

## 12 Rail transport

### 12.1 Project changes

Refinements to the route alignment of the 28 km long rail spur have been occurred to the exhibition of the EA. These modifications improve the efficiency of train operations and minimise the fuel use for these trains.

There are now two road underpasses in the vicinity of Brooklyn Road and Suzanne Road (Figure 3.14). Daily train numbers and train sizes are the same and there are no proposed changes to the Project rail operations. No new level crossings are required for the rail spur. Therefore, the Project changes will have no increased rail traffic impacts compared to the impacts beyond those presented in the EA (Chapter 13 and Appendix L).

#### 12.1.1 Assessment method

Subsequently to the exhibition of the EA and in response to submissions, more detailed investigations have been undertaken of level crossing safety and delay impacts of the trains from the Project.

#### 12.1.2 Environmental management

The EA rail transport assessment (Appendix L, page E.6) identified that an additional railway level crossing safety-risk assessment should be undertaken by ARTC at six level crossings in the Gulgong area. ARTC has undertaken detailed safety review of these six level crossings.

The ARTC safety review has used the Australian Level Crossing Assessment Model (ALCAM). The investigation was undertaken in November 2012, by consultants UTS Rail, for the ARTC to assess the changes to rail transport operations in the Gulgong local area as a result of the Project. The investigation recommended level crossing safety and/ or related road improvements at each of the six level crossings as given in Table 12.1.

**Table 12.1 ARTC recommended Gulgong area level crossing safety improvements**

Level crossing location (chainage)	Existing level crossing safety control	Recommended level crossing safety improvement
Spring Creek Road (459.425 km Ulan Line)	Stop signs	Signage improvements to improve the crossing visibility for approaching traffic
Station Street (340.940 km Gwabegar Line)	Active control with flashing lights but no barriers	Additional boom gate barriers and signage improvements to improve the crossing visibility for approaching traffic
Tallawang Street (341.510 km Gwabegar Line)	Stop signs	The crossing is closed due to sighting compliance issues with the acute angle of the road and railway line approaches. If closure is not feasible, it will be necessary to realign the road approaches and signage improvements to improve the crossing visibility for approaching traffic
Black Lead Lane (341.945 km Gwabegar Line)	Stop signs	Signage improvements to improve the crossing visibility for approaching traffic
Willis Private Road (342.200 km Gwabegar Line)	Stop signs	Signage improvements to improve the crossing visibility for approaching traffic and comply with AS 1742.7

**Table 12.1**      **ARTC recommended Gulgong area level crossing safety improvements**

Level crossing location (chainage)	Existing level crossing safety control	Recommended level crossing safety improvement
Barneys Reef Road (342.489 km Gwabegar Line)	Stop signs	Conversion to Active Control with flashing lights and boom gate barriers due to sighting compliance issues with the acute angle of the road and railway line approaches. A vertical realignment of the roadway is required to accommodate the super-elevation of the curved railway tracks and ensure road vehicles travelling at the sign posted speed limit do not become airborne at the crossing

Source:    *Review of Level Crossings at Gulgong for Proposed Cobbora Mine, November 2012 (UTS Rail 2012).*

A more detailed investigation of the train speeds and closure times was made for the two level crossings in Newcastle. The primary concerns relate to the proposed additional southbound coal trains that will be loaded and generally travelling more slowly than the northbound coal trains, which will be empty. The investigation was based on southbound 1,500-m long loaded coal trains (Engenicom 2012). The predicted train speeds and consequent level crossing closure times were determined for six different train routing and stopping scenarios on the section of the railway line at the interface between the ARTC and RailCorp networks, between Waratah and Kotara. The calculated minimum level crossing closure times for future southbound 1,500-m long loaded coal trains will typically be between five and nine minutes per train (Table 12.2).

