.001 | 0.002 | 0.011 | 0.002 |
| Zinc | mg/L | 0.005 | 0.097 | 0.008 | 0.008 |
| Iron | mg/L | 0.05 | 1.764 | 0.2 | 0.3 |
| Mercury | mg/L | 0.0001 | 0.00005 | 0.00006 | 0.00005 |
| Ammonia | mg/L | 0.01 | 0.06 | 0.02 | 0.02 |
| Nitrate and Nitrite as N | mg/L | 0.01 | 0.052 | 0.15 | 0.05 |
| Total Phosphorus | mg/L | 0.01 | 0.1 | 0.025 | 0.05 |
| Oil/grease | mg/L | 5 | 2.5 | 300 | 2.5 |
| Aluminium | mg/L | 0.01 | N/A | 0.055 | 0.055 |
| Selenium | mg/L | 0.01 | N/A | 0.005 | 0.005 |
| Carbonate | mg/L | 1 | N/A | | W/Creek W6 80th %ile |
| Bicarbonate | mg/L | 1 | N/A | | W/Creek W6 80th %ile |

***Response***

End-of-pipe discharge limits for controlled discharges to Wallarah Creek were proposed in Section 3.3.2 in the RTS1. These discharge limits were developed in accordance with the ANZECC (2000) guidelines.

The ANZECC (2000) guidelines state that low risk trigger values should be derived using the following approaches (in order of preference):

- Use of biological effects data;
- Use of local reference data (i.e. water quality monitoring data for Wallarah Creek); and
- Adoption of the ANZECC default trigger values.

In the absence of biological effects data, low risk trigger values were developed based on the available background water quality data (2006 to 2012). The Wallarah Creek catchment is considered to be a slight to moderately disturbed ecosystem. The ANZECC (2000) guidelines recommend that for a slight to moderately disturbed ecosystem, the 80$^{th}$ percentile of the reference data should be adopted as the low risk trigger value. The ANZECC default trigger values were also considered when selecting suitable discharge limits.

The proposed discharge limits for the Project, as well as the values used to derive these limits, are presented in **Table 9** (reproduced from Table 2 of the RTS1).

**Table 9**
**Preliminary Proposed End-of-pipe Discharge Limits**

| Parameter | Unit | Wallarah Creek (W6) 80$^{th}$ Percentile Value[1] | ANZECC Guidelines Default Trigger Value[2] | Proposed End-of-Pipe Discharge Limit[3] |
|---|---|---|---|---|
| Electrical Conductivity | µS/cm | 516 | 300 | 500 |
| pH | pH units | 5.9 – 6.8 | 6.5 – 8.5 | 6.0 – 8.5 |
| TSS | Mg/L | 24 | - | 25 |
| Dissolved Oxygen | % saturation | 67.8 | 85 | 70 |
| Calcium | mg/L | 13.6 | 1,000 | 40 |
| Sodium | mg/L | 81.4 | 115 | 80 |
| Magnesium | mg/L | 9.8 | 2,000 | 70 |
| Potassium | mg/L | 3 | - | 3 |
| Sulphate | mg/L | 19.9 | 400 | 20 |
| Chloride | mg/L | 141.8 | 175 | 140 |
| Arsenic | mg/L | 0.0005 | 0.013 | 0.0005 |
| Barium | mg/L | 0.15 | 1 | 0.15 |
| Cadmium | mg/L | 0.0001 | 0.0002 | 0.0002 |
| Chromium | mg/L | 0.001 | 0.001 | 0.001 |
| Copper | mg/L | 0.003 | 0.0014 | 0.003 |
| Lead | mg/L | 0.0008 | 0.0034 | 0.001 |
| Manganese | mg/L | 0.105 | 0.1 | 0.1 |
| Nickel | mg/L | 0.002 | 0.1 | 0.002 |

| Parameter | Unit | Wallarah Creek (W6) 80th Percentile Value[1] | ANZECC Guidelines Default Trigger Value[2] | Proposed End-of-Pipe Discharge Limit[3] |
|---|---|---|---|---|
| Zinc | mg/L | 0.097 | 0.008 | 0.097 |
| Iron | mg/L | 1.764 | 0.2 | 1.5 |
| Mercury | mg/L | 0.00005 | 0.0006 | 0.0006 |
| Ammonia | mg/L | 0.06 | 0.02 | 0.06 |
| Nitrate and Nitrite | mg/L | 0.052 | 0.7 | 0.05 |
| Total Phosphorus | mg/L | 0.1 | 0.025 | 0.1 |
| Oil/grease | mg/L | 2.5 | 300 | 2.5 |

Notes: *1. Monthly monitoring data from May 2006 to March 2012. Analytes analysed in a concentration below the detection limit were replaced for the calculation of the 80th percentile with half of the detection limit.*
*2. 95% of species protected. Lowest of irrigation, livestock, ecosystem and recreational trigger values.*
*3. 100 percentile limit.*

WACJV consulted with EPA during the development of discharge limits in 2013. The Amendment does not involve any changes that would affect the quality or quantity of discharges to Wallarah Creek.

On 21 October 2016, WACJV made a request to EPA for a meeting to discuss this issue, but this request was declined.

### 5.7.6 Brine Disposal

***Issue***

*The previous consent condition for a Brine Treatment Management Plan stated that the Plan must include a detailed description of processes for managing brine treatment on site and disposal of brine and salt in underground mine workings, including:*

- *The volumes of brine and salt produced;*
- *The capacity of on-site and underground storages for brine and salt; and*
- *Measures to monitor and mitigate any impacts of underground brine and salt storage on groundwater and surface water resources.*

*Additionally there needs to be the inclusion of appropriate construction and monitoring of surface brine storages to ensure surface water and groundwater is protected.*

*The EPA has not reviewed the groundwater section, however, support the condition for the Plan to cover mitigation and monitoring of underground brine storage. Brine disposal into mine workings may have future surface water implications including the following issues that should be considered in the Brine Management Plan:*

- *The general impacts and potential for cumulative increases in risk to groundwater from brine discharges requires a robust and detailed assessment to consider any potential environmental impacts.*

- *After mining is completed there may be potential to create highly concentrated groundwater (salinity and other pollutants) in the void areas that eventually build up and overflow back to surface waters and or shallow aquifers. Post-mining groundwater levels may drive mixing and upward movement of brine contaminated groundwater.*

*The EPA does not have the expertise to provide advice on the potential impacts of brine disposal on surface waters including groundwater dependant ecosystems. NSW Office of Water (NOW) could be consulted when reviewing the Brine Management Plan, in particular in relation to the aquifer interference assessments.*

***Response***

The submission from DPI-Water (refer to **Section 5.2**) does not raise any issues with regard to salt and brine disposal.

The potential impacts of salt and brine disposal were assessed in Section 6.5.1 of the Groundwater Impact Assessment (Appendix I of the EIS). An additional assessment was undertaken, as described in Section 3.2.7 of RTS1, to further understand the potential impacts on groundwater quality and interactions with surface water in the long term. This assessment determined that it is improbable that any increase in salinity would be observed near the surface. The Amendment does not involve any changes that would affect the disposal of salt and brine.

In accordance with Condition 15 under Schedule 4 of the Recommended Development Consent, WACJV will prepare a Brine Treatment Management Plan (BTMP), as part of the Water Management Plan, in consultation with the appropriate regulatory authorities. The BTMP will include measures for monitoring of surface and underground brine storages.

The only surface brine storage for the Project will be the Brine Water Dam, which has a capacity of 9 ML and forms part of the Water Treatment Plant. The BTMP will contain management measures to prevent spills from the Brine Water Dam.

## 5.8 OFFICE OF ENVIRONMENT AND HERITAGE

### 5.8.1 Landowner Consent

***Issue***

*OEH has reviewed the amended DA in relation to Aboriginal cultural heritage and threatened biodiversity matters. OEH notes that the current mine plan excludes 11 longwall panels in the far west of the original mine plan area. However, it is noted that although it is not specifically mentioned or mapped, the current mine plan still undermines part of the Jilliby State Conservation Area. Landholder's consent will be required from the Minister administering the National Parks and Wildlife Act 1974 once the final mine plan details are known.*

***Response***

The revised mine plan excludes the majority of longwall panels underlying the Jilliby State Conservation Area (SCA). The revised mine plan is discussed in both the PAC1 Report and DP&E's Assessment Report. DP&E's Assessment Report explains that of the 35 longwall panels within the revised mine plan, parts of LWs 15N to 19N are located within the boundaries of the Jilliby SCA.

The Recommended Development Consent include various references to the Jilliby SCA as well as including the revised mine plan as Appendix 3.

WACJV acknowledges that landholder consent from the Minster for the Environment (as the owner of the Jilliby SCA) will be required and will continue to liaise with the Minister's office during the finalisation of the assessment in this regard.

### 5.8.2 Aboriginal Cultural Heritage Management

***Issue***

*Recommended conditions of consent for Aboriginal cultural heritage management:*

1. *The proponent must consult with and involve all the registered local Aboriginal parties for the project, in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation must be collated and provided to the consent authority upon request. The proponent must update the existing Aboriginal Cultural Heritage Management Plan (ACHMP) for the project area in consultation with the registered Aboriginal parties to detail procedures for managing all Aboriginal cultural heritage values associated with the project area. This process must be undertaken prior to commencing any ground disturbance or development works subject to the development.*
2. *Survey Unit 3 (as identified in Ozark 2016) should be inspected by a suitably qualified archaeologist and registered Aboriginal party representatives prior to commencing any ground disturbance or development works subject to the development. The results of this inspection should be incorporated into the ACHMP with suitable management recommendation as required.*
3. *In the event that ground disturbance locates previously unidentified Aboriginal objects within the project area, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and representatives of the local Aboriginal community must be contacted to determine the nature, extent and significance of the finds. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) and the management outcome for the site included in the information provided to AHIMS. The proponent must consult with representatives of the local Aboriginal community, and the archaeologist to develop an appropriate management strategy for all objects/sites which complies with the requirements of the National Parks and Wildlife Act 1974.*

4. *If any human remains are located, all works must halt in the immediate area to prevent any further impact to the remains. The NSW Police are to be contacted immediately. No action is to be undertaken until the NSW Police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact OEH's Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until OEH provides written notification to the proponent.*
5. *All Aboriginal sites impacted by the project must have an Aboriginal Site Impact Recording form completed and be submitted to OEH's AHIMS Register within three months of being impacted.*
6. *An Aboriginal Cultural Education Induction Program must be developed for the induction of all personnel and contractors involved in the construction activities on site. Records are to be kept of which staff/contractors were inducted and when for the duration of the project. The program should be developed and implemented in collaboration with the registered Aboriginal parties.*

***Response***

These suggested conditions are consistent with the conditions of the Recommended Development Consent, as provided in the EAR for the Original Project. These conditions remain achievable for the Amended Project.

### 5.8.3 Threatened Biodiversity Assessment (Appendix F)

***Issue***

*OEH has reviewed the amended DA in relation to changed development footprint, the offset package and impacts on Jilliby State Conservation Area (SCA). The revised DA reduces the disturbance footprint of the Tooheys Road site by 26 hectares (ha) (from 89 ha to 63 ha), as the rail loop is no longer required. This reduces the amount of clearance of several native plant communities, some of which are endangered ecological communities. However, the offset package remains unchanged and this provides a higher offset ratio than the one described in the original Environmental Impact Statement (EIS).*

***Response***

Noted.

### 5.8.4 Proposed Longwall Panels West of Current Project Area

***Issues 37, 38 and 39***

*The new EIS has a map of the mine layout for the current DA (Figure 2 of the Main Report of the EIS) which includes 11 longwall panels in the far west of the project area that are identified as 'Potential Future Mining Areas'. These 11 longwall panels were part of the original mine plan when the first development application for the mine was lodged in 2006.*

*However, during the assessment of this proposal the Planning Assessment Commission (PAC) (November, 2010), the PAC recommended against secondary extraction (i.e. longwall mining) under Jilliby SCA, at least not until after a comprehensive assessment of surface features and mine subsidence impacts and effects had been conducted to the satisfaction to the Director General of the Department of Planning and Environment (DPE). Further, the PAC recommended that any changes to the proposed mine layout would first require a comprehensive assessment to the satisfaction to the Director General of DPE.*

*While the proponent may seek a subsequent development application to undertake longwall mining in these western portions underlying Jilliby SCA, OEH requests that longwalls not be shown in the 'Future Mining Areas' section of the map because:*

*a) There is no certainty that these longwalls will be approved in the future;*
*b) If longwalls are proposed in the future, their dimensions and location may be different; and*
*c) OEH notes the position taken by OPE that should mining proceed in the western section, sensitive areas need to be avoided.*

*Given this position, OEH believes that the location of the unapproved longwalls should not be shown and that only the 'boundary' of the area intended for further development should be indicated.*

***Response***

The 11 longwall panels are shown as potential future mining areas and are not part of the Project or the Amendment. **Figure 1** shows the longwall layout for the Amended Project.

These areas are referred to as ‘potential future mining areas’ with an ‘indicative longwall panel layout’, which implies that their layout is not definitive or certain. The ‘potential future mining areas’ are shown to clearly distinguish between the longwall panels that are included in the current application and the panels that are not included.

Should the additional 11 longwall panels underlying the Jilliby SCA be considered for mining in the future, a separate development application would be submitted. A comprehensive environmental assessment would accompany such an application, as required under the EP&A Act, and would be the subject of public consultation and an assessment by DP&E and the PAC.

### 5.8.5 Securing Offset Land

***Issue***

*Chapter 6 of the EIS for the revised DA includes a description of the proposed offset package for the Wallarah 2 Coal Mine. However, unlike the Preliminary Assessment Report for this project it does not include details of the mechanism(s) that may be used to secure the offset land, or when the offset package would be secured. Several options for securing the offset package have already been discussed with the proponent and these are included as one of OEH's recommended conditions of consent (see below).*

***Response***

The suitable options for mechanisms to protect offset land, as identified in Section 3.9.10 of the RTS1, have not changed as a result of the Amendment.

The appropriate protection mechanisms and timeframe for securing offset land will be determined following further consultation with relevant government agencies.

Condition 18 under Schedule 4 of the Recommended Development Consent, as included in the EAR for the Original Project, requires WACJV to provide appropriate long-term security for the land within the Biodiversity Offset Strategy within 12 months of the commencement of construction. This condition remains appropriate.

### 5.8.6 Landowner's Consent for Mining under Jilliby State Conservation Area

***Issue***

*The mine plan for the modified DA includes longwall mining under part of Jilliby SCA. That is despite the removal of 11 longwall panels in the far west of the original mine plan. The undermining of national park estate requires landholder's consent from the Minister administering the National Parks and Wildlife Act 1974. Such consent would only be considered once the final form of the project is known.*

***Response***

Refer to response to **Section 5.8.1**.

### 5.8.7 Conditions for Threatened Biodiversity

***Issue***

*Following OEH's review of the proposed change to the development application for the Wallarah 2 project OEH recommends the following conditions of consent:*

*1. Biodiversity offsets must be secured within 12 months of any consent being granted by an appropriate permanent mechanism, such as:*

- *a) Biobanking Agreement under Part 7 A of the Threatened Species Conservation Act 1995;*
- *b) Dedication of land under the National Parks and Wildlife Act 1974;*
- *c) A Trust Agreement under the Nature Conservation Trust Act 2001; or*
- *d) A Property Vegetation Plan registered on title under the Native Vegetation Act 2003.*

*2. The proponent will require landholder's consent from the Minister administering the National Parks and Wildlife Act, 1974 prior to be being allowed to mine under Jilliby State Conservation Area.*

***Response***

Refer to **Section 5.8.1** and **Section 5.8.5**.

## 5.9 TRANSPORT FOR NSW

### 5.9.1 Engagement

***Issue***

*TfNSW has reviewed the submitted information and has no further comment on the development application.*

*TfNSW supports the continued engagement between the transport agencies and Wyong Areas Coal Joint Venture.*

***Response***

Noted. WACJV will continue to consult with the appropriate transport agencies, as required.

## 5.10 AUSTRALIAN RAIL TRACK CORPORATION

***Issue***

*Following your request in March 2016 for ARTC to model the capacity availability for the Wallarah 2 Coal Project volumes on the ARTC Hunter Valley Network I can confirm that there is sufficient capacity on the ARTC Hunter Valley Network to accommodate the indicated volumes without the requirement for additional infrastructure to be developed.*

*I would like to take the opportunity to reiterate that as per our discussion in May 2016, that although there is sufficient capacity within the Hunter Valley Network to accommodate the Wallarah 2 Coal volumes, the operational complexities between integrating the dynamic ARTC Hunter Valley coal chain (HVCC) with the adjoining Transport for NSW (Railcorp) network's timetable will create significant challenges for successful delivery of the proposed the Wallarah 2 Coal Project volumes across the two rail networks.*

*Due to the dynamic nature of the demand profile of the HVCC, the risks will change from day to day and will require close coordination between Wallarah 2, Railcorp, ARTC and your rail haulage provider to manage any issues that present.*

***Response***

Noted. WACJV will continue to consult with ARTC, TfNSW and Railcorp to address operational interactions between the two rail networks.

