



## Executive Summary

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This report provides the regulators, stakeholders and the community with the following information:

- ▶ how the Terms of Reference (ToR) for the Project Environmental Impact Statement (EIS) have been met by:
  - describing and listing all legislation, policies and plans relevant to the Project
  - identifying approvals which required for construction and operation of the Project
- ▶ above and beyond the requirements of the ToR, Adani Mining Pty Ltd (Adani) has provided an overview of environmental assessment processes applicable to the Project.

Adani's environmental approval requirements for the Project are broadly outlined below.

### Project-wide authorisations

- ▶ The Project is a controlled action for matters of national environmental significance (MNES) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). This EIS supports assessment of MNES for the Project.
- ▶ The Project has been declared a "significant project" by the Queensland Coordinator-General under the *State Development and Public Works Organisation Act 1971* (SDPWO Act) and this EIS responds to the ToR. The information presented in the EIS is designed to enable the Coordinator-General to make recommendations about the approvals required for the Project. The Coordinator-General may also have regard to other relevant information when making recommendations, including to submissions received about the EIS.
- ▶ Other project-wide requirements, such as agreements under Native Title legislation and quarrying assessment, are described in Section 2 of this report.
- ▶ This report also includes supporting information for temporary workforce accommodation applications in Appendix IV.

### Project (Mine)

- ▶ Mining lease applications under the *Mineral Resources Act 1989* over areas under exploration for coal, namely Exploration Permit for Coal (EPC) 1690 and the eastern portion of EPC 1080.
- ▶ An environmental authority (mining activities) under Chapter 5 of the *Environmental Protection Act 1994* (EP Act) with conditions for the carrying out of environmentally relevant activities.
- ▶ Applying for other permits individually, as triggered and listed in Sections 3 and 6 of this report.

### **Project (Rail)**

- Adani is in discussions with the Office of the Coordinator-General regarding a declaration of land relating to the Project (Rail) as a State Development Area (SDA) under the SDPWO Act. It is proposed the SDA include temporary construction camps to support the construction of the rail, and other facilities such as maintenance areas.
- Other required permits are listed in Sections 4 and 6 of this report.
- This report also includes supporting information for a number of vegetation clearing permits required for construction of the Project (Rail) under the *Nature Conservation Act 1992* in Appendix V.

### **Project (Offsite Infrastructure)**

- It is also proposed that an SDA include the Project (Offsite Infrastructure), such as incorporating a workers accommodation village, airport, industrial area and water supply infrastructure.
- Other required permits, such as licences for the taking of water under the *Water Act 2000*, are listed in Sections 4 and 6 of this report.

Approvals and planning assessment are described in terms of four Project components:

- project-wide authorisations – Section 2
- approvals for the Project (Mine) – Section 3
- approvals for the Project (Rail) – Section 4
- approvals for the Project (Offsite Infrastructure) – Section 5.

Adani has taken care to identify the relevant approvals for all components of the Project. This report intends to provide stakeholders and assessment managers with a clear understanding of Adani's approval requirements.

Adani is actively working to reduce the complexity and administrative burden associated with the large number of approvals required for the Project. Adani seeks that the Coordinator-General recommend the grant of each relevant approval, including those summarised in Section 6, and that appropriate conditions be recommended as part of the Coordinator-General's report.

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## Abbreviations and Glossary

Abbreviation	Meaning
ACH Act	<i>Aboriginal Cultural Heritage Act 2003</i>
Adani	Adani Mining Pty Ltd
ANZECC	Australian and New Zealand Environment Conservation Council Water Quality Guidelines
Building Act	<i>Building Act 1975</i>
CHMP	Cultural Heritage Management Plan
Cth	Commonwealth Government of Australia  Note – all legislation cited is from Queensland Government legislation, unless otherwise indicated
CG	Coordinator-General
DAFF	Department of Agriculture, Fisheries and Forestry
DEHP	Department of Environment and Heritage Protection
EA	Environmental Authority under the <i>Environmental Protection Act 1994</i>
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP Act	<i>Environmental Protection Act 1994</i>
EP Regulation	<i>Environmental Protection Regulation 2008</i>
EPC	Exploration Permit for Coal under the <i>Mineral Resources Act 1989</i>
EPP	Environmental Protection Policies
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
ERA	Environmentally Relevant Activity under the <i>Environmental Protection Act 1994</i>
Fisheries Act	<i>Fisheries Act 1994</i>
IDAS	Integrated Development Assessment System under the <i>Sustainable Planning Act 2009</i>
ILUA	Indigenous Land Use Agreement
LG Act	<i>Local Government Act 1999</i>

Abbreviation	Meaning
NC Act	<i>Nature Conservation Act 1992</i>
LP Act	<i>Land Protection (Pest and Stock Route Management) Act 2002</i>
MCU	Material change of use, as defined in the <i>Sustainable Planning Act 2009</i>
MR Act	<i>Mineral Resources Act 1989</i>
ML	Mining Lease under the <i>Mineral Resources Act 1989</i>
MLA	Mining Lease Application under the <i>Mineral Resources Act 1989</i>
MNES	Matters of national environmental significance under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
km	kilometres
KRA	Key Resource Area under the <i>Mineral Resources Act 1989</i>
kV	kilovolts
MW	Megawatts
Qld	Queensland
P&D Act	<i>Plumbing and Drainage Act 2004</i>
the Project	Carmichael Coal Mine and Rail Project
the Project (Mine)	A greenfield coal mine over EPC1690 and the eastern portion of EPC1080, which includes both open cut and underground mining, on mine infrastructure and associated mine processing facilities (the Mine) and the Project (Offsite Infrastructure).
the Project (Offsite Infrastructure)	Project (Mine) Offsite Infrastructure includes: <ul style="list-style-type: none"> <li>workers accommodation village and associated facilities</li> <li>permanent airport site</li> <li>water supply infrastructure.</li> </ul>
the Project (Rail)	A greenfield rail line connecting the Project (Mine) to the existing Goonyella rail system to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and/or the Port of Abbot Point, including: <ul style="list-style-type: none"> <li>Rail (west): 120 km dual gauge portion from the Mine site running west to east to Diamond Creek</li> <li>Rail (east): 69 km narrow gauge portion running east from Diamond Creek connecting to the Goonyella rail system south of Moranbah.</li> </ul>