**Table 12.2**      **Calculated minimum level crossing closure times for southbound loaded coal trains**

Train route and stopping scenario	Calculated closure time at Clyde Street Level Crossing	Calculated closure time at St James Road Level Crossing, Adamstown
1- Warabrook to Adamstown via the Up Main Line throughout	5 minutes 19 seconds	5 minutes 06 seconds
2- Warabrook to Islington via the Up Main Line, then Woodville to Adamstown via the Up Relief Line	5 minutes 19 seconds	6 minutes 02 seconds
2a- The same as Scenario 2, except including stopping at Broadmeadow, prior to proceeding through Adamstown	5 minutes 19 seconds	9 minutes 01 seconds
3- Warabrook to Waratah via the Up Coal Line, then Waratah to Adamstown via the Up Main Line	7 minutes 08 seconds	5 minutes 06 seconds
3a- The train travels through the Carrington Coal Terminal, stopping before entering the Up Main line at Islington, then proceeding to Adamstown via the Up Main Line	8 minutes 26 seconds	5 minutes 06 seconds
4-Waratah to Woodville via the Up Main Line, then Woodville Junction to Adamstown via the Up Relief Line	7 minutes 08 seconds	9 minutes 01 seconds

Source:    *Maximum Permitted Train Speeds – Waratah to Kotara, Discussion Paper (Engenicom 2012).*

The results in Table 12.2 generally confirm the previously predicted Adamstown and Clyde Street level crossing closure times of 7 minutes 32 seconds per train on average for southbound loaded coal trains (based on the actual surveys of the “mostly northbound” loaded coal trains) in the EA (Appendix L, Section 5.5). A real-time information system is proposed to be installed on the road approaches to both the level crossings at Adamstown and Clyde Street, as announced by the Newcastle MP, Tim Owen AM on 17 September 2012. Variable electronic signs will provide advice to approaching motorists as to when the level crossing gates are closed for coal and other freight trains, and of the remaining waiting times. Additionally, intersection operation improvements, such as varying and extending the traffic signal phase timings, may also be implemented at the Glebe Road-Brunker Road and the St James Road-Bridges Road intersections in Adamstown to help traffic movements on the alternative traffic detour routes and reduce the overall traffic delays when the level crossings are closed.

No timing is specified by the NSW government transport agencies for the announced improvements to be implemented. However, to mitigate the predicted additional traffic delays, they will need to be implemented before the Project’s coal train operations begin in July 2015.

### 12.1.3 Impacts

At the two existing railway level crossings in Newcastle, the NSW Government transport agencies’ proposed level crossing improvements will reduce traffic delays. The additional railway level crossing safety and road traffic delay impact mitigation measures will help reduce the Project’s identified rail transport impacts.

## 12.2 Response to submissions

### 12.2.1 Strains on the existing rail and road systems

#### Submissions

NA-12, I-15, I-157, I-179

#### Issues

Transport for NSW does not agree that existing Teralba and Newstan Coal train paths can be shared by the coal trains from the Project. A number of submissions note that train movements through Newcastle are proposed to be increased by eight trains a day and will increase traffic hold-ups at the Adamstown and Clyde St gates by 40 mins.

#### Response

The EA (Appendix L Section 2.5), suggests that some existing coal train paths south of Newcastle could be shared with other coal trains, such as coal trains from the Project. However, the assessment does not rely on this occurring. It is acknowledged in the summary of the rail transport assessment (Appendix L, Section 7.1) that the existing coal train paths south of Newcastle will require modification to “section running times” and “extension further to the south to Vales Point and/or Eraring” so they can be used by a wider variety of coal train types and customers.

Although eight additional train paths each day through the Newcastle urban area (four in each direction) will be required for the Project coal trains, there will actually only be six additional coal train movements per day (three in each direction) operating through the Newcastle urban area. At least one spare coal train path is required in each direction each day, in addition to the predicted usage level, to provide the necessary daily operational flexibility for the Project coal train operations.

Within the Hunter Valley rail corridors, additional coal train paths are generally proposed to be provided by ARTC by means of infrastructure improvements that will increase the network's overall capacity. These infrastructure enhancements will be managed through the ARTC Hunter Valley Access Regime with long-term 'Take or Pay' commitments of the system users.