## 5.11 CENTRAL COAST COUNCIL

The recent submission received from the Central Coast Council (CCC) included a number of issues previously raised by Wyong Shire Council (WSC) in its submission (dated 20 June 2013) in response to the EIS. These issues were addressed in the RTS1 for the Original Project, which should be referred to for further information.

The issues raised in WSC's submission were considered by the PAC in its review of the Original Project. The PAC has considered the merits of the Project with respect to these issues and has concluded that there is merit in allowing the Project to proceed.

### 5.11.1 Strategic Planning Proposals

***Issue***

*A planning proposal (RZ/14/2014) was lodged over the adjacent land to the north of the proposed rail spur.*

*The planning proposal includes low-density residential allotments, rural residential land and 1.4ha of commercial development. Conditional Gateway approval was granted in May 2016 by the Department of Planning and Environment (DoPE). The proposal includes land adjacent to the MNRL, with the southern extent of the residential land located approximately 240m north of the proposed rail spur.*

*The amended assessment prepared by Hansen Bailey omitted the planning proposal and does not comment on the potential impacts posed by the proposed new coal delivery system.*

***Response***

CCC has since confirmed that the planning proposal referred to in this submission is DLALC's proposal to rezone land at Bushells Ridge and Doyalson. The potential interactions between DLALC's proposal and the Amended Project are discussed in **Section 5.1.6**.

### 5.11.2 Detailed Design Drawings

***Issue***

*The detailed design drawings do not provide an accurate representation of the proposed coal delivery system. This extends to the following:*

- *No details are provided on the elevated road crossings over Tooheys Road, the alignment along Tooheys Road / Doyalson Link Road or the connection with the coal load out facility.*
- *The omission of detailed designs of the structures identified above does not allow for a comprehensive assessment.*

***Response***

Additional design drawings are provided in **Appendix C**.

### 5.11.3 Flooding

***Issue***

*The proposed rail spur will require the construction of two (2) new crossings over the Spring Creek tributaries located at existing rail bridges.*

*The new structures will be located within the tributaries and will be affected by the 1% AEP flood levels.*

*The flood modelling undertaken by G Herman & Associates indicated that the new structures would result in afflux of 0.01m at Bridge 1 and 0.03m at Bridge 2. Velocities during these large storm events will increase flows by a maximum of 0.04m/s around the new bridges.*

*As the proponent has provided no specific details on the bridge designs, it is difficult to gauge the robustness of the flood modelling. Based on the modelling provided, it would appear that the proposal will not significantly affect the flood patterns in the area, but this cannot be determined with certainty.*

*It is understood that the final design of any structures is to be discussed with the NSW Office of Water (NOW) to ensure limited impact on the riparian corridor.*

***Response***

The crossings of Spring Creek (and its tributaries) will be designed so that the impacts on flood regimes are within the predictions of the flood modelling. WACJV will consult with the appropriate regulatory authorities during the detailed design phase.

### 5.11.4 Noise Impacts

***Issue 1***

*The proponent provided acoustic modelling showing the changes in the acoustic environment. The modelling included the construction of a 4.5m high noise barrier along the southern section of the new rail spur. The barrier will extend approximately 50m north from the Doyalson Link Road.*

*The modelling indicated that the new coal delivery plant would have a negligible impact on the residential development in Blue Haven and Wyee South.*

*However, ongoing noise monitoring must be undertaken to verify the modelling during the operational stage of the development. The proponent must address and rectify any noise emissions found to be above those specified in the acoustic modelling.*

***Response***

Conditions 1 to 5 under Schedule 4 of the Recommended Development Consent include appropriate requirements for mitigating and monitoring noise impacts. This includes the requirement to prepare a Noise Management Plan (NMP), which will include a detailed Noise Monitoring Program to measure and evaluate the effectiveness of noise mitigation measures. All proposed noise controls for the Amended Project will be included in the NMP.

***Issue 2***

*Noise levels at the dwellings along Thompson Vale Road and Bushells Ridge Road will increase by up to 4dB. The report states that this level of impact can be described as a 'Moderate' degree of affectation, under the Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Development (VLAMP). The recommendation includes the installation of 'reasonable and feasible noise mitigation measures such as double glazing, insulation and/or air conditioning will be made available to affected landowners, upon request.'*

*The proposed changes in the ambient acoustic environment will result in significant impacts on these residences. The coal delivery system must be redesigned or additional mitigation measures developed to ensure these impacts are eliminated.*

***Response***

As detailed in Section 6.4.3 of the Amendment Document, WACJV has consulted with potentially affected landowners and will offer to apply acoustic treatments in accordance with the VLAMP. WACJV will continue to consult with the affected landowners prior to and during construction and operations to ensure assistance is provided and matters to be dealt with under the VLAMP are expediently addressed.

The Amended Project has adopted various best practice noise controls, as outlined in **Table 3**.

***Issue 3***

*No modelling of the impacts on the future residential and commercial development to the north of the proposed rail spur was undertaken. The noise assessment therefore does not specifically address the potential impacts on the areas mentioned above.*

*The proponent must consider amendments to the current design to reduce the potential acoustic impacts. The amended assessment and modelling showing the potential impacts on the land to the north of the coal load out facility must also be provided.*

***Response***

Refer to the response in **Section 5.1.6**.

### 5.11.5 Air Quality

***Issue 1***

*Updated $PM_{2.5}$ and $PM_{10}$ modelling was provided as part of the amended proposal. The modelling indicated that air quality would not significantly change from that expected under the original proposal.*

*The modelling does not however include impacts on the future residential and commercial development on the land included in RZ/14/2014 and on the Council Land Holdings. Additional modelling must be provided to identify the potential air quality impacts on the land to the north. Where necessary, appropriate mitigation measures must be provided.*

***Response***

Refer to the response in **Section 5.1.6.**

***Issue 2***

*The consent authority must ensure that specific air quality monitoring is undertaken as part of the ongoing operation of the proposed mine. This must include permanent dust deposition gauges to be located at the:*

- *Southern extent of the future residential development included in RZ/14/2014;*

- *Western extent of the Council Land Holdings;*
- *Western extent of the existing residential development in Blue Haven; and*
- *Existing gauges D3 and D4 (as shown on Figure 2.1 of the Air Quality and Greenhouse Gas Assessment prepared by Pacific Environment Limited).*

*Any emissions exceeding the relevant guidelines must be addressed and appropriate mitigation measures put in place to negate any health impacts resulting from the exceedances.*

***Response***

No exceedances of any air quality criteria are predicted from the Amended Project as demonstrated in Section 6.2.3 of the Amendment Document.

Conditions 7 to 9 under Schedule 4 of the Recommended Development Consent include appropriate requirements for monitoring and mitigating air quality impacts. This includes the requirement to prepare an Air Quality Management Plan, which will include an Air Quality Monitoring Program. The Air Quality Monitoring Program will consider the locations of the additional receptors that were considered in the AQGGAA.

### 5.11.6 Ecology

***Issue***

*Council's Ecologist has reviewed the Ecological Impact Assessment – Addendum prepared by Cumberland Ecology (June 2016) and notes that the amendments result in an overall reduction of impacts on biodiversity values compared to the original proposal.*

*The report identifies potential habitat in the study area for the species listed below, however, surveys were not undertaken during their optimal survey period (in accordance with Council's Flora and Fauna Survey Guidelines (2014)):*

- *Caladenia tessellata (Sep – Oct);*
- *Corunastylis sp. 'Charmhaven' (Feb – Mar). The earliest that known populations of the species have been detected is 29 January, with the majority detected in February and March (Payne, 2014);*
- *Corunastylis insignis (Sep – Oct);*
- *Tetratheca juncea (Sep – Oct); and*
- *Thelymitra adorata (Sep – Oct).*

*The significance of impacts to these species cannot be fully assessed until surveys are undertaken in accordance with Council's survey guidelines. Prior to the consideration of the application, it is requested that surveys are undertaken for the species during the periods listed above and the appropriate survey time should be further refined by confirming with Council when known reference populations are flowering.*

*The results of targeted flora surveys should be used in updated Assessments of Significance for the species.*

***Response***

The species listed by Central Coast Council are listed flora species under the *threatened Species Conservation Act 1997* (TSC) and EPBC Act and are outlined **Table 10**.

**Table 10**
**Listed Flora Species Identified by Central Coast Council**

| Species | TSC Act | EPBC Act |
|---|---|---|
| *Caladenia tessellata* | E | V |
| *Corunastylis sp* Charmhaven | CE | CE |
| *Corunastylis insignis* (formerly *Genoplesium insigne*) | CE | CE |
| *Tetratheca juncea* | V | V |
| *Thelymitra adorata* | CE | CE |

*V = Vulnerable, E = Endangered, CE = Critically Endangered*

Targeted searches for *Tetratheca juncea* were conducted by Cumberland Ecology for the EIS and searches were incorporated into the vegetation surveys conducted between November 2015 and January 2016 for the Amendment. As this species is known to flower from late July to December-January (NPWS – EIS survey guidelines for *Tetratheca juncea*), it is considered that surveys were conducted within a suitable flowering period for detection. Although this species was not detected during the 2015-2016 surveys, the species is still considered highly likely to occur within the Infrastructure Boundary (based on the similarity of habitat to known locations) and has been assessed accordingly. Furthermore, this species is known to occur within the proposed offset areas and impacts on this species are considered to be adequately offset.

Targeted surveys for the threatened orchid species, including *Caladenia tessellata, Corunastylis insignis* and *Thelymitra adorata*, were conducted for the Original Project, as described in the EIS. Surveys for *Corunastylis sp* Charmhaven were conducted within suitable habitat at the Tooheys Road Site in late January 2014 based on available information at the time of survey. As the majority of the Tooheys Road Site remains unchanged from the Original Project, the majority of the Tooheys Road Site is considered to have been surveyed during appropriate flowering periods for threatened orchid species.

The timeframe for preparation of the Amendment Document did not coincide with the known flowering period for the target orchid species. As a result, targeted orchid surveys were not conducted within the Addendum Study Area (as defined in the Amendment Document). Instead, assessments for these threatened orchid species within the Addendum Study Area were limited to detailed desktop assessments. These assessments considered the likelihood of occurrence of these threatened orchid species based on the occurrence of vegetation communities known to support the orchid species, condition of the vegetation communities within the Addendum Study Area, results of surveys conducted in habitats of similar condition within other areas of the Tooheys Road Site and locations of known populations.

The majority of the Addendum Study Area passes through disturbed areas of an active quarry site as well as areas adjacent to the rail corridor. Accordingly, the Addendum Study Area is not considered to constitute suitable habitat for these threatened orchid species. Although these species have not been detected at the Tooheys Road site, they are considered to have some potential to occur and have been assessed accordingly. Furthermore, suitable habitat for these species will be conserved within the proposed offset areas. Therefore, further targeted surveys to quantify the potential occurrence of these species and a reassessment of Assessments of Significance are not considered to be warranted.

As all the flora species referred to in CCC's submission are listed under the TSC Act, OEH were informed of the survey effort and desktop assessments for the threatened flora species during a meeting in March 2016. It is noted that OEH was satisfied with the additional assessments conducted for these threatened species and have not raised concerns about the survey effort in their submission. Furthermore, it is also noted that DoEE have not raised concerns about the survey effort and are satisfied with the assessments conducted for threatened species, including threatened orchid species, as listed under the EPBC Act.

Nonetheless, due to the Critically Endangered status of the majority of the orchid species, appropriate pre-clearance surveys for these species will be incorporated into the Biodiversity Management Plan for the Project. If translocation is considered a viable strategy, suitable translocation plans will be implemented if these species are detected within the Infrastructure Boundary.

### 5.11.7 Visual Impacts

***Issue***

*The applicant provided an addendum to the Visual Impact Assessment (VIA) to address the proposed amendments. This included the assessment of six (6) new viewsheds along the conveyor alignment and Nikko Road reserve. The assessment concluded that a 'Moderate' impact would result from the new coal delivery system and will therefore not significantly affect the surrounding development.*

*The VIA did not include any photomontages showing the view from the surrounding properties towards the 27.5m high coal load out facility. It is therefore difficult to understand the level of impact.*

*The proponent must provide an amended VIA to include:*

- *an assessment of the visual impacts on the land to the north of the proposed coal load out facility;*
- *the Council Land Holdings; and*
- *photomontages of all the viewsheds included in the amended VIA.*

***Response***

Refer to the response in **Section 5.1.5**.

### 5.11.8 Service Connections

***Issue***

*The proponent amended the proposed sewer connection that connects the Tooheys Road site to the CSTP.*

*The infrastructure is to be located along a similar alignment as the proposed conveyor system. At the Doyalson Link Road rail crossing, the sewer will follow the Nikko Road reserve to the CSTP in the south.*

*Should the proposal be granted approval, the proponent must liaise with Council to ensure the sewer alignment is acceptable. Potential servicing synergies with the future industrial development to the south of the Link Road may also be available in the future.*

*Furthermore, the following conditions relating to Council's water and sewer services should be imposed, in the event of any approval:*

- *No disposal of brine or mine water to the sewer;*
- *Connection of potable water to Buttonderry and Tooheys Road sites;*
- *Sewage connection to Buttonderry and Tooheys Road sites; and*
- *Connections to be in accordance with Council's requirements.*

***Response***

WACJV will continue to consult with CCC regarding the alignment of the proposed sewer connection (see **Figure 3**), as well as service connections to the Tooheys Road and Buttonderry Sites more generally. The Amended Project application does not involve any disposal of brine or untreated mine water to the municipal sewerage system.

### 5.11.9 Construction Management

***Issue***

*The amended submission provides limited details on the management of the construction of the coal delivery system.*

*In the event of approval, a Construction Environmental Management Plan (CEMP) must be prepared to provide details on the access arrangements, traffic management procedures, depot locations and construction activities during the construction phase of the development.*

***Response***

Construction details were provided in Section 3.12 of the EIS and the changes due to the Amendment were detailed in Section 2.4 of the Amendment Document. The Rail Study (Appendix G of the Amendment Document) contains details regarding the construction of the rail facilities and associated road access.

In addition, the NVIAA (Appendix E, Amendment Document) includes an indicative construction plan and method for the civil and construction works associated with the Project in relation to noise.

WACJV has committed to the preparation of Environmental Management Plans (which are also required and stipulated in the draft conditions of consent), which will include controls to mitigate and manage potential impacts associated with construction activities.

## 5.12 LAKE MACQUARIE CITY COUNCIL

### 5.12.1 Rail Traffic Noise

***Issue***

*The movement of coal from the development to the Newcastle Port may impact sensitive receptors in the City of Lake Macquarie.*

***Response***

Potential noise impacts associated with coal transportation were assessed in Section 8.5 of the Noise and Vibration Impact Assessment (Appendix N of the EIS) and Section 8.2.2 of the NVIAA (Appendix E of the Amendment Document).

Potential air quality impacts associated with coal transportation were assessed in Section 9 of the Air Quality and Greenhouse Gas Assessment (Appendix L of the EIS) and Section 8 of the AQGGAA (Appendix D of the Amendment Document).

### 5.12.2 Rail Network

***Issue***

*The LGA's rail network comprises the Main Northern Railway line and several unloading/loading loops. The amended Rail Study accompanying the amended development application models additional train cycles for delivery of coal to port terminals at Kooragang at 3-4 cycles per day, or on demand for ship loading (6 cycles per day for 6 days), with projections of coal production up to 2026. The report states that rail modelling allows for capacity of six available train cycles per day, achieving sufficient network capacity without the need for additional rail infrastructure.*

*However, the modelling assumes no increase in existing passenger and non-coal freight train frequency south of Newcastle. This is in direct conflict with the stated objectives of Lake Macquarie City Council Lifestyle 2030 Strategy below:*

> *"Other than bulk movement of coal, in 2010 the rail network is generally not used for freight transport by businesses located within the LGA. LS2030 encourages the consideration of rail freight as a transport alternative that should be considered in the design of industrial areas near the rail system. The potential Killingworth employment land provides an opportunity to incorporate rail access if the foreshadowed Newcastle rail freight bypass route is built nearby.*
>
> *The nine railway stations in the LGA provide access to the passenger rail service to the Central Coast, Sydney, and Newcastle. The public transport interchanges at Morisset, Fassifern, and Glendale will become increasingly used as the urban intensification, mixed use and sustainability policies of LS2030 are implemented.*

*Three major priorities exist for the rail system, implementation of which will require the coordinated activities of Council, City Rail, Transport NSW, Hunter Buses and the Roads and Maritime Services. Delivery of an improved rail system is on-going, with improvements anticipated in the next 10-15 years.*

- *Ensuring local and commuter needs of the community are met by providing frequent, reliable, convenient, and safe services, together with supportive interchange and cycling infrastructure.*
- *Minimising environmental impacts, such as noise and vibration, on surrounding land uses should be incorporated where necessary.*
- *Encouraging freight with an origin or destination in the LGA to use rail as a mode of transport.*

*Council is concerned that in the event that the rail network fails or is not functional, road transport is not a viable alternative given the significant social, environmental and economic impacts of road haulage.*

*The amended development application does not take into account future variations in commuter and non-coal freight use. Capacity projections made within the amended Rail Study are based on current commuter and non-coal freight services, with future capacity estimations only recording coal freight use. Therefore, the capacity projections conflict with the aims of Council's Lifestyle 2030 Strategy. These aims include encouraging non-coal freight use within industrial areas south of Newcastle and increasing passenger rail services situated around transport interchanges as urban intensification and mixed use policies are implemented.*

***Response***

Rail network modelling (Railsys) was undertaken to confirm that there is sufficient network capacity to accommodate the train movements associated with the Amended Project. As explained in **Section 5.1.1**, the rail modelling considered the Northern Sydney Freight Corridor and assumptions of future passenger requirements.

