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1.1 INTRODUCTION

The Galilee Coal Project (Northern Export Facility) (also known as the China First Project), (hereafter referred to as the project) comprises a new coal mine located in the Galilee Basin, Queensland, approximately 30 km to the north of Alpha; a new rail line connecting the mine to coal terminal facilities; and use of coal terminal facilities in the Abbot Point State Development Area (APSDA) and port loading facilities at the Port of Abbot Point.

Figure 1 shows the overall project concept.

Waratah Coal proposes to mine 1.4 billion tonnes of raw coal from its existing tenements, Exploration Permit for Coal (EPC) 1040 and EPC 1079. The mine development involves the construction of four nine Million Tonnes Per Annum (Mtpa) underground long-wall coal mines, two 10 Mtpa open cut pits, two coal preparation plants with raw washing capacity of 28 Mtpa.

The annual Run-of-Mine (ROM) coal production will be 56 Mtpa to produce 40 Mtpa of saleable export highly volatile, low sulphur, steaming coal to international markets. At this scale of operation, the capital expense of constructing the required rail and port infrastructure is economically viable over the life of the project. The assessment of the mining construction and operation is detailed throughout Volume 2 of this EIS.

Processed coal will be transported by a new railway system approximately 468 km in length that runs from the Galilee Basin to the existing Port of Abbot Point. The railway component includes a state of the art, heavy haul, standard gauge railway to support 25,000 tonne (t) train units. The final railway easement is expected to be approximately 60-80 m wide and will include both the rail and a service road. The assessment of the rail construction and operation is detailed throughout **Volume 3** of this EIS.

It should be noted that the description of the stockpiling and export elements of the project provided in the Initial Advice Statement of October 2008, proposed either use of the Multi-Cargo Facility (MCF) or a jetty berth design similar to that currently in use at Abbot Point. Since then, as a result of the outcomes of detailed engineering studies by Waratah Coal and the opportunity for Waratah Coal to minimize environmental impacts and exploit economic opportunities by sharing facilities in multi-user infrastructure arrangements, the jetty berth design has been removed as an option for the project, and use of facilities within the proposed Terminal 4-7

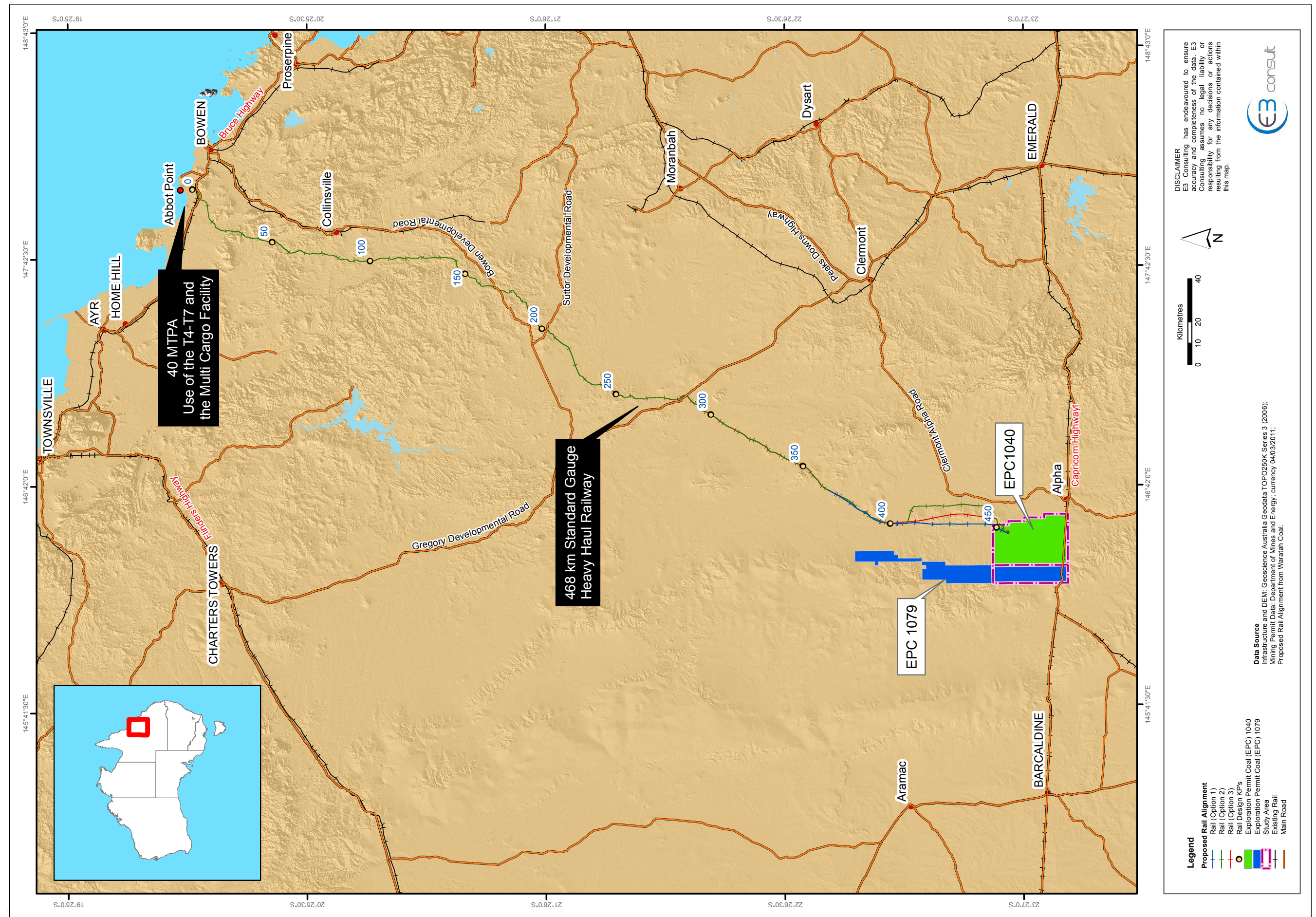
(T4-7), Multi-User Corridor (MUC) and MCF remains the sole option for the stockpiling and port export elements of the project. However, it should be noted that should any component of the T4-7, MUC or MCF not progress, Waratah Coal would need to seek alternatives for coal stockpiling and ship loading. This could include investigation of a stand-alone jetty and stockpiling facilities. Should this be required, this would be the subject of a separate future EIS process and referral to the Commonwealth Government.

The project will utilise future coal stockpiling and port loading facilities to be developed by North Queensland Bulk Ports Corporation (NQBP) within planned infrastructure at the APSDA and the Port of Abbot Point. Waratah Coal intends to utilise facilities for coal stockpiling at the proposed T4-7 within the APSDA. This project is currently undergoing initial design and is the subject of an Expression of Interest (EOI) (closing on 1 August 2011) from entities wishing to participate in the development of the T4-7. Waratah Coal is seeking preferred respondent status in this project which would award the right to develop a site at the T4-7 location; to develop conveyers within the MUC between the T4-7 and the MCF; and use of two berths at the MCF. The T4-T7 project is yet to undergo a formal environmental assessment process; which will be overseen by NQBP. This process will be commenced when preferred respondents and design parameters are finalised - expected to commence in early 2012. It is anticipated that once NQBP has completed their assessments, Waratah Coal may need to undertake additional approvals processes and/or accept resultant conditions of operations from NQPBs via lease requirements and a framework agreement.