In the Newcastle area, some of the additional Project coal train paths could be provided by extending and reconfiguring existing spare coal train paths that are available for use by other coal train operators south of Newcastle. This will be determined by negotiation between CHC, the energy providers and RailCorp, which is responsible managing and operating the railway network south of Woodville Junction in Newcastle.

Additional export coal train paths from the Hunter Valley lines to the Port of Newcastle will not affect the operation of the two existing level crossings in Newcastle at Clyde Street and Adamstown, as the railway tracks to either the Kooragang or Carrington terminals diverge from the railway network to the north of these two level crossings.

### 12.2.2 Central Coast power stations rail loops

#### Submission

NA-12, NA-13

#### Issues

The DP&I asks whether there has been any consultation with the existing Newstan and Teralba mines about the potential impacts on peak train movement because a potential reduction is required in peak train paths to account for Project trains to access the Central Coast power stations. Transport for NSW advises the timing of proposed modifications to the unloading points at Eraring and Vales Point will determine the train configurations that can be used to supply the customers of the mine.

#### Responses

The constraint of the train sizes at the Eraring and Vales Point unloading points is acknowledged. The EA rail transport report assessment is based on the most likely train configurations, 7,800 to 8,800 t capacity, either 1,370 m or 1,550 m long, operating to either the Eraring and Vales Point or the Hunter Valley power stations.

The EA rail transport assessment continues to assume that train sizes of 7,800 t (1,370 m long), which are compatible with the Hunter Valley and Ulan line rail operations, will be used for Project coal trains travelling to Eraring and Vales Point

If the future configurations of the Eraring and Vales Point Power Station loops are not upgraded it may limit the amount of coal delivery to the power stations, so that the number of trains remains consistent with that assessed in the EA.

In further discussions between RailCorp, Transport for NSW and CHC it was confirmed all the current RailCorp timetabled coal train paths for the Newstan and Teralba mines south of Newcastle will be retained for their use and Project coal trains will have no impact on the rail transport operations for these mines.

### 12.2.3 Cumulative rail traffic

#### Submission

C2, NA-13

#### Issues

The MWRC comments that the EA does not include enough specific detail about the volume of mine-related rail traffic from the Ulan cluster of mines (include all existing movements and any predicted increases in rail traffic from the development of Ulan West and Moolarben Stage 2). The MWRC asserts that conclusions about the rail network's capacity to accommodate rail traffic from the Project cannot be tested. The DP&I comments there is no clear justification provided for not assessing the impacts on rail infrastructure between Ulan, Sandy Hollow and Muswellbrook, where the Project's contribution to rail movements may be significant for overall train movements.

#### Responses

The EA (Appendix L, Section 4.1 and Section 4.2) has assessed the future coal production tonnages and the future train capacity for the Muswellbrook to Ulan line based on the most recent ARTC June 2012 analysis (ARTC 2012). The ARTC analysis provides cumulative tonnage predictions for 2017 and 2021 that include the combined future production from the Ulan, Moolarben and Wilpinjong, including additional production from approved and proposed expansions at these three mines; the Cobbora mine; and the potential coal production from three prospective mines at Mt Penny, Bylong and Ferndale.

The contracted coal tonnage for 2012 that is transported on the line west of Mangoola is 27 Mtpa. The predicted future cumulative coal tonnage for all the current and proposed mines is 59.5 Mtpa for 2021. The ARTC report provides the cumulative future coal production tonnage for all the mines along the route but does not identify the tonnages for individual mines.

The ARTC rail corridor upgrade strategy will be underpinned by the ARTC Access Undertaking, which provides a commercial framework for capacity development and includes passing loops and related capacity upgrade works at 11 locations on the Muswellbrook to Ulan line described in EA (Appendix L, Table 2.2). Subject to the identified ARTC (2012) rail corridor capacity upgrade works being completed for the Wilpinjong to Mangoola section of the Ulan railway line, and the track loading capacity (30 TAL axle loading) upgrading works being completed for the Tallawang to Ulan section, the EA has confirmed that enough rail network capacity will be available on all sections of the ARTC rail network for coal trains from the Project to operate.