WACJV is not seeking approval to transport product coal via the road network. There is sufficient capacity in the coal handling infrastructure to accommodate short term disruptions to the rail network.

### 5.12.3 Awaba Rail Loop

***Issue***

*The amended Rail Study states a third transport option of a 30TAL wagon train with 54 wagons is likely to require the use of a proposed Awaba Rail Loop.*

*The proposed infrastructure improvement in Lake Macquarie is one additional freight-passing loop and signals at North Awaba. This is not considered adequate to address all the potential pressures on the existing rail services south of Newcastle.*

*In addition, there is no consideration given to the environmental impacts of the new Awaba Loop, particularly if it was necessary to build on land zoned E2 Environmental Conservation. Further, there is no clear indication of who will design, fund or construct the new infrastructure.*

***Response***

The revised Rail Study (Appendix G of the Amendment Document) concluded that the use of 30 tonne axle load (TAL) wagons was not viable. Accordingly, this wagon configuration was not adopted for the Amended Project. Instead, the Amended Project will utilise trains with 25 TAL wagons.

The rail network modelling undertaken for the Amended Project has determined that there are sufficient available train paths for the train movements associated with the Project. The passing loops at Awaba that were previously proposed for the Original Project are not required for the Amended Project.

### 5.12.4 Air Quality

***Issue***

*Emissions that may impact sensitive receptors in the City of Lake Macquarie, are largely related to rail freight. The proposed amendment to the development will see an increase in coal rail movements through the City of Lake Macquarie, from 38 rail movements (120 tonne wagons, previous applications), to 44 rail movements (100 tonne wagons for the first three years of operations) and 60 rail movements (100 tonne wagons) for the remaining 21 years of operation.*

*The increase in coal transport through the City is of interest to Council, as is the period of the rail movements. In order to allow for a comprehensive understanding of the proposal as amended, Council requests that the units for rail movements be clarified (e.g. movements per month/year, etc.). Council notes that rail movements will increase by ~15% and 60% for the two stages of operation and the impact on sensitive receptors around the rail corridor has not been thoroughly investigated.*

*As such, Council requests that the proponent comment on the impact of dust and particulate matter from the current scenario and the two stages of development, due to increased rail movements and stirring of dust in the rail corridor. The investigation should relate to cumulative impact and should be undertaken with reference to the findings of the following reports which concluded that, among other things, the vast majority of particulate matter from the rail corridor is due to stirring from passing trains (coal and otherwise):*

1. *Re-analysis of ARTC Data on Particulate Emissions from Coal Trains (Ryan L., 2014 – on behalf of the NSW EPA);*
2. *Additional Analysis of ARTC Data on Particulate Emissions in the Rail Corridor (Ryan L., 2015 – on behalf of the NSW EPA); and*
3. *Other relevant studies undertaken by the NSW EPA.*

*Should the revised investigation conclude that cumulative emissions will not impact sensitive receptors above relevant impact assessment criteria, then Council recommends that a suitable condition be imposed on any consent granted to ensure that dust from coal wagons is controlled and managed appropriately.*

***Response***

A revised Rail Study was completed for the Amendment, as presented in Appendix G of the Amendment Document. As explained in Section 3.7 of the revised Rail Study, the Amended Project will utilise a train configuration of 44 x 100 t wagons during Years 4 to 6 and a configuration of 60 x 100 t wagons thereafter.

The adopted train configurations for the Amended Project consist of more wagons than the trains for the Original Project, thus reducing the number of train cycles required. The Amendment requires generally between 3 and 4 train cycles per day, which is less than the average 4.33 train cycles per day (and maximum of 7 under campaign loading conditions) required in the Original Project.

The submission from LMCC incorrectly states that the Amended Project will require 44 rail movements in the first three years of production and 60 rail movements for the following 21 years.

The Amended Project will require 3 to 4 train cycles per day maximum over the entire mine life (or 6 to 8 one-way movements). It therefore appears that LMCC has misinterpreted the number of wagons for the number of train movements.

Section 8 of the AQGGAA presents a detailed summary of all government commissioned reports related to coal train movements that were publicly available at the time of writing, including:

- *Re-analysis of ARTC Data on Particulate Emissions from Coal Trains* (Ryan L., 2014 – on behalf of the NSW EPA); and
- *Additional Analysis of ARTC Data on Particulate Emissions in the Rail Corridor* (Ryan L., 2015 – on behalf of the NSW EPA).

Since the completion of the AQGGAA, the NSW Chief Scientist has released the "*Final Report on the Independent Review of Rail Coal Dust Emissions Management Practices in the NSW Coal Chain*" (NSW Government, 2016). The report concluded that it is not possible to recommend any additional mitigation measures as there is currently insufficient knowledge and data about the amount and distribution of coal emissions in the coal rail corridor.

As explained in Section 8 of the AQGGAA, TSP emissions from the train movements associated with the Project would account for less than 0.5% of total Project emissions and as a result, any changes in ground level concentrations due to this source would be extremely low.

The PAC review for the Original Project concluded that *'air quality impacts can be managed and agrees to the Department's proposed conditions of consent'*. The dust controls that were previously committed to for the Original Project will be implemented for the Amended Project.

### 5.12.5 Proposed Conditions of Approval

***Issue***

*Should the Department countenance approval of the application, Council recommends the following conditions be imposed.*

*Prior to the transport of any coal along the rail network to the port of Newcastle, the proponent shall prepare a comprehensive Air Quality Management Plan that includes the assessment and management of rail freight emissions (fugitive and otherwise). At a minimum, the proponent shall commit to the number of maximum rail movements as prescribed in the approved project documentation and to Level 1 watering of coal wagons prior to haulage.*

*Complaints concerning particulate matter and other pollutants from rail movements shall be thoroughly investigated and revisions to operations to address complaints shall be formalised in a revised Air Quality Management Plan. Complaints regarding air pollution emanating from the rail corridor (and other emissions as relevant to the project), shall be discussed with the appropriate regulatory authority and managed accordingly.*

*In the interest of protecting the public health of residents within the City of Lake Macquarie, Council recommends the imposition of a condition of consent which requires the development to comply at all times with applicable NSW acceptable criteria levels and guidelines for environmental health (including noise).*

*Council recommends that a condition be imposed on any consent granted to ensure that the Biodiversity Offset Package includes a legally binding mechanism and funding provision that ensures offset areas are conserved in perpetuity.*

*Should the proposed conveyor infrastructure require power (either full or partial power), Council recommends the use of renewable energy.*

***Response***

The following conditions were included in the Recommended Development Consent which addresses most of the requests above, as provided in the EAR for the Original Project:

- Conditions 3 and 4 under Schedule 4 require the implementation of best management practices to minimise rail noise and ensure compliance with operating noise criteria (as specified in Table 3 under Schedule 4);
- Conditions 7 and 8 under Schedule 4 require the implementation of all reasonable and feasible avoidance and mitigation measures to be employed so that air quality criteria are not exceeded at privately owned residences;

- Condition 9 under Schedule 4 requires the preparation of an Air Quality Management Plan in consultation with the appropriate regulatory authorities;
- Conditions 17 and 18 under Schedule 4 require the applicant to implement the Biodiversity Offset Strategy within 12 months and to provide appropriate long-term security for the offset land.

These conditions remain appropriate for the Amended Project.

Measures to reduce the greenhouse gas emissions of the Project will be included in the Air Quality Management Plan.

The use of renewable energy to power the conveyor is not feasible.

### 5.12.6 Community Comments Received by Mayor

*Council's Mayor received the following comments and concerns raised by local residents. These are conveyed to the Department for consideration:*

***Issue 1***

*1) "Bushells Ridge Road and Hue Hue Road was not mentioned in the Environmental Impact Study.*

***Response***

Both the EIS and Amendment Document assessed the potential impacts of the Project on the surrounding environment, including properties located on Bushells Ridge Road and Hue Hue Road.

***Issue 2***

*2) Dust to our home and drinking water – tank water is the main supply of water for domestic use eg: Drinking, bathing and washing. The water is collected from the roof of our dwellings and this will be affected by the dust from this mine in Tooheys Road Road, which runs off Bushells Ridge Road.*

***Response***

Research conducted in Hay Point in Queensland (in close proximity to the Dalrymple Bay Coal Terminal) investigated the potential health risks as a result of elements contained in coal dust deposited on rooftops entering rainwater tanks systems used for potable supply (Lucas et al., 2009). Leaching tests were conducted on numerous coal types to identify the potential for trace element release into rainwater in the tank. In addition, rainwater samples were collected from both the rainwater tanks and taps of three homes within the dust deposition zone of the Dalrymple Bay Terminal.

The leaching tests indicated that negligible amounts of trace elements in coal dust were released in the rainwater, and all trace elements were below the thresholds in the Australian Drinking Water Guidelines (ADWG). The ADWG provide the threshold levels considered safe for human consumption. The research concluded that *"tank and tap samples were all below ADWG and indicated a minimal likelihood of coal dust being an issue with respect to human health*".

In 2008, Associate Professor Barry Noller from the Centre for Mined Land Rehabilitation, University of Queensland conducted a study to investigate the relationship between mining and levels of lead in the air and in rainwater tanks (Noller, 2009). The village of Camberwell and an outlying rural area of Muswellbrook were chosen for the study because of their close proximity to coal mining operations and local homes. A total of 36 houses were involved in the sampling study. This research involved extensive sampling of local rainwater tanks, soils, airborne particles and house dust. The key findings were as follows.

- No tank water exceeded the ADWG trigger for lead;
- There was no significant difference in drinking water lead levels between houses close to coal mining operations and those obtained from background sites including Newcastle town water;
- Some tanks contained elevated lead levels in historical sludge; however, this was not contaminating the tank water;
- Lead levels in mined overburden, coal and topsoil were low and within normal background lead levels;
- Airborne particles (or Atmospheric Total Suspended Particulates) taken by High Volume Air Samplers indicated that there is no significant transfer of lead from mine overburden material; and
- Out of all the dust samples taken inside houses, only two window tracks were found to contain elevated lead levels (possibly from historic house dust or lead in paint).

The results of this study show that there is no demonstrated link between coal mining in the Hunter Valley and health risks associated with lead. The review found that lead levels in the air and rainwater tanks are significantly below the relevant national standards. It is noted, however that all rainwater tanks should be maintained in accordance with the advice outlined in NSW Health's Rainwater Tanks brochure to ensure water is safe for drinking. Regardless of the above, it is good practice for any rain water system in any location to install a simple first flush system to prevent particulate matter (or any other undesirable material) that has accumulated on the roof from being washed into the rain water tank.

The predicted dust deposition levels for the Amended Project are an order of magnitude below the relevant criteria. Based on the predicted dust deposition levels and the aforementioned studies, the Project is not expected to give rise to any risks associated with contamination of water collected in rainwater tanks.

***Issue 3***

*3) Noise associated with the construction and then the operation of the mine 24 hours every day (24/7). The stockpile is in the same place as before so we will still get the same amount of dust. We are approx. 200 metres from this stockpile of coal.*

***Response***

The potential noise impacts of the Amended Project were assessed in Section 6.4 of the Amendment Document. The nearest private residence (occupied house) is located approximately 700 m from the proposed product coal stockpile and is separated from the site by the M1 Motorway and Tooheys Road.

WACJV has consulted with residents in the vicinity of the Project and identified air quality and noise amenity concerns that needed to be addressed. This consultation has driven the focus on ensuring appropriate design and operation of the stockpiling facilities, including stockpile characteristics (location, height and orientation), train loading operations, and best practice dust and noise mitigation measures.

The potential air quality impacts of the Amended Project were assessed in Section 6.2 of the Amendment Document. The Amended Project is predicted to comply with the relevant air quality criteria at all private residences.

***Issue 4***

*4) Glare of lights all night from this mine which will affect our sleep and this in turn will affect our health.*

***Response***

Measures to manage lighting impacts are outlined in Section 6.8.4 of the Amendment Document. WACJV has designed the surface infrastructure such that the requirement for external lighting is minimised. Where they are required, external lights will generally be directed downwards and fitted with low lux lamps.

***Issue 5***

*5) Traffic to and from the mine along Bushells Ridge Road will affect the residents and the normal traffic flow now. Bushells Ridge Road is a rural road and even two school bus have difficulties passing each other on Bushells Ridge Road.*

***Response***

The primary routes that will be used to access the Tooheys Road Site and Buttonderry Site are identified in Section 5.4 of the Traffic and Transport Impact Assessment (Appendix Q of the EIS).

Bushells Ridge Road is generally only used by vehicles travelling to the Tooheys Road Site from the west. Only a small minority of the workforce (approximately 30 personnel) will be based at the Tooheys Road Site. Therefore, the Project will not result in a significant increase in traffic along Bushells Ridge Road.

***Issue 6***

*6) Trains, the impact on commuters travelling on the train to Newcastle or Sydney with additional eight coals trains will impact to the time and length of train journey for commuters and not to mention the breakdowns that occur with this additional trains on the railway line.*

***Response***

As discussed in Section 6.6.3 of the Amendment Document, rail network modelling (undertaken by TfNSW) determined that there are sufficient paths available for the train cycles required for the Amended Project. That is, the Amended Project will not affect the scheduling of other train services on the Main Northern Rail Line.

***Issue 7***

*7) The impact on Wyong Hospital and we were not included in the Health Report (Bushells Ridge Road & Hue Hue Road Residents) that was written by Dr Peter Lewis Area Director of Public Health for North Sydney and the Central Coast.*

***Response***

A Health Risk Assessment (HRA) was included as Appendix M of the EIS. The HRA assessed the potential mortality and morbidity rates that would result from the air quality and noise impacts of the Project. Therefore, the potential health risk has been assessed for all areas that are predicted to be affected by dust and noise. NSW Health has provided a revised response as discussed in **Section 5.13**.

***Issue 8***

*8) Animals, there has been no study into the fauna and flora species in this area and the impact that will take place to these species.*

***Response***

The potential impacts to flora and fauna have been comprehensively assessed in Section 7.9 of the EIS and Section 6.5 of the Amendment Document.

***Issue 9***

*9) I wonder if the new development in Bushells Ridge Road have any knowledge of this development?*

***Response***

As detailed in Section 5 of the EIS and Section 4 of the Amendment Document, an extensive stakeholder engagement program has been undertaken to inform the community of the Project. In addition, both the EIS and Amendment Document have been placed on public exhibition. Direct consultations with subdivision proponents have included those located both south and north of Bushells Ridge Road. Potential impacts on DLALC's proposed residential development are discussed in detail at **Section 5.1.6**.

***Issue 10***

*10) On the first EIS for Wallarah 2 project Wyee did not exist in the first EIS and was bought to the attention of MP Greg Piper, now the amendment only mentions the change to rail loop.*

***Response***

The air quality and noise assessments undertaken for the EIS determined that the Original Project was not expected to result in impacts to residents in Wyee. Since the Amendment involves the relocation of the proposed train load out facility to a position that is closer to Wyee, the Amendment Document has considered potential impacts to receptors in Wyee.

***Issue 11***

*11) As per article on NEWS ABC on the 4th August 2016 on the clean-up bill to Queenslanders will this occur at the Coal mine – Wallarah 2 in 28 years time after the closure of the mine?*

***Response***

Condition 29 under Schedule 4 of the Recommended Development Consent requires the preparation of a Rehabilitation Management Plan in consultation with the appropriate regulatory authorities.

In addition, mining leases issued under the *Mining Act 1992* (NSW) require the establishment of a rehabilitation bond, which is released once suitable mine closure outcomes have been achieved.

***Issue 12***

*12) On Professor Pell information the coal mine will frack the aquifers which supply Wyong and Gosford council for their town water.*

***Response***

Hydraulic fracturing (or 'fracking') is the process of injecting a pressurised liquid into a rock to generate fractures within the rock. The Project does not involve any hydraulic fracturing.