Abbreviation	Meaning
SCL	Strategic Cropping Land under the <i>Strategic Cropping Land Act 2011</i>
SCL Act	<i>Strategic Cropping Land Act 2011</i>
SCR	State Controlled Roads under the <i>Transport Infrastructure Act 1994</i>
SDA	State Development Area under the <i>State Development and Public Works Organisation Act 1971</i>
SDPWO Act	<i>State Development and Public Works Organisation Act 1971</i>
SEIS	Supplementary Environmental Impact Statement
SEWPaC	Department of Sustainability, Environment, Water, Population and Communities (Cth)
SP Act	<i>Sustainable Planning Act 2009</i>
SP Regulation	<i>Sustainable Planning Regulation 2009</i>
ToR	Terms of Reference
VM Act	<i>Vegetation Management Act 1999</i>
Water Act	<i>Water Act 2000</i>
WRP	Water Resource Plan under the <i>Water Act 2000</i>
WSSR Act	<i>Water Supply (Safety and Reliability) Act 2008</i>



## 1 Introduction

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### 1.1 Description of Project

Adani Mining Pty Ltd (Adani) is proposing to develop a 60 million tonne (product) per annum (Mtpa) thermal coal mine in the north Galilee Basin approximately 160 kilometres (km) north-west of the town of Clermont, Central Queensland. All coal will be railed via a line connecting to existing QR National rail infrastructure, and shipped through coal terminal facilities at the Port of Abbot Point and / or the Port of Hay Point (Dudgeon Point expansion). The Carmichael Coal Mine and Rail Project (the Project) will have an operating life of approximately 90 years.

The Project is comprised of the following major components:

- ▶ The Project (Mine): a greenfield coal mine over EPC1690 and the eastern portion of EPC1080, which includes both open cut and underground mining, on mine infrastructure and associated mine processing facilities (the Mine) and the Project (Mine) Offsite Infrastructure including:
  - a workers accommodation village and associated facilities
  - a permanent airport site
  - water supply infrastructure.
- ▶ The Project (Rail): a greenfield rail line connecting the Mine to the existing Goonyella rail system to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and/or the Port of Abbot Point, including:
  - Rail (west): a 120 km dual gauge portion from the Mine site running west to east to Diamond Creek
  - Rail (east): a 69 km narrow gauge portion running east from Diamond Creek connecting to the Goonyella rail system south of Moranbah.

Detailed descriptions of the Project are provided in Volume 2, Section 2, Description of the Project (Mine) and Volume 3, Section 2, Description of the Project (Rail).

### 1.2 Significant Project Environmental Impact Assessment

On 26 November 2010, the Project was gazetted as a "significant project" for which an EIS is required under Section 26 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The EIS has been prepared to respond to the Terms of Reference (ToR) issued by the Coordinator-General. The following steps in the environmental coordination process remain to be completed:

- ▶ this EIS is available for public comment. Submissions may be made by the public to the Coordinator-General during the submission period. This will also include submissions from Queensland Government departments and local governments with an interest in the Project and approvals
- ▶ the Coordinator-General must then consider the EIS, all properly made submissions and any other material deemed relevant to the Project
- ▶ the Coordinator-General may request further information or responses to comments from Adani under Section 35(2) of the SDPWO Act

- ▶ the Coordinator-General will evaluate the EIS, submissions on the EIS, any other relevant information and prepare a report which makes recommendations in relation to approvals required for the Project. Under the SDPWO Act, the Coordinator-General's report may include:
  - recommendations that approvals under Queensland legislation be granted or refused
  - if the Coordinator-General recommends approvals be granted, the Coordinator-General may also list conditions that must be imposed
  - any additional conditions that the Coordinator-General considers relevant.

### 1.3 Purpose of this report

The ToR requires the EIS to describe and list all legislation, policies and plans relevant to the Project, and identify approvals, licences, permits and other authorisations required for construction and operation of the Project. See Appendix I for a table describing how the ToR have been met.

This report was prepared on the basis of a review of legislation, including supporting plans and policies, and the identification of triggers for approvals for the Project.

Approvals and planning assessment are described in terms of four Project components:

- ▶ project-wide authorisations – Section 2
- ▶ approvals for the Project (Mine) – Section 3
- ▶ approvals for the Project (Rail) – Section 4
- ▶ the Project (Offsite Infrastructure) approvals – Section 5.

Adani has taken care to identify the relevant approvals for all components of the Project. This report intends to provide stakeholders and assessment managers with a clear understanding of Adani's approval requirements.

Adani is actively working to reduce the complexity and administrative burden associated with the large number of approvals required for the Project. Adani seeks that the Coordinator-General recommend the grant of each relevant approval, including those summarised in Section 6, and that appropriate conditions be recommended as part of the Coordinator-General's report.

## 2 Project-wide authorisations

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This Section describes legislation and approvals governing the Project as a whole, which are:

- ▶ approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) for the taking of a controlled action
- ▶ complying with the *Native Title Act 1993* (Cth)
- ▶ negotiating and implementing Cultural Heritage Management Plans (CHMPs) under the *Aboriginal Cultural Heritage Act 2003*
- ▶ environmental coordination of a “significant project” and State Development Areas (SDA) under the SDPWO Act for the Project
- ▶ complying with the general environmental duty and approvals for the Project as a whole under the *Environmental Protection Act 1994* (EP Act).

This Section also outlines the *Water Act 2000* (Water Act), workforce accommodation and quarrying assessment and approvals, as these are required Project wide.

Sections 3 to 5 also detail assessment and approvals for particular components of the Project and how some of the legislation described broadly in this Section is triggered specifically.

### 2.1 Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The EPBC Act is the principal piece of Commonwealth environmental protection legislation. The EPBC Act provides that an action that has, or is likely to have, a significant impact on defined MNES is a controlled action.

A person must not carry out a controlled action without approval from the Commonwealth Minister for the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC).

The Project was declared a controlled action on 6 January 2011 with the following matters determined to be controlling provisions under the EPBC Act:

- ▶ World Heritage properties (Sections 12 and 15A)
- ▶ National Heritage places (Section 15B and 15C)
- ▶ Ramsar Wetlands (Sections 16 and 17B)
- ▶ listed Threatened Species and Communities (Sections 18 and 18A)
- ▶ listed Migratory Species (Sections 20 and 20A)
- ▶ Great Barrier Reef Marine Park (Sections 24B and 24C).

