

SUBMITTER No.	364	ISSUE REFERENCE:	12027 / 17157
SUBMITTER TYPE		TOR CATEGORY	Project Description
NAME	DEEDI (Mining and Petroleum Operations)	RELEVANT EIS SECTION	Volume 3 – 1.1.2.4

DETAILS OF THE ISSUE

Dust control methods for rail wagons.

To eliminate coal dust emission along the rail corridor, the proponent should investigate the use of an environmentally friendly surface veneer which would provide full coverage of coal in rail wagons.

PROPONENT RESPONSE

In addition to the commitments presented in Section 10.4 of the EIS, Waratah Coal commits to the following dust control measures:

- Waratah Coal proposes to use tippler wagons (gondola) rather than the more traditional bottom dump coal wagons. With the use of tippler wagons, coal hang-up should be negligible or eliminated. Bottom dump wagons are more frequently associated with coal hang up, particularly in wet weather, and
- In addition to the tippler wagons, Waratah Coal’s solution to mitigation of coal dust is to provide a cover to the top of the wagons. It is intended these covers will be made of fibreglass. These covers have been proven in service, operating in conditions ranging from -40°C to +40°C. The railcar cover system meets the criteria for a “closed transport vehicle” specified in the United States Code of Federation Regulations (CFR), Title 49, Transportation (Subsection 173.403(c)).

In addition to significantly reducing coal dust, these commitments provide:

- Reduction in emissions from fuel consumption as using covers provides better train aerodynamics, which reduces fuel consumption, and associated emissions
- Elimination of the need to use chemicals for veneering
- Elimination of the need for more than 50 million litres of water required to apply the chemical veneering.

Examples of successful use of covers elsewhere

The covers proposed to be used on the Waratah Coal rail coal wagons are waterproof, which will be a key feature in the North Queensland tropical region where major operational issues can occur when the moisture content rises above specification. Whilst the covers do not achieve a hermetic seal between the cover and the rail coal wagon, the result is a very effective seal eliminating virtually all dust or material losses from the tops of the wagons. The fact that the seal is very effective is evidenced by the style of proposed covers receiving approval from the United States Department of Transport for a project hauling low level radioactive waste¹.

The proposed rail coal wagon covers are constructed from fibreglass, generally have a curved profile in the transverse direction and can operate in environmental conditions ranging from -40°C to +40°C and including extreme weather conditions such as strong winds and heavy snow. This provides light but strong wagon covers with improved train aerodynamics, particularly in the unloaded condition where considerable fuel savings are expected which in turn results in lower emissions.

¹ The US Department of Transportation is quoted as follows, “The Department of Transportation (DOT) has determined that the Ecofab Railcar Cover System meets the criteria for a closed transport vehicle specified in Title 49 CFR 173.403(c).” (<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=788aad24d2a46d0a744d93ea1875af72&rgn=div8&view=text&node=49:2.1.1.3.9.9.25.2&idno=49>)

It is essential that the application of the covers to rail coal wagons does not in any way add to the train cycle times or cause any delays to the trains either at the loading or unloading sites. Consequently the covers and handling equipment are designed as a system to match the speed of loading or unloading the coal trains.

The specifications for these rail coal wagon covers are Commercial in Confidence and cannot be provided, however covers for rail wagons have been in commercial use within Australia for over 10 years.

The types of wagon covers proposed by Waratah Coal are similar to the type that have been fitted to tippler wagons operations within Australia in NSW, South Australia and Queensland. These covers are used in some very demanding environments for 'dusty' commodities such as lead, zinc and copper concentrates. These operations are still in service today after over 10 years of continuous operations. The operations in Queensland involve the concentrate wagon covers being removed with fork-lifts at the loading sites and removed with fork-lifts or automated equipment at the unloading sites. In Townsville fully automated wagon cover handling equipment has been incorporated into the tippler wagon operating systems.

The efficacy of the proposed covers for coal operations is evidenced by the manufacturer of these rail wagon covers currently executing a project in the United States to cover all coal train wagons that are operating in the Powder River Basin (PRB) region in Wyoming. This region hosts the two largest coal mines in the world where each produce more than 100Mtpa and load more than 2000 coal wagons daily. This region has a common section of triple and quad track (160km) that connects all the mines in the region, which is why this section of track is regarded as the busiest section of freight rail line in the world.

In 2006 there were two major derailments on this common section of rail line due to a combination of rain, snow and track ballast being contaminated with coal dust which prevented the track from draining, resulting in major failures in the sub-grade. These derailments led to closure of the common section of rail line resulting in major disruptions to train operations and power utilities which relied on this coal for domestic electricity generation. The need to eliminate the emission of coal dust from these trains led to the requirement to cover the coal wagons.



Coal train in Queensland demonstrating use of covers similar to those proposed for use by Waratah Coal

The volume of operations in the PRB region requires high speed coal loading systems. Due to the long term development of the PRB region, there are not only large numbers of wagons loaded each day at the mines, but there are at least 19 different types of wagons with different dimensions and capacities. Waratah Coal’s rail wagon cover supplier has designed and developed a fully automated coal wagon cover system to suit these large scale operations. Their technology has been designed to operate in parallel with existing train loading and unloading operations, and not slow down or interrupt train loading or unloading. Consequently our supplier has developed a patented design for fully automated rail wagon covers that can be used on these US coal trains (both bottom dump and tippler unload) or similar wagons around the world including the Galilee Basin.

SUBMITTER No.	364	ISSUE REFERENCE:	13018
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (APSDA Branch)	RELEVANT EIS SECTION	Volume 4, Chapter 2, p17: 2.2.2.6 Land Use, Existing Environment

DETAILS OF THE ISSUE

The EIS currently makes the following statement:

“The utilisation of the proposed coal terminal and multi-user infrastructure corridor by Waratah is consistent with the strategic direction of the APSDA and the development scheme.

Future industry to be developed with the central portion of the APSDA will be assessed by NQBP as part of an Environmental Impact Assessment and DEEDI in accordance with the Development Scheme”.

These statements are misleading. This section should clarify:

- All development within the APSDA that constitutes a material change of use will require a subsequent approval by the Coordinator-General under Section 84 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act)
- The Development Scheme for the APSDA is a regulatory document for material change of use applications in the APSDA
- NQBP intends to manage the EIS process for the proposed coal terminal (T4-T9)
- NQBP’s proposed EIS management will be for T4-T9 rather than for the whole central portion of the APSDA.

PROPONENT RESPONSE

Given the Queensland Government directive to defer the approval process for the expansion of Abbot Point until the end of 2012, and the associated uncertainty over the T4-T9 and MCF proposals, the limit of the assessment for the project is now defined as the boundary of the APSDA.

However, all future development within the APSDA that constitutes a material change of use will be submitted to the Coordinator-General to gain the relevant approvals. This will be done in accordance with the SDPWO Act, but will not be part of the scope of this SEIS.

SUBMITTER No.	419	ISSUE REFERENCE:	4111
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DERM	RELEVANT EIS SECTION	Executive Summary, Section 3.1.16, Waste (p45)

DETAILS OF THE ISSUE

The sources of waste streams listed in this Section 3.1.16 include mention of water management structures including dams, levee banks and sediment traps. No clear information is presented regarding the water types, or the anticipated water quality of these water types (i.e. concentrations). Since an identified risk is ‘the storage, seepage and overtopping of potentially contaminated water such as tailings water or pit process water in dams and basins at the mine’, the water quality information of the various water types should be clearly presented in the EIS. This information is necessary to enable an assessment of likely environmental risk.

PROPONENT RESPONSE

A site water management system for the site has been developed (refer to the *Mine Site Water Management System* report) with the focus on the separation of “clean” and “dirty” water. The site has significant operational requirements for water including underground workings, coal preparation, dust suppression and raw water demand. Water requirements will be preferentially sourced from “dirty” water run-off collected on site where possible. The water within the mine site has been classified into the following four classes:

- **Contaminated Water** – surface runoff from CHPP, ROM and stockpile areas and water contained within open-cut pits which could potentially contain hydrocarbons, saline and/or acidic or other chemical contaminants. These will be directed adequately sized dams to prevent discharge as well as meet on site demands
- **Dirty Water** – surface runoff from spoil dumps and rehabilitated spoil areas that could contain sediments but typically not with elevated contaminant levels. This runoff will be directed to sediment containment dams for reuse onsite and limit discharge
- **Clean Water** – Surface runoff from natural catchments or groundwater pumped from underground water dewatering and aquifer pre-drainage. Surface runoff from natural catchments will not be contained onsite and will pass through the site via the proposed creek diversions. Clean groundwater will be stored and reused in underground workings to prevent discharge offsite
- **Raw Water** – Imported low-salinity water required for mine demands that require a high water quality specification (e.g. CHPP vacuum pumps, wash-down, drinking water supply).

A site water balance model has been developed (refer to the *Mine Site Water Management System* report contained in the *Appendices – Volume 2* of this SEIS) using historic climate data to simulate realistic climatic conditions and hydrological processes, as well as assessing the performance of proposed dams and impacts to the hydrological regime.

The results of the water balance modelling indicate all dams that will contain contaminated water have been adequately sized to prevent discharge over the entire modelling period while the sediment dams only discharge in high rainfall years.

SUBMITTER No.	1840	ISSUE REFERENCE:	4112
SUBMITTER TYPE	Council	TOR CATEGORY	Project Description
NAME	Barcaldine Regional Council	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

With the projects understanding of the dispersive soils , what is the appropriate landform design (slopes) to help manage the landform from erosive impacts?

What is the principle and parameters of the drainage design to minimise erosion, considering the soil types?

What is the design criteria for the contour banks?

What are the sediment dams design criteria?

The above mentioned drainage, erosion and sediment control measures are generic. If the appropriate soil science has been completed, then the detailed design criteria should be undertaken to ensure that the proposed measures will work for the proposed landforms on the known soil types.

PROPONENT RESPONSE

A revised mine site infrastructure layout has been prepared to detail the site features and is included with Issue Reference 6017, and the design of the mine water management system has been further progressed. The *Mine Site Water Management System* report (contained in *Appendices – Volume 2* of this SEIS) describes the proposed site water management system and the results of water balance modelling undertaken to assess the performance of the system. In addition, plans have been provided detailing the location of all dams, waterways and associated stormwater infrastructure.

The *Mine Site Water Management System* report provides additional detail relating to the design requirements of water and stormwater related infrastructure.

For soils related information and requirements, refer to the *Soils and Land Suitability* report and the *Supplementary Soil Survey for the Open Cut Area* report (contained in *Appendices – Volume 2* of this SEIS). Commitments for further work are discussed in Section 6 of the *Soils and Land Suitability* report.

SUBMITTER No.	419	ISSUE REFERENCE:	19106
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DERM	RELEVANT EIS SECTION	All sections

DETAILS OF THE ISSUE

The EIS should describe the activities and infrastructure associated with a project in sufficient detail that would allow the potential environmental impacts:

1. To be assessed against acceptance criteria
2. Be managed through setting appropriate conditions of any issued environmental authority.

The submitted EIS identifies likely 'acceptance criteria' and commits to meeting those criteria. The EIS for the most part, does not identify in sufficient detail the activities and infrastructure such that the potential environmental impacts can be adequately assessed.

The EIS should as a minimum:

- Undertake a preliminary design for the purpose of sizing and locating infrastructure, overburden dumps, tailings dams and associated diversions and flood levees
- Identify and assess the potential environmental impacts of proposed developments.

PROPONENT RESPONSE

A revised mine site infrastructure layout has been prepared to detail these features (see Figure 1).

1. Figure 1 shows the location, relative size and shape of the final voids. The total area of footprint for the open-cut mines is 7437 ha. The individual size for each open-cut mine is:
 - Open-cut No. 1 North: 2803.03 ha
 - Open-cut No. 1 South: 2077.41 ha
 - Open-cut No. 2 North: 1776.20 ha
 - Open-cut No. 2 South: 780.22 ha

The proposed size and shape of the final voids will be detailed in the Environmental Authority, the EM Plan and the Rehabilitation and Decommissioning Plan – refer to Issue Reference 4040 in Part C – 19 – Decommissioning and Rehabilitation for more detail.