***Issue 13***

*13) The KORES EIS mentions that 100,000 people will die from health related illness cause by the mine and this has by admitted by the KORES (the public health report did not mention the residents of WYEE).*

*Our property is 224 Bushells Ridge Road, Tooheys Road runs off Bushells Ridge Road at the end of our house paddock therefore we will be affected by the dust from the coal stock pile which is only 200 metres from our front door. Therefore this will impact on all resident in Bushells Ridge and Hue Hue Road residents and Wyee which is only 0.5km from my front gate to Wyee Railway Station which will be included in the High Dust Area."*

***Response***

The nearest private residence (occupied house) is located approximately 700 m from the proposed product coal stockpile and is separated from the site by the M1 Motorway and Tooheys Road.

This consultation has driven the focus on ensuring appropriate design and operation of the stockpiling facilities, including stockpile characteristics (location, height and orientation), train loading operations, and best practice dust and noise mitigation measures.

WACJV has consulted with residents in the vicinity of the Project and identified concerns that needed to be addressed. Such consultation has led to the comprehensive assessment of potential air quality impacts and the adoption of various best practice dust controls (see **Table 2**).

The potential air quality impacts of the Amended Project were assessed in Section 6.2 of the Amendment Document. The Amended Project is predicted to comply with the relevant air quality criteria and related community health criteria at all private residences.

This submission has misinterpreted the findings of the HRA (Appendix M of the EIS). The HRA predicted that at the nearest residence, the $PM_{2.5}$ emissions resulting from the Project may increase the risk of mortality by 1 in 100,000 at the nearest residence. This risk of mortality is based on the worst case exposure to $PM_{2.5}$, which occurs at the nearest residence. The densely populated areas in the region (e.g. Wyong, Warnervale, Woongarrah) are located a much greater distance from the Project and as such, would experience exposures that are much less than the worst case exposure. It is erroneous to calculate the rate of mortality to the region by extrapolating the worst case exposure to all receivers in the region.

As discussed in Section 6.2.3 of the Amendment Document, the Amended Project is predicted to comply with the regulatory air quality criteria at all private residences.

## 5.13 NSW MINISTRY OF HEALTH

### 5.13.1 Air Quality

***Issue***

*The following comments relate to 'Wallarah 2 Coal Project Air Quality and Greenhouse Gas Assessment – Addendum' (AQGGA-A), published 4 July 2016. The comments provided in this letter are contingent upon the Environment Protection Authority's (EPA) confirmation that the modelling approach is appropriate. If this was found not to be the case, our findings would need to be reconsidered.*

*The PHU notes that modelling predicts that incremental dust deposition and TSP, PM10 and PM2.5 concentrations at the closest residential receivers are below impact assessment criteria. As health impacts can occur below guideline values, and there is no safe level of exposure to particulate matter (PM), it is important to consider all reasonable and feasible measures to reduce air quality impacts.*

*Assessing air quality impacts requires high quality and complete data. It is noted that the monitoring data presented to establish existing air quality used high volume air samplers to measure PM10. It is stated on p17, AQGGA-A, that data from these samplers were 68% and 77-79% complete. Dust deposition data were also incomplete – 'for most years, less than a full year of data was available' (p20, AQGGA-A). Data from other sources, such as from the EPAs routine ambient quality monitoring network in the areas may help supplement these data and ensure that conclusions drawn are valid. The Wyong site has PM10 and PM2.5 data commencing in October 2012 to present, with over 95% completeness. These data provide considerable insight into local air quality, and the relationship between PM10 and PM2.5.*

*Particulate pollution contour plots presented in sections 7.1 and 7.2 demonstrate increased ground level concentrations affecting nearby properties. Table 7.1 (p32) that some sites are estimated to experience increases in particulate pollution levels, including P8, P9 and P11, and a greater number of sites experience smaller increases in particulate pollution.*

*This proposal will increase the frequency of higher air pollution days - figure 7.7, p41, shows the estimated number of days exceeding background 24hr PM10 concentrations for two sites. The graph shows that these premises are expected to see 15 to 20 additional days with a PM10 above the more moderate level of 20ug/m3. For susceptible individuals, there is a risk of more frequent health events. While serious events are less common, less severe health outcomes are more likely (as outlined in Appendix M of the original EIS – 'pyramid of health impacts' and our previous submission of 26 June 2013). The risks for individuals will be influenced by any underlying health conditions.*

*Clarification is sought in relation to the risk of potential air quality impacts from the proposed overland conveyor (length over 3km) and new train load out facility. There does not appear to be any impact of these new infrastructures in any of the contour maps.*

*Confirmation is sought that these potential sources of emissions were included in the model, and if so, an explanation of why they don't appear to cause any increase in particulate pollution.*

*It is noted that there are existing communities within a kilometre of the new surface facility. Bluehaven is only 300 metres east of the conveyor new transfer point (near the intersection of the railway line and motorway link road). There are over 25,000 people in the Bluehaven, Lakehaven, and Gorokan area. The proposed Warnervale Town Centre will see a further 50,000 people living about 4km to the south east of the surface facility. This new development may attract a higher proportion of susceptible people, such as children.*

*In summary, particulate pollution will be elevated beyond the boundaries of the proposal, which increases the risk of adverse health effects for people exposed to increased levels of particulate pollution. If this project is approved, there should be ongoing and high quality monitoring of PM10 and PM2.5, and an effective response to air quality criteria exceedance and significant incremental increases in air pollution. Best-practice particulate control measures should be implemented and maintained to minimise air quality impacts on surrounding communities, particularly protecting the most affected receptors.*

*The PHU requests confirmation from the NSW EPA that the Air Quality Management Plan is appropriate, and the opportunity to review the plan before final approval.*

***Response***

Implementation of Best Practice Measures

WACJV has committed to the implementation of the best practice dust management measures outlined in Section 6.3 and Table 6.3 of the AQGGAA.

Full details of dust management measures will be provided in an Air Quality Management Plan (AQMP), which will be prepared in accordance with the conditions of development consent for the Project. The AQMP will describe all best practice dust control and monitoring measures to be implemented, including the measures required by the EPA. All measures will be quantifiable, auditable, measurable and enforceable. The AQMP will include Key Performance Indicators (KPIs) for determining compliance with the plan and conditions of development consent. Spontaneous combustion is considered unlikely to occur due to the anticipated high moisture content of the Project's coal resource. However, should spontaneous combustion be determined to be a risk in the future, it will be considered in the AQMP with relevant management and mitigation measures incorporated to the approval of relevant regulators (including NSW Health).

Submissions from the public assert that it is not possible to prevent dust emissions from the site. Whilst the implementation of best practice dust management measures does not guarantee the complete avoidance of dust emissions, these measures are implemented to ensure that dust concentrations at private receivers are maintained below levels that are considered acceptable by regulatory authorities.

Existing Air Quality ($PM_{10}$ and $PM_{2.5}$)

As explained in Section 4.3 of the AQGGAA, the following background $PM_{10}$ and $PM_{2.5}$ concentrations were assumed for the cumulative assessment:

- Annual average $PM_{10}$ – 17 $\mu g/m^3$
- Annual average $PM_{2.5}$ – 7 $\mu g/m^3$

$PM_{10}$ concentrations were determined from High Volume Air Sampler (HVAS) data collected in the vicinity of the site between 1999 and 2015. $PM_{2.5}$ concentrations were determined by applying the average $PM_{2.5}/PM_{10}$ ratio of 0.4 calculated from EPA data collected at Beresfield and Wallsend during 2014.

**Figure 19** presents all the $PM_{10}$ and $PM_{2.5}$ data collected at Wyong (16 October 2012 – 28 September 2016) together with the HVAS data collected for the Project. Analysis of the OEH Wyong data determined an annual average $PM_{10}$ concentration of 16 $\mu g/m^3$ and an annual average $PM_{2.5}$ concentration of 6 $\mu g/m^3$. Given that the assumed background levels in the AQGGAA were slightly higher, the cumulative assessment is considered to be conservative.

Air Quality Impacts from the Proposed Conveyor and Train Load Out Facility

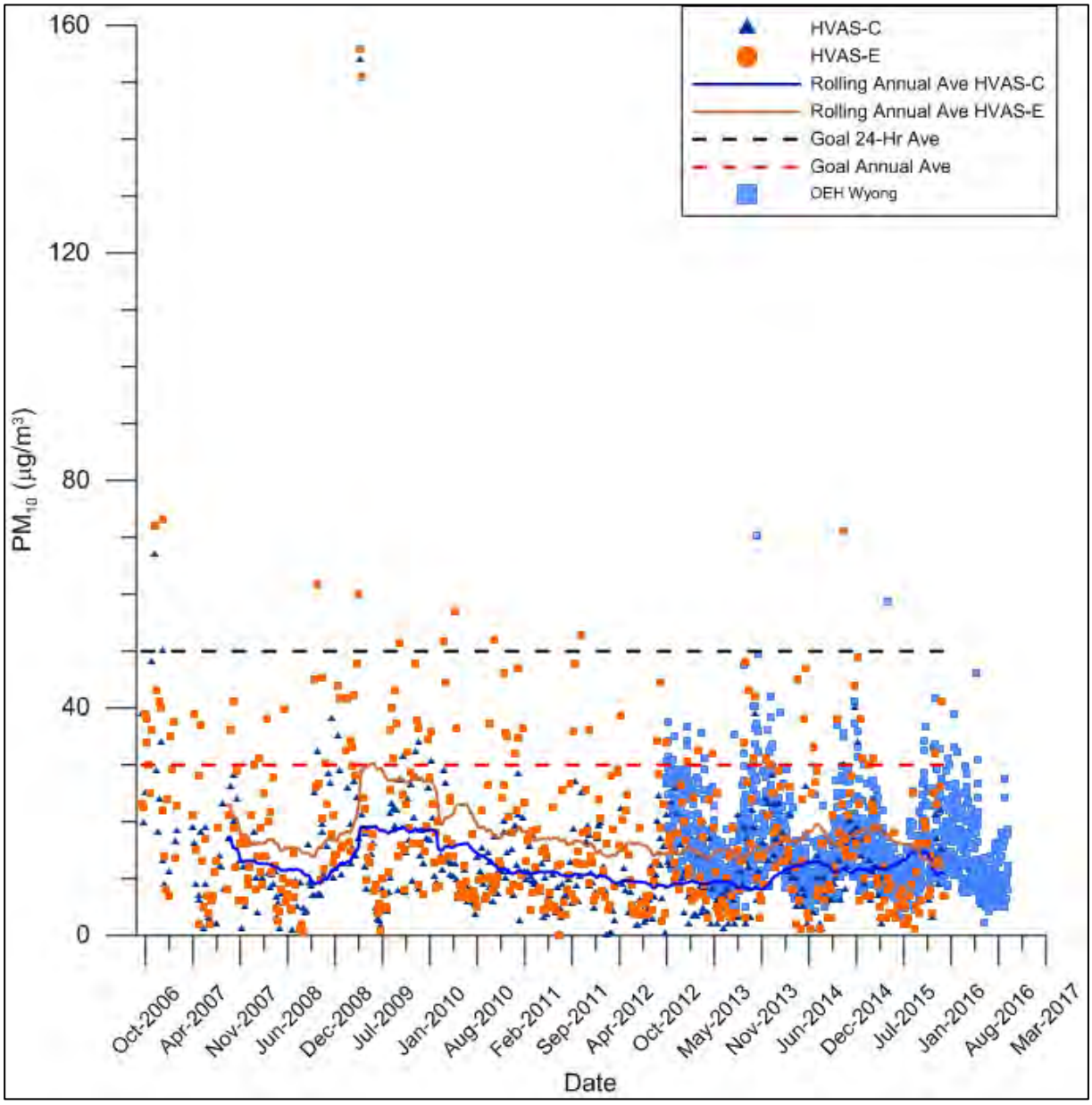
As presented in Table 6.2 and Appendix C of the AQGGAA, the emissions inventory includes emissions both from the proposed overland conveyor and the rail load-out facility. **Figure 20** shows the location of sources as allocated in the dispersion modelling and **Table 11** presents a summary of the activities allocated to each source. Activities associated with the conveyor were allocated to sources 12 – 23 and the train load-out activities were allocated to source 24.

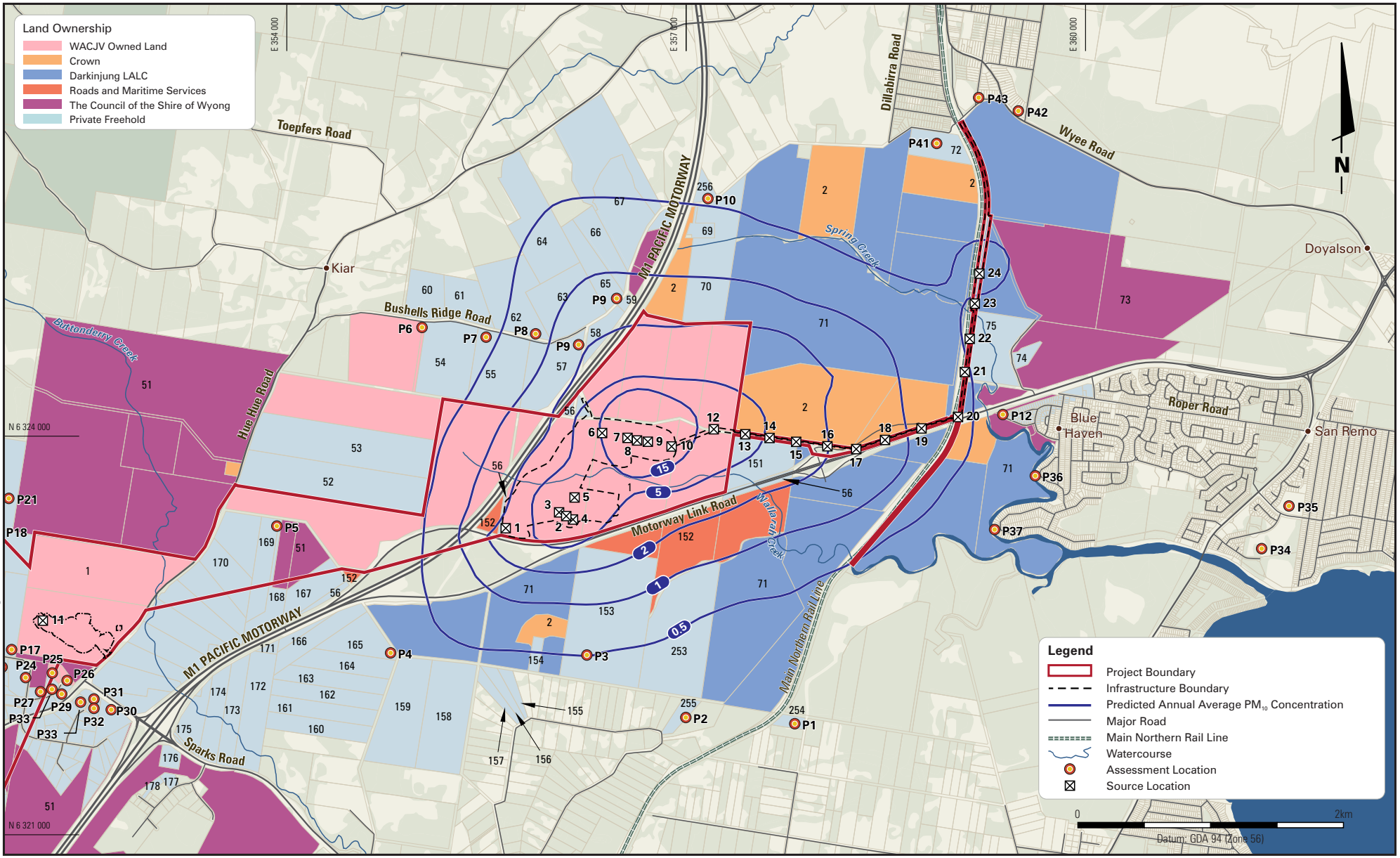
**Figure 20** (annual average $PM_{10}$) and **Figure 21** (maximum 24-hour average $PM_{10}$) are derived from Figure 7.1 and Figure 7.5 from the AQGGAA, with the addition of the source locations and more contour levels assigned that show there is contribution from both the proposed overland conveyor and the rail load-out facility to the predicted concentrations.