Under the EPBC Act, where actions require assessment under State approval processes, and where the State approval process is accredited by the Commonwealth Government, a single assessment process may be used for both Commonwealth and State approvals.

The Commonwealth Government has accredited the EIS process, administered by the Coordinator-General under the SDPWO Act and a bilateral agreement is in place relating to EIS coordination between the Commonwealth and Queensland Governments. This EIS is designed to meet the impact assessment requirements under both Commonwealth and Queensland legislation.

### **2.1.1 Relevance of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) to the Project**

The Project will require approval for the taking of a controlled action from SEWPaC under Part 9 of the EPBC Act before it can proceed. See also Volume 1, Section 11 for more information about MNES and the controlled action.

## **2.2 Native Title Act 1993 (Cth)**

Under Section 3 of the *Native Title Act 1993* (Cth), the main objectives of the legislation are to:

- ▶ provide for the recognition and protection of Native Title
- ▶ establish ways in which future dealings affecting Native Title may proceed and to set standards for those dealings
- ▶ establish a mechanism for determining claims to Native Title
- ▶ provide for, or permit, the validation of past acts, and intermediate period acts, invalidated because of the existence of Native Title.

Native Title is the recognition by Australian law that some Indigenous people have rights and interests in their land that come from their traditional laws and customs. Native title rights may include the right of Indigenous people to:

- ▶ live on the area
- ▶ access the area for traditional purposes including camping or ceremonial activities
- ▶ visit and protect important places and sites
- ▶ hunt, fish and gather food or traditional resources including water, wood and ochre
- ▶ teach law and custom on country (National Native Title Tribunal, 2011).

### 2.2.1 Relevance of the Native Title Act 1993 (Cth) to the Project

The land in the Project area is within the Native Title claim areas of the following peoples:

- ▶ the Project (Mine) and western-most 17 km of the Project (Rail) are located within the area of the Wangan and Jagalingou People registered Native Title claim (QUD85/04, QC04/6)
- ▶ approximately 145 km of the Project (Rail) is located within the area of the Jangga People determined Native Title claim (QUD6230/98, QC98/10)
- ▶ approximately 17 km of the Project (Rail) is located within the area of the formerly registered Native Title claim Barada Barna Kabalbara and Yetimarla People #4 (BBKY #4) (QUD6023/01, QC01/25)
- ▶ approximately 3 km of the Project (Rail) is located within the area of the Barada Barna People registered Native Title claim (QUD380/08, QC08/11).

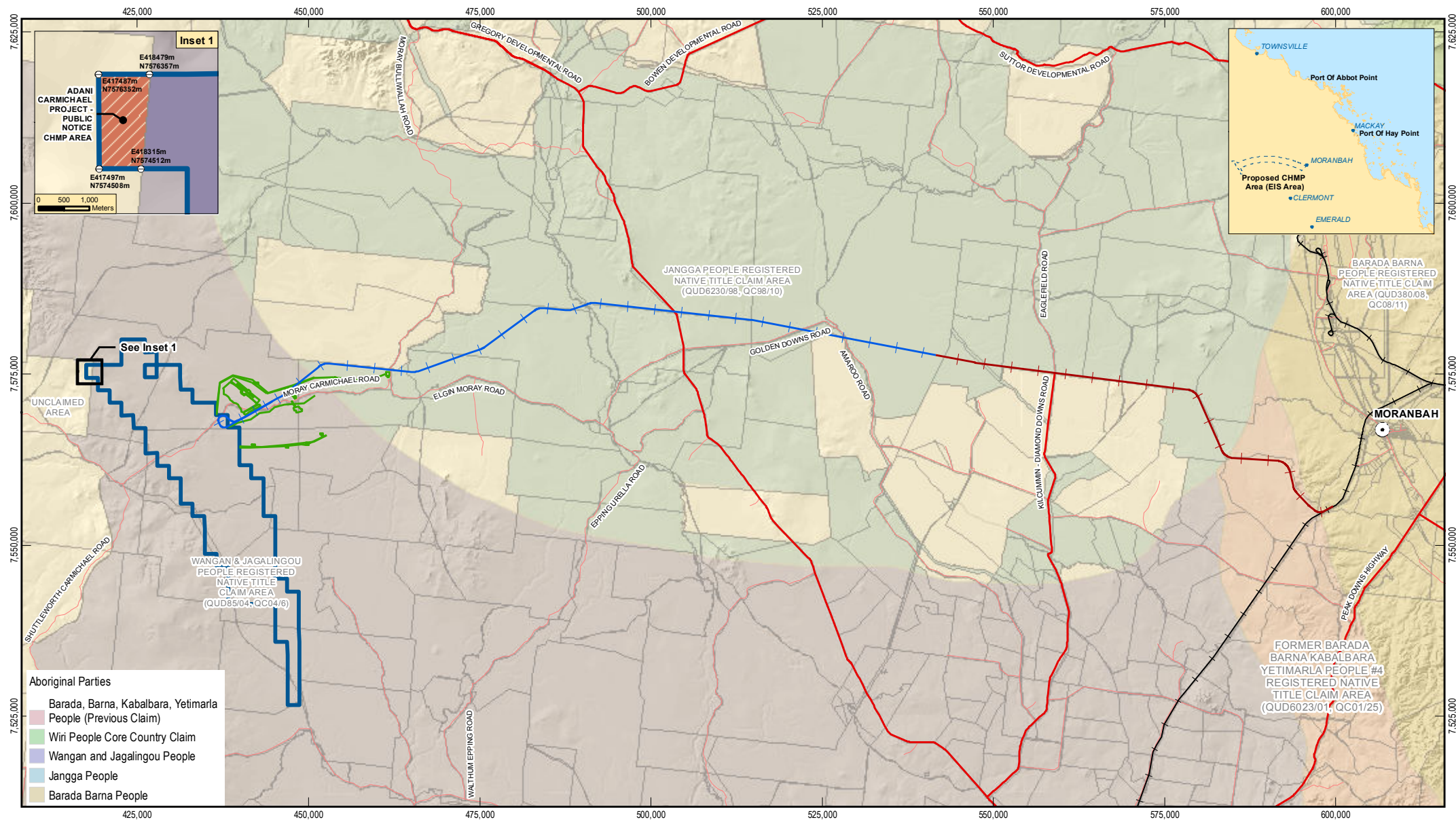
As the *Native Title Act 1993* (Cth) is under the jurisdiction of the Commonwealth Government, actions under this Act do not require Queensland Government approval. However, works on a Mining Lease (ML) cannot commence without following the procedures provided for under the *Native Title Act 1993*.