2. The location and footprint of essential plant is shown on Figure 1. The footprint area for the CHPP, stockpiles and loading facilities is 120ha.
3. The location and size of the overburden encapsulation areas is shown on Figure 1. The collective size of these areas is 1816ha.
4. Proposed containment systems for the management and permanent storage of tailings and rejects are detailed in the *Tailings Storage Facility Update* report (contained in *Appendices – Volume 2* of this SEIS). The tailings will be dewatered using filter press conveyors and the tailings paste and rejects will be trucked to disposal cells constructed initially within the box-cut spoil piles and later within the in-pit spoil piles.

A mine water management system has been designed to facilitate the containment and re-use of runoff and other water produced or impacted by mining activities during the life of the mine. The performance of the water management system has been assessed using water balance modelling. The site water management system is described in the *Mine Site Water Management System* report (contained in *Appendices – Volume 2* of this SEIS).

Diversion channels and levees designed to prevent the mine workings from flooding are described in the *Mine Site Creek Diversion and Flooding* report (contained in *Appendices – Volume 2* of this SEIS).

The Final Rehabilitation and Decommissioning Plan will provide more information as to the final landforms, including voids, to be remaining on site come closure. A *Rehabilitation and Decommissioning* section of the *Draft Mine EM Plan* has been prepared (see *Appendices – Volume 2* of this SEIS).

SUBMITTER No.	419	ISSUE REFERENCE:	6017 / 4049 / 4113 / 6051 / 6052 / 17016 / 19008
SUBMITTER TYPE	Government	TOR CATEGORY	EMP / Project Description
NAME	DERM	RELEVANT EIS SECTION	All sections

DETAILS OF THE ISSUE

The EIS does not provide the necessary details on the proposed containment system proposals for the mine site. The EIS and EM plan should describe and identify on maps at suitable scale the location and form of all necessary mining infrastructure on the mine site.

The EIS and EM plan should detail, as a minimum:

1. The location and size of open-cut pits, including proposed size and shape of final voids
2. The location and footprint of essential plant, including the coal preparation plant, stockpiles and loading facilities
3. The location and size of overburden dumps
4. A containment system for the management and permanent storage of tailings
5. A containment system for the management of runoff and seepage from overburden rock dumps
6. A site water management system for the management of runoff from around the site and the surrounding catchments that would normally pass through the site
7. Any associated diversion channels, levees and dams required to control and store contaminants generated by the mining activities or to protect the mine workings from flooding

The EIS and EM plan should as a minimum:

1. Undertake a preliminary design for the purpose of sizing and locating infrastructure, overburden dumps, tailings dams and associated diversions and flood levees
2. Include a site water management system for the management of runoff from around the site and the surrounding catchments
3. Identify and assess the potential environmental impacts of proposed developments.

PROPONENT RESPONSE

A revised mine site infrastructure layout has been prepared to detail these features (see Figure 1).

1. Figure 1 shows the location, relative size and shape of the final voids. The total area of footprint for the open-cut mines is 7437 ha. The individual size for each open-cut mine is:
 - Open-cut No. 1 North: 2803.03ha
 - Open-cut No. 1 South: 2077.41ha
 - Open-cut No. 2 North: 1776.20ha
 - Open-cut No. 2 South: 780.22 ha

The proposed size and shape of the final voids will be detailed in the Environmental Authority, the EM Plan and the Rehabilitation and Decommissioning Plan – refer to Issue Reference 4040 in Part C – 19 – Decommissioning and Rehabilitation for more detail.

2. The location and footprint of essential plant is shown on Figure 1. The footprint area for the CHPP, stockpiles and loading facilities is 120ha.

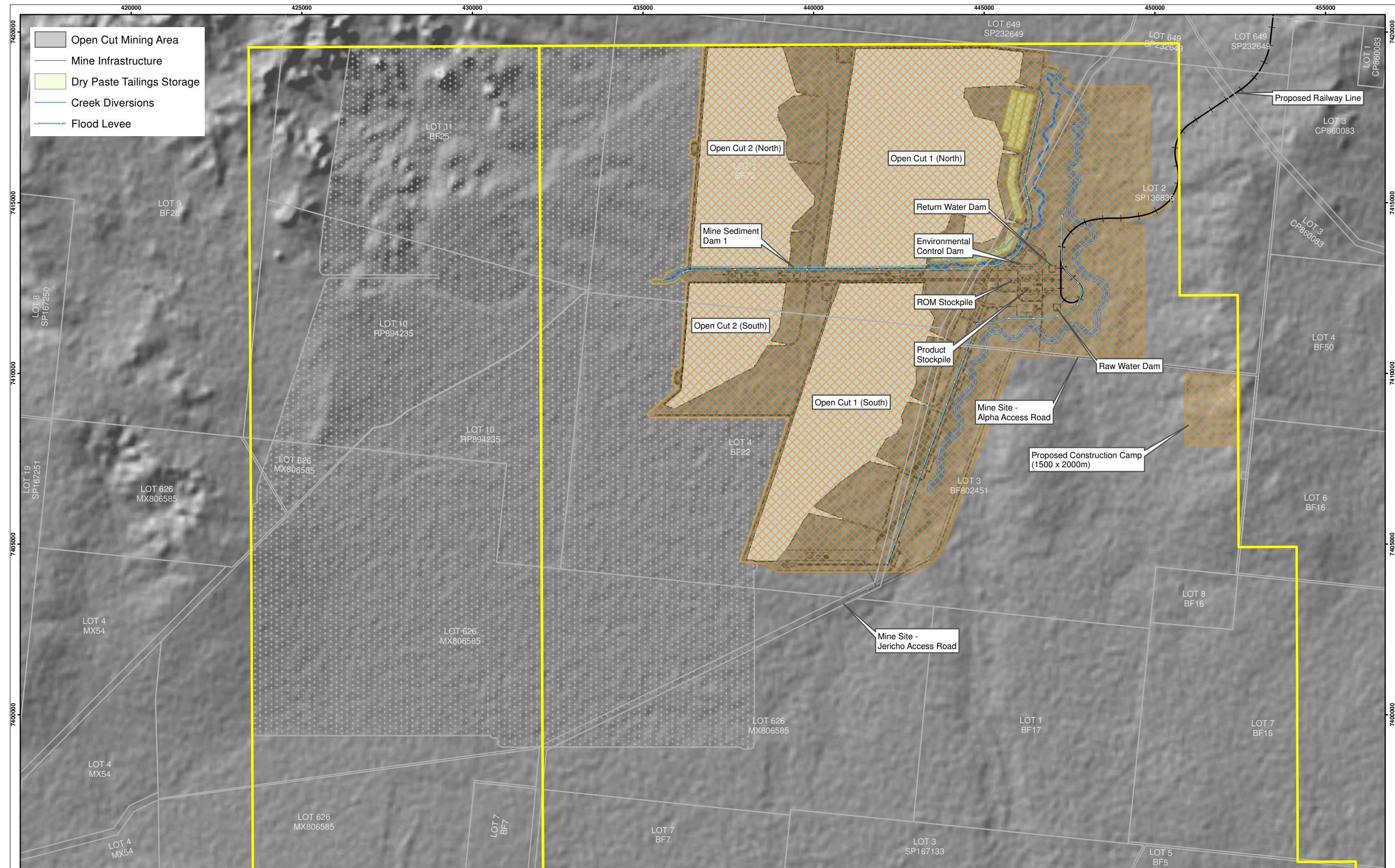
3. The location and size of the overburden encapsulation areas is shown on Figure 1. The collective size of these areas is 1816ha.
4. Proposed containment systems for the management and permanent storage of tailings and rejects are detailed in the *Tailings Storage Facility Update* report (contained in *Appendices – Volume 2* of this SEIS). The tailings will be dewatered using filter press conveyors and the tailings paste and rejects will be trucked to disposal cells constructed initially within the box-cut spoil piles and later within the in-pit spoil piles.

A mine water management system has been designed to facilitate the containment and re-use of runoff and other water produced or impacted by mining activities during the life of the mine. The performance of the water management system has been assessed using water balance modelling. The site water management system is described in the *Mine Site Water Management System* report (contained in *Appendices – Volume 2* of this SEIS).

Diversion channels and levees designed to prevent the mine workings from flooding are described in the *Mine Site Creek Diversion and Flooding* report (see *Appendices – Volume 2* of this SEIS).

The *Draft Mine EM Plan* (contained in *Appendices – Volume 2* of this SEIS) contains more information – refer to sections 1, 2, 7 and 10.

Figure 1. Mine Infrastructure Plan



<p>Waratah Coal THE NEW ENERGY IN COAL Mineralogy House, Level 7, 380 Queen Street, Brisbane Qld 4000, Australia</p>	<p>Source: Cadastral Boundaries: DERM 2012 EPC Boundary: Department of Natural Resources and Mines (DNRM) 2012 Mine Detail: Waratah Coal Pty. Ltd. 2012 Background Image: Shaded relief: ESRI Data & amp; Maps 2006</p>	<p>0 1,000 2,000 3,000 4,000 5,000 Metres A3 Scale 1:100,000 Coordinate System: GDA 1994 MGA Zone 55 Projection: Transverse Mercator</p>	<p> EPC1040 & Part of EPC1079</p> <p> Probable clearing footprint (16,520 Ha)</p> <p> Mine Subsidence Footprint (25,598Ha)</p> <p> Cadastral Boundary</p>	<p>MINE INFRASTRUCTURE AREA</p>
	<p>Disclaimer: This plan is based on or contains data provided by others. Waratah Coal Pty. Ltd. gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to and use of the data. Data must not be used for direct marketing or be used in breach of privacy laws.</p>			
	<p>File: File: WAR20-26-SEIS0016a-MINE-INFRASTRUCTURE-AREA-121214 Date: 14/12/2012</p>			

SUBMITTER No.	419	ISSUE REFERENCE:	17017 / 19016
SUBMITTER TYPE	Government	TOR CATEGORY	EMP (Project Description) / Project Description
NAME	DERM	RELEVANT EIS SECTION	Chapter 7 – EMP: Mine, Section 7.4, Project Characteristics (p113)

DETAILS OF THE ISSUE

The EM plan does not include the proposed mining sequence for both proposed pits/longwalls and seams.

The EM plan should be revised to include the following:

- The proposed sequencing and timing of mining of each seam within the mining lease
- The use of different mining techniques in areas of different topographic or geo-technical character
- The estimated area to be disturbed at each major stage of the project

PROPONENT RESPONSE

The requested information for proposed sequencing and timing of mining of each seam and the different used of mining techniques is contained and clearly detailed in the original EIS submission as follows:

- **Open-cut:** Please refer to EIS Vol 2, Section 1.2.2.1 Open-cut Mining Method, pages 22-24; Section 1.2.2.2 Open-cut Mining Development Sequence pages 25-26; and Section 1.2.2.3 Open-cut Mine Development Schedule pages 27-32, which includes the proposed 25 years sequencing summarised in Figure 16 on page 28.
- **Underground:** Please refer to EIS Vol 2, Section 1.2.2.7 Underground Mining Method on pages 36-37 and Section 1.2.2.8 Underground Mining Development Sequence on pages 38-41, which includes the proposed sequencing summarised in Figures 33 and 34 on pages 40 and 41.

The estimated gross area disturbed for each mine at the major stages of the project is summarised in the following table. Please note that the areas given are the total areas estimated to be disturbed. The amount of disturbed land at any given time will be significantly less than the amounts below as rehabilitation is planned to be completed within two years of mining. All detail will be contained in the final Mine Rehabilitation Plan.

Table 1. Estimated gross area of disturbed land

YEAR	OPEN-CUT MINES				UNDERGROUND MINES	
	OC 1 Nth	OC 1 Sth	OC 2 Nth	OC 2 Sth	B Seam	D Seam
1-5	1125.5	650.8	418.0	111.6	1033.8	2295.8
6-10	799.4	424.9	419.9	114.8	1596.6	4144.2
11-20	1148.8	1299.5	644.4	245.2	3235.4	8692.6
21-25	171.2	88.9	624.7	395.0	1690.3	6365.2
26-30	-	-	-	-	1227.3	5929.5
Total Area	2803.0*	2077.4*	1776.2*	780.2*	8783.4	27427.3

* Please note total area is less than the sum of the individual areas as some areas will overlap in footprint.

The *Draft Mine EM Plan* provides further details – refer to Section 2 for Project Description; Section 7 for Mineral Waste; and Section 9 for Rehabilitation. The *Draft Mine EM Plan* is contained in *Appendices – Volume 2* of this SEIS.