The EA report includes, with reference to the most recent ARTC Hunter Valley Corridor Capacity Strategy, an assessment of the impacts of the Project on the need for rail infrastructure, including rail corridor noise mitigation measures, from Ulan to Sandy Hollow and Muswellbrook.

The future projected coal and other freight train movements that will be using the line, in 2017 and 2021, are summarised in Appendix L (Table 4.3 and Table 4.4), including the Project coal trains that will be generating five loaded coal train movements per day using the Ulan line at full production in 2021, and fewer in 2017.

The rail noise assessment for the Project for the Ulan line has been extended towards Muswellbrook, to the point where the Project coal trains are 10% or less of the total rail traffic.

#### 12.2.4 Impacts on rail commuter transport

##### Submission

I-8, G-19

##### Issues

Two submissions comment that the need to transport coal through the Newcastle commuter network to Vales Point and Eraring power stations will cause unacceptable increased rail traffic congestion.

##### Responses

The assessment of the existing supply and usage of the coal and other freight train paths in the Newcastle area (EA Appendix L Section 2.5) identifies enough under-use and spare capacity of coal train paths in the Newcastle urban area to accommodate additional coal trains from the Project without adversely affecting capacity for rail commuter transport.

To avoid potential conflicts with existing or future commuter passenger train operations Newcastle, it is likely that future additional coal train paths for trains from the Project will not be scheduled to operate during the morning and afternoon commuter peak periods.

The Network Management Principles of the Railcorp network will ensure the preference and priority of commuter services will not be affected by the Project trains.

The NSW Government's Draft Freight and Ports Strategy released in November 2012 (Transport for NSW November 2012), identifies a Newcastle Rail Bypass as an appropriate longer-term solution for rail freight operations, which would remove the majority of freight trains from the rail network through Newcastle.

#### 12.2.5 Impacts to the Hunter rail corridor

##### Submissions

G-10, I-32

##### Issues

Submissions comment that train movements will impact on the populations of Gulgong, Ulan, Wollar, Bylong and all communities on the Hunter rail corridor and that access constraints have not been adequately identified or addressed.

## Responses

The impact of the additional coal trains from the Project on road transport at railway level crossings and rail-related noise and air quality impacts on residential properties located next to the railway line have been assessed in detail in the EA. Further information on the rail-related noise and air quality impacts is provided in the relevant sections of this RTS. Appropriate mitigation measures will be implemented for railway level crossing safety and traffic delays in Gulgong and the Newcastle urban area and the potential rail-related air quality and noise impacts for residential properties next to railway lines, such that impacts of Project generated train movements at Gulgong and the other towns along the transport route will be mitigated to acceptable levels.

### 12.2.6 Impacts of train movements on Gulgong

#### Submission

I-39, C-2

#### Issue

One submission comments that access into Gulgong will be hampered and the rail track requires moving or modifying. However, the submission notes the use of coal trains, as opposed to road coal trucks, is preferred. MWRC comments the EA does not address the impact of rail transport on Gulgong, particularly for emergency vehicles and the standard of rail crossings.

#### Response

It is not proposed to move the railway tracks in Gulgong. The existing railway line through Gulgong passes along the northern edge of the town with six residences potentially exposed to rail-related noise exceeding the applicable criteria.

### 12.2.7 Train movements in Newcastle

#### Submission

NA-12

#### Issue

Transport for NSW comments that in the context of future railway level crossing operations in the Newcastle urban area, the times of day the Project coal trains are likely to pass through Newcastle cannot be specified until train configurations and timetabled train paths are determined. The methodology assessing the coal train delays could be further refined to also distinguish between the loaded and empty coal trains in the up and down directions.

#### Response

There are the constraints on freight train path availability in the Newcastle area from passenger train operations during both the weekday morning (7–9 am) and afternoon (4–6 pm) commuter peak periods. It is considered unlikely that any additional Project train paths, for coal trains of any configuration, will be identified in this area during these weekday peak road and rail traffic periods.