**Table 11**
**Air Quality Assessment –Allocation of Activities to Source Locations**

| Activity | Source ID | | |
|---|---|---|---|
| CL - Conveyor transfer @ Portal | 1 | | |
| CL - Conveyor transfer to ROM stockpile | 2 | 3 | 4 |
| CL - Loading ROM stockpile from conveyor | 2 | 3 | 4 |
| CL - Active ROM Stockpiles (wind erosion and maintenance - assumes maintenance by FEL/Dozer) | 2 | 3 | 4 |
| CL - Conveyor transfer to Crushing Station | 5 | | |
| CL - Processing - Crushing Station | 5 | | |
| CL - Conveyor transfer between crusher and stockpile | 6 | | |
| CL - Conveyor transfer to Product stockpile | 7 | 8 | 9 |
| CL - Loading Product stockpile from conveyor gantry | 7 | 8 | 9 |
| CL - Active Product Stockpiles (wind erosion and maintenance - assumes maintenance by FEL/Dozer) | 7 | 8 | 9 |
| CL - Loading from Product Stockpile to Conveyor | 10 | | |
| CL - Unloading material at transfer points | 10 | 12 | 20 |
| Conveying from stockpiles to train load out bin | 12 – 23 | | |
| Transfer from conveyor to train load out bin | 24 | | |
| CL - Loading Trains from Train Load Out Bin | 24 | | |

**Figure 19**
**24-h average $PM_{10}$ concentrations at Project HVASs and OEH Wyong**



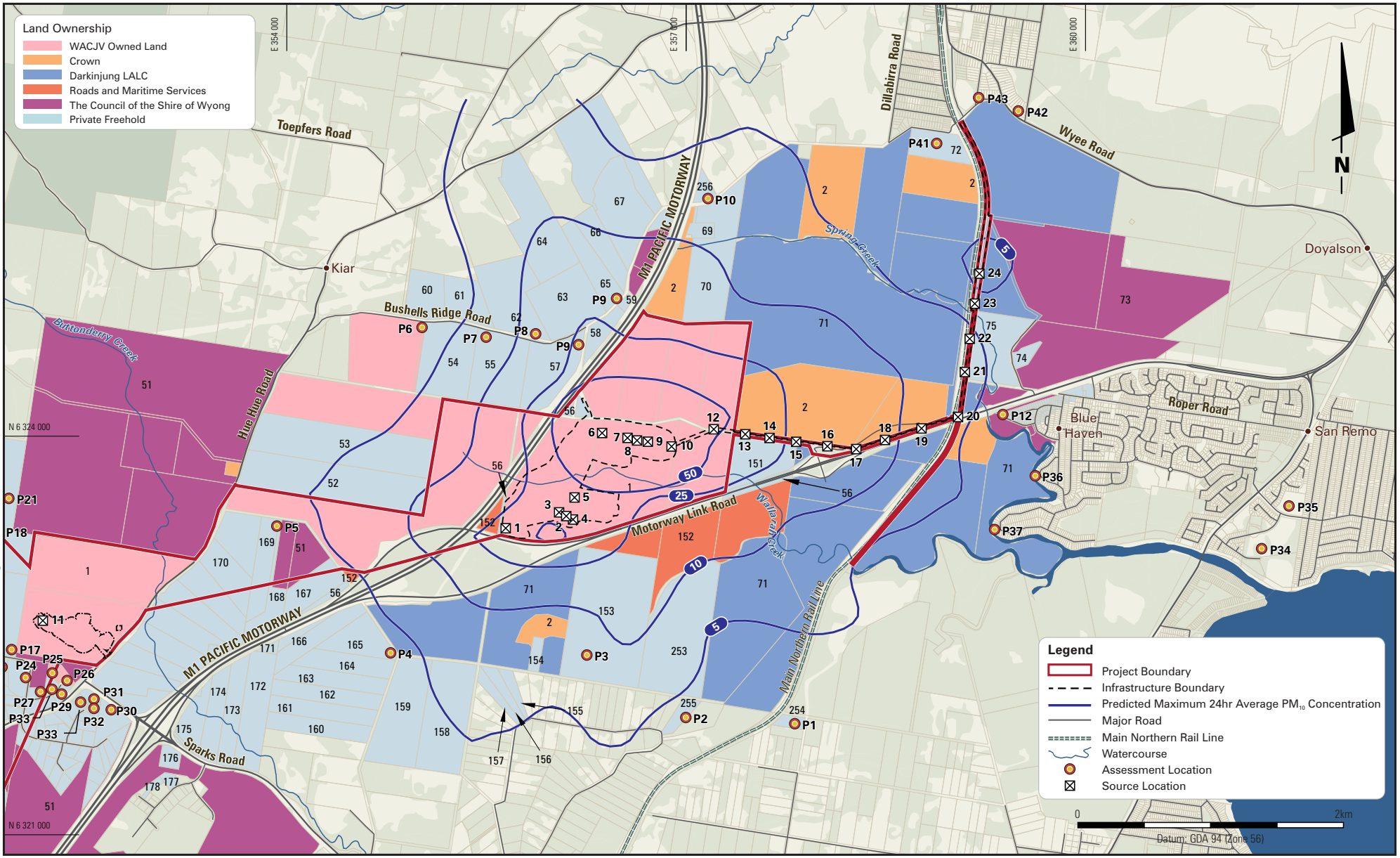



HB WALLARAH COAL RTS 1163 F20 Predicted Annual Average PM10 Concentrations 03 11 2016

WALLARAH 2 COAL PROJECT

Predicted Annual Average $PM_{10}$ Concentrations (Incremental)

**FIGURE 20**




HB WALLARAH COAL RTS 1163 F21 Predicted Maximum 24hr Average PM10 Concentrations 03 11 2016

WALLARAH 2 COAL PROJECT

Wallarah 2 COAL PROJECT | HansenBailey ENVIRONMENTAL CONSULTANTS

Predicted Maximum 24-hr Average $PM_{10}$ Concentrations (Incremental)

**FIGURE 21**

### 5.13.2 Water and Sewerage Services

***Issue***

*We note the amended application includes realignment of the sewer connection to the Tooheys Rd site. We assume that all the surface facilities at both Tooheys Rd and Buttonderry Rd will be connected to Council's mains water supply and sewerage systems.*

*The proponent is advised to ensure that all potable water supplies, including for use during construction (previously implied as likely to be sourced from water carts) meet the relevant criteria of the Australian Drinking Water Guidelines. The proponent must consider its obligations under the drinking water provisions of the Public Health Act 2010 (NSW) and the NSW Health Private Water Supply Guidelines in the management of potable water supplies that are not sourced from mains water.*

*Consultation with the PHU is required should any wastewater reuse options involve potable uses, including connection to employee amenities.*

*The EIS discusses anticipated increases in flooding as a result of the project. There are public health risks associated with flooding of onsite waste management systems, for example, septic tanks on properties impacted by the project. The proponent should develop and implement effective protocols to identify and mitigate risks from flooding.*

***Response***

Surface facilities at both Tooheys Road and Buttonderry Road will be connected to both the CCC's potable water supply and sewerage system, as detailed in the Amendment Document and EIS.

As discussed in Section 3.7.7 of the RTS1, WACJV will ensure that the potable water supplies, including any sourced from carts during construction, meet the drinking water provisions of the *Public Health Act, 2010* (NSW), 'Australian Drinking Water Guidelines' (NHMRC, 2011) and the 'Private Water Supply Guidelines' (NSW Health, 2008).

As discussed in Section 7.1.4 of the EIS, WACJV will develop Property Subsidence Management Plans (PSMPs) for all private properties that are predicted to be impacted by subsidence. PSMPs will be developed in consultation with land owners and will include measures to manage the consequences of subsidence, including changes to flood impacts.

### 5.13.3 Drinking Water Supplies

***Issue***

*The proposal includes mining underground beneath Jilliby Jilliby Creek, and it is noted the subsidence impact zone includes Wyong River in part. Our concern about impacts from the project on the Central Coast's drinking water supply remains (see 2013 submission). Should the project proceed, approval conditions should be applied to ensure that the requirements of relevant agencies are met, and the risk to the drinking water supply adequately mitigated.*

*We understand that some residences in the area are using groundwater as a drinking water supply. It is important to consider what may be the impact on these supplies i.e. having a clear process for identifying whether a bore is affected by the project. Methods to mitigate these potential impacts are essential.*

***Response***

The potential loss of surface water from the water supply catchment was discussed in Section 3.3.8 of the RTS1 and the Surface Water Impact Assessment (Appendix J of the EIS). This assessment demonstrates that the Project is unlikely to result in any substantial impact on the water supply catchment. The Amendment does not involve any changes to activities within the Central Coast's drinking water catchment. As a result, the impacts of the Project on the drinking water catchment remain as assessed in the EIS and RTS1.

Section 3.2.1 of the RTS1 discusses the potential for impacts to private bores. Section 6.4 of the Groundwater Impact Assessment (Appendix I of the EIS) identifies 12 existing private bores located within the Subsidence Impact Limit. Groundwater levels within this zone may fall by up to 1.4 m due to subsidence. However, 55% to 75% recovery is expected to occur within 6 months under low rainfall conditions. Recovery will occur much more rapidly under high rainfall conditions. Although subsidence induced displacement is unlikely to affect borehole yield in a measurable way, the boreholes could be susceptible to mechanical damage and may need to be repaired or re-drilled (if damage occurs).

WACJV has committed to ongoing consultation with bore owners and repairing and/or replacing any bore water supply affected by the Project.

Appropriate conditions of approval to address the above concerns have been included in the Recommended Development Consent, as provided in Appendix A of the Director-General's EAR. Table 1 under Schedule 3 of the Recommended Development Consent provides clear performance measures for subsidence impacts to watercourses.

Additionally, Condition 5 of Schedule 3 requires the proponent to prepare an Extraction Plan, which includes a Water Management Plan to provide for the management of the potential impacts and/or environmental consequences to watercourses and aquifers.

### 5.13.4 Noise Assessment

***Issue***

*Research reports an association between community noise and health outcomes in adults and children, including annoyance, sleep disturbance, cardiovascular disease, performance and learning, mental health and stress (Health Effects of Environmental Noise, EnHealth). Current measures of noise exposure may not necessarily capture the nature of the exposure that leads to adverse health effects.*

*We defer to the NSW Environment Protection Authority (EPA) for validation of the Project Specific Noise Criteria (PSNC) modelling and the methods used to determine ambient noise levels, and request confirmation that these are acceptable.*

*We are aware that the EPA has advised that further information to enable assessment of the amended project and we support this advice. The following comments are based on the information available.*

***Response***

Refer to the response to the EPA submission in **Section 5.7**.

### 5.13.5 Ambient Noise Assessment and Modelling

***Issue***

*As ambient noise monitoring was conducted under limited meteorological conditions, further monitoring under different conditions may be required. Advice from the EPA would be appropriate regarding whether a longer monitoring period is required to provide confidence that the ambient noise levels are truly representative under the variety of expected local weather conditions.*

*The noise amenity classifications for all noise assessment locations require justification to the satisfaction of the EPA. For example, the urban classification of sites P13, P14 and P15 is not consistent with the land use zoning and the ambient noise levels at these locations are arguably not indicative of an urban environment. A revised assessment will be required if the classifications alter.*

*Further detail is required in The Noise and Vibration Impact Assessment Addendum (p6) regarding assumptions used and mitigation strategies included in the modelling. For example Noise and Vibration Impact Assessment Addendum (p5) is unclear on whether cladding is provided to the rail load out bin facility, and whether the conveyors are enclosed on all sides and the roof. If the modelling includes these strategies, then a clear statement regarding the commitment or not, to provide these should be made. If not included, consideration should be given to modelling their benefit, as cladding and fully enclosing the conveyors would likely be appropriate mitigation measures.*

*The noise modelling appears to include two locomotives at idle. Clarification is required that modelling has accounted for the possibility of four locomotives being operated if this may occur.*

***Response***

The issues raised in the EPA's submission, including the issue of noise amenity classifications, are addressed in **Section 5.7**.

Section 3.3 of the NVIAA provides details of the noise controls that were assumed in the noise modelling. Such controls include fitting conveyors with side and roof screens and acoustic treatment of the train load out bins.

Section 6.4.4 of the Amendment Document discusses the management and mitigation measures to be implemented to minimise noise emissions. This includes the shielding of conveyors to the roof and side walls, enclosure of conveyor drivers and transfers as well as operating only two of the four locomotives units whilst the train is on the rail spur.

### 5.13.6 Noise Impacts

***Issue***

*The Amended DA notes that some properties (P14, P15 and P16) will experience increased noise levels and a moderate degree of affectation (Noise and Vibration Impact Assessment Addendum pp19 and 29). It is important that mitigation measures, at source or house, be implemented to ensure noise impacts are limited. Any remedial acoustic works to properties in the noise management zone should be to the satisfaction of the affected land occupier and the EPA.*

*We assume that site M16 referred to in Tables 4, 5 and 6 of the Noise and Vibration Impact Assessment Addendum is actually site M15. Since the PSNC for location P17 are based on ambient noise levels measured at site M15, we seek confirmation that location M15 is indicative of the ambient noise levels in southern Wyee. Alternatively, additional ambient noise monitoring should be required at a representative location, and assessment conclusions adapted as necessary.*

*Noise levels at P17 are expected to exceed the PSNC by up to 2 dB(A). While agreeing that the modelled noise increase is small, it is not insignificant because a number of residences are potentially affected. Should the project proceed we suggest that additional mitigation measures be undertaken so that the project meets the PSNC for residences in Wyee.*

***Response***

In Tables 4, 5 and 6 of the NVIAA, monitoring location M16 should actually be labelled M15. Location M15 is representative of receivers in the southern parts of Wyee. As outlined in Table 1 of the NVIAA, the acoustic environment at M15 is influenced by distant road traffic, rail traffic and local domestic activities. See further discussion in **Section 5.7.1**.

Based on site inspections, the ambient background noise for the Wyee residents would be similar to that reported for M15. However, local road traffic generated within the Wyee area would give rise to road traffic noise in addition to the noise experienced at M15.

### 5.13.7 Construction Noise

***Issue***

*Since the predicted construction noise levels have potential to impact a number of residences, the proponent should commit to a construction schedule that creates the least possible disruption to the community.*

*From Table 27 of the Noise and Vibration Impact Assessment Addendum the NML exceedances seem to be expected with more than 10dB(A) during standard hours, and up to 20 dB(A) and frequently around 10 dB(A) outside standard hours. Consideration should be given to regulatory controls to minimise these exposures, such as limiting work outside of standard hours, or other appropriate mitigation measures.*

***Response***

Refer to the response in **Section 5.7.1**.

### 5.13.8 Rail Noise

***Issue***

*Since the rail load out facility configuration and rail spur noise barrier will be defined in the detailed project design phase, we question whether sufficient certainty exists around the configuration of infrastructure generally, to permit accurate impact assessment.*

*The 2013 EIS noted that rail noise, while not expected to result in increases above existing levels, will result in a minor increase in the 24 hour noise level along on the Main Northern Rail line. Although the increase is small, it will likely affect households and businesses along the rail line for the Central Coast and the Hunter. The cumulative impact from the increased rail movements should be considered in relation to the Central Coast and Newcastle population, from a noise (human health) and traffic perspective.*

*The management of train horn noise is a strategy adopted in the noise modelling but no detail is provided. Considering the potential for sleep disturbance, the contribution of train horns to the project's noise levels should be demonstrated in the assessment.*

***Response***

The noise modelling undertaken for the Amendment determined that a 50 m long x 4.5 m high (above top of rail) noise barrier (or alternative measure that achieves the same level of noise attenuation) was required along the southern portion of the rail spur in order to comply with the noise criteria for Blue Haven. The final detailed design of the barrier would be dependent upon detailed ground survey and final site levels.

Cumulative rail noise impacts along the Main Northern Rail Line are addressed in the Noise and Vibration Impact Assessment (Appendix N of the EIS).

WACJV has been informed by rail authorities that train horns are not required to be used when entering or leaving the rail spur. Train horn usage will be managed in accordance with best practices and addressed through operational agreement with the above rail provider.

### 5.13.9 Noise Management Strategies

***Issue***

*The amendment EIS (p52) does not appear to acknowledge and commit to all the strategies included in the noise modelling the recommended engineering controls or the EIS recommendations. Clear commitment is required to ensure that these strategies at a minimum, are incorporated into the project design and operation, should it proceed.*

*The amendment EIS (p52) undertakes to 'where necessary, operate only two of the four locomotives whilst the train is on the rail spur'. We require clarification on how the proponent will identify this necessity.*

*The proponent has undertaken to 'explore the potential for additional noise controls from operational management approaches'. Operational noise controls should be identified and applied so that the impact on the community is minimised.*

*In summary, the project's noise emissions have potential to affect a number of community members and so we believe the increased noise levels are not insignificant. We believe that more effective noise mitigation measures be implemented to avoid the described noise impacts to the Wyee and Blue Haven areas. These measures should be applied at the project, rather than to private properties. We defer to the EPA, but suggest that should the project proceed, as a minimum, the measures recommended in sections 7 and 11 of the Noise and Vibration Impact Assessment Addendum should be adopted and supported with appropriate approval and licensing conditions imposed.*

***Response***

WACJV commits to the noise controls outlined in Sections 3.3, 7.1.1 and 11 of the NVIAA (as summarised in **Table 3**).

WACJV commits to operating only two of the four locomotives (whilst the train is on the rail spur) in order to reduce noise levels at nearby receivers, particularly the private residences located on Thompson Vale Road. The triggers for the implementation of this control will be defined in the Noise Management Plan, which will be developed in consultation with the appropriate regulatory authorities.