SUBMITTER No.	787	ISSUE REFERENCE:	17148
SUBMITTER TYPE	NGO	TOR CATEGORY	Project Description
NAME	GVK Resources	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

- Query regarding the ability to transport 400 Mtpa without major congestion
- GVK will not accept at-grade rail to rail crossings, only grade separated crossings
- No consideration of train dynamic forces.

PROPONENT RESPONSE

The rail corridor will be capable of transporting 400Mtpa at less than one hour headways. Adequate planning for maintenance needs to be considered as part of the total corridor design. The congestion may occur at the loading and unloading points unless sufficient loading and unloading facilities and train holding roads are provided.

There will be no at-grade rail crossings with any railway line. A heavy haul system needs to be isolated from all other railway lines.

Train dynamics and train dynamic forces are complex and need to be considered for a range of inputs to provide for a safe, efficient and cost effective railway system. Issues such as rolling contact fatigue, maximising wheelset kilometrage and minimising impact on rollingstock and infrastructure, are not appropriate nor need to be considered as part of an EIS process.

SUBMITTER No.	1840	ISSUE REFERENCE:	17153, 17154
SUBMITTER TYPE	Council	TOR CATEGORY	Project Description
NAME	Barcaldine Regional Council	RELEVANT EIS SECTION	1.1.1 - Summary Intro

DETAILS OF THE ISSUE

Underground mines at 9 Mtpa = 36, 2 open-cut pit mines 10 Mtpa = 20, 2 prep plants at 28 Mtpa = 56 Mtpa = 40 Mtpa of sales. However, the introduction conflicts with section 1.1.1, which states there are four surface mining pits at 10 Mtpa each?

Is there 16 Mtpa of rejects and washery fines plus water to be managed each year? Please confirm correct mining operations and rates. Please clarify production quantities and mining operations with rates.

PROPONENT RESPONSE

The mine arrangement will be as follows:

- 2 Open-cut pits at 10 Mtpa = 20 Mtpa
- 4 Underground mines at 9 Mtpa = 36 Mtpa
- 2 Coal Preparation and wash plants with 4 modules each rated at 1,000 tonnes per hours: $2 \times 4 \times 1000 = 8,000$ tphr plants will be available for production for 7,000 hr/a which results in 56 Mtpa ROM (8,000 tph x 7,000 hr/a).

Therefore total Mine ROM = 56 Mtpa

The 56Mtpa ROM will wash down to 40 Mtpa resulting in 16 Mtpa of fines and water to be managed. See also Figure 1 Mine Infrastructure Arrangement presented in Issue Reference 6017 of this Chapter.

SUBMITTER No.	418	ISSUE REFERENCE:	17155
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Dept. of Local Government and Planning (DLGP)	RELEVANT EIS SECTION	Executive Summary, 2.1.1.1 Mine

DETAILS OF THE ISSUE

Workers Accommodation. It is unclear whether there is intended to be both a 'purpose built 2,000 person workers village adjacent to the site' and a 'temporary 2,500 person workers village at the mine site' or just one of these.

Clarify the following in tabular format:

- Number of workers accommodation villages with capacity of each and in total
- Estimated driving time (minutes) and distance (kms) between each accommodation village and Alpha town
- Which accommodation villages are to be permanent and which are to be temporary, and the estimated timeframe of use of the accommodation villages
- A map which shows the intended locations of workers accommodation villages will also clarify the issue.

PROPONENT RESPONSE

There will be one accommodation camp near the mine site that will accommodate both the construction workers and the fly-in, fly-out permanent mine operations staff. A permanent accommodation village of 2,000 beds will be the long term accommodation infrastructure near the mine site (See Figure 1 at Issue Reference 6017 of this Chapter) and the basis as to how the temporary accommodation will be integrated and built to suit the peak construction and operations accommodation requirements. These requirements will be subject to ongoing and continuous review.

It is expected that a peak accommodation requirement of 2,500 beds will be required in the first 2 years of construction which is then expected to increase by another 1,500 permanent mine operations staff to a total requirement of 4,000 beds during the third year. After the initial construction phase of 3 years, the requirements will reduce down to approximately 2,000 beds (1,500 operations + 500 contractors) for the next 5 to 10 years depending on world demand for thermal coal.

SUBMITTER No.	419	ISSUE REFERENCE:	17156
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DERM	RELEVANT EIS SECTION	Volume 2, Section 4.2.3, Land Tenure (p142) and Volume 3, Section 1.4.5, Bulk Earthworks (p26)

DETAILS OF THE ISSUE

DERM Forest Products is responsible for the administration and sale of State-owned terrestrial quarry material under the provisions of the *Forestry Act 1959*.

As outlined in Table 4 of Chapter 1 of Volume 3 of the EIS, the project needs access to very large quantities of quarry material, including ballast, for the proposed rail line from Alpha to Abbot Point. On page 26 of the EIS the following statements are made: 'Where suitable construction material cannot be sourced from within the railway cuttings, a series of borrow pits will need to be established, or the material hauled from nearby quarries. The location and spacing of borrow pits have not been established, but will be located away from sensitive environments such as significant vegetation and surface drainage.'

As well as requiring significant quantities of quarry material for the construction and subsequent maintenance of the proposed rail line, it is anticipated that the project will also require significant additional quantities of quarry material for haul roads and other relevant infrastructure within the proposed coal mine and for the coal terminal facilities in the Abbot Point State Development Area.

This EIS does not provide specific details as to the proposed locations of the:

- Required series of “borrow pits” or gravel quarries, but these are suspected to be located adjacent to the proposed rail line corridor
- New hardrock quarries required to source ballast and other quarry material.

As the majority of the proposed ‘borrow pits’ and the proposed new hardrock quarries required for the project are expected to be located on State-owned land where the ownership of the quarry material is reserved to the State. DERM Forest Products is likely to receive applications in regard to the project for permits to search for quarry material and/or for sales permits to purchase quarry material.

To date, Waratah Coal has only advised DERM Forest Products of its interest in obtaining a sales permit to source hardrock quarry material from a nominated part of Surbiton South Pastoral Holding, which is over Lot 3533 on PH56 near Alpha.

DERM Forest Products is dealing with enquiries and applications from other parties also interested in quarry material in the Alpha to Abbot Point region to service the quarry material demand in relation to the other projects being proposed for this region including the Alpha Coal Project, the Carmichael Coal Project, the South Galilee Coal Project, the Multi Cargo Facility at the Port of Abbot Point and the development of the Abbot Point State Development Area. Collectively the required demand for quarry material to service these proposed projects is massive.

PROPONENT RESPONSE

Waratah Coal has engaged AMEC (Australian Mining Engineering Consultants) to carry out a geological survey along the length of the corridor to identify potential quarry and borrow areas for sand and gravel. A total of 29 potential quarry sites and 24 potential sand sites were identified. In addition to these sites, discussions have been held with existing quarry operators in central west Queensland and potential future quarry operators around Bowen for the production of rock and rail ballast.

In this regard, it may be that the majority of rock and rail ballast (approximately 1 million cubic metres – refer to Volume 3, Chapter 1, Table 4 page 26 of the EIS) will be sourced from commercial quarries. Quantities of sand and borrowed material will depend on final designs and it is intended to continue our discussions with DERM Forest Products in detail as quantities on all material and locations are progressed.

SUBMITTER No.	364	ISSUE REFERENCE:	17160
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (APSDA Branch)	RELEVANT EIS SECTION	Executive Summary 1.1.2 Rail, p5; Volume 2 Mine, Chapter 1 – Project Description, p5; Volume 3, Rail.

DETAILS OF THE ISSUE

Reference is made to rail maintenance and provisioning facility being constructed on a site adjacent to the railway for refuelling and servicing, servicing rolling stock etc without any detail in relation to the maintenance yards, crossing of rail lines, freight etc or location of the facility.

The proposed rail maintenance facility site is not identified on the mapping and there is no assessment of how it relates to other proposals in the immediate area.

The information provided is inadequate to assess this aspect of the EIS.

PROPONENT RESPONSE

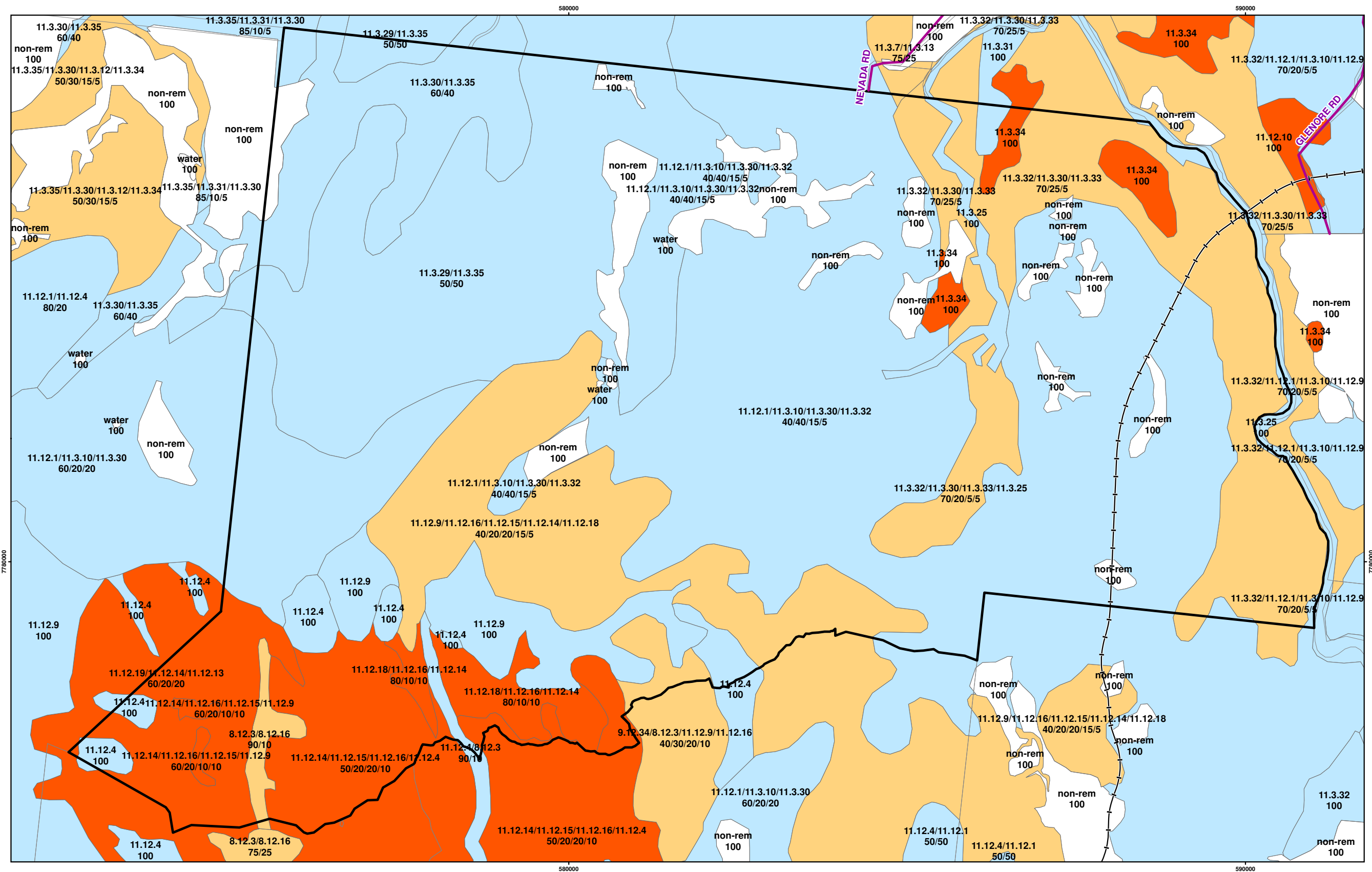
The proposed preferred location of the marshaling yard is situated alongside the proposed rail corridor in Lot 24 on RP805036 (see Figure 2). The following provides a description of the remnant regional ecosystems within and around the footprint of the proposed marshaling yards:

- Small patches of RE 11.3.9 – *Eucalyptus platyphylla*, *Corymbia* spp. woodland on alluvial plains – VMA status least concern – present as unique polygons
- Small patches of RE 11.3.25 – *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines – VMA status least concern – present as unique polygons
- Majority of the proposed location overlays a large patch of mixed polygon 11.3.32/11.3.30/11.3.33 (polygon comprised of 70/25/5 % respectively)
 - RE 11.3.32 – *Allocasuarina luehmannii* open woodland on alluvial plains – VMA status least concern – dominant component of mixed polygon comprising 70% of the mixed polygon vegetation.
 - RE 11.3.30 – *Eucalyptus crebra*, *Corymbia dallachiana* woodland on alluvial plains – VMA status least concern – sub-dominant component of mixed polygon comprising 25% of the mixed polygon vegetation.
 - RE 11.3.33 – *Eremophila mitchellii* open woodland on alluvial plains – VMA status Of Concern – sub-dominant component of mixed polygon comprising 5% of the mixed polygon vegetation.
- Edge of a patch of mixed polygon 11.3.32/11.12.1/11.3.10/11.12.9 (polygon comprised of 70/20/5/5 % respectively)
 - RE 11.3.32 – *Allocasuarina luehmannii* open woodland on alluvial plains – VMA status least concern – dominant component of mixed polygon comprising 70% of the mixed polygon vegetation.
 - RE 11.12.1 – *Eucalyptus crebra* woodland on igneous rocks – VMA status least concern – sub-dominant component of mixed polygon comprising 20% of the mixed polygon vegetation.
 - RE 11.3.10 – *Eucalyptus brownii* woodland on alluvial plains – VMA status least concern – sub-dominant component of mixed polygon comprising 5% of the mixed polygon vegetation.
 - RE 11.12.9 – *Eucalyptus platyphylla* woodland on igneous rocks – VMA status least concern – sub-dominant component of mixed polygon comprising 5% of the mixed polygon vegetation.