The RailCorp level crossing closure times survey at the Adamstown level crossing was from 5–9 March 2012. It is reported in the EA (Appendix L, Section 5.5) and generally identifies all the existing coal trains travelling in the northbound (down) direction as loaded and all the coal trains travelling in the southbound (up) direction as empty, with no more than one or two exceptions, during the five-day survey.

The future Project coal trains will all be travelling in the opposite directions when loaded and empty, compared with the existing coal trains. However, the level crossing delays for coal trains on the RailCorp network are mainly determined by whether the coal train is loaded or empty, rather than whether it is travelling southbound or northbound, due to the 60 km/hr operating speed restriction for loaded coal trains on the network. Another constraint to the coal train operating speeds in the Adamstown and Broadmeadow areas occurs where both northbound and southbound trains may need to use the 25 km/hr speed limit crossovers when switching between the main and relief tracks, between Adamstown and Broadmeadow.

Further detailed investigation of the level crossing delays for loaded coal trains, up to 1,500 m long, has been undertaken by Engenicom, as reported in Section 12.1 and Table 12.2 of this report. It confirms the predicted future level crossing delays for southbound loaded coal trains at both the St James Road (Adamstown) and the Clyde Street (Islington) level crossings will normally be within the range of five to nine minutes. This is consistent with the average estimated delay of 7 minutes 32 seconds per train for southbound loaded coal train movements, which was reported in the EA.

#### 12.2.8 Cope Road rail crossing

##### **Submission**

C2

##### **Issues**

The MWRC comments the EA does not specify the date or source of the road traffic counts that were used to assess rail crossing safety, and specifically questions the traffic counts used for the two crossings on the Cope Road route referred in the EA as Station Street, Gulgong; 10 m west of Ulan Road. The MWRC comments that the rapid and continual expansion of the three coal mines at Ulan has seen increasing volumes of road traffic not only between Mudgee and the mines along Ulan Road but also between Gulgong and Ulan along Cope Road.

##### **Responses**

The preliminary level crossing safety assessment in the EA (Appendix L Section 5) is based on research by the NSW Independent Transport Safety and Reliability Regulator (ITSRR), which assesses level crossing safety based on the type of safety control and the combination of the daily train and road traffic volumes.

The daily road traffic volumes are assessed from the most recent published daily road traffic volume survey information from RMS within specified ranges (less than 300; 300–1,000; and 1,000–3,000 vehicles per day for road traffic). Although the daily road traffic volumes on the Cope Road–Station Street route at Gulgong and Ulan may now have increased above the RMS surveyed levels, which date from 2005 and 1992 respectively, the current average daily traffic volumes at these level crossing locations (Station Street at Gulgong and MR 598 Cope Road at Ulan-also known as Ulan Village Main Street) are still expected to be within the assessed daily traffic volume ranges of 300–1,000 and 1,000–3,000 vehicles per day at each location.



## 12.2.9 Gulgong level crossings

### Submissions

C-2, I- 124, NA-13

### Issues

The MWRC comments that the Station Street crossing must be upgraded to include half-boom barriers because it has been identified in the top 300 of the priority ranking for upgrade of railway level crossings in NSW (NSW Parliament Staysafe Committee Report 2009), and it is likely that if an up-to-date traffic count were done, then the road traffic volumes are likely to be more than stated in the report. Further, the MWRC considers that other crossings near Gulgong should be similarly reassessed, particularly the one on Spring Creek Road where there was a relatively serious accident in the last twelve months. MWRC states that a number of traffic counts taken by the council in the general area in early 2011 suggest road traffic volumes continue to increase, not only because of the expansion of the Gulgong township but also from traffic generated by mining and ancillary industries. The DP&I comments there has been no assessment of the impact of rail pass-by on traffic queues on the adjoining road system at level crossings near intersections on major roads

An individual submission comments: “we have had to endure the practice of changing drivers at the old railway station whilst the train is parked over two crossings and sometimes the three crossings that gives access to the North of Gulgong. This can take up to 15 minutes before they move again. This blocks all access in and out of town for traffic and emergency services.” The only solution here is to have an over-pass for the main entrance to town.