Adani has been negotiating an Indigenous Land Use Agreement (ILUA) with the Wangan and Jagalingou People for the relevant areas located within the Claim area and the ILUA is scheduled to be authorised by the Wangan and Jagalingou People by early 2013.

Adani is well progressed with its negotiations of an ILUA with the Jangga People. If the ILUAs are not in place at the time of assessment, Native Title notification will be required with the relevant Native Title parties, under the relevant legislation.

A map of Aboriginal Party Interest Areas is included in the Figure 1. Further information about indigenous cultural heritage is included in Volume 1, Section 5 (Indigenous and non-Indigenous Cultural Heritage).





1:750,000 (at A4)  
0 5 10 15 20 25  
Kilometres  
Map Projection: Universal Transverse Mercator  
Horizontal Datum: Geocentric Datum of Australia (GDA)  
Grid: Map Grid of Australia 1994, Zone 55



#### LEGEND

- Town
- Other Rail Network
- Mine (Onsite)
- Rail (West)
- State Road
- Cadastral Parcel
- Mine (Offsite)
- Rail (East)
- Local Road



**Adani Mining Pty Ltd**  
Carmichael Coal Mine and Rail Project

Job Number 41-25215  
Revision C  
Date 06-12-2012

#### Aboriginal Party Interest Areas

Figure 1

G:\41\25215\GIS\Maps\MXD\100\_Planning\41-25215\_107\_rev\_c.mxd

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Data source: DERM: DEM (2006), DOD (2010), DME: EPC1690 (2010), EPC1690 (2011); © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads (2007), Register of Native Title Claims (2011);

GHD: Barada Barna Kabalbara Yetimarla People (2011); Adani: Alignment Op9 Rev3 (2012); Gassman/Hyder: Mine (Offsite) (2012). Created by: BW.MS

Based on or contains data provided by the State of QLD (DERM) [2010]. In consideration of the State permitting use of this data you acknowledge and agree that the State 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 any use of the data. Data must not be used for marketing or be used in breach of the privacy laws.

## 2.3 Aboriginal Cultural Heritage Act 2003

The main purpose of the *Aboriginal Cultural Heritage Act 2003* (ACH Act) is to provide for effective recognition, protection and conservation of Aboriginal cultural heritage (Section 5). A person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage (the “cultural heritage duty of care”) (Section 23 (1)).

For projects requiring an EIS, it is mandatory to prepare a Cultural Heritage Management Plan (CHMP).

### 2.3.1 Relevance of the Aboriginal Cultural Heritage Act 2003 to the Project

Adani has been in close consultation with the Aboriginal parties for each part of the Project area and has signed CHMPs with all four relevant aboriginal parties which are the:

- ▶ Wangan and Jagalingou People registered Native Title claim (QUD85/04, QC04/6)
- ▶ Jangga People determined Native Title claim (QUD6230/98, QC98/10)
- ▶ Barada Barna Kabalbara and Yetimarla People #4 (BBKY #4) (QUD6023/01, QC01/25)
- ▶ Barada Barna People registered Native Title claim (QUD380/08, QC08/11).

All four CHMPs have been approved by the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs. Activities on a mining lease cannot commence until the last CHMP is approved by the Department of Environment and Heritage (DEHP). Activities must comply with the CHMPs.

Note - the *Torres Strait Islander Cultural Heritage Act 2003* is not triggered by the Project. An outline of the *Torres Strait Islander Cultural Heritage Act 2003* is located in Appendix II.

## 2.4 State Development and Public Works Organisation Act 1971

### 2.4.1 Significant Project and EIS Coordination

The SDPWO Act provides for State planning and development through a coordinated system of public works organisation and also provides for coordinated environmental assessment that benefits the State.

Under the SDPWO Act, declaration as a “significant project” provides for the coordinated assessment of the Project by the Coordinator-General.

Section 37 of the SDPWO Act specifically states that an EIS such as this one can be “taken as fulfilling requirements under the information and referral stage and notification stage of IDAS” (Integrated Development Assessment System) for relevant approvals under the *Sustainable Planning Act 2009* (SP Act).

The provisions and purpose are described in the Explanatory Notes to the *State Development and Public Works Organisation Amendment Bill 1999*. The SDPWO Act provides for “instances where the Coordinator-General may become the assessment manager (such as, potentially, within State development areas declared under the SDPWOA)”.

The Coordinator-General can also make recommendations about projects that “involve an application made for a mining lease under the *Mineral Resources Act 1989* which has been declared a significant project by the Coordinator-General”, such as the Project (Mine). The Explanatory Notes state that the purpose of the provision is to “avoid duplication of process and delay”. Similarly, the Coordinator-General’s report will make recommendations about the ML and Environmental Authority (EA) under the EP Act which are required for the Project.

According to the Explanatory Notes, the Coordinator-General’s report on the EIS can “provide the whole-of-government response to a mining lease application” and the “EIS will be subject to public consultation as would be required under the MRA”, meaning the *Mineral Resources Act 1989* (MR Act).

Section 50 of the SDPWO Act also applies to a project that requires a decision under legislation **other** than the SP Act or the EP Act. The legislation provides for circumstances where the EIS can satisfy “the requirement of the other Act”. The Coordinator-General may then set conditions that must be attached to any approval under the other Act.

#### *Relevance of Significant Project and EIS Coordination to the Project*

This report identifies where relevant information to assist the Coordinator-General in making these recommendations can be found in this EIS. As set out in more detail in this report, recommendations are sought in relation to:

- development approvals under the SP Act
- ML under the MR Act
- approvals under the EP Act for mining and other environmentally relevant activities
- any other approvals, such as:
  - permits under the Water Act
  - vegetation clearing under the *Vegetation Management Act 1999* (VM Act)
  - permits, approvals or leases under other legislation such as the *Fisheries Act 1994* (Fisheries Act), *Forestry Act 1959* (Forestry Act) and the *Nature Conservation Act 1992* (NC Act).