Waratah Coal note that RE 11.3.25b *Eucalyptus camaldulensis* or less often *E. tereticornis* open-forest to woodland fringing drainage lines and RE 11.3.30 *Eucalyptus crebra*, *Corymbia dallachiana* woodland on alluvial plains, are included in the 17 Regional Ecosystems that the southern subspecies of Black-throated Finch (*Poephila cincta cincta*) has been recorded from in Northern Queensland since 1994 (BTF Recovery Team *et al.*, 2007²). However, the mapping shows that only a small proportion of the site is comprised of these REs and the site is considered to be the most desirable location for the marshaling yards of its proximity to labour and service resources as well as the suitability for general layout and operation. As such, Waratah Coal have chosen to locate the marshaling yards in this location, and will pay particular attention to groundtruthing this section of the rail when they do their ecological assessment of the rail in 2013. Should the location reveal suitable Black-throated Finch habitat, or other significant environmental constraints, Waratah Coal will relocate the marshaling yards to the proposed alternative location, or other more environmentally suitable location further down the track.

² Black-throated Finch Recovery Team, Department of Environment and Climate Change (NSW) and Queensland Parks and Wildlife Service. 2007. *National recovery plan for the black-throated finch southern subspecies Poephila cincta cincta*. Report to the Department of the Environment and Water Resources, Canberra. Department of Environment and Climate Change (NSW), Hurstville and Queensland Parks and Wildlife Service, Brisbane.

Figure 3. Lot 4 SB687 – Remnant Vegetation



<p>Waratah Coal THE NEW ENERGY IN COAL</p> <p>Mineralogy House, Level 7, 380 Queen Street, Brisbane Qld 4000, Australia</p>	<p>Source: Cadastral Boundaries: DERM 2012 Roads & Waterways: Geoscience Australia 2010 Rail Alignment: Waratah Coal Pty Ltd 2012 VMA Regional Ecosystems v.1: State of Queensland (Department of Environment and Resource Management)</p>	<p>0 500 1,000 1,500 2,000 2,500 3,000 Metres A3 Scale 1:50,000 Coordinate System: GDA 1994 MGA Zone 55 Projection: Transverse Mercator</p>	<p>Remnant vegetation</p> <ul style="list-style-type: none"> Not Of Concern Of Concern - Dominant Of Concern - Subdominant Non-remnant 	<p>LOT 4 SB687 - REMNANT VEGETATION</p>	
	<p>Disclaimer: This plan is based on or contains data provided by others. Waratah Coal Pty Ltd gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to and use of the data. Data must not be used for direct marketing or be used in breach of privacy laws.</p>				<p>Legend:</p> <ul style="list-style-type: none"> infra_Streets Lot 4 SB687 Cadastral boundaries Proposed Railway Line
	<p>File: File: WAR20-26-SES0502a-P100x-Lot 4 SB687-REMNANT-VEGETATION-121207 Date: 7/12/2012</p>				

The proposed alternative location for the marshaling yard is situated alongside the proposed rail corridor in Lot 4 on SB687 (see Figure 3). This area contains the following least concern remnant regional ecosystems:

- RE 11.12.1 – *Eucalyptus crebra* woodland on igneous rocks – co-dominant regional ecosystem on the site comprising 40% of the site vegetation;
- RE 11.3.10 – *Eucalyptus brownii* woodland on alluvial plains – co-dominant regional ecosystem on the site comprising 40% of the site vegetation;
- RE 11.3.30 – *Eucalyptus crebra*, *Corymbia dallachiana* woodland on alluvial plains sub-dominant regional ecosystem on the site comprising 15% of the site vegetation;
- RE 11.3.32 – *Allocasuarina luehmannii* open woodland on alluvial plains – sub-dominant regional ecosystem on the site comprising 5% of the site vegetation.

As for the preferred site, Waratah Coal note that RE 11.3.30 *Eucalyptus crebra*, *Corymbia dallachiana* woodland on alluvial plains, is one of the 17 Regional Ecosystems that the southern subspecies of Black-throated Finch (*Poephila cincta cincta*) has been recorded from in Northern Queensland since 1994 (BTF Recovery Team *et al.*, 2007³). However, as the mapping shows that only 15% of the site is comprised of this RE, Waratah Coal have chosen to locate an alternative to the preferred location for the marshaling yards at this site, and will pay particular attention to groundtruthing this section of the rail when they do their ecological assessment of the rail in 2013. Should both the preferred location and this alternate location reveal suitable Black-throated Finch habitat, or other significant environmental constraints, Waratah Coal will relocate the marshaling yards to a more environmentally suitable location further down the track.

SUBMITTER No.	364	ISSUE REFERENCE:	17165
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (Resource Planning, Geological Survey of Qld)	RELEVANT EIS SECTION	Volume 3, Rail (Chapter 1 –Project Description) 1.2.1 – Rail Development

DETAILS OF THE ISSUE

A rail development of the proposed magnitude will be a major consumer of extractive materials, particularly high quality construction aggregates for rail ballast and concrete aggregates. However, despite the potential impacts on local markets, the environmental impacts of extraction, and the significant implications for the project timelines that extractive industry development approvals may have, no data is provided on the volumes of materials likely to be required for construction, nor where it will need to be sourced.

PROPONENT RESPONSE

Waratah Coal has engaged AMEC (Australian Mining Engineering Consultants) to carry out a geological survey along the length of the corridor to identify potential quarry and borrow areas for sand and gravel. A total of 29 potential quarry sites and 24 potential sand sites were identified. In addition to these sites, discussions have been held with existing quarry operators in central west Queensland and potential future quarry operators around Bowen for the production of rock and rail ballast.

In this regard, it may be that the majority of rock and rail ballast (approximately 1 million cubic metres – refer to Volume 3, Chapter 1, Table 4, page 26 of the EIS) will be sourced from commercial quarries. Quantities of sand and borrow material will depend on final designs and it is intended to continue our discussions with DERM Forest Products in detail as quantities on all material and locations are progressed.

³ Black-throated Finch Recovery Team, Department of Environment and Climate Change (NSW) and Queensland Parks and Wildlife Service. 2007. *National recovery plan for the black-throated finch southern subspecies Poephila cincta cincta*. Report to the Department of the Environment and Water Resources, Canberra. Department of Environment and Climate Change (NSW), Hurstville and Queensland Parks and Wildlife Service, Brisbane.

SUBMITTER No.	364	ISSUE REFERENCE:	17166
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (Resource Planning, Geological Survey of Qld)	RELEVANT EIS SECTION	Volume 3, Rail (Chapter 1 –Project Section 1.4.4 Description); Establishment of Quarries and Gravel / Sand Extraction Points

DETAILS OF THE ISSUE

This section states a preferred option of using existing quarries to provide material for the development of the embankment and rail formation although no quarry operations were specifically identified.

The proponent should identify existing extractive operations that may be sourced to provide construction material for the rail line construction.

Where adequate existing operations are unavailable, the draft EIS should be amended to address the identification of greenfield resources and the impacts of their extraction.

PROPONENT RESPONSE

Waratah Coal has engaged AMEC (Australian Mining Engineering Consultants) to carry out a geological survey along the length of the corridor to identify potential quarry and borrow areas for sand and gravel. A total of 29 potential quarry sites were identified. In addition to these sites, discussions have been held with existing quarry operators in central west Queensland and potential future quarry operators around Bowen for the production of rock and rail ballast.

In this regard it maybe that the majority of rock and rail ballast (approximately 1 million cubic metres – Refer Volume 3, Chapter 1, Table 4, p26 of the EIS) will be sourced from commercial quarries. Quantities of quarry material will depend on final designs and it is intended to continue our discussions with DERM Forest Products in detail as quantities on all material and locations are progressed.

SUBMITTER No.	364	ISSUE REFERENCE:	17167 / 1011
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description / Economy
NAME	DEEDI (Economic Policy Division)	RELEVANT EIS SECTION	Volume 3, Rail (Chapter 17 – Economic Impact Statement): 17.4.1 – Impacts on Industry

DETAILS OF THE ISSUE

Existing quarries are proposed to be used to source construction materials. The impact on extractive industry and the community of the potential depletion of limited extractive resources is poorly addressed by the draft EIS.

The draft EIS should discuss the potential impact on the normal supply/demand of extractive resources in the regions impacted by the project, both during and after rail line construction, including any mitigation measures.

PROPONENT RESPONSE

Waratah Coal intends to use a combination of new quarries and existing quarries to source its extractive materials for the project construction. A total of 29 potential quarry sites and 24 potential sand sites have been identified along the length of the corridor during a geological survey. Discussions have also been held with existing quarry operators in central west Queensland and potential future quarry operators around Bowen for the production of rock and rail ballast. Waratah Coal does not expect any of its extractive requirements to affect in any way the ability of

existing and future quarry customers to have their ongoing quantity requirements satisfied. Waratah Coal expects that the production of new quarries and extractive sites will actually assist the community and other users by having more sites available and at a competitive price particularly where the upfront development costs have been met by Waratah Coal during the execution of this project.

The quantity of extractive material required by Waratah Coal is minor compared with the potential sources available and whilst the extractive resources are considered to be an important resource, the quantities required by Waratah Coal does not place that industry under any adverse risks. The final quantities of sand and borrow material will depend on final designs and discussions with DERM Forest Products will continue, however, quantities required for the project are currently estimated at rail ballast, approximately 1 million cubic metres (Refer to EIS Volume 3, Chapter 1, Table 4 on page 26); aggregate, 90,000 cubic metres; and sand, 45,000 cubic metres.

Practically, there is an expectation that only one railway line will be constructed, with connecting spur lines to all other Galilee Basin mines, which are expected to be constructed during different time periods. This should result in an even demand for quarry material. Whilst the demand overall will be high, the total available supply well exceeds the forecast demand.

It is acknowledged that potential offset areas may include areas which have conflicting land uses. Waratah Coal commits to liaising with the Forest Products Group of DAFF to ensure this does not occur.

SUBMITTER No.	364	ISSUE REFERENCE:	20000
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (Office of Advanced Manufacturing)	RELEVANT EIS SECTION	Volume 3, Rail (Chapter 4 –Project Description), Section 4.2.4.3 – Exploration Permits and Leases

DETAILS OF THE ISSUE

The draft EIS states that “The rail alignment is designed to avoid Hancock Coal’s proposed infrastructure within MLA 70426” and also “Negotiations with Hancock Coal will continue to be undertaken to seek mutually satisfactory outcomes.”

However, the proposed rail corridor passes close to the planned accommodation village for the Hancock Coal Alpha Project and it is important that this potential conflict is resolved before the final rail route is determined.