### Responses

The Station Street level crossing at Gulgong was identified as a priority for upgrading in the list of the state’s top 300 priority sites in 2009. It is 295<sup>th</sup> on the list. After the exhibition of the EA, an additional ARTC assessment (as reported in Section 12.1 and Table 12.1 of this report) has identified half-boom barriers as an appropriate additional safety provision at the Station Street crossing. In this regard the ARTC level crossing safety review’s recommendations will supersede those of the EA. The ARTC assessment has also identified appropriate railway level crossing safety improvements (improved signage) for the Spring Creek Road level crossing and four other existing railway level crossings in the Gulgong area, as listed in Table 12.1.

There are three level crossings in Gulgong (Station Street, Tallawang Street and Black Lead Road). As these are each at least 500 m apart, it is unlikely all three level crossings will be blocked by a moving train simultaneously for more than 30 seconds unless the train is stationary. Emergency services vehicles will have an alternative level crossing location to use at Gulgong, when one of the three level crossings is blocked. The previous train operating practices at Gulgong, which were caused by a previous signalling arrangement, where a train could be parked for up to 15 minutes across two or more level crossings at Gulgong, no longer apply. Instead the Centralised Train Control (CTC), which operates on the Ulan line further east, will be extended to Tallawang.

The potential road safety and traffic queuing impacts of additional traffic queues on the adjoining road system at the Gulgong area level crossings when the Project coal trains are fully operational (ten additional train movements daily) were considered in the overall context of the Gulgong area level crossing safety investigations in the EA (Assessment L Sections 5.3 and 5.4). The possibility of road traffic queuing across level crossings was considered as an additional level crossing safety risk where level crossings are located on a side road, close to a T-intersection with a major road. At these crossings, when the minor road approach is blocked by a train, the major road may need additional widening by means of additional left or right turning lanes, so that traffic queuing on the major road does not block other through traffic movements on the major road.

At the level crossings investigated in the Gulgong, Ulan and Tallawang areas where this situation exists, such as two level crossings at Ulan located on side roads close to an intersection with the Mudgee-Ulan-Casillis Road, the major road already includes additional turning lanes to accommodate queued turning traffic.

At other level crossings, such as Black Lead Road, which is close to the intersection with Barneys Reef Road, there are no additional turning lanes provided on Barneys Reef Road. However, the volumes of through traffic movements on Barneys Reef Road are sufficiently low that the future traffic delay and safety conflicts between through traffic and any queued traffic when there is a train at the Black Lead Road level crossing, should not require additional turning lanes.

#### 12.2.10 Coal transport to Port Kembla

##### Submission

G-10

##### Issue

This submission suggests that if the Project is privatised it will need to increase production rates for export to remain viable. The resulting expansion would put more pressure on the Hunter rail corridor, suggesting that the outcome would be coal sent by rail through Mudgee to Port Kembla for export.

##### Response

As stated in the EA (Section 2.10) coal will not be carried through Mudgee. If approved, the Project coal will have to transport coal in accordance with the EA. Further, the section of railway line from Gulgong to Kandos has effectively been non-operational since 2007 and would require major rehabilitation and upgrading to be used for coal transport. The cost of these infrastructure upgrades are not economically viable for future coal transport from the Project via Mudgee. This has not been sought in the EA and will not be approved as part of this Project.

#### 12.2.11 Rail transport air quality and noise impacts

##### Submissions

I-12, I-13, I-15, I-39, I-55, I-70, I-84, I-85, I-101, I-118, I-124, I-133, I-135, I-148, I-157, I-170, I-185 G-2, G-15, G-19

## Issues

These submissions comment that increased coal transport by rail will cause, or add to, adverse air quality, noise and health impacts on affected communities and residences along the rail corridor. One submission comments that the rail line should be moved away from the township of Gulgong leaving a by-pass loop for non-coal trains to use the existing rail line and station to avoid dust deposition from coal trains.