The proposed MCF will be a new multi trade port facility adjacent to the existing Abbot Point Coal Terminal berths. Awarding of a stockpiling tranche in the T4-T7 would allow Waratah Coal use of two berths within the MCF. The MCF Environmental Impact Statement process is well underway, and Federal Government approval is expected in 2011. However, the MCF EIS does not include undertaking the following activities and development of the following structures:

- Wharf structures;
- Ship loading and unloading infrastructure and associated facilities of private port users as well as operation of these facilities; and
- Conveyors, pipelines etc. servicing the MCF

Figure 1. Project Location, Galilee Basin, Queensland, Australia



It is anticipated that once NQBP has received their approval, Waratah Coal will need to undertake additional approvals processes to facilitate the above activities and development.

Given that the coal terminal and port infrastructure are largely the subject of current and future assessments by NQBP, this EIS does not consider the potential impacts of these projects. However, an overview of existing environment within the APSDA and the Port of Abbot Port, as well as the probable coal terminal design and infrastructure requirements is provided in **Volume 4** of this EIS.

Various supporting infrastructure will also be constructed as part of the project including the connection to new power and water supply infrastructure being proposed by Government.

The construction period for the project is estimated to be 36 months.

1.2 PROJECT PROPONENT

The Project proponent is Waratah Coal Pty Ltd a fully owned subsidiary of Mineralogy Pty Limited (Mineralogy). The project will be developed by China First Pty Ltd, a fully owned subsidiary of Resourcehouse Limited.

Waratah Coal presently holds 37 EPC’s, seven Exploration Permits - Minerals (EPMs) and five EPC applications pending. The total area of all granted tenements is 23,441 km²; of which 21,561 km² represent the area available for coal exploration. The EPM’s cover areas already held as EPC’s. Additionally, 3,673 km² of land are under application by Waratah Coal for new EPC’s. All tenements and applications are within Australia, mostly within the state of Queensland.

The contact details for Waratah Coal are as follows:

*Manager Environment and Approvals
Waratah Coal
GPO Box 1538
Brisbane Qld 4001*

1.3 ENVIRONMENTAL POLICY

Waratah Coal’s approach to managing environmental aspects for which it is responsible is embodied in the development and implementation of its Environmental Management System (EMS). Waratah Coal’s EMS has

been developed to be consistent with the internationally recognised EMS standard ISO 14001. In delivering its environmental stewardship responsibilities Waratah Coal has developed and adopted a systematic approach to managing environmental issues across all activities.

A copy of Waratah Coal’s Environmental Policy is provided at **Figure 2**.

1.4 PROJECT DESCRIPTION

Waratah Coal intends to establish a new coal mine, railway and coal stockyards and supporting infrastructure to export high volatile, low sulphur, steaming coal to international markets.

The project incorporates:

- a new coal mine and associated infrastructure located near Alpha in the Galilee Basin, Central Queensland;
- a rail network between the mine and the Abbot Point State Development Area (APSDA); and
- onshore coal infrastructure at the APSDA and port loading facilities that will be integrated into the Multi Cargo Facility (MCF) at the Port of Abbot Point.

Each of the project components is briefly described below and detailed descriptions of each component are provided in **Chapter 1** of **Volumes 2 to 4**.

The project will be developed over three years. The mine will have a life of approximately 30 years, whereas the rail and coal terminal facilities at the APSDA and Port of Abbot Point will continue to operate to support other projects.

1.5 PROJECT COMPONENTS

1.5.1 MINE

The mine will be a combination of two surface mines and four underground mines with an ultimate export capacity of 40 Mtpa. The surface and underground mines will be supported by a purpose built Mine Infrastructure Area (MIA).

The raw coal will be washed for the export market with an overall product yield of 72%. The annual raw coal production will be 56 Mtpa to produce 40 Mtpa of saleable export product coal.

Figure 2. Waratah Coal Environmental Policy Statement



ENVIRONMENTAL POLICY

Waratah Coal recognises its responsibilities for implementing sound environmental stewardship of the environment in which it works. We will care for and manage the environment to deliver environmental better practice outcomes. Our Commitment extends to all of those who work with and for Waratah Coal.

In executing our environmental policy we will

- **Comply** with all relevant legislation and regulations
- **Incorporate** environmental better practice into our core business plans and management processes
- **Provide** adequate resources to meet our commitments
- **Train** our workforce and contractors to meet our standards
- **Communicate** our planned actions, targets and results to all stakeholders
- **Identify, minimise and mitigate** environmental disturbance throughout our business
- **Measure** our performance
- **Enforce** our standards with partners and contractors
- **Improve** our performance through continuous planning

This environmental policy confirms the company's intent towards creating and implementing sound environmental management practices.

All Management, employees and contractors of Waratah Coal will uphold and implement this policy.

Clive F. Palmer
Chairman
Waratah Coal

The overall mine arrangement will incorporate the following operations producing raw coal:

- two surface mining pits in the B seam resource producing 10 Mtpa total;
- two surface mining pits in the C and D seam resources producing 10 Mtpa total;
- one long wall mine in the B seam producing 9 Mtpa;
- three long wall mines in the C and D seam resources producing 27 Mtpa total;
- raw coal stockpiles at the underground mines;
- haulage roads to deliver raw coal from the surface mines to crushing and stockpile facilities;
- three overland conveyor systems to transport raw coal to the coal processing plants;
- three raw coal stockpiles to feed the coal preparation plants while providing blending capability;
- two coal preparation plants consisting of four 1,000 tonnes per hour (tph) modules each;
- two product coal stockpiles handling product coal to rail load out facilities;
- two railway turning loops each with a single coal load out facility;
- topsoil stockpiles and out of pit overburden spoil sites to create initial surface mining pit space;
- water management structures including dams, levee banks and sediment traps;
- tailings dams and coarse spoil disposal areas integrated into the mine spoil pile areas;
- refuelling and maintenance facilities;
- access roads, power lines and other services located in a central services corridor transgressing the entire resource area; and
- a mine office, communications, and associated amenities.

The surface mining method will be a combination of walking draglines for overburden removal in conjunction with truck and shovel fleets for partings removal and coal recovery.

An additional overburden removal system utilising large electric rope shovels loading onto overburden conveyors will also be used in conjunction with the draglines. This configuration offers the flexibility to create additional pit space by moving overburden over longer distances rather than through the use of walking draglines without the expense of truck and shovel fleets to achieve this.

The underground mining system is based on large scale long wall mining with each mine accessing the underground resource at 120 m depth through two cross measure drifts and a ventilation shaft.