The proponent needs to achieve an agreed outcome with Hancock Coal on the rail route through the southern section of MLA 70426, particularly as it relates to potential impacts on the planned accommodation village for the Hancock Coal Alpha Project.

PROPONENT RESPONSE

A report is provided in the *Appendices – Volume 2* (of this SEIS) responding to this submission, and detailing the history of rail alignment designs by Waratah Coal since the inception of the Project in 2008.

SUBMITTER No.	1841	ISSUE REFERENCE:	21000
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPac	RELEVANT EIS SECTION	Executive Summary; Appendix 11 – Terrestrial Ecology

DETAILS OF THE ISSUE

There are still some inconsistencies with the description of the project, for example, in the executive summary the railway design corridor is described as being 60-80m wide although it “may be larger through significant cuttings.” It does not become apparent what this means until in Appendix 11 Terrestrial Ecology – Rail documents when it is made clear that at various points along the rail alignment the cuttings will expand the width to 150m. Appendix 11 describes the rail corridor as actually being 150m in areas where cross-slopes require cutting, although it would seem that they have averaged the clearance width to 100m. This should be clarified to explain the circumstances properly. Clearing is projected to be about 2,688ha of remnant vegetation based on RE mapping, but is this based on the average clearing rate? If so, then potentially, where the cuttings will be wider, there will be a greater impact on vegetation communities (i.e. habitat). The report also states that the width of the clearance could be reduced to 50m, but in the executive summary (and Appendix 26) it states that the corridor could be reduced to 40m. Which is the truer statement?

PROPONENT RESPONSE

Since submission of the EIS Waratah Coal has commissioned a concept design of the alignment of the 453km of rail corridor (from the boundary of the APSDA to the beginning of the rail loop at the mine site) – see *Railway Concept Design* report in *Appendices – Volume 2* of this SEIS. This engineering provides the vertical alignment of the rail, which in turn provides the width required for the rail easement. At present, 421km of the rail vertical alignment has been engineered (with the balance 32km awaiting the completion of the Digital Terrain Model (DTM)), which will be completed as soon as possible.

The final railway easement will be an average width of 49.5m⁴. In relatively flat terrain the rail will be 40m wide and in areas where cross-slope cuttings are required the width of the easement will be wider – up to a maximum width of 184m (however there are only two areas exceeding 150m). The easement includes both the rail and a service road. In the 32km of the corridor which have not yet been engineered, a footprint area of 40 m was assumed based upon the relatively flat topography. There are no Endangered or Of Concern REs, or TECs within this 32km section of the rail easement. Within the easement all existing vegetation will need to be cleared to facilitate construction and operation of the rail.

The amounts of remnant vegetation and Threatened Ecological Communities (TECs) that would need to be cleared to facilitate the rail are 33 ha of Endangered RE and 104 ha of Of Concern RE. Within these, the following areas, also classified as TECs, will require clearing:

- 30 ha of TEC – Brigalow (*Acacia harpophylla* dominant and co-dominant);
- 23 ha of TEC – Weeping Myall Woodlands;
- 2 ha of TEC – Coolibah Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions;
- 21 ha of TEC – Natural Grasslands of the Queensland Central Highlands and the Northern Fitzroy Basin.

Regional ecosystem calculations were undertaken by overlaying the Queensland Vegetation Management Act 1999 protected remnant Regional Ecosystems (RE) over the rail easement and calculating areas and types requiring clearing. TEC (as defined from the RE analogues listed in the SEWPaC Species Profile and Threats (SPRAT) database) analogues were overlaid over the the rail easement to enable a derivation of areas of TECs to be cleared. A more detailed

⁴ Average width calculated by dividing the total area of the rail footprint (2215 ha) by the length of the rail (453 km).

description of the areas with environmental values to be cleared to facilitate the rail corridor is presented in Section 5 of the *Biodiversity Offset Proposal* in the *Appendices – Volume 2* of this SEIS.

It should also be noted that initial aerial photography interpretation does indicate that the mapping of REs along the rail easement may be altered in terms of line work and polygon descriptions following further field work.

SUBMITTER No.	1841	ISSUE REFERENCE:	21001
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPac	RELEVANT EIS SECTION	Executive Summary

DETAILS OF THE ISSUE

Again in the executive summary, direct and indirect impacts should be clearly summed up, not provided sporadically throughout the document. In the executive summary it describes direct clearing impacts of 4,594.68ha. It does not provide an indication of indirect impacts associated with potential subsidence. Vol 5B Appendix 10 describes the mine footprint as surface footprint 14,615ha and underground longwall area is 29,755ha.

PROPONENT RESPONSE

The areas to be impacted at the mine can be described as the open cut mining area, which are the areas required to be cleared to facilitate the open cut mines and the mine infrastructure areas. This area is 16,519.99ha. The areas that overlay the underground mining areas, and could be subject to impacts resulting from subsidence, amount to 25,598.10ha (See Figure 1 in Issue Reference 6017 in this chapter).

In terms of vegetation to be cleared, Table 2 gives the break-down of the amounts of vegetation protected under the Queensland *Vegetation Management Act 1999* (VM Act) to be cleared to facilitate the open cut mines (direct impacts), and the amounts which may be affected by subsidence from underground mining activities (indirect impacts).

Table 2: Amounts of vegetation (ha) to be cleared or potentially affected by subsidence within the Mining Lease Application Area (VMA status)

	E DOMINANT	E SUBDOMINANT	OC DOMINANT	OC SUBDOMINANT	LC	NON-REMNANT	TOTAL
OPEN CUT	0	0	0	0	4,877.49	11,642.50	16,519.99
UNDERGROUND (SUBSIDENCE)	0	0	0	197.42	12,462.34	12,938.34	25,598.10

E = Endangered; OC = Of Concern; LC = Least Concern at present.

Based on the DEHP Regional Ecosystem Mapping (Version 6.1).

As can be seen from Table 2, the open cut mines will require disturbance to 16,519.99ha, of which 4,877.49ha is covered by REs classified as Least Concern under the VM Act. The remaining 11,642.50ha is comprised of pasture grass and other areas already cleared of native vegetation.

A further 25,598.10ha may potentially be affected by subsidence as a result of underground mining operations. Of this area, 12,462.34ha is covered by REs classified as Least Concern (LC) under the VM Act. A further 197.42ha is covered by vegetation that is classified as Of Concern (OC) subdominant under the VM Act. The Of Concern elements of this 197.42ha are 11.67ha of RE 10.10.3, and 16.15ha of RE 10.10.7.

The remaining 12,938.34ha overlying the areas potentially subject to subsidence is comprised of pasture grass and other areas already cleared of native vegetation.

Field surveys have confirmed that there are no vegetation communities within the mine site study area that are listed under the EPBC Act.

Waratah Coal has developed a *Biodiversity Offset Proposal* which seeks to cover the unavoidable impacts associated with both the mine site and rail corridor, and makes additional voluntary provision for the Bimblebox Nature Refuge. Information on the project’s offsets is contained in the *Biodiversity Offset Proposal* in *Appendices – Volume 2* of the SEIS.

SUBMITTER No.	1841	ISSUE REFERENCE:	21005
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPac	RELEVANT EIS SECTION	Volume 3 – Rail

DETAILS OF THE ISSUE

More information is required to understand the potential impacts associated with each of the rail options, clearly demonstrating why one is to be chosen above the others.

PROPONENT RESPONSE

Options 1 and 2 of the rail alignment between KP410-460 have been removed leaving the former Option 3 as the sole option for this section of the rail alignment (see Sheet 5 of Figure 4). This is the option that most closely follows cadastral boundaries, and as such, minimises impacts upon affected landowners.

The desktop options assessment of all three options presented as Appendix 5A of the EIS concluded that the impacts from each of the options would be essentially the same or very similar. As a result, Option 1 was disregarded as this has the potential to impact upon the Alpha Coal (Hancock Coal) Mine Infrastructure Area. Option 2 was disregarded for both social and environmental reasons. Option 2 runs through the middle of property boundaries and hence constitutes the most impact of any option to the landholders in the Surbiton Area. Whilst all options have the potential to impact Weeping Myall Woodlands, Option 2 has the added potential to impact upon protected Brigalow communities (*Acacia harpophylla* dominant and co-dominant); and the Vulnerable flora species – *Acacia ramiflora*.

Hence Option 3 was selected as it is the option that, along with Option 1 has least potential to impact upon environmental values, but in addition, has least impact upon Hancock Coal’s proposed operations, and it is the option that most closely follows cadastral boundaries and hence limits impacts on landholders in the Surbiton area.

Since the EIS, there have been some minor changes to the initial Option 3 alignment as requested by the landowners to better align with the property boundaries. There has also been a change in alignment between KP 432-448 to accommodate the Hancock/GVK Alpha Project mine layout. This revised alignment through the Alpha and Kevins Corner Project areas has been discussed with both Hancock/GVK and the Department of Natural Resources and Mining and some further changes to the alignment through the mine area of the Alpha and Kevins Corner may be necessary once the final rail alignments, final land property boundaries and final infrastructure locations are determined. The optimum alignment is currently shown in Figure 4.

This selected alignment does not sterilise the coal deposits of either Alpha or Kevins Corner. The general area of the alignment is where the coal seams E and F are located. These seams will not be mined as evidenced in the EIS reports for both Alpha and Kevins Corner where it is stated that mining these seams is uneconomic.

Waratah Coal has included Option 3 in their calculations for the *Biodiversity Offset Proposal* (contained in *Appendices – Volume 2* of this SEIS), and has commissioned ground truthing of Option 3 to verify the presence or absence of the potential environmental values (including MNES) detailed in the options assessment in Appendix 5A of the EIS.

The *Rail Alignment through MLAs 70426 and 70425* report contained in the *Appendices – Volume 2* of this SEIS provides the detail of the rail alignment designs by Waratah Coal since the inception of the project in 2008.

Figure 4. Project changes since EIS lodgment (Sheet 1 of 5)

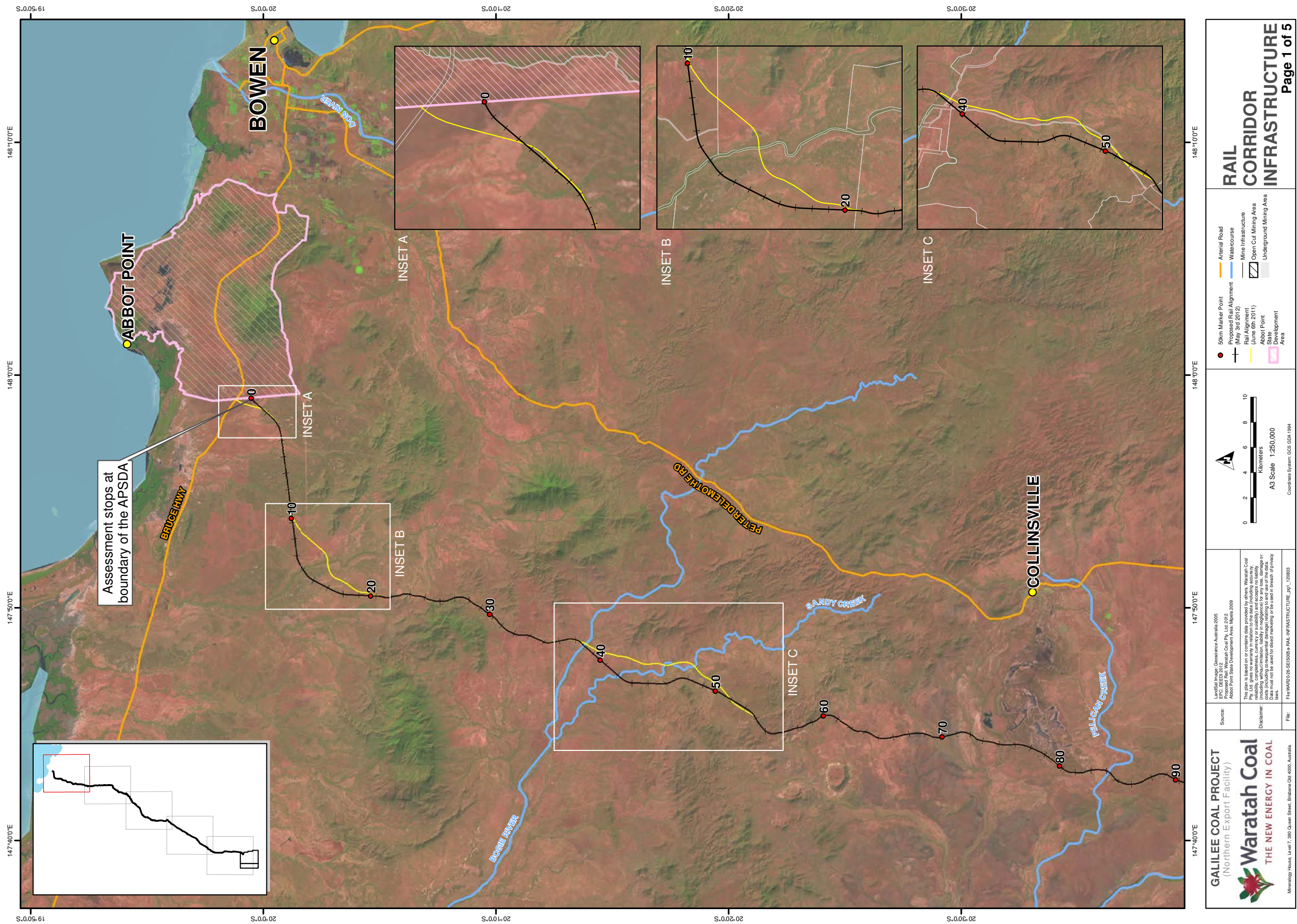


Figure 4. Project changes since EIS lodgment (Sheet 2 of 5)