## Responses

The EA includes detailed assessments of the rail-related air quality and noise impacts along the route through the township of Gulgong. Potentially significant rail-related noise and air quality impacts are likely to occur at 11 residences within about 30–50 m from the railway line and related mitigation measures are given in Sections 13 and 15 of this report.

The updated rail noise assessment, which is provided in Chapter 15 of this report, has now been extended further to the east in the direction of Ulan and Muswellbrook, to the point where Project trains are 10% of the total rail traffic.

Additional responses on the impacts of the Project rail transport on air quality and noise are provided in Chapters 13 and 15 respectively of this report.

### 12.2.12 Rail infrastructure improvements

#### Submission

NA 12

#### Issue

Transport for NSW advises that rail network access fees are not necessarily the appropriate funding mechanism for network enhancements. Transport for NSW is working on an appropriate funding mechanism that will be advised in due course.

#### Response

It is accepted that a variety of funding sources are possible for rail network upgrades. CHC is aware Transport for NSW is working with electricity companies to establish the other mechanism or mechanisms for funding rail upgrades.

### 12.2.13 Rail spur connection

#### Submission

NA-12

#### Issue

Transport for NSW comments that a rail spur triangular connection to the north at Tallawang is mentioned in the EA documentation, but is not shown on Project drawings.

## **Response**

While considered during Project design, it is not proposed to construct a triangular rail junction at Tallawang at this stage and all trains leaving the rail spur will travel south. The Project has no requirement for a northern access to the rail network.

### **12.2.14 Consultation with ARTC regarding Gulgong area level crossing upgrades**

#### **Submission**

NA-13

#### **Issue**

The DP&I comments CHC needs to demonstrate it has consulted the ARTC about any upgrades of level crossings in the Gulgong area.

#### **Response**

CHC has an agreement in place with the RTC to progress the recommended treatments for level crossing upgrades in the Gulgong area as described in Section 12.1.

On 10 January 2013, representatives of CHC met with the ARTC and agreed for the ARTC to progress to the detailed design phase for level crossing safety improvements, including consulting the local council and relevant stakeholders.

### **12.2.15 Upgrades at Awaba north and Vales Point Power Station rail loops**

#### **Submission**

NA-13

#### **Issues**

The DP&I comment that passing loops for Awaba North and Vales Point Power Station need to be upgraded to cater for proposed 1,500 m trains and 30 TAL track capacity. The DP&I requests further information on contingencies if this is not completed, as well as implications for train capacity and tonnage and the timing for RailCorp to upgrade these loops.

#### **Responses**

RailCorp and Transport for NSW have advised that passing loops for longer trains destined for Eraring will be required in both directions on the RailCorp network at Awaba North. Discussions are continuing between Origin Energy and Transport for NSW to determine the necessary timing and eventual funding for these works. Before the upgraded passing loops are constructed at Awaba North the daily number of coal trains serving the Eraring Power Station from the Project will remain as described in the EA but will be restricted in length.

The Vales Point Power Station rail loop requires upgrading to accommodate the longer coal trains and 30 TAL axle loadings. No date is committed for these upgrading works. It is likely that similar to the situation for the Eraring Power Station, the daily number of coal trains from the Project serving the Vales Point Power Station will remain the same, but trains may be restricted in length until the construction of the upgraded rail loop at the power station is completed.

### 12.3 Conclusion

A number of refinements to the route alignment of the proposed 28-km long rail spur were identified after the exhibition of the EA. These design modifications will improve the efficiency of the proposed Project coal train operations on the spur and minimise the fuel use for these trains. These changes will not otherwise affect the proposed rail transport operations for the Project.

More detailed investigations were made into the future predicted railway level crossing safety and delay impacts of the additional coal trains from the Project. They identified the following additional environmental management measures:

- additional railway level crossing safety improvement measures at six existing railway level crossings in the Gulgong area; and
- additional railway level crossing traffic delay mitigation measures for road traffic at the two crossings in the Newcastle urban area.

These additional crossing safety and road traffic delay impact mitigation measures will further reduce the identified rail transport impacts of the Project.