The benign structural geology of the Galilee Basin offers an opportunity to mine 7 km long blocks with a 450 m wide long wall face. Extraction height of the long wall faces will vary from 1.8 m to 2.5 m depending on the constraints of seam geology.

1.5.2 RAIL

Studies have been undertaken of the rail network options to the preferred export port location of Abbot Point. These studies have identified that the best option to achieve the minimum possible logistical cost is a new heavy haul, standard gauge rail link operating with 20,000 tonne unit size diesel electric trains.

Initially the transport of 40 Mtpa of export quality washed coal to the coal terminal will require the use of six (6) train sets each comprising four (4) locomotives and 250 wagons, operating on a 24 hour cycle over a six day week. The ultimate scenario, the transport of 400 Mtpa of export quality washed coal to the coal terminal from a number of coal mines in the Galilee Basin and will require the use of sixty seven (67) train sets each comprising four (4) locomotives and 250 wagons, operating on a 24 hour cycle over a six day week, generating 134 train movements per day or 1 train every 22 minutes (based on 300 operational days per calendar year). The rail line is approximately 468 km and will operate as a private line.

A rail maintenance and provisioning facility will be constructed on a site adjacent to the railway for refuelling and servicing of the locomotives, servicing of rolling stock and also to provide facilities for track and signalling workers.

Maintenance roads will be constructed within the railway easement along the length of the railway.

The train locomotives will be diesel-electric. The key design characteristics for the proposed railway are outlined in **Table 1**.

The need for electricity will be limited to providing power for construction camps, signals and telemetry. Fibre optics will be used to support the rail communications system.

Table 1. Railway Design Parameters

DESCRIPTION	PARAMETER
Corridor width (nominal)	60 - 80 m wide easement which may be larger through significant cuttings
Design speed	80 km/hr loaded, 100 km/hr unloaded
Track	Standard Gauge single track with passing loops at 75 km average spacing
Nett tonnage per train	21,240 t (Standard Gauge)
Train length	3,200 m
Passing loop length	3,500 m
Flood immunity	1 in 100 years (Q100)
Maximum grades	1 in 100 against loaded train, 1 in 80 against unloaded train
Rail bridge design loading	M400
Signalling	Trains to be equipped with state of the art signalling technology with supervision of the drivers actions by the safety system

1.5.3 COAL TERMINAL

The coal stockyards and coal transfer infrastructure will be established within the APSDA and at the Port of Abbot Point. The Port of Abbot Point is located approximately 25 km to the north west of the township of Bowen in North Queensland. The area is an existing port with coal stockyards and offshore infrastructure.

Coal will be transported to the coal terminal in side dumping rail wagons. The wagons will discharge the coal into a dump station situated on the rail loop. Coal from the rail dump station will be transported to coal stockpiles by a conveyor and stacker system.

The project will utilise future coal stockpiling and port loading facilities to be developed by North Queensland Bulk Ports Corporation (NQBP) within planned infrastructure at the APSDA and the Port of Abbot Point. Waratah Coal intends to utilise facilities for coal stockpiling at the proposed T4-7 within the APSDA. This project is currently undergoing initial design and is the subject of an Expression of Interest (EOI) (closing on 1 August 2011) from entities wishing to participate in the development of the T4-7. Waratah Coal is seeking preferred respondent status in this project which would award the right to develop a site at the T4-7 location; to develop conveyers within the MUC between the T4-7 and the MCF; and use of two berths at the MCF. The T4-T7 project is yet to undergo a formal environmental assessment process; which will be overseen by NQBP. This process will be commenced when preferred respondents and design parameters are finalised - expected to commence in early 2012. It is anticipated that once NQBP has completed their assessments, Waratah Coal may need to undertake additional

approvals processes and/or accept resultant conditions of operations from NQPBs via lease requirements and a framework agreement.

The proposed MCF will be a new multi trade port facility adjacent to the existing Abbot Point Coal Terminal berths. Awarding of a stockpiling tranche in the T4-T7 would allow Waratah Coal use of two berths within the MCF. The overland conveyor and service road will be located within the multi-user transport corridor being established by Government as part of the MCF project to connect the APSDA industry precinct to the MCF. The coal transfer infrastructure will be integrated into the expansion of the Port of Abbot Point through connection with the proposed MCF.

Ships will be loaded at two berths at the MCF each with an 8,000 tph ship loaders. Each ship loader will use a dedicated out loading conveyor rated at 8,000 tph. Coal will be fed to each outloading conveyor by a dedicated coal reclaimer with the same capacity.

The operation of the stockyard and transfer infrastructure will require associated services such as all-weather access road, raw and potable water supply, electricity supply and communications. These will be provided as part of the Government upgrade to the APSDA.

1.5.4 OTHER PROJECT COMPONENTS

The project will include a range of infrastructure to support the operations of the mine. This will include but is not limited to:

- connections to power and water supply services;
- temporary and permanent workers accommodation;
- fencing, roads and tracks;
- potential airstrip capable of landing 20 seater aircraft;
- stormwater and sewerage services;
- telecommunications;
- borrow pits and quarries;
- storage areas and depots; and
- waste facilities.

1.6 PROJECT RATIONALE

The coal mine infrastructure area is situated approximately 30 km north of Alpha. To date, Waratah Coal has identified approximately 1.4 billion tonnes of coal within EPC 1040 and EPC 1079. Coal quality tests confirm that these coal reserves average less than 0.5% sulphur and possess an average calorific value of 26 MJ/kg.

The project is intended to have an initial export capacity of 40 Mtpa, with the capability to expand substantially to 100 Mtpa. The project will proceed through a staged development process with first coal loads in 2014. As the coal will require washing for the export market, an initial 56 Mtpa of ROM coal will be required to provide 40 Mtpa of export coal.

The transport of the coal from the mine to international markets requires the resolution of four key logistical issues, these being:

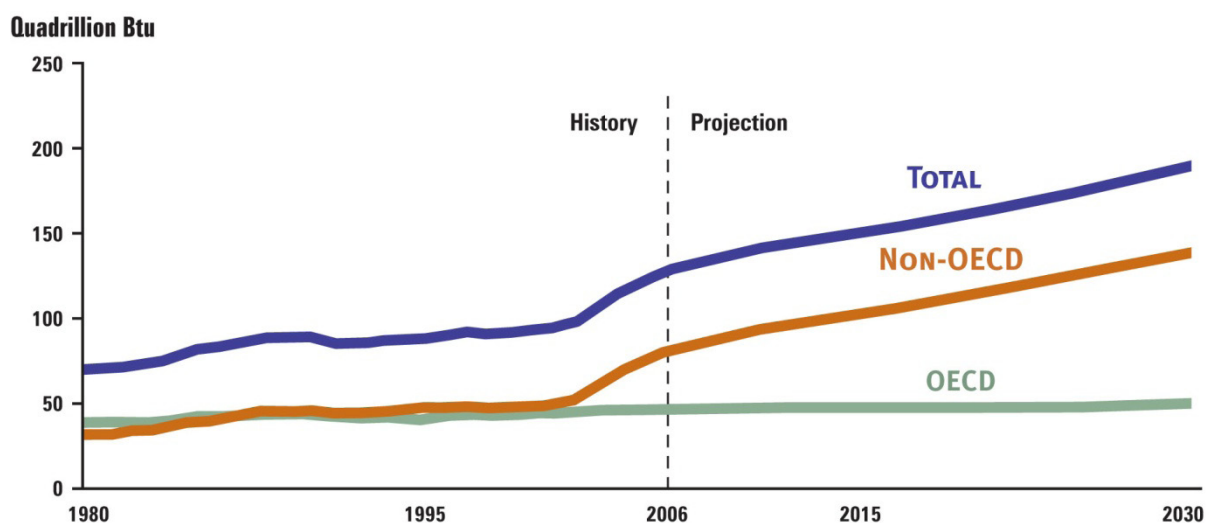
- higher transport costs than competitors due to distances between the mine and existing Queensland coal ports infrastructure;
- congestion on the existing Queensland Rail (QR) operated narrow gauge rail infrastructure;
- congestion at the existing coal ports; and
- uncertainty over the ultimate ownership of important infrastructure as a result of the proposed privatisation of major infrastructure assets by the Queensland Governments.

In recognition of these issues and to enable coal to be exported at the minimum logistical cost, Waratah proposes to construct the new rail line and utilise coal terminal infrastructure with an initial capacity of 50 Mtpa.

1.7 PROJECT DEMAND

Over the last 15 years the rapid growth in the world's economy has resulted in a swift increase in global fuel consumption, principally in oil, coal, natural gas and other fossil fuels. In particular **Figure 3** illustrates the demand for coal has increased considerably due to its low price and reliable supply, compared to other fossil fuels. Australia being the world's leading exporter of coking and thermal coal, holds a strong position with future international coal trade as it continues to improve its inland transportation and port infrastructure to expedite coal shipments to international markets.

Figure 3. World Coal Consumption, 1980-2030



The U.S. Energy Information Administration (EIA) predicts that world coal consumption will increase by 49% from 2006 to 2030, from 127.5 quadrillion British Thermal Units (Btu) in 2006 to 190.2 quadrillion Btu in 2030. This accounts for a global coal consumption of over 10 billion tonnes by 2030. With total recoverable coal reserves worldwide estimated at 929 billion tons, coal will continue to be the primary source of fuel into the foreseeable future.

While thermal and coking coals are both traded internationally, the majority of the trade is in thermal coal, which the EIA estimates will account for 72% of all world coal trade by 2030. Currently Indonesia is the world's largest exporter of thermal coal, supported by Australia, South America (Colombia and Venezuela) and southern Africa (South Africa, Mozambique, and Botswana). Despite this; however, Australia is expected to be the dominant leader in future years once many of its infrastructure investments are in place.

In 2007, 58% of the world's exported thermal coal was imported by Asian countries, which is expected to steadily rise to 65% by 2030, as illustrated in **Figure 4**. Australia having large proven reserves of thermal coal, including an estimated 14 billion tonnes of Joint Ore Reserves Committee (JORC) inferred coal resource lying untapped within the Galilee Basin, together with being well situated geographically to these Asian markets, is in a strong position to be major suppliers to these coal dependant countries.

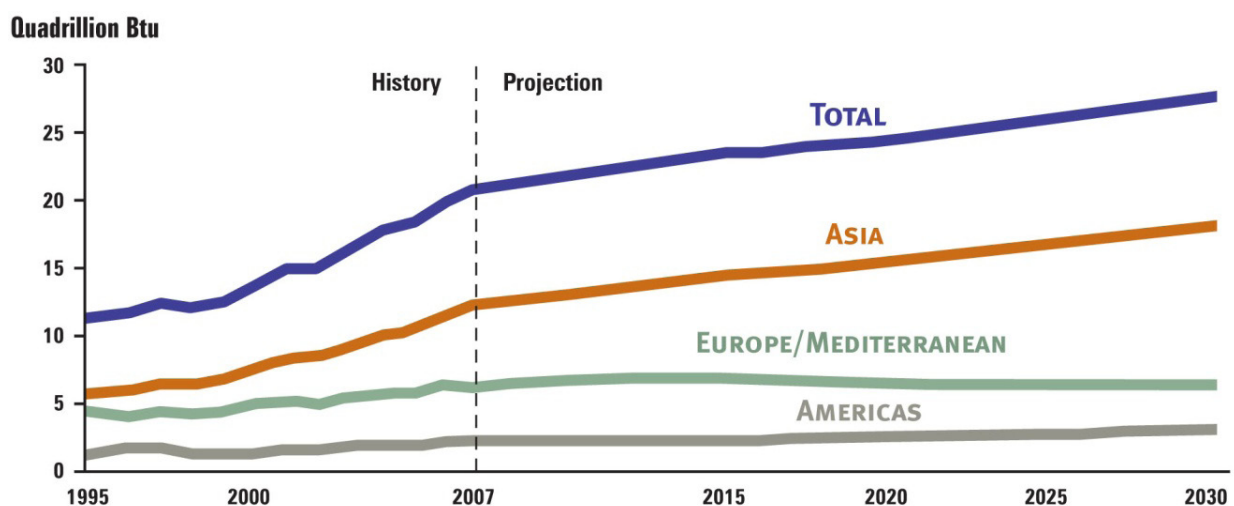
Global industrialisation together with high prices for alternate energy sources has driven the demand for thermal coal in recent years. **Figure 5** reflects the

Australian Bureau of Agricultural and Resource Economics (ABARE) in the prediction of global thermal coal imports will increase by 19% over the next 5 years, from 730 million tonnes in 2009 to an estimated 872 million tonnes by 2015. The growth over this outlook is likely to be driven predominately by developing Asia, in particular China, India and Korea, which reflects their increasing economic reliance on coal-fired electricity generation which can't be met by their domestic supplies. Clearly there is significant potential to increased thermal coal exports from Australia to support these rapidly growing Asian economies on the back of new projects through the development of new rail infrastructure capacity.

According to the ABARE, India is expected to show strong growth and investment in future coal export markets and likely to double its annual imports between 2009 and 2015. Despite it being the world's second largest coal producer with abundant coal reserves that are likely to further increase over this period, the economic growth of the nation and thirsty demand for thermal coal for electricity generation is predicted to be higher than its domestic production, leading to increases in the country's coal imports. Similarly, The Republic of Korea is also expected to show a steady demand for overseas thermal coal, estimated to increase at around 2% per year between 2010 and 2015. This is on top of the 11% growth it imported in 2009 (84 million tonnes).