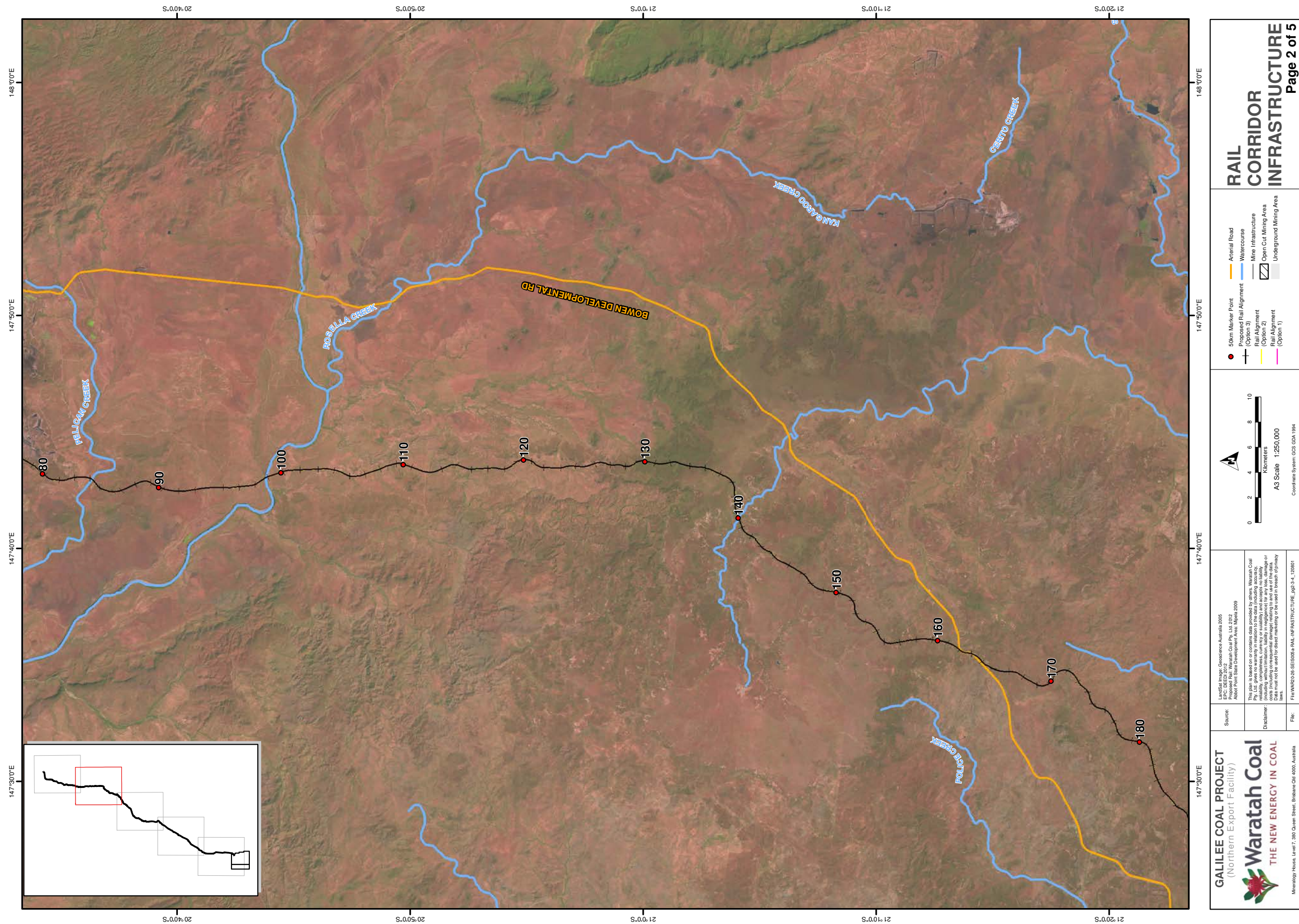


Figure 4. Project changes since EIS lodgment (Sheet 3 of 5)

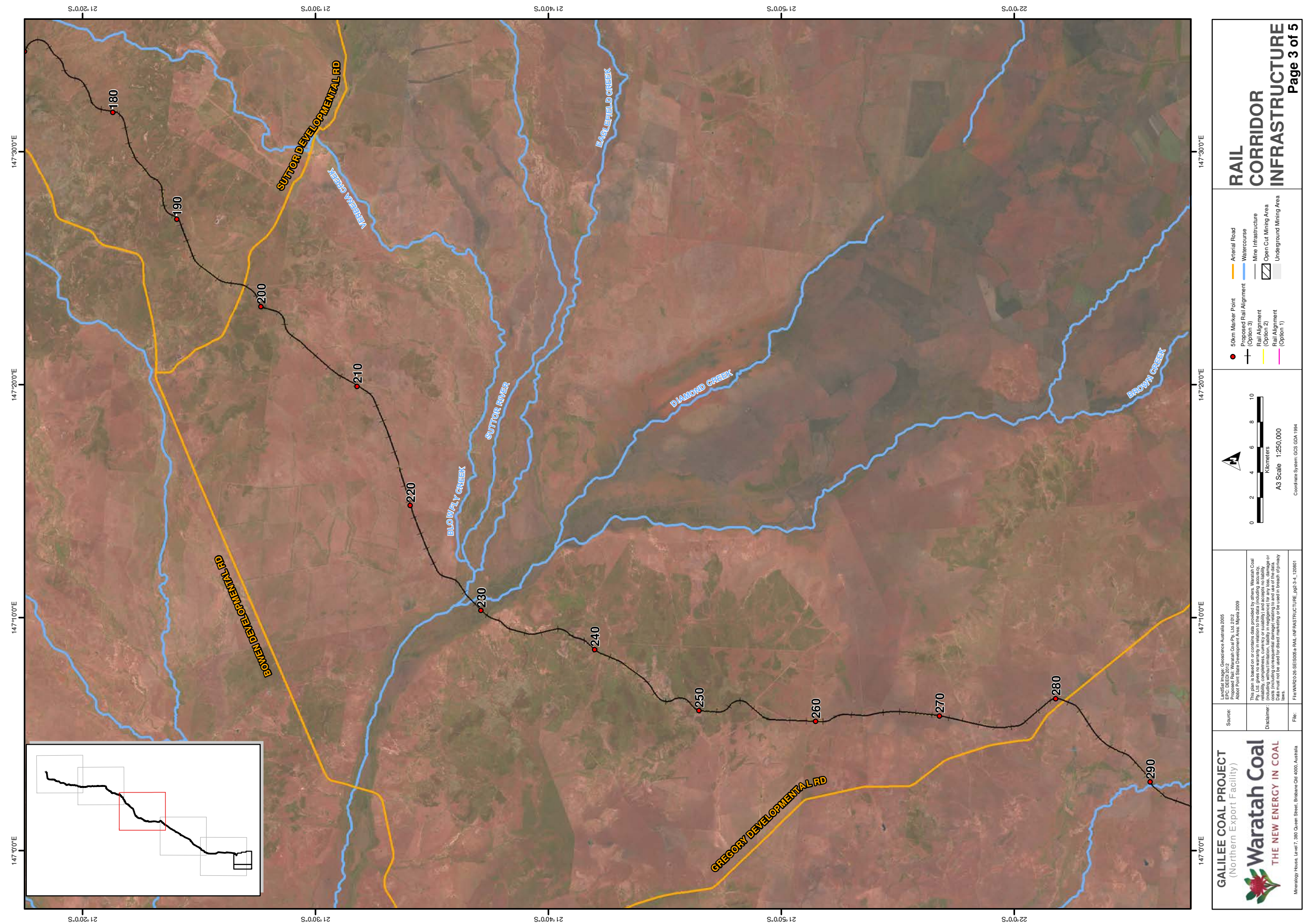
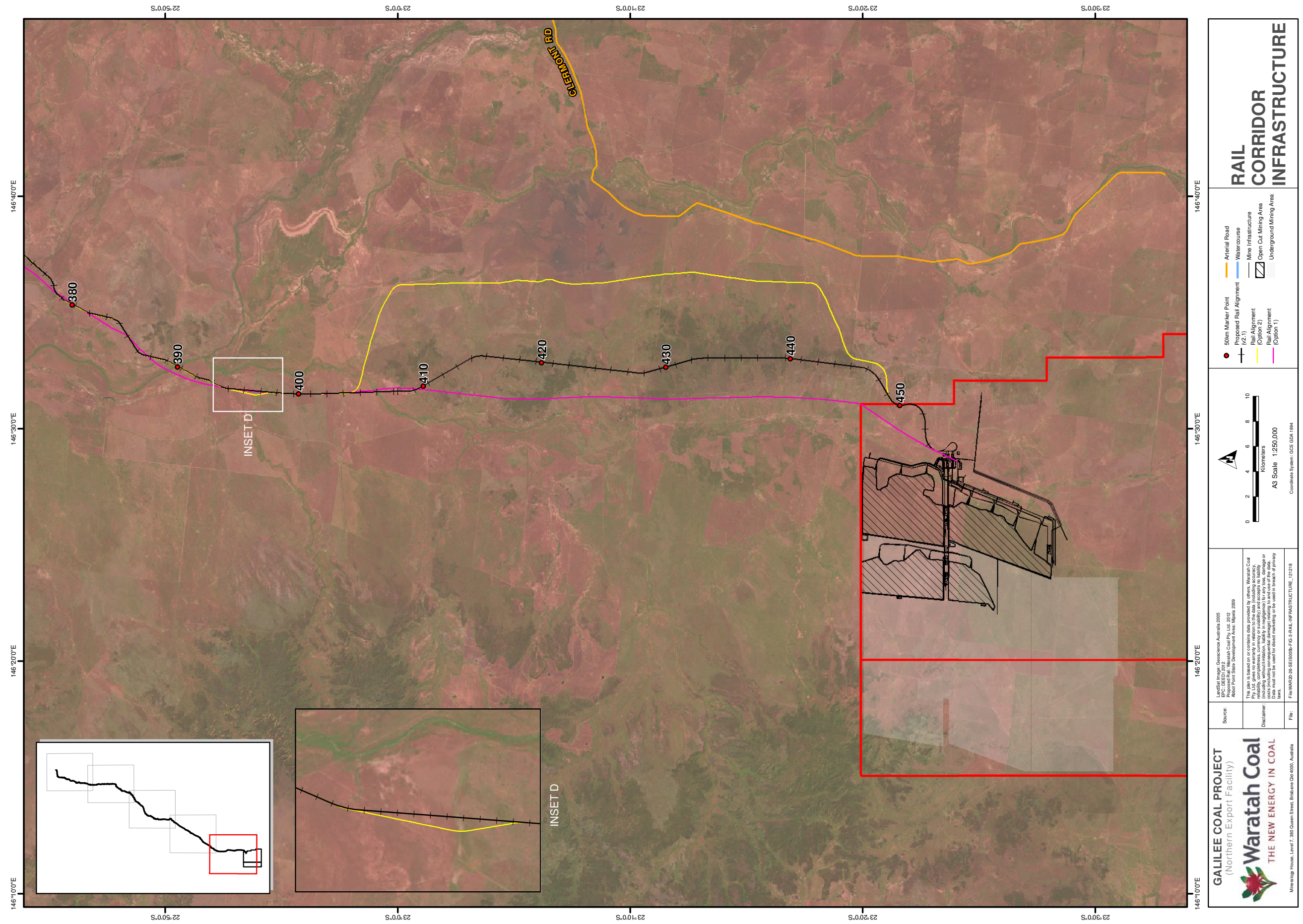


Figure 4. Project changes since EIS lodgment (Sheet 5 of 5)



SUBMITTER NO.	1841	ISSUE REFERENCE:	21024
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPac	RELEVANT EIS SECTION	Appendix 26 – MNES Section 2.2.1.2

DETAILS OF THE ISSUE

Report indicates that the majority of changes are within the 1.6km rail corridor, need information on how many are outside and where? Waratah are committed to undertaking detailed surveys of all remnant vegetation prior to finalisation of the alignment, SEWPac cannot approve the project if there is still so much uncertainty.