To streamline legislative approval processes, Adani seeks that the Coordinator-General recommend the grant of each of the relevant approvals summarised in Sections 6.1 to 6.3, together with any other approvals and conditions the Coordinator-General identifies as being required for the Project.

#### **2.4.2 State Development Areas**

The SDPWO Act also provides for the Coordinator-General to declare an area to be an SDA. Where an SDA is declared, the Coordinator-General prepares a development scheme for the SDA dealing with lawful future uses of the land within the SDA, and takes on an assessment role in development applications in the area.



### ***Relevance of State Development Areas to the Project***

Adani is in discussions with the Office of the Coordinator-General about the declaration of the area of land relating to the Project (Rail) and the Project (Offsite Infrastructure) as an SDA.

## **2.5 Environmental Protection Act 1994**

The object of the EP Act is to “protect Queensland’s environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development)”.

The EP Act is based on an obligation for persons, including Adani, to comply with the “general environmental duty” under Section 319. The general environmental duty means that a person cannot “carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm”.

Environmental harm is defined in Section 14 as “any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance”.

Under the EP Act, assessment and approval is required for:

- ▶ mining activities
- ▶ petroleum, greenhouse gas storage and geothermal energy production activities
- ▶ activities that may cause actual or potential environmental harm via the generation of emissions or otherwise through carrying out the activity (environmentally relevant activities)
- ▶ movement of soil from land on the Contaminated Land Register to another parcel of land.

Chapter 2 of the EP Act identifies Environmental Protection Policies (EPPs) which have been created for the purposes of protecting and enhancing environmental values. The EPPs have been reviewed and outcomes are outlined in Appendix II. The EP Act is administered by the DEHP.

### **2.5.1 Relevance of the Environmental Protection Act 1994 to the Project**

Adani will comply with the general environmental duty and approvals for the Project as a whole and implemented through the Environmental Management Plans (EMPs) and supporting systems. For more detail about the EMPs, see Volume 2, Section 13 (Mine), and Section 14 (Offsite) and Volume 3, Section 13 (Rail).

Specific approvals and assessment under the EP Act applicable to the Project are outlined in Sections 3, 4 and 5.

## 2.6 Sustainable Planning Act 2009

The aim of the SP Act is to achieve sustainable planning outcomes through:

- managing the process by which development takes place
- managing the effects of development on the environment
- continuing the coordination and integration of local, regional and state planning (DLGP 2011).

The SP Act provides the legislative framework for development assessment, through the Integrated Development Assessment System (IDAS) and the assessment of applications triggered under a number of other Acts, including the VM Act and the Water Act. The Project as a whole triggers various aspects of the SP Act and the IDAS, depending on the activity and location. Individual triggers for the Project are described in Sections 3 to 5 of this report.

## 2.7 Water Act 2000

The object of the Water Act is to provide for the “sustainable management of water and other resources and the establishment and operation of water authorities”. The Water Act deals with rights to access surface and groundwater resources, and the control of works with respect to surface and groundwater conservation and protection, and irrigation, some aspects of supply, drainage and flood control.

Water licences are required for taking or interfering with water. Under Section 204 of the Water Act, water licences may be granted authorising either the taking and interfering with the flow of water in a watercourse, lake or spring, such as by building infrastructure, or for the taking of water.

The Water Act also provides for riverine protection permits. Activities involving the destruction of vegetation or placing fill or excavating in a watercourse require a riverine protection permit unless an exemption applies.

There are three Water Resources Plans applicable to the Project, which are:

- *Water Resource (Burdekin Basin) Plan 2007*
- *Water Resource (Fitzroy Basin) Plan 2011*
- *Water Resource (Great Artesian Basin) Plan 2006.*

There are also three Resource Operations Plans applicable to the Project.

- *Burdekin Resource Operations Plan 2009 (BROP)*
- *Fitzroy Resource Operations Plan 2011 (FROP)*
- *Great Artesian Basin Resource Operation Plan 2006 (GABROP)*

### 2.7.1 Water Resource (Burdekin Basin) Plan 2007

The *Water Resource (Burdekin Basin) Plan 2007* (Burdekin WRP) applies to the Project. Section 2 of the Burdekin WRP outlines that the purpose is to:

- define the availability of water in the plan area
- provide a framework for sustainably managing water and the taking of water
- identify priorities and mechanisms for dealing with future water requirements
- provide a framework for establishing water allocations
- provide a framework for reversing, where practicable, degradation that has occurred in natural ecosystems
- regulate the taking of overland flow water.

Under Section 10, the Burdekin WRP applies to the following:

- water in a watercourse or lake
- water in springs not connected to artesian or subartesian water
- overland flow water not connected to artesian or subartesian water.

Section 79 of the Burdekin WRP states that a person must not take overland flow water other than:

- for stock or domestic purposes
- for other purposes if the works have a capacity of 250ML or less
- under a water licence
- overland flow of not more than the amount necessary to satisfy the requirements of an EA issued under the EP Act
- taking only of contaminated agricultural runoff water
- under another authority under Section 80 of the Burdekin WRP.

### 2.7.2 Burdekin Resource Operations Plan 2009 (BROP)

The *Burdekin Resource Operations Plan 2009* (BROP) implements the provisions made by the WRP (BB). BROP implements the WRP (BB) by specifying rules and operational requirements for managing surface water resources in:

- the Burdekin Haughton and Bowen Broken water supply schemes
- the lower Burdekin, Haughton and Bowen River water management areas
- other areas within the Burdekin Basin.

The BROP sets out rules that guide supplemented water management in the two water supply schemes, flow access rules and volumetric limits for un-supplemented water, and how water allocations can be traded and changed in other ways. The BROP also implements strategies to support a range of ecological outcomes and the

water and ecosystem monitoring requirements that will be used to assess the effectiveness of the implemented WRP (BB).

Specific approvals and assessment under the WRP (BB) and applicable to the Project are outlined in Sections 3, 4 and 5.