In China, the rapidly growing economy calls for a swift increase in energy supply of which coal consumption accounts for approximately 70% of its primary energies. Although China is relatively abundant in coal reserves, these are located in the north, while demands are concentrated in the south. With generally high

Figure 4. Coal Imports by Major Importing Region, 1995-2030



Source: U.S. Energy Information Administration

Figure 5. Thermal Coal Outlook

	unit	2008	2009	2010 f	2011 f	2012 z	2013 z	2014 z	2015 z
World									
Coal trade	Mt	704.0	730.0	750.4	768.3	785.5	811.7	842.6	871.7
Imports									
Asia	Mt	388.0	434.6	445.0	459.3	472.6	493.4	521.4	544.1
China	Mt	35.4	84.0	85.0	87.0	89.0	92.0	95.0	100.0
Chinese Taipei	Mt	60.3	57.0	58.0	58.8	59.3	61.5	68.4	71.0
India	Mt	34.0	45.0	50.0	55.0	60.0	70.0	80.0	90.0
Japan	Mt	128.2	116.0	117.0	118.0	119.0	120.0	121.0	122.0
Korea, Rep. of	Mt	75.5	84.0	85.0	86.0	87.0	89.4	93.3	95.0
Malaysia	Mt	16.6	16.0	16.5	17.0	18.0	18.5	19.5	20.0
other Asia	Mt	37.9	32.6	33.5	37.4	40.3	42.1	44.1	46.1
Europe	Mt	222.5	212.7	219.2	220.0	220.8	222.0	220.9	221.9
European Union ^a	Mt	184.6	178.5	182.0	182.3	182.7	183.2	181.4	181.7
other Europe	Mt	37.9	34.2	37.2	37.6	38.2	38.8	39.4	40.2
Other	Mt	93.5	82.7	86.2	89.1	92.1	96.3	100.4	105.7
Exports									
Australia	Mt	126.4	138.6	146.0	150.0	160.0	176.0	185.0	207.5
China	Mt	42.7	21.5	20.0	19.0	18.0	17.0	16.0	15.0
Colombia	Mt	73.6	70.0	74.0	81.0	88.0	95.0	102.0	109.0
Indonesia	Mt	193.0	200.0	210.0	222.0	230.0	240.0	250.0	250.0
Russian Federation	Mt	85.8	90.0	92.0	94.0	96.0	98.0	100.0	102.0
South Africa	Mt	61.3	65.0	68.0	71.0	75.0	79.0	84.0	88.0
United States	Mt	35.1	20.0	22.0	24.2	26.6	29.3	32.2	35.4
Other	Mt	86.1	124.9	118.4	107.1	91.9	77.4	73.4	64.7
		2007	2008	2009	2010	2011	2012	2013	2014
		-08	-09	-10 f	-11 f	-12 z	-13 z	-14 z	-15 z
Australia									
Production	Mt	185.9	204.5	213.0	218.0	228.0	250.0	270.0	300.0
Exports									
Volume	Mt	115.1	136.4	140.7	148.5	155.0	170.0	180.0	200.0
Value									
– nominal	A\$m	8 365	17 885	11 138	12 790	12 927	14 296	15 276	17 132
– real ^b	A\$m	8 829	18 304	11 138	12 500	12 328	13 302	13 866	15 173

^a Regarded as 27 countries for all years. ^b In 2009-10 Australian dollars. ^f ABARE forecast. ^z ABARE projection.

Sources: International Energy Agency; Coal Services Pty Ltd; Queensland Department of Mines and Energy; ABARE.

Source: ABARE

transportation costs, forecast trends indicate that is more economical to source thermal coal from Australia and ship to Guangdong, than rely on domestic production and haulage from northern China.

In 2009, China became a net importer of thermal coal, with it importing an estimated 84 million tonnes of steaming coal, up by 137% from the previous year. The ABARE forecasts that this will further increase to 100 million tonnes by 2015, as domestic coal consumption continues to rise and exceeds domestic coal production, coupled with greater transportation and rail infrastructure costs and the increasing geographic distance between production and consumption centers in China. A further indication of China's future reliance on overseas thermal markets is its fall in coal exports between 2004 and 2009 of 73%.

ABARE forecasts a steady growth in thermal coal exported from Australia to be between 6 to 9 % per annum, up to 200 Mtpa, by 2014-15 (**Figure 6**). With the Galilee Basin having high quality thermal coal, with favorable geological conditions conducive to excellent mining efficiency and low mining costs, it provides it with a sharp competitive edge and strong market potential. This is underpinned by China's investment into the Waratah Coal project, with Metallurgical Corporation of China (MCC) long term purchase and sale agreement for the supply of 40 Mtpa of thermal coal over 25 years. For Queensland this represents an excellent opportunity to expand its global market for thermal coal through the rapid development of the Galilee Basin and associated infrastructure.

Figure 6. Australia's Thermal Coal Export Forecast

1.8 PROJECT COSTS AND BENEFITS

It is estimated that the construction of the project will require an investment of A\$8.1 billion consisting of:

- port and onshore infrastructure – A\$2 billion;
- railway – A\$2.1 billion; and
- mine – A\$4.0 billion.

The project will realise significant economic and social benefits on a regional, state and national scale. The rail corridor will open a new multi-billion tonne coal province with opportunities for thermal coal export to world markets for both Waratah, as well as other Galilee Basin proponents through welcomed third party access arrangements. It will also provide much needed new rail infrastructure in Central Queensland to ease existing congestion on the current coal haulage systems.

The project will generate considerable export income for the Australian economy with revenue of \$4 billion per annum, or \$85 billion over the life of the project. Commonwealth and State Government revenue will also be increased through taxes and royalties of up \$360 mpa (State) and \$700 mpa (Commonwealth) respectively from the project alone.

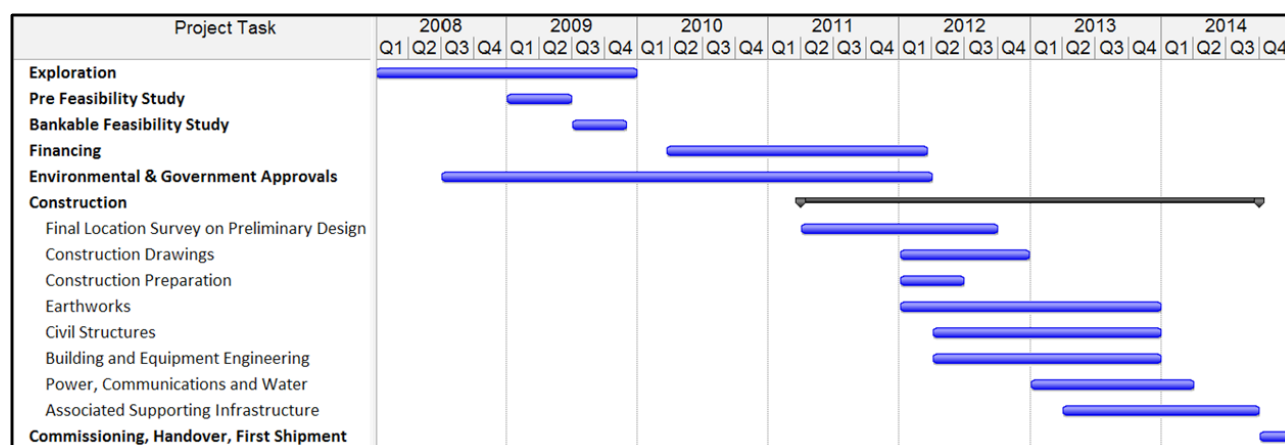
The project will assist in driving the growth of Central and North West Queensland, creating approximately 3,500 direct jobs during construction and a proposed workforce of 2,360 permanent employees / contractors

for the long term operation of the mine, rail and port facilities. This will comprise 1,900 workers at the mine site of which 1,872 will be FIFO, and 28 will be housed in Alpha. The remaining 460 workers will be required for the rail (275) and the port operations (185). A flow through benefit of an additional 70,000 indirect jobs is anticipated, with the majority of these expected to occur in Queensland.