PROPONENT RESPONSE

The alignment changes referred to and the footprint of the rail corridor has been refined since lodgment of the EIS.

Since submission of the EIS Waratah Coal has commissioned a concept design of the alignment of the 453km of rail corridor (from the boundary of the APSDA to the beginning of the rail loop at the mine site) – see *Railway Concept Design* report in *Appendices – Volume 2* of this SEIS. This engineering provides the vertical alignment of the rail, which in turn provides the width required for the rail easement. At present, 421km of the rail vertical alignment has been engineered (with the balance 32km awaiting the completion of the Digital Terrain Model (DTM)), which will be completed as soon as possible.

The final railway easement will be an average width of 49.5m.⁵ In relatively flat terrain the rail will be 40m wide and in areas where cross-slope cuttings are required the width of the easement will be wider – up to a maximum width of 184m (however there are only two areas exceeding 150m). The easement includes both the rail and a service road. In the 32km of the corridor which have not yet been engineered, a footprint area of 40m was assumed based upon the relatively flat topography. There are no Endangered or Of Concern REs, or TECs within this 32km section of the rail easement. Within the easement all existing vegetation will need to be cleared to facilitate construction and operation of the rail.

The amounts of remnant vegetation and Threatened Ecological Communities (TECs) that would need to be cleared to facilitate the rail are 33ha of Endangered RE and 104 ha of Of Concern RE. Within these, the following areas, also classified as TECs, will require clearing:

- 30ha of TEC – Brigalow (*Acacia harpophylla* dominant and co-dominant)
- 23ha of TEC – Weeping Myall Woodlands
- 2ha of TEC – Coolibah Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions, and
- 21ha of TEC – Natural Grasslands of the Queensland Central Highlands and the Northern Fitzroy Basin.

Regional ecosystem calculations were undertaken by overlaying the Queensland *Vegetation Management Act 1999* protected remnant Regional Ecosystems (RE) over the rail easement and calculating areas and types requiring clearing. TEC (as defined from the RE analogues listed in the SEWPac Species Profile and Threats (SPRAT) database) analogues were overlaid over the rail easement to enable a derivation of areas of TECs to be cleared. A more detailed description of the areas with environmental values to be cleared to facilitate the rail corridor is presented in Section 5 of the *Biodiversity Offset Proposal* in the *Appendices – Volume 2* of this SEIS.

It should also be noted that initial aerial photography interpretation does indicate that the mapping of REs along the rail easement may be altered in terms of line work and polygon descriptions following further field work.

Ecological survey of the rail will be undertaken in early 2013, during or immediately after the wet season to ensure suitable conditions, and hence adequate survey data can be collected from all vegetation communities along the rail corridor.

⁵ Average width calculated by dividing the total area of the rail footprint (2215ha) by the length of the rail (453km).

SUBMITTER No.	1841	ISSUE REFERENCE:	21025
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPaC	RELEVANT EIS SECTION	Appendix 26 – MNES report – Section 2.2.1.3 – Changes in Alignment

DETAILS OF THE ISSUE

Alternative rail alignments have been assessed through desktop analysis for options 2 and 3, using original field assessment for Option 1. Have surveys been undertaken considering all these other options?

PROPONENT RESPONSE

As detailed in the Executive Summary, Section 1.1.2.2 of Chapter 1 of the Rail Volume (Vol 3) (this being the section that discusses the options assessment), and Section 3.5 and Section 4 of the Options Assessment presented in Appendix 5A of the EIS, no surveys had been undertaken of the Options 2 and 3 at the time the EIS went to publication. However, the findings of the Options Assessment were taken in to account, and Waratah Coal have since elected to have Option 3 as the preferred option. As such, Waratah Coal have commissioned additional fieldwork to verify the presence or absence of MNES. The planned survey program will be undertaken during or immediately after the 2012/2013 wet season to ensure suitable conditions, and hence adequate survey data, can be collected from all vegetation communities along the rail corridor.

SUBMITTER No.	1841	ISSUE REFERENCE:	21054
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPaC	RELEVANT EIS SECTION	Fig 3-17

DETAILS OF THE ISSUE

Aquifers

A data gap analysis undertaken by Bradshaw and Bradshaw (2010) suggested that there was evidence of the vertical movement of groundwater between different sedimentary layers and aquifers. However Fig 3-17 indicates that “leakage does not contribute a significant amount of water to deeper aquifers at this site.” Further monitoring and analysis of sites within and in a buffer zone around the proposed mine footprint is required to determine the extent of groundwater movement between aquifers and therefore potential drawdown impacts.

PROPONENT RESPONSE

The question of vertical movement of groundwater has been addressed by installation of seven VWP sites with 25 pressure sensors in and around the mine footprint to give the natural vertical hydraulic gradients. Model calibration of these vertical profiles will allow quantification of vertical permeabilities. See the *Groundwater Assessment* report contained in *Appendices – Volume 2* of this SEIS.

The completed program of laboratory measurement of vertical permeability in cores will assist as well.

There will certainly be movement of water vertically. However, the low permeabilities of coal measure lithologies as a rule would suggest only minor quantities of water movement, except in the fractured zone above mined panels.

A *Longwall Mining Subsidence* report (in *Appendices – Volume 2* of this SEIS) has recently been completed and gives details of the fractured zones and will be taken into account in the revised modelling.

SUBMITTER No.	1841	ISSUE REFERENCE:	21055
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Commonwealth DSEWPac	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

Previous advice from earlier correspondence. Specific comments on the draft EIS

Mapping

Mapping will require refinement to facilitate the assessment process. In its current state it is too broad and vague for sufficient analysis, also there are some discrepancies between the maps and discussion of the listed EPBC species.

PROPONENT RESPONSE

Mapping has been refined as part of the completed supplementary technical studies (see *Appendices – Volume 2* of this SEIS). Mapping for MNES fauna species is included in the *Fauna Assessment* report (Appendix – Volume 2 of this SEIS). There are no MNES flora species or TECs at the mine site. Mapping for the MNES species and TECs along the rail alignment will be finalised after the planned ecological survey program that will be undertaken during or immediately after the 2012/2013 wet season to ensure suitable conditions, and hence adequate survey data, can be collected from all ecological communities along the rail corridor.

SUBMITTER No.	364	ISSUE REFERENCE:	7014
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (APSDA Branch)	RELEVANT EIS SECTION	Volume 4 Chap 2 Port p15, Figure 1 Volume 4, Chapter 2, Volume 4, Port, Chapter 1, p5 p23, Volume 4, Figure 3 Volume 4, Port, Chapter 1, p6 p23, Volume 4, Figure 3

DETAILS OF THE ISSUE

All maps and figures need to be amended to clarify that the APSDA is not part of the EIS.

Reference to the proposed multi-user transport corridor is incorrect and should be replaced with proposed multi-user infrastructure corridor (MUIIC).

The rail planning in the APSDA shown is a working option and indicative only and should be noted as such.

The indicative development parcels, and indicative road layout shown in this map are not included in the legend and could be misleading. These should be identified in the mapping legend, annotated or further explained in the text of the report as indicative.

PROPONENT RESPONSE

All maps and figures that reference the APSDA in this SEIS note that the APSDA is the limit of the assessment for this SEIS. No indicative development within the APSDA is presented.

SUBMITTER No.	418	ISSUE REFERENCE:	7015
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Dept. of Local Government and Planning (DLGP)	RELEVANT EIS SECTION	All appendices

DETAILS OF THE ISSUE

The Appendices need to include up to date information relating to the APSDA (numerous maps, figures and references have been superseded).

Given the EIS stops at the boundary of the APSDA, all appendices need to be updated or amended to state that the information relating to the APSDA is for illustrative purposes only and not part of the EIS.

PROPONENT RESPONSE

Wherever relevant, the Appendices of the SEIS are clear that the boundary of the APSDA is the limit of the assessment for this SEIS.

SUBMITTER No.	664	ISSUE REFERENCE:	17011
SUBMITTER TYPE	Council	TOR CATEGORY	Entire EIS (General Comment)
NAME	Whitsunday Regional Council	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

Further investigations / Management plans. Several investigations and management plans are required for review prior to approval:

- Detailed flora and fauna survey for final alignment of the corridor
- Significant Community/Species management plans
- Geotechnical investigation
- Earthworks schedule for cut/fill balance, volumes, destination and source of material
- Hydraulic study and modelling for final route
- Soil and erosion management plan (Erosion and sediment control plan) – for construction and post construction stages for the rail corridor (including bridges and waterway crossings) and all temporary facilities
- Sediment program for pre, during and post construction of water crossing locations
- Water quality monitoring program that includes pre, during and post construction
- Stormwater management plan for temporary camps, waterway crossings and structures
- Acid Sulfate soil investigation and ASS management plan
- Weed and pest management plan
- Fire management plan
- Cultural Heritage Management plans
- Final designs of culverts and bridges, stabilisation of beds and banks
- Decommissioning and rehabilitation management plan
- Details of monitoring programs of water and soil quality, impacts to flora and fauna

- Hazardous materials and waste management plan, and
- Biodiversity offset strategy.

PROPONENT RESPONSE

This SEIS provides details with reference to all of these issues. Please refer to the appropriate Chapters and Appendices.

SUBMITTER No.	779	ISSUE REFERENCE:	17019
SUBMITTER TYPE	Individuals	TOR CATEGORY	Entire EIS (General Comment)
NAME	Names withheld	RELEVANT EIS SECTION	Exec Summary 1.4.1; Vol 1, Ch 1, p5; App 10, 4.5; 4.4; - 3.2.2; 3.5.3

DETAILS OF THE ISSUE

1. The BNR, its values and the likely impacts on it are incompletely, inconsistently and incorrectly described throughout the EIS. Particular issues with lack of detail being provided in the Executive Summary
2. BNR described as being of Local significance under the State Biodiversity Planning Assessment when it is of State significance
3. The submitter believes the project rationale is ‘out-of-line with current thinking’
4. Submitter believes Waratah Coal’s environmental policy is very general and difficult to comprehend
5. Issues with ‘readability’ and lack of a “functional search term capability”, as well as size of documents slowing down scroll functions on some computers
6. Issue with the summary presented in the executive summary
7. Inability to copy and paste
8. Submitter contends that the document is difficult to navigate due to not having an index or logical layout
9. The submitter points out seven errors (omissions, faulty references to other sections of the EIS and typos) that they contend lead to difficulty in comprehension and navigation.

PROPONENT RESPONSE

1. Waratah Coal disagrees with the submitter, and believes that overall they have provided an accurate statement of the ecological values throughout the area. The Executive Summary (and to a lesser extent the EIS chapters) is just that – a summary – and as such, provides an overview. As acknowledged by the submitter the detailed information regarding the ecological values is present within the EIS and the consultant’s reports in the Appendices, which is where the detail should be. Note that further, more detailed flora and fauna assessments have been completed on the BNR since the submission of the EIS. Refer to the *Mine Site Fauna Assessment* report and the two *Flora and Vegetation* reports contained in the *Appendices – Volume 2* of this SEIS.
2. Waratah Coal acknowledges that there was an erroneous description of the BNR being of Local Significance in the Executive Summary, but this was obviously not intended to be deliberately misleading, as the proper description of the BNR being of State Significance, is given in Volume 2, Chapter 6, pg 4 and in Volume 5 Appendix 10B, pg 33. Further ecological work to enable description of the values of the BNR and surrounds was undertaken as part of the SEIS. This work can be found in Part C – Nature Conservation and the associated Appendices – *Mine Site Fauna Assessment* report and the two *Flora and Vegetation* reports – Volume 2 of this SEIS.
3. This is an opinion-based statement that does not need to be addressed.
4. This is an opinion-based statement that does not need to be addressed.