### **2.7.3 Water Resource (Fitzroy Basin) Plan 2011**

The *Water Resource (Fitzroy Basin) Plan 2011* (WR (FB)) applies to the Project as water may be sourced from within the Fitzroy basin during construction of the railway. The purpose of the WRP (FB) is to:

- ▶ define the availability of water in the plan area
- ▶ provide a framework for sustainably managing water and the taking of water
- ▶ identify priorities and mechanisms for dealing with future water requirements
- ▶ provide a framework for establishing water allocations
- ▶ provide a framework for reversing, where practicable, degradation that has occurred in natural ecosystems
- ▶ regulate the taking of overland flow water.

The WRP (FB) applies to the following:

- ▶ water in a watercourse or lake
- ▶ water in springs
- ▶ overland flow water.

### **2.7.4 Water Resource (Great Artesian Basin) Plan 2006**

The purpose of the *Water Resource (Great Artesian Basin) Plan 2006* (WRP (GAB)) WRP (GAB) is to:

- ▶ define the availability of water in the plan area
- ▶ provide a framework for sustainably managing water and the taking of water
- ▶ identify priorities and mechanisms for dealing with future water requirements
- ▶ provide a framework for establishing water allocations
- ▶ provide a framework for reversing, where practicable, degradation that has occurred in natural ecosystems.

The WRP (GAB) catchment area is defined by the following areas:

- ▶ Cape
- ▶ Laura
- ▶ Gulf
- ▶ Gulf East
- ▶ Carpentaria

- Carpentaria East
- Flinders
- Flinders East
- Western Carlo
- North West
- Barcaldine West
- Barcaldine North
- Barcaldine East
- Barcaldine South
- Western
- Central
- Warrego West
- Warrego East
- Surat
- Surat North
- Surat East
- Mimosa
- Mulgildie
- Eastern Downs
- Clarence Moreton.

#### **2.7.5 Great Artesian Basin Resource Operation Plan 2006 (GABROP)**

The *Great Artesian Basin Resource Operation Plan 2006* (GABROP) implements the provisions made by the WRP (GAB). GABROP implements the WRP (GAB) by specifying rules and operational requirements for managing ground water resources that are defined to be within one of the 25 groundwater catchments listed under the WRP (GAB).

#### ***Relevance of the Water Act to the Project***

The Project as a whole triggers various aspects of the Water Act and WRPs, depending on the activity and location. Details about specific approvals and planning assessment for the Project and the Water Act are described in Sections 3, 4 and 5.

## 2.8 Workforce accommodation assessment and approvals

Adani's exploration and rail construction workforce accommodation needs are, and will be, met by the following:

- ▶ up to 200 beds conditioned under EPC 1690 and accompanying environmental authority (exploration)
- ▶ an amendment to support the current exploration activities for expansion up to 400 beds on EPC 1690 currently under consideration by DEHP
- ▶ an application for additional construction camps to be sought in early 2013 (rail).

The likely level of construction workforce needed for the Project has been benchmarked against similar works on greenfield rail alignments and mine production developments within Australia. The following travel and accommodation arrangements are anticipated:

- ▶ fly-in-fly-out personnel could travel from the east coast of Australia to Moranbah or the Project (Mine) and may be transferred to the construction camp sites via buses
- ▶ employees could be transported from construction camps to the work sites by 4WDs or communal buses
- ▶ construction staff will most likely be provided with return airfares or transport to the place of engagement for every roster cycle.

Further information about workforce accommodation is located in Volume 1, Sections 2 Description of the Project, 3 Social Impact Assessment and 4 Social Impact Management Plan.

The workforce will be distributed relatively evenly across the four camps, with the capacity for 400 beds per rail camp and 500 beds at the temporary mine camp (located at the Project (Offsite Infrastructure) site). Supporting information for temporary workforce accommodation is located in Appendix IV. It also addresses supporting activities such as water for laundry and washing, waste water treatment, sewage treatment works, electricity generation and solid waste management.

Adani is also seeking recommendations from the Coordinator-General about a development approval for the permanent workers accommodation village to support ongoing mining production will be made for up to 2000 beds.

As an alternative, and if considered more appropriate by the Coordinator-General, Adani seeks recommendations that a preliminary approval for a material change of use for the workers accommodation village be granted subject to appropriate conditions.

Additional information may be requested by the Coordinator-General about workforce accommodation during the assessment of the EIS under Section 35(2) of the SDPWO Act.

## 2.9 Quarrying assessment and approvals

The Project will require a significant amount of quarry material. The material will be used for upgrade and maintenance works on existing infrastructure and the construction of new infrastructure. Provisional amounts of fill expected to be needed totals approximately 12 million m<sup>3</sup>. Adani has identified quarry locations, which are being studied for feasibility.

Adani's approach to quarrying approvals and assessment is proposed as follows:

- ▶ work with the Isaac Regional Council (or any other local quarry providers) to purchase material from at least four quarries, under existing approvals
- ▶ discuss with quarry operators the possibility of expanding the quarries, and assist with obtaining approvals
- ▶ make applications to authorise a number of new quarries in the region.

Depending on the location and existing tenure of the sites, various pieces of legislation may be triggered, such as the *Forestry Act 1959*. The *Forestry Act 1959* provides for, among other things, the sale and disposal of quarry material. All forest products and quarry materials on all State land are the property of the State. The Act is administered by the Department of Agriculture, Forestry and Fisheries (DAFF).

Development approval under the SP Act will also be triggered for any quarry expansions or new quarries, depending on the location and nature of the proposed quarrying or extractive activity. Other approval requirements may be triggered, such as vegetation clearance permits under the VM Act or an Environmentally Relevant Activity (ERA) (extraction) under the EP Act.