The project will generate additional expenditure to the regional economy as local suppliers, service providers and contractors participate in the project. The project will assist in the progress of the general regional development of both the Northern Economic Triangle and Central Queensland. There exists an opportunity for a fibre optic cable used for the railway communications systems to provide a platform to enhance broadband capacity of the region, as well as provisions for new water and power infrastructure servicing this remote area.

1.9 PROJECT TIMEFRAME

The project is committed to commence early engineering works in late 2011 with final construction due for completion Q4 2014, as illustrated in **Figure 7**. This schedule is based on a high level assessment of the time required for the design, supply and construction of the various project elements following a conventional contracting strategy.

Figure 7. Project development schedule

Each of the open pits is planned to have a construction scale of 10 Mtpa and construction period of 18 months, including 2 months for pilot production, commencing Q2 2013 and ready for production by Q4 2014. The construction period for underground mines will be 24 months. Projected timeframes for construction of underground mines 1 to 4 will commence during Q3 2012 to Q3 2014 and Q4 2012 to Q4 2014, respectively.

Construction of Coal Handling and Preparation Plant (CHPP) A will be started in Q1 2013 and commissioned in Q3 2014, while CHPP B will be started in Q2 2013 and put into production Q4 2014.

The railway is expected to have the longest construction period, estimated to take the full 36 months. The coal terminal will take 30 months to complete, starting early 2012 and synchronously completed with the railway by Q4 2014. All supporting infrastructure for the project is expected to take up to 24 months.

On this basis, the implementation schedule demonstrates that the project could be commissioned and ready to start production within approximately 36 months, from project sanction and formal go ahead that is assumed to occur in Q4 2014. By 2015 it's estimated that the raw coal volume will reach up to nine Mtpa and commercial coal of 5.5 Mtpa and by 2017, the raw coal volume will reach 56 Mtpa and export coal of 40 Mtpa, the design production capacity.

1.10 RELATIONSHIP TO OTHER PROJECTS

A number of projects are proposed in proximity to the project. These projects are in various stages of approval and / or development. Where information is available and the projects could potentially contribute to cumulative impacts they have been detailed below.

These projects have also been considered in the cumulative impacts assessment section of the EIS (refer Volume 1, Chapter 5).

1.11 THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

1.11.1 EIS OBJECTIVES

The objective of an EIS is to ensure that all potential environmental, social and economic impacts of a project are identified and assessed. An EIS will, where possible, state how any adverse impacts should be avoided or mitigated. The EIS also determines where project impacts cannot be avoided or mitigated, and establishes proposed offsets in accordance with relevant policies. The EIS assesses direct, indirect and cumulative impacts based on sound environmental protection and management criteria.

The EIS is a self-contained and comprehensive document that provides sufficient information on the potential impacts of the project and the management measures employed to avoid, mitigate and / or offset adverse impacts. The EIS document provides information for the following persons and groups (stakeholders):

- *for interested bodies and persons:* a basis for understanding the project, prudent and feasible alternatives, affected environmental values, impacts that may occur, and the measures to be taken to mitigate all adverse impacts;
- *for groups or persons with rights or interests in land as defined under section 38 of the Environmental Protection Act 1994 (EP Act):* an outline of the effects of the proposed project on that land including access arrangements;

- *for government agencies and referral bodies:* a framework for decision-makers to assess the environmental aspects of the project with respect to legislative and policy provisions, and based on that information, to make an informed decision on whether the project should proceed, and if so, subject to what conditions, if any; and
- *the proponent:* a mechanism by which the potential environmental impacts of the project are identified and understood, including information to support the development of management measures, such as an Environmental Management Plan (EMP), to mitigate the effects of adverse environmental impacts of the development.

Waratah Coal is required to address the Terms of Reference (ToR) to the satisfaction of the; Commonwealth Minister for Environment, Heritage and the Arts (through the previous Department of Environment, Water, Heritage and the Arts (DEWHA), now the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC)); and Queensland Coordinator-General before the EIS is made publicly available. Evaluation of the EIS is not undertaken until public notification is completed and all relevant material, including additional information or comments about the EIS and the Project are available.

1.11.2 EIS PURPOSE

The purpose of the EIS is to provide information on the nature and extent of potential direct and indirect environmental, social and economic impacts associated with the construction and operation of the project. Specifically, the EIS provides:

- an understanding the project, the existing environment affected by the project, the potential impacts of the project and measures to be undertaken to mitigate adverse impacts;
- an outline of the impacts on the surrounding area in terms of community interests, infrastructure and land use;
- a framework for decision-makers to consider the environmental aspects of the project in view of legislative and policy provisions to determine whether the project can proceed and the relevant conditions for approval to ensure environmental compliance and recommended environmental management and monitoring programs based on legislative requirements;
- a source of information from which interested parties may gain an understanding of the project, the need and benefits, alternatives, the affected environment, potential impacts and measures to minimise these impacts; and
- a document for public consultation and informed consent on the project.

Through this EIS, Waratah is seeking approval for the following components of the project:

- a new operational coal mine producing 56 Mtpa;
- a new standard gauge heavy haul rail line linking the mine to new coal stockyards in the APSDA.

In addition Waratah propose to utilise the future coal stockpiling and port loading facilities to be developed by North Queensland Bulk Ports Corporation (NQBP) within planned infrastructure at the APSDA and the Port of Abbot Point:

- one tranche for coal stockpiling at the proposed T4-7 within the APSDA
- a new overland conveyor system within the Multi-User Corridor (MUC) linking the T4-7 in the APSDA to the MCF at the Port of Abbot Point.
- use of two berths within the MCF.