5. The size of the EIS files is a function of the content, which is required by the ToR. It was made clear that, if requested, hard copies of the EIS could be provided to users without high speed broadband or unlimited download capacity access and also copies were placed in several libraries throughout Queensland. The size of the files are comparable with that of other EISs for a project of this scale.
6. Waratah Coal contend that the Executive Summary does, as specified in the ToR “convey the most important aspects and options relating to the project to the reader in a concise and readable form”. The details of the elements that the submitter believes should be in the Executive Summary are in the body of the EIS, where the details should be.
7. It is not the function of the EIS, nor a requirement of the ToR, to provide an uncontrolled document that people can cut and paste from.
8. An index is not a requirement of the ToR *per se* – a table of contents was provided. All future publications will be laid out in accordance with the ToR.
9. It is not unreasonable to expect a few mistakes in a document that contains 79 chapters and several thousand pages – this SEIS has been well reviewed and edited as will be all future publications.

SUBMITTER No.	1840	ISSUE REFERENCE:	17021
SUBMITTER TYPE	Government	TOR CATEGORY	Entire EIS (General Comment)
NAME	Barcaldine Regional Council	RELEVANT EIS SECTION	1.3.2

DETAILS OF THE ISSUE

MLA 70426 in which name has this Application been made?

Further studies required within the SEIS?

PROPONENT RESPONSE

The Mining Lease Application for 70426 has been made in the name of Hancock Coal. Please refer to their Alpha Coal EIS, SEIS and SEIS Addendum for information relating to this area.

SUBMITTER No.	775	ISSUE REFERENCE:	17025
SUBMITTER TYPE	Individual	TOR CATEGORY	Entire EIS (General Comment)
NAME	Name withheld	RELEVANT EIS SECTION	App27 s 5.2 p29, V5-App27 s 7.1 p39

DETAILS OF THE ISSUE

There is no evidence anywhere in the EIS that Waratah have attempted to – avoid, minimise and mitigate any environmental impacts. The mine plan layout on BNR appears to be dictated purely by the underlying geology.

Waratah must produce evidence that they have attempted to “avoid, minimise and mitigate the environmental impacts” in laying out their mine plan. For example, what areas have been avoided, and what activities have been minimised, that would have otherwise been part of the mine plan?

PROPONENT RESPONSE

The overall mine plan has been developed to limit potential environmental impacts that can reasonably be avoided. For example, the placement of mine infrastructure area to, as well as is practicably possible, limit impacts upon Tallarenha Creek, and the limiting of the mine open-cut footprint to limit potential ecological impacts.

The project is unviable if the reserves under the Bimblebox Nature Reserve (BNR) are not mined.

Due to the distance to market for coal from the Galilee Basin mines, there is a critical volume and quality of coal required to make each project economically viable, such that the capital costs of the rail and port infrastructure are justified.

For the Galilee Coal Project, the reserves beneath the BNR are critical as they are the most cost effective of all reserves within the mining lease to recover, being the shallowest of all the reserves. In addition, the coal reserves under the BNR are of superior quality compared with other coal within the mining lease. This superior coal is required for blending with the other comparatively inferior coal to give an overall coal product with an energy level of 6350k/cal, which makes the product competitive on the world coal market. The coal from the Galilee Coal Project has been presold at these energy levels.

If the BNR is not available for mining, in addition to reduction in coal quality being likely to result in the loss of the contract for the pre-sale, it is estimated that the loss in coal reserves for the open-cut operations will be over 42% (167 million tonnes) and for the total mine operations (both open-cut and underground) almost 40%. This represents a reserve of almost 410 million tonnes of coal which makes cost recovery to build the rail, mine and port infrastructure unlikely. It is also worth noting that the reduction in royalties to the Queensland Treasury would be almost A\$3 billion (based on \$100/tonne coal price). Additional reductions in royalties would also result due to reduced sale prices from the comparatively inferior product that would result without the reserves from under the BNR being available for blending.

SUBMITTER No.	354	ISSUE REFERENCE:	17020
SUBMITTER TYPE	NGO	TOR CATEGORY	Project Description
NAME	AMCI	RELEVANT EIS SECTION	Vol 3 Ch 17, Exec Summary; Vol 3 Ch 1, Exec Summary

DETAILS OF THE ISSUE

- There needs to be one rail alignment from the Galilee Basin
- Is the rail project of suitable initial capacity and can the capacity be expanded in the future?
- Will there be an effective and timely third party access regime?

PROPONENT RESPONSE

One rail alignment

Since the submission of the EIS, the Government has announced its intention for one rail corridor from the Galilee Basin and in doing so has given preference to an East-West corridor and a North-South corridor. However, the preferred North-South alignment, proposed by Hancock Coal only, caters for 60Mtpa, therefore does not meet the requirement for all Galilee Basin proponents, and Waratah Coal is therefore proceeding with its proposed rail component.

In addition, Waratah Coal's rail alignment has been designed to be immune to impacts of flooding up to an event with an Average Recurrence Interval (ARI) of once in 100 years. It is Waratah Coal's understanding that the alignment proposed by Hancock/GVK is flood immune up to an event with an ARI of once in 50 years and once in 20 years for minor culverts. Waratah Coal believe that the rail alignment out of the Galilee Basin should be designed to be flood immune to a once in 100 year ARI event to reduce the likelihood of supply chain breakages in flood events.

Initial capacity and future expansion

Planning for the Waratah Coal corridor is for an ultimate capacity of 400Mtpa which is the basis of the EIS and for which approvals are being sought. Whilst the overall planning is for 400Mtpa, the initial design and construction of the railway is for 60Mtpa.

Third party access

It is the clear intention of Waratah Coal for the railway to be available to all Galilee (and Bowen Basin) coal producers under agreed commercial arrangements in a timeframe to suit the other third party users.

The third party access regime falls under the *Competition and Consumer Act 2010* (formerly known as the *Trade Practices Act 1974*), where the Australian Competition and Consumer Commission (ACCC) enforces the Australian Consumer Law (ACL) which is included under the Act.

SUBMITTER No.	425	ISSUE REFERENCE:	17142
SUBMITTER TYPE	Individuals	TOR CATEGORY	Project Description
NAME	Names withheld	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

Property requirements: All vehicles and equipment must be washed down before entering property. Certificate of inspection to be produced before entry.

No firerms, no living, no camping, no rubbish, no fires and no dogs.

PROPONENT RESPONSE

Waratah Coal abides by a Code of Conduct which sets out requirements for appropriate behavior on landowners properties. Waratah Coal also use experienced contractors who are also bound by Waratah Coal's Code of Conduct.

Waratah Coal has a Weed Management Strategy and Safe Operating Procedures (for site operations) that highlight the need and gives direction on how to control the spread of weed and seed. All employees are aware of their obligations as set out the Exploration Code, State Legislation and regulations.

Waratah Coal respect that certain landowners require a wash down certificate prior to entry. In very remote locations along the rail this can be difficult due to remoteness from certified wash down stations. In these instances Waratah Coal will negotiate with the landholder to ensure an acceptable solution. These may include:

- leaving the vehicle at the property boundary and utilising a vehicle from within the property
- mobile wash station and presence of employee trained in how to conduct certified washes by a third party who is authorised to inspect. Employees then sign a purpose-made duplicate book to certify and record that the vehicle has been cleaned to comply with a certified wash.

SUBMITTER No.	364	ISSUE REFERENCE:	17158
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DEEDI (Mining and Petroleum Operations)	RELEVANT EIS SECTION	Vol 2 1.1.5

DETAILS OF THE ISSUE

Resource mapping – The current state of resource knowledge in JORC terms should be stated clearly and the selection of particular seams for longwall mining justified.

PROPNENT RESPONSE

The target coal seams in the project area (EPC 1040 and part of 1079) are found in the Late Permian age Bandanna Formation and the Colinlea Sandstone.

The coal is found in four major seams – B, C, DU, and DL.

The total resources for the Galilee Coal Project as of 24th February 2010 are estimated to be 3.684 Billion tonnes (Bt) of JORC compliant coal resources. The resources are quantified and categorized as 1.975Bt of measured resources, 569 Million tonnes (Mt) of indicated and 1.140Bt of inferred resources. The estimate has found there is approximately 0.6Bt in the concept open-cut and the remaining 3.1Bt in the concept underground.

The Galilee Coal Project open-cut mining areas will mine seams B, C, DU, and DL. These seams will be mined to an economic depth of cover extent, which include 579Mt of coal. Beyond this economic cut off limit, underground operations will commence.

The Galilee Coal Project underground mining areas will selectively mine seams which can be mined safely and efficiently, without endangering the lives of workers. The seam selection criteria are based on geological conditions, geotechnical conditions, hydrogeological conditions, longwall mining technique, coal quality, and geographical location.

There are four longwall mining areas which will selectively mine various seams. Underground longwall mine 1 will extract DU seam, based on the superior coal quality and coal thickness within the northern section of mining tenure. The estimate of coal to be extracted within underground 1 operation is 300Mt. Seams C and DL within the foot print of underground 1 mining area will be left due to interburden thickness rendering extraction unsafe.

Underground longwall mine 2 will extract DL seam, utilising longwall mining operations. The DL seam is selected due to superior coal quality, working section height and geotechnical conditions. An estimate of coal to be extracted through this system is 340Mt. Within the footprint mining area of longwall two seams C and DU are left due to insufficient interburden thicknesses rendering extraction unsafe.

Underground longwall mine 3 will extract DL seam, utilising longwall mining operations. Similar to underground two DL seam is selected due to superior coal quality, working section height and geotechnical conditions. An estimate of coal to be extracted through this system is 340Mt. Within the footprint mining area of longwall two seams C and DU are left due to insufficient interburden thicknesses rendering extraction unsafe.

Underground longwall mine 4 will extract B8 seam, utilising longwall mining operations. The B8 seam is selected due to superior coal quality, working section height and geotechnical conditions. An estimate of coal to be extracted through this system is 320Mt.

The total estimate of underground coal to be extracted from undergrounds 1, 2, 3 and 4 will be 1,300Mt of coal. The quantity of underground coal being estimated as JORC resources is shown in the Table *Resource Estimate Summary by Conceptual Mining Type* shown in Issue Reference 17037 in Part C – 02 – Land. Refer also to this response for further details.

SUBMITTER No.	418	ISSUE REFERENCE:	17244
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	Dept. of Local Government and Planning (DLGP)	RELEVANT EIS SECTION	Page 19, Volume 4, Chapter 2; 2.2.3.2 Nature and Conservation reserves

DETAILS OF THE ISSUE

The reference to the Parsons Brinckerhoff report is incorrect and needs to be updated.

The correct reference for this paragraph is : Office of the Coordinator-General, Land and Infrastructure Study for the Central Portion of the APSDA, 2010.

PROPONENT RESPONSE

If required in future correct reference will be made to this report.

SUBMITTER No.	356	ISSUE REFERENCE:	17015
SUBMITTER TYPE	Government	TOR CATEGORY	Project Description
NAME	DTMR	RELEVANT EIS SECTION	Vol 3, Chpt 4, Fig 10

DETAILS OF THE ISSUE

Waratah and Powerlink have held initial discussions on the interaction between the proposed Waratah Coal rail line and the proposed Powerlink Galilee Basin transmission project.

Powerlink is seeking that the land required for the Galilee Basin transmission project is to be designated for community infrastructure under Section 201 of the *Sustainable Planning Act 2009*.

Powerlink notes that the proposed Waratah rail line Option 3 passes close to the proposed Powerlink Surbiton Hill substation and is adjacent to, or crossing over, various proposed transmission lines in the area.

Both parties have stated their intent to work together to develop a mutually acceptable outcome.

PROPONENT RESPONSE

Powerlink and Waratah Coal are in discussions to ensure that the rail and power alignments do not impact upon each other.

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