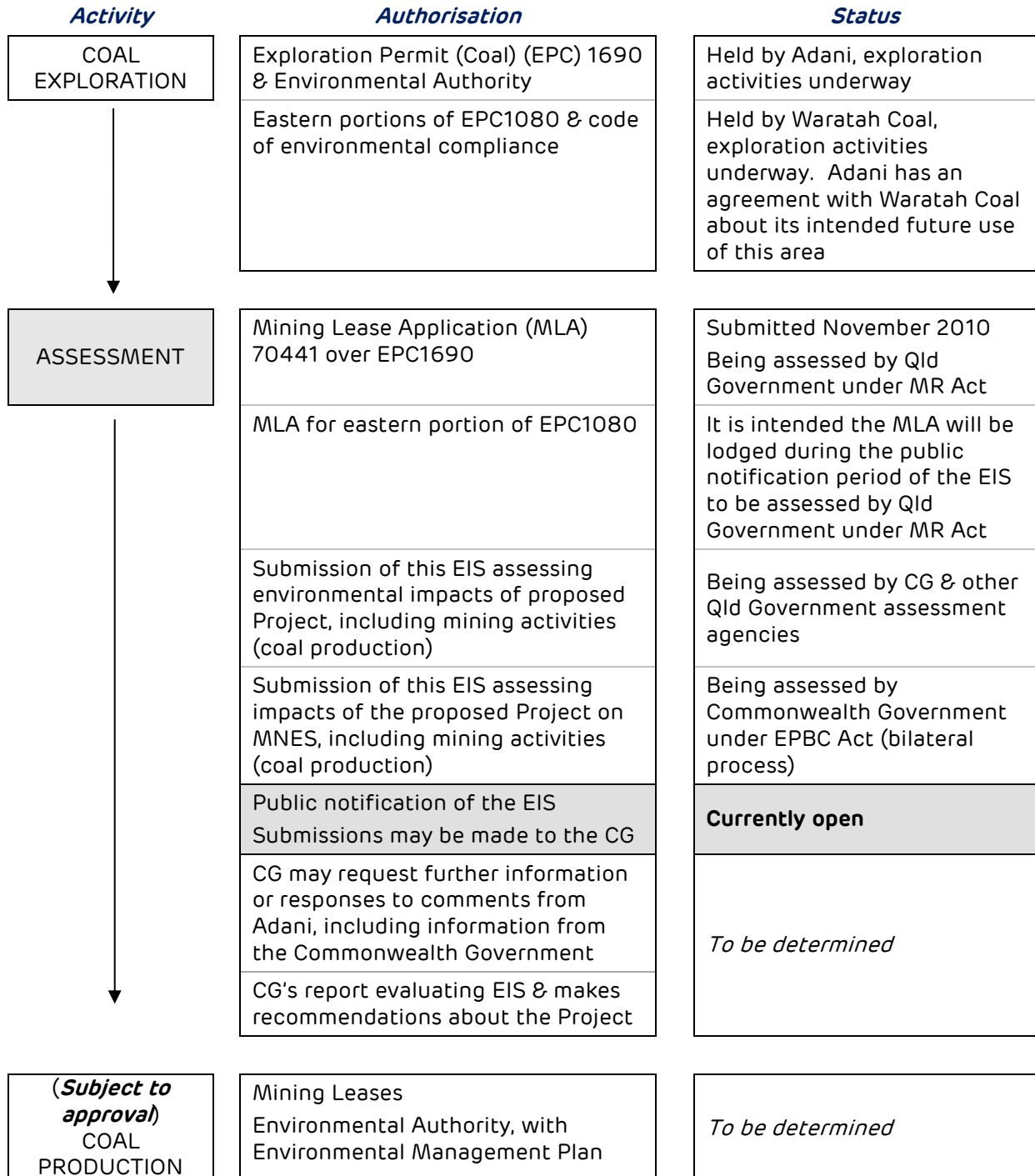
Under Section 236 of the MR Act, a holder of a mining lease is entitled to use sand, rock and gravel for the purposes of constructing infrastructure on the subject ML. Accordingly, a sales permit for use of quarry material within the Project (Mine) ML area may not be required. A sales permit, however, may be required for use of forest products or quarry material taken from the Project (Rail) corridor or Project (Mine) offsite areas.

The relevant applications will be made for quarrying once the locations, amount of material and any other relevant approval triggers have been determined.

### 3 Project (Mine) approvals

The following Figure 2 outlines current approvals and assessment processes for the Project (Mine), including exploration and production.

*Figure 2 – Authorisation and assessment process for the Project (Mine)*





### 3.1 Mineral Resources Act 1989

The MR Act provides for the assessment, development and utilisation of mineral resources to the maximum extent practicable, consistent with sound economic and land use management.

The objectives of the MR Act are to:

- encourage and facilitate prospecting and exploring for and mining of minerals
- enhance knowledge of the mineral resources of the State
- minimise land use conflict with respect to prospecting, exploring and mining
- encourage environmental responsibility in prospecting, exploring and mining
- ensure an appropriate financial return to the State from mining
- provide an administrative framework to expedite and regulate prospecting and exploring for and mining of minerals
- encourage responsible land care management in prospecting, exploring and mining.

Mining tenements under the MR Act may, among other things, authorise prospecting, exploration, mining, processing or transport of materials (including coal). The types of mining tenements are outlined in Table 1 below.

**Table 1: Types of Mining Tenements**

Type of mining tenement	Details
Prospecting permit (PP)	This permit entitles the holder to prospect for and/or hand-mine for minerals (excluding coal) and/or peg a mining lease or mining claim on the available land. There are two types of prospecting permits, namely a parcel prospecting permit and a district prospecting permit.
Mining Claim (MC)	A mining claim is granted to holders of prospecting permits to carry out small scale operations, which can be up to one hectare in area and can be granted for minerals other than coal.
Exploration permit (EP)	This permit is issued for the purposes of exploration, allowing the permit holder to determine the existence, quality and quantity of minerals on, in or under land by methods such as prospecting and geophysical surveys. This permit may eventually lead to an application for a mineral development licence.
Mineral Development Licence (MDL)	This licence allows the holder to undertake geoscientific programs, mining feasibility studies, environmental, engineering and design studies so as to evaluate the potential for development of the defined resource
Mining Lease (ML)	A lease granted for mining operations that entitle the holder to machine-mine specified minerals and carry out activities associated with mining or promoting the activity of mining.

The MR Act is administered by the Department of Natural Resources and Mines.

### **3.1.1 Relevance of the MR Act to the Project (Mine)**

Adani has applied for an ML over the EPC 1690, is Mining Lease Application (MLA) number 70441.

A further MLA will be made for the eastern portion of EPC 1080. It is proposed that this area be utilised for out-of-pit spoil dumps and infrastructure. For Further information about the inclusion of the eastern portion of EPC 1080, see Volume 1 Section 2 Description of the Project.