### 5.13.10 Monitoring and Enforcement

***Issue***

*The NSW EPA has previously proposed approval conditions. Should the project proceed, management of the impacts on the environment and the local community will depend on effective implementation and monitoring of the many control measures, and enforcement of the approval conditions. Specifically, we seek confirmation that should the project proceed, the Noise Management Plan, including Construction Noise and Vibration Management Plan and Monitoring Program, and Air Quality Management Plans will be satisfactory to the EPA.*

*We support the need for continuous real time monitoring of air quality and noise impacts, and the implementation of management strategies that are consistent with best practice, clearly quantifiable, measurable, auditable and enforceable. Methods for determining compliance must be to the satisfaction of the appropriate regulator.*

*Further, the proponent will need to ensure that appropriate air quality and noise mitigation criteria are met for the life of the project, given the expansion of residential and employment lands planned for surrounding areas.*

***Response***

Appropriate conditions of approval to address the above concerns have been included in the Recommended Development Consent (Appendix A of the EAR) for the Original Project. Conditions 5 and 9 under Schedule 4 requires the Noise Management Plan and Air Quality Management Plan to be developed in consultation with the EPA.

### 5.13.11 Resident Feedback

***Issue***

*The community must have a contact point for complaints if noise or air quality issues occur and the proponent must guarantee a prompt and genuine response to all complaints. The previously proposed 'complaints management protocol' should be developed and implemented in consultation with the community so that the community can be confident that any concerns will be effectively addressed.*

***Response***

Conditions 1 and 2 under Schedule 6 of the Recommended Development Consent (Appendix A of the EAR) for the Original Project require the preparation of a Complaints Management Protocol. WACJV will develop a Complaints Management Protocol in accordance with these conditions.

## 5.14 CENTRAL COAST WATER CORPORATION

The Central Coast Water Corporation (CCWC) no longer exists.

The CCC advised that its submission dated 16 September 2016 addresses all water supply matters as the CCC is the declared water supply authority under the WM Act. Issues raised in the CCC submission are discussed in **Section 5.11**.

## 5.15 TRANSGRID

***Issue***

TransGrid outlined a number of unresolved issues in an email to the DP&E dated 23 September 2016. The email states "*No mine activities are permitted to occur near TransGrid's easements and infrastructure without our prior written consent. No such consent has been given to date."*

***Response***

Prior to and subsequent to the email referred to above, several meetings were held with TransGrid and WACJV which led to commitments being made by both parties as documented in the *"Modification Processes Agreement - Wallarah 2 Coal Transmission Line 2M/22 Modification"* (Process Agreement) (October 2016). The Process Agreement relates to work that TransGrid will undertake (should development consent be granted) to resolve issues relating to subsidence impacts on TransGrid assets.

As outlined in Section 1.1 of the Process Agreement, TransGrid will provide the following initial services;

- Review and assessment of the proposed project on TransGrid assets;
- Review and assessment of technical impacts (including confirming proposed concept design / routes) for the proposed project, including advice in relation to clearances; and
- Assessment of any access, operational or maintenance impacts of proposed project.

Section 2.1 of the Process Agreement details the Feasibility Study to be undertaken by TransGrid which will include:

- Engineering design assessment of structures affected by the long wall mine in stage 1;
- Engineering determination, based on a review of the provided subsidence report and the structure assessment to determine whether:

  a. It is possible to reinforce existing towers in their current locations; or

  b. It will be necessary to complete some form of line deviation for Stage 1 works; and
- Preliminary engineering assessment of the work scope, risks, timing and costs for resolution of Stage 1 impacts in regard to affected towers.

As outlined in Section 1.2 of the Process Agreement, should development consent be granted, WACJV will provide:

- Detailed specifications and plans drawn to scale and fully dimensioned, showing property boundaries and other relevant information. Survey plans will clearly identify TransGrid's easements, any high voltage transmission lines and horizontal clearances; and
- Three dimensional CAD files of the development, particularly that located within or surrounding TransGrid assets and easements, preferably in 3D-DXF format.

WACJV will continue to consult with TransGrid to resolve outstanding issues and the timing for TransGrid services.

# 6 SPECIAL INTEREST GROUP SUBMISSIONS

*This section outlines the SIGs' submissions on the Amendment Document and provides responses to the issues raised.*

## 6.1 DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL

### 6.1.1 Validity of the Amendment

***Issue***

DLALC asserted that the Amendment constitutes a substantial alteration to the proposal and as such, warrants a new development application rather than an amendment to the existing DA.

***Response***

Clause 55 of the EP&A Regulation outlines the process for amending a Development Application. Clause 55 states:

> *(1) "A development application may be amended or varied by the applicant (but only with the agreement of the consent authority) at any time before the application is determined.*
>
> *(2) If an amendment or variation results in a change to the proposed development, the application to amend or vary the development application must have annexed to it written particulars sufficient to indicate the nature of the changed development."*

The submission from DLALC suggests that the power to amend a DA does not apply if the proposed alterations are substantial. Clause 55 does not, by its terms, contain any such limitation. The only pre-requisites for the amendment of a DA prior to it being determined are the "agreement of the consent authority" and, if the amendment results in a change to the proposed development, sufficient written particulars indicating the nature of the change is required.

In respect of the first pre-requisite, the proposed amendment was accepted by the Minister's delegate on 20 July 2016 (as required by clause 55(1)).

In respect of the second pre-requisite, the Amendment Document provides a detailed description of the Amended Project (as required by clause 55(2)).

The leading authorities relating to the scope and application of clause 55 of the EP&A Regulation are *Ebsworth v Sutherland Shire Council* [2005] NSWLEC 603, and *Radray Constructions Pty Ltd v Hornsby Shire Council* (2006) 145 LGERA 292.

Together, these decisions confirm that:

- An amendment to a DA cannot convert the original DA into an original, new or fresh application;
- The 'substantially the same development' test (derived from the modification power under section 96 of the EP&A Act) does not apply to an amendment to a development application under clause 55 of the EP&A Regulation;
- A broad approach to both the scope and application of clause 55 of the EP&A Regulation is appropriate and should be given the widest interpretation that language will permit; and
- The extent of change that is permitted by clause 55 will depend on the facts and particular case including, for example:
    - the nature of the site;
    - the nature and characteristics of the proposed development;
    - the time at which the amendment application is made; and
    - the reasons for making the application.

It is clear from these leading authorities that DLALC's submission to the effect that a new DA is required because the amended DA involves substantial alterations is misplaced and wrong at law. In any event, the Amendment does not represent a substantial alteration of the proposed development.

As set out in the Amendment Document, the following aspects of the Amended Project are unchanged from the Original Project:

- Underground mining activities;
- Layout of the Buttonderry Site and Western Ventilation Shaft;
- Coal production rate;
- Method of coal transportation; and
- Construction and operational workforce.

Further, the Original Project and Amended Project are characterised as proposals for underground coal mining. In the circumstances, the Amendment will not result in the original DA being converted into a new or fresh application, and thereby require a new DA for the Amended Project.

In relation to the nature of the site, the Original Project and Amended Project cover a vast area of land which, for the most part, will remain the same despite the Amendment (excepting the exclusion of land owned by DLALC and inclusion of land owned by the Crown).

As set out above, in terms of the nature and characteristics of the proposed development, the Original Project and Amended Project involve the construction and operation of a new underground coal mine and associated infrastructure.

In respect of the timing of the amendment application, the Amendment has obviously been made prior to any determination of the original DA and has now been the subject of public exhibition.

Finally, with respect to the reasons for making the amendment application, despite the best efforts of WACJV, the NSWALC has not provided its consent in respect of land owned by DLALC which is required under clause 49(3A) of the EP&A Regulation. As a result, WACJV investigated and decided to proceed with the Amendment.

### 6.1.2 Adequacy of Amendment Document

***Issue***

DLALC asserted that the documentation supporting the Amendment does not satisfy the requirements of an EIS as it does not satisfy the Director-General's Requirements or the Supplementary Director-General's Requirements

Further, the documentation supporting the Amendment is inadequate to allow a proper assessment and the public to comment on the Amended Project.

***Response***

Clause 55(2) of the EP&A Regulation states that an application to amend a DA must be supported by "written particulars sufficient to indicate the nature of the changed development". The Amendment Document provides a detailed description of the Amended Project, as required under clause 55(2). There is no requirement, legislative or otherwise, for an EIS to be prepared in respect of a proposed amendment to a DA. The proposition put forward by DLALC is an incorrect understanding of the law.

The Amendment Document provides a detailed description of the Amended Project (as required by clause 55(2)) and is adequate to allow a proper assessment and the public to comment on the Amended Project. It is noted that the Amendment Document must be read together with all other documentation prepared for the Original Project.

### 6.1.3 Procedural Fairness

***Issue***

DLALC asserted it has been denied procedural fairness by being denied access to information.

***Response***

The two fundamental requirements of procedural fairness are as follows:

- There should be a fair hearing; and
- There should be no bias on the part of the decision-maker.

No allegation of bias by the decision-maker has been made by DLALC.

DLALC has had ample opportunity to be heard in relation to the Amendment. It is noted that DLALC has utilised such opportunity to object to the Amended Project, including:

- In the form of a letter from its legal representative (Chalk & Fitzgerald Lawyers & Consultants) to the Minister on 22 April 2016;
- Its submission to the Director, Mining Projects on 31 August 2016; and
- Its submission to the Director, Mining Projects on 30 September 2016.

It is also noted that the Amendment Document was on exhibition for public comment between 22 July and 5 September 2016. During this time, DLALC was afforded the same opportunity as the public generally to review and comment on the Amendment Document.

In the circumstances, it is clear that DLALC and the public generally have had the opportunity to be heard in relation to the Amendment. It is likely that a further opportunity will be available when the Amended Project is the subject of a public hearing or public meeting by the PAC.

Finally, it is noted that DLALC and the public generally do not have a right under the EP&A Act to request and obtain additional information from a proponent (in this case, WACJV). Therefore, it does not follow that the failure to provide requested information results in a denial of procedural fairness where there is sufficient information provided.

### 6.1.4 Road Closure Application

***Issue***

DLALC stated that it has been denied access to the closure application for Nikko Road. DLALC asserts that this is contrary to the rules of procedural fairness.

***Response***

WACJV objected only to the publication of information within the road closure application (W562973) which identified third parties as being involved in commercially sensitive negotiations.

While the proposed road closure is associated with the Amended Project, the road closure application is completely separate and independent from the DA process under the EP&A Act. In the circumstances, the road closure application is not a relevant consideration in determining the DA for the Amended Project.

It is understood that the road closure application will ultimately be advertised and interested persons will have the opportunity to provide comments.

### 6.1.5 Nikko Road

***Issue 1***

DLALC asserts that the Amended Project will impede the use of Nikko Road by the public.

***Response***

Road closure is the terminology used by DPI – Crown Lands. Nikko Road is not physically being closed by WACJV.

Wyong Coal proposes to construct a 6 m wide all weather access road for the full 1.5 km length of Nikko Road to the north of the Motorway Link Road. This replaces the current dirt track which is less than 300 m in length. This road provides a connection between DLALC lands that does not currently exist. Access to the south of the Motorway Link Road will however remain restricted by the current envelope between the bridge supports.

The all-weather access road along Nikko Road is only intended to be accessed by WACJV, Council, Emergency Services, infrastructure owners and service providers, and adjoining land holders including DLALC. It is not intended to be used by the public.

***Issue 2***

DLALC asserts that Nikko Road is an important component of the regional road network and that it may be developed in the future as a link between Wyee and Warnervale.

***Response***

WACJV consulted with RMS, DPI – Crown Lands and Central Coast Council (CCC) during the preparation of the Amendment Document. Neither Agency nor Council raised matters associated with any future plans regarding development of Nikko Road as a connecting road between Wyee and Warnervale. Similarly, RMS, DPI Crown Lands or CCC has raised any plans regarding future development of Nikko Road in their submissions. It is also not identified in Central Coast Regional Plan 2036 released on 14 October 2016.

It is also noted that DLALC proposed residential developments to the North of Nikko Road propose only road access via the existing main arterial Gosford and Wyee Roads with no connection to Nikko Road proposed.

***Issue 3***

DLALC asserts that WACJV cannot provide an easement over Nikko Road unless it obtains ownership of the road.

***Response***

As explained in **Section 5.1.2**, if the road closure application is approved, the former Nikko Road land will be vested in WACJV. WACJV will grant access to other specific users mentioned above via an easement along the section of Nikko Road within the Project Boundary (refer to **Figure 3**).

### 6.1.6 Bushfire Risk

***Issue***

DLALC asserts that the Amended Project is inappropriate because it involves development on land that is mapped as bushfire prone land or a bushfire buffer zone. DLALC also asserts that bushfire risks have not been adequately considered in risk assessments.

***Response***

The Project is situated on land that is mapped as Bushfire Prone Land (BPL). In fact, the vast majority of the Wyong LGA is mapped as BPL, as shown in Figure 5 of the Preliminary Hazard Analysis (Appendix AB of the EIS).

Section 79BA(1) of the EP&A Act states that development consent cannot be granted for any proposed development on BPL unless the development conforms to the NSW Rural Fire Service's guideline titled *'*Planning for Bush Fire Protection'. However, section 79BA(1B) states that this requirement does not apply to State Significant Development.

Condition 26 under Schedule 4 of the Recommended Development Consent requires bushfire management measures to be implemented (if the Project is approved). In accordance with this condition, WACJV will ensure that the site is suitably equipped to respond to bushfire emergencies and will assist emergency services in the event of a fire.

Emergency Services will have access to the all-weather road along Nikko Road as a result of having been granted easement in gross. The linear infrastructure between the Coal Product Stockpile at Tooheys Road and the coal loading facility at Nikko Road 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.

### 6.1.7 Site Access

***Issue***

DLALC inquired about WACJV's proposed routes for accessing Nikko Road during construction and operations. DLALC also asserted that Nikko Road does not provide sufficient room for parking or employee facilities.

***Response***

The routes for accessing the surface infrastructure sites are unchanged from the Original Project. The main entry to the Tooheys Road Site will be located on Tooheys Road.

During the construction phase, all construction personnel undertaking works at the Tooheys Road Site will initially arrive via the main entry. The personnel that are allocated to the Nikko Road works will be transported to the Nikko Road site by bus, as described in Section 6.4.3 of the Amendment Document. This arrangement reduces the number of vehicle movements to and from Nikko Road. Preliminary constructability assessments by an accredited rail and civil constructor advise that access to the Nikko Road site will occur via Gosford Road and the adjoining rail corridor to the north of the proposed train load out loading facility.

Given that the conveyors, transfer stations and train load out facility are automated, no personnel will be permanently stationed at the facilities along Nikko Road. Accordingly, no permanent parking or employee facilities will be required at this part of the site. During the operational phase, visits to the Nikko Road infrastructure will be limited to inspections and maintenance works for which sufficient parking space is available immediately north of the train load out loading facility. The 6m wide access road will ensure accessibility along Nikko Road. The operations and maintenance required at Nikko Road will be managed by an accredited rail provider registered by the Office of the National Rail Safety Regulator.

### 6.1.8 Amenity Impacts

***Issue***

DLALC asserted that the Amendment Document did not adequately assess the potential noise and dust impacts. In particular, DLALC inquired about potential impacts to persons that have to use the proposed access track alongside the proposed infrastructure on Nikko Road.

***Response***

The air quality impact assessments for the Original Project (Appendix L of the EIS) and the Amended Project (Appendix D of the Amendment Document) were undertaken in accordance with the *"Approved Methods for Modelling and Assessment of Air Pollutants in NSW"* (DEC, 2005).

The noise impact assessments for the Original Project (Appendix N of the EIS) and the Amended Project (Appendix E of the EIS) were undertaken in accordance with the relevant guidelines, including:

- 'NSW Industrial Noise Policy' (EPA, 2000);
- 'Interim Construction Noise Guideline' (DECC, 2009);
- 'Road Noise Policy' (OEH, 2011);
- 'Rail Infrastructure Noise Guideline' (EPA, 2013); and
- 'Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments' (NSW Government, 2014).

As shown on **Figure 20** and **Figure 21**, the $PM_{2.5}$ and $PM_{10}$ concentrations that are predicted to be generated by the Project are well below the regulatory air quality criteria, even at locations directly alongside the conveyor.

As shown in **Figure 17**, noise levels along Nikko Road are expected to exceed 50 dBA at certain times. Elevated noise levels are only expected to occur when the train load out facility and / or bin feed conveyor are operating. At all other times, the noise level is expected to be significantly lower.

Authorised persons using this section of Nikko Road are not expected to remain on the road for long periods of time. Exposures to the predicted low dust levels and moderate noise levels for short periods of time are not expected to give rise to any adverse health consequences.

### 6.1.9 Risk Assessment

***Issue***

DLALC states that the risks associated with the Amended Project have not been adequately assessed. In particular, DLALC asserts that the risk assessment has not considered the risks associated with conveying coal over the Main Northern Rail Line.