The T4-T7 project is yet to undergo a formal environmental assessment process; which will be overseen by NQBP. This process will be commenced when preferred respondents and design parameters are finalised - expected to commence in early 2012. It is anticipated that once NQBP has completed their assessments, Waratah Coal may need to undertake additional approvals processes and/or accept resultant conditions of operations from NQPBs via lease requirements and a framework agreement. In addition, the MCF EIS does not include undertaking the following activities and development of the following structures:

- Wharf structures;
- Ship loading and unloading infrastructure and associated facilities of private port users as well as operation of these facilities; and
- Conveyors, pipelines etc. servicing the MCF

It is anticipated that once NQBP has received their approval, Waratah Coal will need to undertake additional approvals processes to facilitate the above activities and development.

Approval is also being sought for the supporting activities and infrastructure for each of the above components.

1.11.3 EIS PROCESS

On 28 November 2008, the project was declared to be a 'significant project for which an EIS is required' under s26 of *State Development and Public Works Organisation Act 1971* (SDPWO Act) by the Queensland Coordinator General. This declaration initiated the statutory EIS procedure under Part 4 of SDPWO Act, administered by the Department of Employment Economic Development and Innovation (DEEDI) on behalf of the Coordinator-General. The following matters contributed to the declaration by the Coordinator-General:

- an estimated construction expenditure of A\$5.3 billion;
- the creation of approximately 2,200 construction jobs and 760 permanent jobs;
- the establishment of new rail infrastructure from the Galilee Basin to the APSDA to support the commencement of coal export from the Galilee Basin tenements; and
- a significant boost to the Queensland economy.

The estimated construction costs and employment figures included in the Initial Advice Statement (IAS) were later revised to a construction expenditure of A\$8.3 billion and construction and permanent workforces of approximately 3,500 and 2,360 respectively.

On 11 February 2009 Waratah Coal referred the project to the Commonwealth Minister for the Environment, Heritage and the Arts for a decision as to whether the project constituted a 'controlled action' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) - Referral No. 2009/4737.

On 20 March 2009 the Minister declared that the project was a 'controlled action' as it has potential to have or was likely to have a significant impact on Matters of National Environmental Significance (MNES). The controlling provisions were determined as:

- ss 12 and 15A (world heritage properties);
- ss 15B and 15C (national heritage places);
- ss 18 and 18A (listed threatened species and communities);
- ss20 and 20A (listed migratory species); and
- ss 23 and 24A (Commonwealth marine areas).

The Minister further determined that environmental assessment of MNES was to be undertaken in accordance with Part 8 of the EPBC Act to be administered by the DSEWPC.

Following consultation between Department of Sustainability, Environment, Water, Population Communities (DSEWPC) and the office of the Coordinator General, it was agreed that the EIS (under the EPBC Act and SDPWO Act) would be undertaken as a parallel process including a single ToR and one EIS study and report that would satisfy the requirements of both jurisdictions. Relevant Commonwealth and Queensland Departments and Local Government were invited to participate in the EIS process as advisory agencies.

A draft ToR was prepared and released for public and advisory agency comment on 1 June 2009. The comment period ran for 28 days (20 business days) consistent with the legislation and closed on 29 June 2009. The draft ToR was finalised with the office of the Coordinator General having regard to comments and submissions received. The final version of the ToR was issued in August 2009.

This EIS has been prepared in accordance with **Volume 5, Appendix 1** of the ToR for this project.

A public notice will be placed in relevant newspapers advising where copies of the EIS can be viewed and/or purchased. The advertisement will also provide advice about the submission process; including details of the submission period and where submissions could be lodged. At the completion of the submission period, all responses will be considered and DEEDI may require Waratah Coal to prepare supplementary documents to address comments submitted by advisory agencies and members of the public.

At the conclusion of the EIS phase, DSEWPC will prepare a decision brief for the Commonwealth Minister for the Environment, Heritage and the Arts, evaluating MNES addressed in the EIS. This draft of the proposed decision will be provided to Commonwealth and Queensland ministers who are invited to provide comment at the project referral stage within 10 business days.

The final decision of the Commonwealth Minister will be publicly notified on the DSEWPC website at: <http://www.environment.gov.au/epbc/>.

After completion of the EIS phase, the Coordinator-General will prepare a report evaluating the EIS covering Queensland issues, pursuant to s35 of SDPWO Act. The Coordinator-General's report will include an assessment, any associated mitigation measures and conclusions relating to environmental effects of the project. Material that will be assessed includes: the EIS, properly made submissions and other submissions accepted by the Coordinator-General. Any other material the Coordinator-General believes to be relevant to the project such as a supplementary report, comments and advice from advisory agencies and other entities, technical reports and legal advice; will all also be assessed.

The Coordinator-General's report will be publicly notified by placing it on the website of the office of the Coordinator-General. This site can be accessed at <http://www.dip.qld.gov.au/projects/mining-and-mineral-processing/coal/galilee-coal-project-northern-export-facility.html>. The Coordinator-General's report will also be presented to the assessment manager/s (under the *Sustainable Planning Act 2009* (SP Act)), the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (under the EPBC Act), the Queensland Minister for Climate Change and

Sustainability (under the EP Act) and the Queensland Minister Natural Resources, Mines and Energy (under the *Mineral Resources Act 1989* (MR Act)).

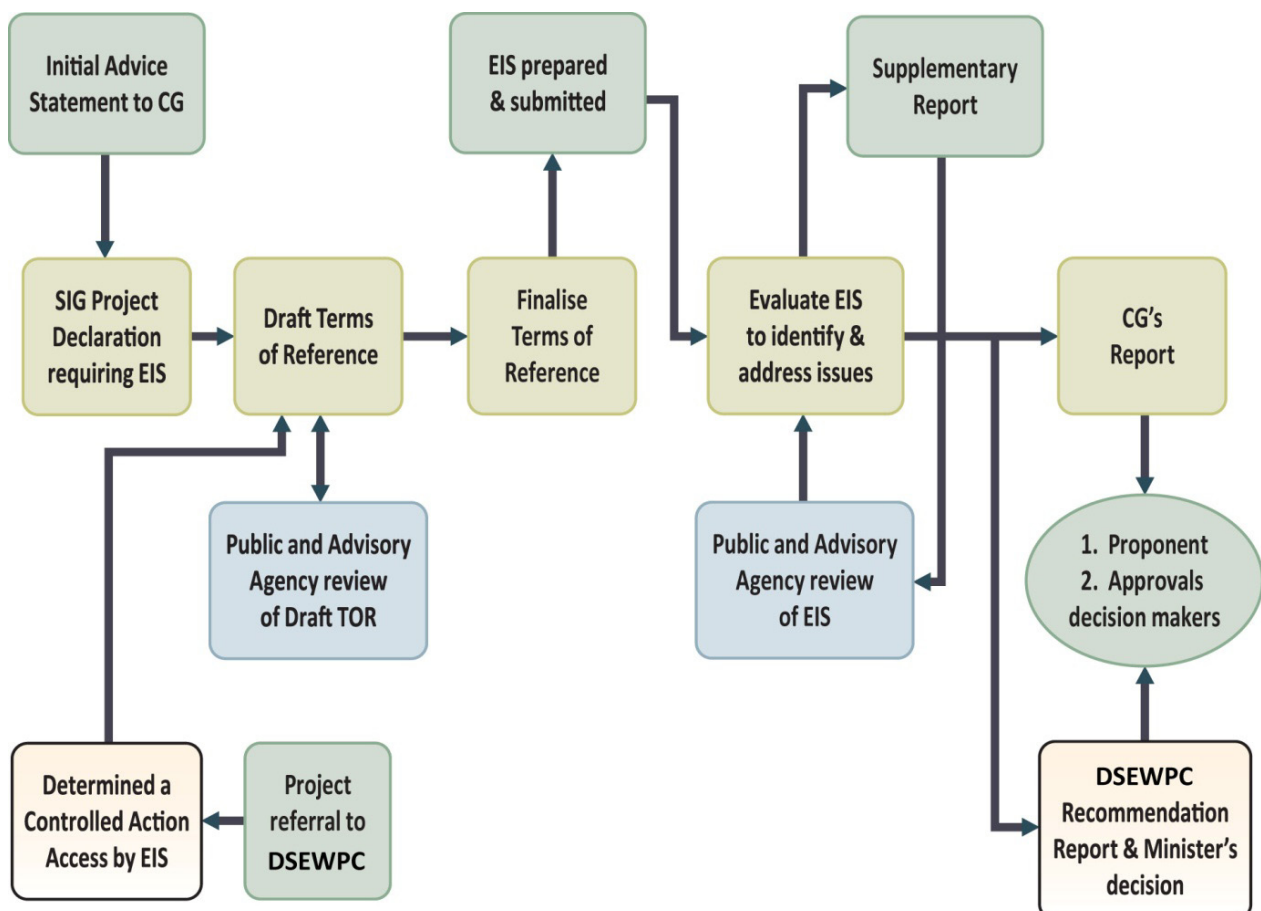
The Coordinator-General's report may make conditions for:

- proposed mining lease(s) under the MR Act;
- any draft environmental authority under the EP Act for the proposed environmental authority (mining activities); and
- a development approval under SP Act.

The Coordinator-General will assess and determine all applications for projects within the APSDA. The Abbot Point State Development Area (APSDA) is approximately 16,230 ha and provides for the establishment of industrial development, including infrastructure corridors and essential infrastructure. A Development Scheme has been prepared by the Coordinator-General to manage land use in the APSDA which was approved by the Governor-in-Council on 19 June 2008.

A copy of the flowchart showing the EIS process as agreed by the Commonwealth is shown in Figure 8.

Figure 8: EIS Assessment Process



1.12 EIS ASSESSMENT METHOD

The method used for the preparation of the EIS included three stages:

- the development of a detailed project description;
- undertaking detailed baseline studies to provide information on the existing environmental values; and
- undertaking detailed investigations of the interactions between the project and the receiving environment, and the development of appropriate management strategies to mitigate potential risks identified during the assessment.

1.12.1 PROJECT DESCRIPTION

A detailed description of the project is provided in **Volumes 2 to 4, Chapter 1**. The description comprises the three components, these being:

- mine and associated infrastructure;
- rail network and associated infrastructure; and
- coal stockpiling within the APSDA, conveyor to the Port of Abbot Point and the ship loading facilities at the MCF.

The description is based on the detailed engineering studies undertaken during the feasibility / preliminary design phase of the project. As the project design continues to be refined, there is the potential for some aspects of the project to be modified. Any further changes to the project design are unlikely to be significant deviations from the description used to inform this EIS.

1.12.2 BASELINE DATA COLLECTION AND ASSESSMENT

In order to establish the environmental values within the study area, Waratah undertook a detailed investigation of existing baseline data. Baseline data was initially collected from previous reports that were considered relevant. Where gaps in the data were identified, or no or little data existed, targeted data collection activities were undertaken to supplement the baseline understanding of the project area. On completion of the targeted survey activities, all data was collated and the environmental values of the study area were identified.

Targeted data collection was undertaken for the following environmental attributes:

- topography, geology and soils;
- terrestrial and aquatic flora and fauna;
- surface and groundwater;
- cultural heritage;
- land use (including visual amenity);
- noise, vibration and air quality; and
- social and economic.

The data used in the baseline assessment were current as of November 2010.

1.12.3 ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT

The Project has been considered in the context of the environmental values collected from the desktop review and data collection. Potential environmental impacts were determined for each phase of the Project (e.g. construction, operations and decommissioning). In assessing the potential impacts on the receiving environment, consideration was given to the requirements of current Commonwealth and Queensland legislation and regulation, together with compliance to relevant Guidelines, Standards and Planning Policies.

A risk assessment was undertaken to assess potential impacts against the receiving environment. In parallel, environmental objectives were identified in order to set the targets to be achieved so as there was compliance with legislative instruments. Impacts were assessed in a quantitative manner and appropriate mitigation measures were identified. The objective and targets were incorporated throughout the design stage of the project and have been used to influence and / or been incorporated into design considerations, construction procedures and the ongoing operations of the Project.

EMPs have been developed for each component of the project. The purpose of an EMP is to:

- identify priorities;
- set environmental management objectives and targets;
- define performance indicators;
- document strategies and time frames to achieve targets;

- allocate responsibilities and identify the necessary resources to ensure the EMP is implemented;
- embed a process to ensure continuous improvement within the EMP; and
- establish processes to monitor, evaluate, report progress, compliance with the EMP and relevant legislation.

1.13 EIS SUBMISSIONS

The EIS has been completed and released for public and advisory agency review. An advertisement has been placed National, Queensland and Regional newspapers advising of the display locations and submission particulars.

Further details regarding the procedure to submit a submission are available at the website of the Department of Local Government and Planning <http://www.dip.qld.gov.au/projects/mining-and-mineral-processing/coal/galilee-coal-project-northern-export-facility.html>. When making a submission, it is important to note that under s 34(3) of the SDPWO Act, the Coordinator-General may accept a submission that is not a ‘properly made submission’; however, this may not be appropriate for matters relating to approvals associated with SP Act. It is therefore recommended that all submissions conform to these requirements.

A ‘properly made submission’ must:

- be in writing and be received by the Coordinator-General on or before the last day of the submission period;
- be signed by all persons making the submission;
- state the name and address of each person making the submission; and
- state the grounds of the submission and facts and circumstances relied on.

Submissions should be sent to:

The Coordinator-General

*C/- EIS Project Manager – Galilee Coal Project
Northern Export Facility*

Significant Projects Coordination

Office of the Coordinator General

Department of Local Government and Planning

PO Box 15009

City East Qld 4002

The Coordinator-General considers all submissions to be public documents. Therefore all submissions will be provided to Waratah Coal for a response in the form of a Supplementary EIS or specific submission documents (e.g. letter format). Responses to submissions may identify additional environmental management measures to address specific issues. The Coordinator-General will consider the EIS findings, submissions and the responses to submissions as part of the Evaluation Report prepared for the Project. Conditions may be included in this Evaluation Report to address environmental issues raised during the EIS process.