***Response***

A comprehensive risk assessment was undertaken which identified the risks that needed to be assessed in the Amendment Document. This risk assessment was summarised in Section 5 of the Amendment Document.

Whilst the conveyor gantry across the Main Northern Rail Line will be entirely enclosed eliminating the risk of spilling coal onto the Main Northern Rail Line, WACJV will consult further with Sydney trains, TfNSW and accredited civil and rail constructors in the conduct of further comprehensive risk assessments. The outcomes of those risk assessments will further address matters associated with interactions between the project's infrastructure and the Main Northern Rail Line.

In addition, 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 the wider community, its workforce and its equipment. This risk based process is a requirement involving construction within 25 m of a rail corridor, which can only be undertaken with TfNSW consent.

### 6.1.10 Stormwater Management

***Issue***

DLALC asserts that the Amendment Document did not address stormwater management.

***Response***

The water management system for the Project was described in Section 7.3 and Appendix J of the EIS. The Amendment does not involve any changes to the water management system.

Additional stormwater management measures for the proposed infrastructure on Nikko Road were proposed in Section 6.1.4 of the Amendment Document. These measures will be implemented to avoid discharges of untreated water to Spring Creek and adjoining properties. Appropriate erosion and sediment controls for the works at Nikko Road will be included in the Water Management Plan.

### 6.1.11 Rehabilitation

***Issue***

DLALC asserts that a rehabilitation plan has not been prepared for the Amendment.

***Response***

Condition 29 under Schedule 4 of the Recommended Development Consent requires the preparation of a Rehabilitation Management Plan. WACJV will prepare the required Rehabilitation Management Plan in consultation with the appropriate regulatory authorities.

### 6.1.12 Economic Impacts

***Issue***

DLALC asserts that there has been no assessment of the adverse economic impacts of the Amended Project, particularly given its location within a growing residential area.

***Response***

An Economic Impact Assessment (Appendix J of the Amendment Document) was undertaken for the Amended Project. This assessment included a cost-benefit analysis (CBA) which weighed the benefits of the Project against its costs. For the purposes of CBA, the costs are the potential social and environmental impacts to society.

Monetary values were ascribed to residual environmental impacts (i.e. impacts which cannot be avoided). In the case of the Project, the residual impacts were the predicted greenhouse gas emissions and impacts on water resources. The costs associated with other environmental impacts were reflected in the CBA by including the cost of mitigation measures in the total operating costs of the Project.

### 6.1.13 Aboriginal Land Rights Act

***Issue***

DLALC asserts that Amended Project is contrary to the objects and purposes of the *Aboriginal Land Rights Act 1983*.

***Response***

Section 3 of the *Aboriginal Land Rights Act 1983* (ALR Act) lists the purposes of the ALR Act as follows:

*(a) to provide land rights for Aboriginal persons in New South Wales,*

*(b) to provide for representative Aboriginal Land Councils in New South Wales,*

*(c) to vest land in those Councils,*

*(d) to provide for the acquisition of land, and the management of land and other assets and investments, by or for those Councils and the allocation of funds to and by those Councils,*

*(e) to provide for the provision of community benefit schemes by or on behalf of those Councils.*

The ALR Act enables an Aboriginal Land Council to make a claim for 'claimable Crown lands', as defined under section 36 of the Act. The infrastructure associated with the Amendment will be located on land that is either private freehold (owned by WACJV) or part of the Boral Montoro Quarry, a road reserve or a rail corridor. None of these lands satisfy the definition of "claimable Crown lands". Therefore, the Amendment does not impede the provision of land to Aboriginal Land Councils.

Furthermore, the Amendment will not impede access to any lands that were previously granted to DLALC under the ALR Act or which remain under claim (see **Section 5.1.2**).

Indeed, the DA for the Original Project did affect land claimed and obtained by DLALC under the ALR Act. However, the Amendment has removed such land from the Amended Project. As a result, the Amendment is not contrary to the objects and purposes of the ALR Act.

### 6.1.14 Consultation with Affected Landowners

***Issue***

DLALC asserts that WACJV has not consulted with land owners that are potentially affected by the Amended Project.

***Response***

WACJV has consulted with adjacent land owners including those that are predicted to experience exceedances of the regulatory noise criteria. There are no predicted exceedances of air quality criteria at private properties.

WACJV consulted with DLALC regarding the Amendment as outlined in **Table 12**.

## Table 12
## DLALC Consultation

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| 29 April 2015 | Sean Gordon (SG)(CEO) | Kenny Barry (KB) – Project Manager Peter Allonby (PA) – General Manager | Hon R.N. [Angus] Talbot formally closed mediation. | Mediation failed to deliver an outcome. | |
| 22 February 2016 | SG | KB, PA | Advice to DLALC regarding DA amendment, including explanation of alternative infrastructure path, crown road requirements, interactions with the Main Northern Rail line and Cultural heritage surveys. DLALC invited to contact WACJV throughout the process should they require more information. | DLALC invited to ask questions and consult further.<br><br>DLALC advised by WACJV that should proposal proceed to lodgement of an amendment DLALC would be consulted directly. | |
| 7 April 2016 | Brooke Harb (BH) – Project Officer | KB | Consultation regarding Mining Lease Application (MLA). | DLALC was provided with expanded copy of MLA plan as requested by BH from DLALC. | |
| 1 August 2016 | Lynne Hamilton (LH) | Peter Smith (PS) – Environment and Community Manager | Letter received requesting further information/plans for W2CP DA Amendment | DLALC were provided plans on 14 August satisfying items 1, 3, 4 & 5 as requested by DLALC. | |
| | | | | Due to confidentiality issues, WACJV advised DLALC that it was unable to provide a copy of the road closure application for Nikko Road. However the redacted supporting information letter to the road closure application and an associated plan was provided. | |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| 14 August 2016 | LH | KB | Consultation – provision of information regarding Crown Road application | As above | |
| 15 August 2016 | LH | KB | Thanking KB for provision of information to DLALC | Email | |
| 17 August 2016 | LH | Wyong Coal Admin | Meeting request from WACJV to DLALC to facilitate the provision of further information regarding the DA Amendment | DLALC Administration was contacted to arrange a meeting for 17 or 18 August.<br>SG phoned back to advise that he is away until next week and advised Wyong Coal Administration to email Jodi Shannon (JS) – Executive Assistant to arrange. | Administration sent an email to JS to arrange a consultation meeting for next week |
| 18 August 2016 | LH | KB | KB request to DLALC for a meeting to provide further information for DA Amendment | WACJV Administration phoned LH on her mobile at approx 10.30am and followed up with an email meeting request to LH at 10.37am requesting a meeting either today or tomorrow. WACJV Admin also followed up with further calls to LHs mobile at 1.15pm, 2.30pm and 4pm on the 18 August - No response. | Late afternoon on 18 August, KB received a call from LH saying she missed a call from our office. KB advised we had been trying to contact her to arrange a meeting for either 19 August or 22 August.<br>LH rejected the meeting offer, explaining that she would not be willing to meet without SG present and that he was unavailable. DLALC Admin would contact WACJV to arrange a meeting. |
| 18 August 2016 | LH | KB | To advise DLALC unable to meet | As above | |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| 19 August 2016 | JS | Wyong Coal Admin | Email received from DLALC regarding meeting request | Email received from JS Friday 19 August @ 9.26am as follows: *Dear Mandy, We believe that you have been making contact with Darkinjung. We will be in touch after Wednesday of next week as previously discussed.* | WACJV awaited contact from DLALC as instructed, however DLALC failed to contact. |
| 25 August 2016 | JS | Wyong Coal Admin | Further attempt to arrange meeting with DLALC | Phoned JS to schedule a meeting with SB and LH - answering machine advised office is unavailable today due to training - left a message for her to call and also followed up call with an email to JS, received an out of office reply advising JS on holidays until Monday 29 August | 26 August - BH phoned at 1pm on behalf of LH to schedule a meeting for KB & PA to meet with SG & LH - advised next available date was 7 September. KB advised to accept a 9am meeting on 7 September but also requested Brook to convey a message to LH & SG strongly urging to meet before then - BH advised she would pass the message on. |
| 26 August 2016 | BH | Wyong Coal Admin | Response from DLALC | As Above | |
| 29 August 2016 | SG | PA | The provision of further information to DLALC including detailed plans to satisfy various DLALC requests to DP&E. | 6pm: Email to SG advising that DP&E has made us aware of a request from DLALC for further information re DA and that we have been trying to contact him since then to discuss exactly what information. | Response from SG at 8.02pm on 29 August. |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| | | | | DLALC requires so that the correct information can be provided. In the absence of such meeting, WACJV has prepared additional plans to satisfy what it believed DLALC's concerns would be. PA strongly suggested an earlier meeting. | |
| 29 August 2016 | SG | PA | Response to email from SG to PA acknowledging information provided. | As above. | |
| 30 August 2016 | JS | Wyong Coal Admin | Further follow-up phone call and email request from WACJV to DLALC urging consideration of earlier meeting. | Phone call and email. | No response received. |
| 31 August 2016 | JS | Wyong Coal Admin | Further follow-up from WACJV to DLALC regarding earlier meeting request. | Phoned JS at 9.28am and was advised that she was away from her desk. Phoned again at 10.23am and was advised that she was out of the office. | 31 August - email response at 12.01pm from JS saying DLALC still would like to meet at the already set date and time |
| 31 August 2016 | JS | Wyong Coal Admin | Response from JS at DLALC to WACJV requests. | As above. | |
| 7 September 2016 | SG & LH | KB and PA | Meeting with DLALC to provide further DA Amendment plans/information | Met to discuss information provided to DLALC including plans showing improved access to Nikko Rd, design of infrastructure, access to site and ability to construct without impinging on neighbouring allotments. | Draft minutes received from LH 13 September, mark-up returned 14 September, finalised 16 September |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| | | | | Meeting also attended by WACJV Engineering and Environmental & Planning experts. Discussions regarding possible impacts on future residential areas which do not have current zoning approval, but which are proposed through a gateway and rezoning application. Noise and dust modelling methodology, requirements and outcomes regarding DLALC land discussed. | |
| 9 September 2016 | SG | PA | PA email to SG thanking him for meeting on 7 September. Request to provide written offer including process steps and timeline. | Reply from SG on 12 September advising that he is waiting for minutes to be finalised for both parties to agree & sign off. | |
| 12 September 2016 | SG & LH | PA | PA email LH request for meeting to discuss the proposed re-cycling facility. | Reply from DLALC (LH) stating that it will correspond further once minutes of meeting are accepted. | PA emailed LH on 11 September requesting tentative date for a meeting. |
| 12 September 2016 | SG | PA | Response from SG to PA email of 9 September. | As above. | |
| 13 September 2016 | LH | PA | Email from PA requesting audio recording of meeting on 7 September. | Reply from LH on 13 September advising that DLALC will send Confidentiality Agreement then release. | |
| 13 September 2016 | LH | PA | Response from LH to request for audio recording. | As above. | |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| 14 September 2016 | LH | PA | PA email and teleconference to clarify issue of confidentiality. | PA assumed from LH response (see previous consultation) and absence of *commercial-in-confidence* content in minutes that confidentiality does not apply to them. | |
| 15 September 2016 | SG | PA | PA email to SG meeting request for Wed 21/9/16 to discuss progress on DLALCs request to revert to original rail option on DLALC land. | No response received. | |
| 19 September 2016 | SG | PA | SG message to PA and return regarding media and proposed meeting. | DLALC said they would not be able to meet until later in week but did not confirm a meeting time. | |
| 22 September 2016 | SG | PA | Telephone from SG to PA advising DLALC meetings with DPE, and Premier and Cabinet and to arrange meeting with Wyong Coal. | Arrange meeting. | |
| 22 September 2016 | SG | PA and KB | Meeting to follow-up matters raised at 7 September meeting, reversion to original rail option, etc. | Option revoked by DLALC in favour of a Negotiated Regional Planning Outcome to the south of Link Road. | |
| 26 September 2016 | SG | PA | Email from PA requesting DLALC position in writing. | Await response. | |
| 27 September 2016 | SG | PA | Email from DLALC confirming option without providing requested details. | Follow-up email. | |
| 28 September 2016 | SG | PA | Further email request for DLALC to provide option details in writing. | Await response. | |
| 28 September 2016 | SG | PA | Response from SG without provision of requested information. | Follow-up email. | |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| 28 September 2016 | SG | PA | Further email outlining time constraints and reiterating need for written proposal from DLALC. | No response received. | |
| 4 October 2016 | LH | Dianne Munro (DM) - Hansen Bailey | Obtain access to DLALC to take photographs for compilation of photomontages. | Advised by LH to contact office for access. | |
| 5 October 2016 | LH & DLALC Admin | DM | Pickup key to access DLALC lands for photomontage field work. | Attempted to contact LH prior to arriving at DLALC's property. Signed for key at DLALC office. Key returned to office. | |
| 6 October 2016 | SG | DM | Letter to DLALC requesting further information on the proposed residential development at Bushells Ridge. | Correspondence received that no further additional is available. | |
| 6 October 2016 | SG | PA | Wyong Coal suggested meeting to further discuss rail options previously offered by DLALC. | Met SG at office of Premier and Cabinet Gosford. SG agreed to contact WACJV on 10 October regarding meeting. DLALC failed to follow-up. | |
| 7 October 2016 | DLALC Admin | PS | Pickup key to access DLALC lands for assessment field work. | Met with DLALC admin, pickup key and return to office. | |
| 10 October 2016 | SG | DM | Written reply from SG to request for further information. | Correspondence advised WACJV to consult the DP&E and CCC websites to obtain further information regarding DLALCs proposed residential development. | |
| 11 October 2011 | SG | PA | Further email from PA to DLALC requesting written information regarding DLALC rail option offer. | | |

| Contact Date | Contact Person | WACJV Contact | Purpose of Contact | Action/Activity | Future Action / Follow-up |
|---|---|---|---|---|---|
| 11 October 2016 | SG | PA | Letter from DLALC stipulating conditions and information provision needed prior to consultants to enter DLALC land | Wyong Coal advised access complete with no further access required. | |
| 13 October 2016 | SG | PA | DLALC contacts WACJV to arrange a meeting with planners as previously requested by Wyong Coal. | Meeting arranged for 17 October 2016. | |
| 17 October 2016 | SG | PA | Meeting with DLALC CEO, Planning Manager and Planning Consultants. | Discussions regarding DLALC rail proposal to the south of M1 motorway link road, DLALC refused to discuss previously offered reversion to original rail option or DA amendment impacts or issues. | |
| 20 October 2016 | SG | PA | Email from PA to SG requesting expressing concern regarding viability of NRPS and requesting further information to allow further consideration by Wyong Coal. | No response from DLALC. | |
| 26 October 2016 | SG | PA | Further email from PA to SG repeating request for further information to allow further consideration by Wyong Coal. | | |
| 27 October 2016 | SG | PA | Letter from SG informing that DLALC now withdrawing from discussions but leaving door open to consider original DA or NRPS upon commercial terms. | | |
| 29 October 2016 | SG | PA | Response to SG clarifying statements made by DLALC and confirming that Wyong Coal willingness to consider alternatives if DLALC provides further information. | No response received as at 9am, 4 November 2016. | |

### 6.1.15 Permissibility of the Amendment

***Issue***

*DLALC asserts that the Nikko Road infrastructure is prohibited due to the zoning of the land on which it is proposed to be located. DLALC also asserts that the location of this infrastructure is inappropriate as it is sited within the coastal zone (as defined under SEPP 71).*

***Response***

The permissibility of the Amendment was addressed in Section 3.3.4 of the Amendment Document. Clause 7 of the Mining SEPP provides that development for the purpose of underground mining is permissible with development consent on any land.

As explained in Section 3.3.3 of the Amendment Document, the Amended Project will comply with the provisions of *State Environmental Planning Policy No. 71 – Coastal Protection*.

### 6.1.16 Design Drawings

***Issue***

DLALC requested design drawings of the proposed noise barrier, transfer station (adjacent to the Motorway Link Road) and conveyor gantry over Tooheys Road. DLALC requested plans of the proposed infrastructure within the Nikko Road reserve, including the rail spur, transfer station, train load out facility and retaining walls.

***Response***

The transfer station adjacent to the Main Northern Rail Line was depicted in drawing 22-17704-C203 in Appendix B of the Amendment Document. The proposed noise barrier was depicted in drawing 22-17704-C206 in Appendix B of the Amendment Document.

A plan view of the proposed infrastructure within the Nikko Road reserve is provided by Drawing 22-17704-C301 in **Appendix C**. This drawing also shows that a retaining wall will be constructed along a part of the eastern boundary of Nikko Road just north of the Motorway Link Road Bridge. Drawing 22-17704-C306 shows the conveyor gantry across Tooheys Road. These drawings were presented to DLALC on 7 September 2016 and discussed in detail with WACJV's attending specialists, with offers to seek further information should it be required. To date, no further requests from DLALC regarding these matters have been received.

Further detailed design of the proposed infrastructure will be completed prior to construction.

### 6.1.17 Sewer Connection

***Issue***

*DLALC requested clarification on whether the proposed sewer connection will be a private line, or a component of the municipal sewerage system that can be used to service other developments.*

***Response***

As explained in Section 2.3.4 of the Amendment Document, the purpose of the proposed sewer connection is to connect the Tooheys Road Site to the municipal sewerage system. This will be a private pipeline and will be designed in accordance with CCC's requirements, however WACJV will consider design allowing access to other users should the need arise. The indicative alignment of the sewer connection was shown on Figure 4 of the Amendment Document.

### 6.1.18 Visual Impact

***Issue***

DLALC asserted that the Amendment Document has not assessed the potential visual impacts of the train load out facility.

***Response***

Refer to the response in **Section 5.1.5**.

### 6.1.19 Construction Activities

***Issue***

DLALC asserted that the Amendment Document did not contain a construction plan. In particular, DLALC requested detailed on how construction equipment and materials would be transported to the proposed site along Nikko Road.

***Response***

An indicative construction schedule for the Original Project was presented in Section 3.12 of the EIS. As indicated in Section 2.4.1 of the Amendment Document, this construction schedule remains applicable to the Amended Project.

As explained in Section 2.4.2 of the Amendment Document, approximately 60,000 $m^3$ of fill material will be required for the construction activities along Nikko Road. Excavated rock from the development of the drift will be re-used as fill material. This material will be transported to Nikko Road via the overland conveyor.

The access arrangements during the construction phase are described in **Section 6.1.7**.

### 6.1.20 DLALC's Proposed Residential Development

***Issue***

DLALC requested an assessment of potential impacts on its proposed residential development at Bushells Ridge and Doyalson.

***Response***

The potential impacts on DLALC's proposed residential development are discussed in detail in **Section 5.1.6**.

### 6.1.21 Other DLALC Proposals

***Issue***

DLALC asserted that the Amended Project would impede access to its industrially zoned land (particularly Lot 195 DP 1032847). DLALC asserted that this would interfere with their plans to develop a Resource Recovery Facility (and associated rail siding) and the CASAR Motorsport Precinct.

***Response***

The Amended Project does not involve any development on land owned by DLALC. As such, the Amended Project will not preclude any prospective industrial development on DLALC's land.

Lot 195 DP 1032847 is located immediately to the west of the Main Northern Rail Line (see **Figure 3**). The Amended Project does not involve any development adjacent to the western boundary of the rail corridor, so there will be no impediment to accessing Lot 195 DP 1032847 from the Main Northern Rail Line. Further discussions with TfNSW confirms that whilst a full assessment of rail options into Lot 195 DP 1032847 would be required to facilitate rail access for DLALC, WACJV's proposed connection to the Main Northern Rail Line does not appear to present any impediment to access by DLALC.

It should be noted that in the course of consultation following DLALC's original submission on 31 August 2016, DLALC advised that the resource recovery facility and rail spur are no longer proposed to be located on Lot 195 DP 1032847.

The CASAR Park Precinct is a proposed motorsport facility located on Lot 191 DP 1032847 and Lot 195 DP 1032847. The proposed facility includes a 3.5 km long tarmac race track, pit garages, administration building, amenities, car park, driver training facilities and a go-kart circuit (Wilson, 2015). The CASAR Park Precinct was the subject of a development application (DA 658/2015) lodged with Wyong Shire Council (now CCC) on 30 June 2015.

Public access to the CASAR Park Precinct is proposed to be via an access road off Bushells Ridge Road. The Amended Project does not include any development that would impede access from Bushells Ridge Road.

The rail infrastructure, resource recovery facility and motorsport precinct referred to by DLALC would not be sensitive to noise impacts. Table 2.1 of the INP provides that the amenity criterion for industrial premises is 75 dBA. The noise levels resulting from the Amended Project are not expected to exceed 75 dBA at any location on DLALC's land.

### 6.1.22 Alternatives to the Amended Project

***Issue***

DLALC asserts that the consideration of alternatives to the Amended Project was inadequate.

***Response***

WACJV considered all infrastructure configurations that were practicable and did not involve development on DLALC land. The relative merits of each alternative were discussed in Section 2.5 of the Amendment Document.

Alternative development concepts raised by DLALC during ongoing consultations have been and will continue to be assessed as required, however at this stage none meet the general suite of practicability and environmental planning criteria, and do not avoid DLALC land.

## 6.2 DLALC SUBMISSION 2

DLALC made a second submission on 30 September 2016. This submission largely reiterated the issues that were raised in their earlier submission on 31 August 2016. These issues were addressed in **Section 6.1**.

DLALC's second submission stated that a "further alternative scenario has been presented to Wallarah 2".

***Response***

During the consultation meeting of the 7 September 2016, DLALC requested WACJV consider reverting back to the original DA rail configuration with the Wallarah 2 rail spur crossing Lot 193 DP 1032847, Lot 195 DP 1032847 and Lot 1 DP1192889, all owned by DLALC. Further discussion regarding the failure of the parties to previously reach an agreement on compensation for this option resulted in DLALC advising that their economic circumstances had changed, and that a proposed resource recovery facility within Lot 195 DP 1032847 required a rail spur which was considered amenable with the original Wallarah 2 rail spur proposal (now amended).

Following considerable assessment of the legal and practical implications of the offer, Wyong Coal agreed to further explore this option, seeking written clarification from DLALC of the exact nature of the offer, its commercial terms and the provision of more information associated with the proposed Waste Recycling Facility. At a subsequent meeting on the 22 September 2016, DLALC withdrew that offer, reasoning that the Waste Recycling Facility was now considered not appropriate for that location, and that a rail connection was not actually required for the Waste Recycling Facility.

At the subsequent meeting DLALC presented another option involving the use of its land located to the south of the M1 Motorway Link Road, arguing fewer impacts to the community and DLALCs proposed plans to the North near Bushells Ridge and Doyalson. DLALC acknowledged that there were restrictions upon the land in question, which would be addressed via a Negotiated Regional Planning Outcome requiring WACJV, DLALC and NSW Government inputs. Upon review, WACJV conveyed serious concerns to DLALC regarding the proposal, but agreed to review and consider the offer, requesting the details be provided in writing by DLALC as soon as reasonably practicable.

Whilst the written details were not provided by DLALC, WACJV undertook a detailed review of the option which proved to display a number of significant issues including:

- Placement of trains and loading facility closer to existing Blue Haven, Woongarrah, and Wallarah residential areas and Warnervale Urban release areas;
- A lack of topographic relief between the proposed rail spur and loader and the existing residential and Warnervale Urban release areas;
- An increased potential for visual, noise and dust impacts on the existing residential and Warnervale Urban release areas;
- Insufficient area within which to construct and operate a rail spur and loader;
- Rail connection issues requiring connection to the Main Northern Rail line to be North of the M1 link road bridge;
- Impacts on a significant area of riparian and adjoining vegetation, crossings of Wallarah Creek and a major controlled access road;
- Environmental study requirements with potential delays of up to two years;
- Significant delays associated with a Regional Planning outcome, with no guarantee of an outcome suitable to WACJV;
- Land offered by DLALC under existing Awabakal/Guringai Native Title Claim; and
- Any agreement with DLALC would still require a Land Dealing approval from the NSWALC.

During further consultation with DLALC, WACJV raised the matters of concern, seeking inputs from DLALC toward possible resolution, whilst confirming the current DA amendment as the preferred option presenting minimal impacts. To date, DLALC has declined to participate in further consultation regarding the current DA amendment and has not provided any information to allow Wyong Coal to further consider alternatives suggested by DLALC.

## 6.3 AUSTRALIAN COAL ALLIANCE

### 6.3.1 Original PAC Recommendations

***Issue***

The ACA asserted that the recommendations in the PAC Review Report have not been implemented.

***Response***

The PAC's recommendations are outlined in Section 5 of the PAC Review Report. The PAC did not request any alterations to the Project. Instead, the PAC's recommendations related to operational controls and monitoring commitments that will need to be implemented once the Project has commenced. It is anticipated that these obligations will be imposed as conditions of Development Consent.

The PAC also requested further information regarding the potential surface water and noise impacts. This information was provided in the *Response to Planning Assessment Commission Review Report* (Hansen Bailey, 2014).

**Section 2** provides a summary of the PAC's recommendations and how each recommendation has been or will be addressed.

### 6.3.2 Objections to Original and Amended Project

***Issue***

The ACA stated that its objections to the Original Project remain applicable to the Amended Project. The ACA appended their 2013 submission on the EIS to their current submission.

***Response***

The issues raised in ACA's previous submission (2013) related to the Original Project. These issues were addressed in RTS1.

The PAC considered the merits of the Original Project in its review and concluded that there is merit in allowing the Project to proceed. The proposed mining activities, infrastructure (other than the coal load out infrastructure), production and employment aspects of the Amended Project are unchanged from the Original Project. The merits of these aspects of the Project have therefore not been re-visited. It is expected that these aspects of the Project will remain acceptable to the PAC.

### 6.3.3 Korea Resources Corporation

***Issue***

The ACA asserted that Korea Resources Corporation (Kores), the major shareholder in WACJV, is in the process of abandoning its foreign developments. ACA asserted that if Kores abandons the Project, the NSW government would have to bear the costs of site remediation and rehabilitation.

***Response***

The WACJV ownership is comprised of various Korean and Japanese interests. Like all Resources companies, Kores has and will continue to evaluate its assets in terms of value and return. Notwithstanding that, each WACJV partner remains fully committed and financially resourced to enable the implementation of the Wallarah 2 Coal Project.

In NSW, all mining leases include a condition that requires the leaseholder to provide a security bond. This bond is only released when rehabilitation objectives have been achieved. Therefore, WACJV will bear all costs associated with decommissioning and rehabilitation of the site.

### 6.3.4 DLALC's Proposed Residential Development

***Issue***

The ACA asserted that the potential impacts on DLALC's proposed residential development need to be assessed.

***Response***

This issue is addressed in detail in **Section 5.1.6**.

### 6.3.5 Darkinjung Proposal and Tourism

***Issue***

The ACA asserted that DLALC's proposed CASAR Motorsport Precinct will generate significant revenues from tourism and will provide greater employment opportunities than can be provided by the Project.

***Response***

As explained in **Section 6.1.21**, the Project does not preclude any development whatsoever on DLALC's industrial land, as it does not impede access to these lots. Industrial developments (such as the CASAR Park Precinct) are subject to higher noise amenity criteria as per requirements the Amended Project is expected to comply with. Therefore, there is no basis for considering the Project and DLALC's proposals to be mutually exclusive or incompatible.

### 6.3.6 Employment

***Issue***

The ACA asserts that WACJV's commitment to 60-70% local employment is not achievable, given that few Central Coast residents would be qualified in mining. The ACA also asserts that the available jobs would be occupied by retrenched miners from the Hunter Valley.

***Response***

The range of persons that could be suitable employees is far broader than what is suggested in this submission. The operational workforce of an operational coal mine consists of roles in a wide range of disciplines including mining, engineering, geology, environmental science, work health and safety, trades, commerce, human resources and administration.

Through its community consultation program, WACJV has been actively communicating with prospective employees from the local area and Greater Central Coast region for a number of years.

Following further dedicated consultation in July 2016, 233 additional resumes and expressions of interest were received from prospective employees within the Central Coast Region, with 97 of those being directly local to the proposed operation. WACJV is therefore confident that the 70% local employment target is achievable and applicable to both experienced and inexperienced personnel required for the Project.

### 6.3.7 Air Quality

***Issue 1***

The ACA noted that the train wagons will not be covered and raised concerns regarding dust emissions from rail transportation.

***Response***

Dust emissions associated with rail transportation are discussed in **Section 5.12.4**.

***Issue 2***

The ACA noted that there are residential areas in close proximity to the Amended Project, and that there are multiple schools, pre-schools, retirement villages and a hospital within 5 km of the Project.

***Response***

As discussed in Section 6.2 of the Amendment Document, the Amended Project will comply with the relevant air quality criteria at all existing residences, including residences in Wyee and Blue Haven and other sensitive receptors in the wider area beyond these locations. As shown in **Figure 20** and **Figure 21**, the predicted $PM_{10}$ concentrations, even at the closest parts of DLALC's proposed residential development are considerably below the relevant air quality criteria.

***Issue 3***

The ACA asserted that the model predictions are conservative as they do not account for the changing nature of intense wind and storm events in the recent years.

***Response***

The AQGGAA was conducted in accordance with the 'Approved Methods for Modelling and Assessment of Air Pollutants in NSW' (DEC, 2005). The modelling undertaken for the AQGGAA used all available meteorological data, including data collected subsequent to the modelling undertaken for the Original Project (i.e. data from 2013-2015).

***Issue 4***

The ACA asserted that fugitive emissions will be generated by conveyors, wind erosion, stockpile maintenance and upcast ventilation shaft.

***Response***

As discussed in **Section 5.13.1**, the AQGGAA considered emissions from all potential sources including conveyors, wind erosion, stockpiles and the up-cast ventilation shaft. The predicted worst case particulate concentrations at sensitive receptors are within the relevant air quality criteria.

### 6.3.8 Noise

***Issue 1***

The ACA asserts that noise generated by the Amended Project will result in health problems for residents in Blue Haven and Wyee.

***Response***

The NVIA considered the potential noise levels at assessment location P13, which is near the western boundary of Blue Haven. Noise levels at Blue Haven are predicted to be within the noise criteria prescribed by the INP.

Assessment location P17 is located near the southern boundary of Wyee. Noise levels at location P17 are predicted to exceed the PSNC by up to 2 dBA. The VLAMP does not require any mitigation requirements for exceedances of 0-2 dBA.

The noise criteria recommended by the INP were developed to manage the potential effects of noise on communities, which may include physical and mental health, sleep disturbance, adverse health effects and social well-being. Compliance with the INP criteria will ensure that these effects do not occur.

### 6.3.9 Electricity Transmission Lines

***Issue***

The ACA noted that WACJV has entered into a commercial agreement with Transgrid. The ACA asserts that WACJV should be obligated to ensure that power lines and timber poles are always functional, and that any loss of functionality should be compensated by WACJV.

***Response***

As explained in Section 5.14 of the Subsidence Predictions and Impact Assessments (Appendix H of the EIS), the Project may result in impacts to two high angle tension towers supporting the 330 kV transmission lines overlying the Extraction Area.

WACJV recently entered into a Process Agreement with Transgrid for a pre-feasibility study into potential mitigation measures for these tension towers. The pre-feasibility study will consider the effectiveness of the following measures:

- Reinforcement of the towers at their existing locations; and
- Realignment of the transmission lines.

WACJV will bear the costs of this pre-feasibility study. WACJV will also bear the costs of any mitigation measures that are determined to be necessary.

The issues raised in TransGrid's submission are addressed in **Section 5.15**.

### 6.3.10 Water Supply

***Issue***

The ACA asserts that loss of water from the catchment will affect local residents and industry.

***Response***

The significance of impacts on water supply was considered by the PAC in its review of the Original Project. The PAC recommended 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".*

With respect to the merits of the Project as a whole, the PAC concluded that if its recommendations are adopted, there is merit in allowing the Project to proceed.

The Amendment does not alter the already assessed impacts of the Project on the Central Coast water supply scheme. Accordingly, the potential impacts to the water supply scheme have been demonstrated to be comprehensively managed and do not need to be re-considered when assessing the merits of the Amended Project.

### 6.3.11 Compatibility with Other Land Uses

***Issue***

The ACA asserts that the Central Coast is the fastest growing residential development area in NSW. The ACA also asserts that tourism is a major contributor to ongoing and increased employment.

***Response***

As explained in Section 6.2.3 of the Amendment Document, the dust concentrations resulting from the Amended Project are predicted to be well below the relevant amenity air quality criteria at all existing and proposed residential areas.

As explained in Section 6.4.3 of the Amendment Document, operational noise levels are predicted to comply with the PSNC for Blue Haven. Some isolated residences are predicted to experience exceedances of the PSNC. Noise mitigation measures will be offered to the three rural landowners in accordance with the VLAMP as communicated during direct consultations with these landowners to date.

As explained in **Section 6.1.21**, the Amended Project does not present any impediment to DLALC's proposed resource recovery facility or motorsport precinct.

The potential impacts on DLALC's proposed residential development are discussed in **Section 5.1.6**.

Therefore, the Amended Project should not be viewed as being incompatible with further residential development, other existing and proposed land uses, and tourism within the Central Coast LGA.

## 6.4 NATURE CONSERVATION COUNCIL

Most of the major areas of concern to NCC relate to the Original Project rather than the Amended Project. Issues relating to the Original Project were addressed in RTS1. However, further clarification has been provided for particular issues.

### 6.4.1 Public Opposition to the Project

***Issue***

The NCC states that "*There were over 600 public submissions opposing the development in 2013, which indicates a high degree of public opposition".*