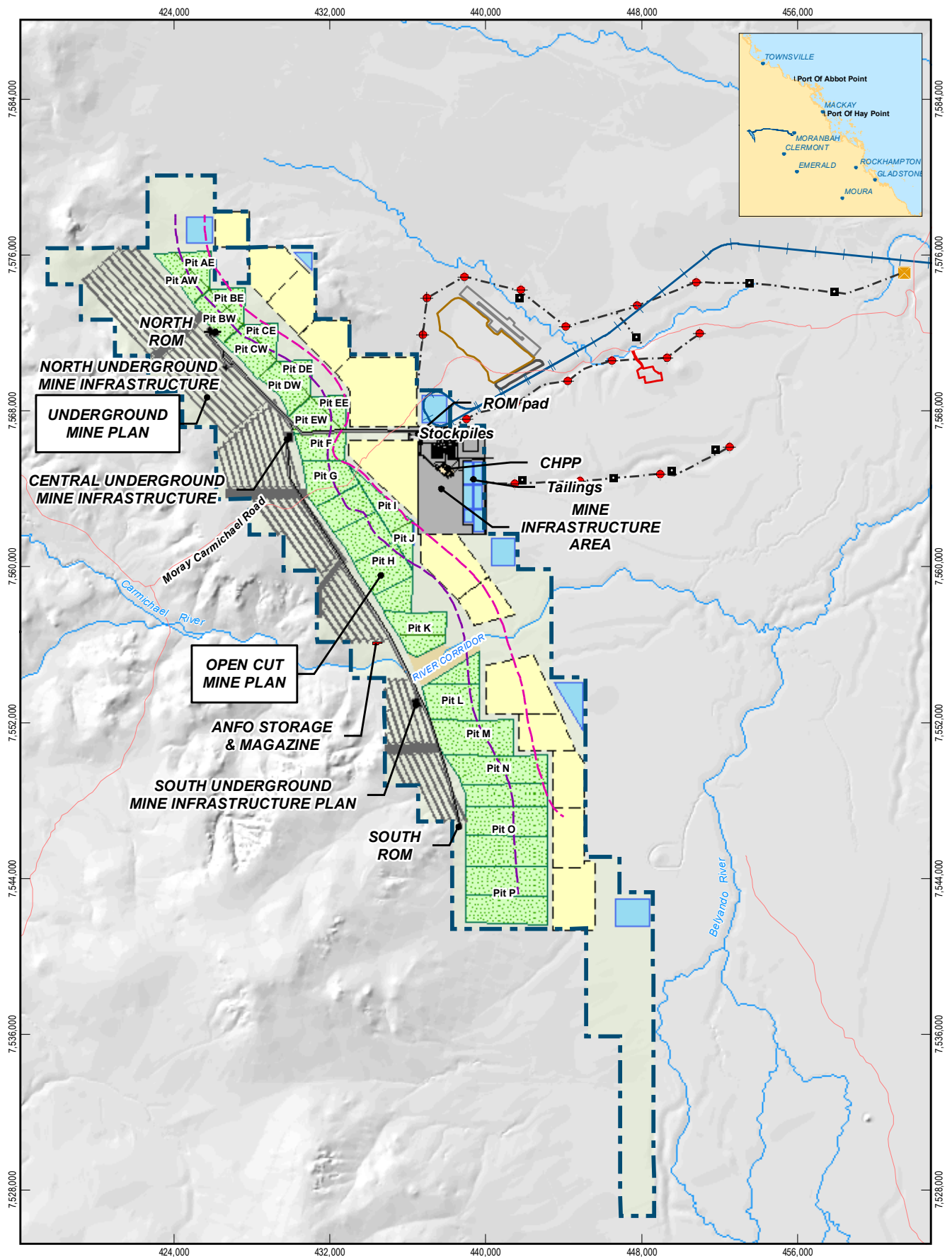
Adani has obtained consent from the holder of EPC 1080 (Waratah Coal) to the making of this MLA which will Adani to obtain a PP (for purposes necessary to enable Adani to apply for an ML) and lodge an MLA during the public notification period of the EIS.

The total area of the Project (Mine) is mapped in the Figure 3 following this Section.

Adani seeks recommendations as a part of the Coordinator-General's report that both of the proposed mining leases be granted subject to appropriate conditions.

Additional information may be requested by the Coordinator-General about the MLAs during the assessment of the EIS under Section 35(2) of the SDPWO Act.

The MR Act, the *Petroleum Act 1923* and the *Petroleum and Gas (Production and Safety) Act 2004* establish a tenement regime under which the two industries co-exist. The Project (Mine) land is covered by a petroleum exploration tenement, that is, Authority to Prospect number 1044. Studies carried out indicate it is unlikely feasible significant petroleum resources are in the area. However, should there be co-development opportunities, Adani will work under the provisions of the legislation to meet outcomes required.



#### LEGEND

- |                     |                        |                              |                               |
|---------------------|------------------------|------------------------------|-------------------------------|
| Local Road          | Rail (West)            | Mine (Offsite)               | Airport Location              |
| River / Watercourse | Mine (Onsite)          | Borehole                     | Rail Siding                   |
| AB1 Cropline        | Open Cut Blocks        | Storage Site (Instream)      | Industrial Area               |
| D1 Cropline         | Out of Pit Waste Dumps | Storage Facility (Offstream) | Workers Accommodation Village |
| Overland Conveyors  | Water Management Dams  | Pipeline Network             |                               |

Based on or contains data provided by the State of QLD (DERM) [2010]. In consideration of the State permitting use of this data you acknowledge and agree that the State 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 any use of the data. Data must not be used for marketing or be used in breach of the privacy laws.

1:275,000 (at A4)  
0 2 4 6 8  
Kilometres  
Map Projection: Universal Transverse Mercator  
Horizontal Datum: Geocentric Datum of Australia (GDA)  
Grid: Map Grid of Australia 1994, Zone 55



**Adani Mining Pty Ltd**  
Carmichael Coal Mine and Rail Project

Job Number 41-25215  
Revision C  
Date 06-12-2012

#### General Mine Layout

Figure 3

G:\4125215\GIS\Maps\MXD\100\_Planning\41-25215\_170\_rev\_c.mxd

Level 4, 201 Charlotte St Brisbane QLD 4000 T +61 7 3316 3000 F +61 7 3316 3333 E bnemail@ghd.com W www.ghd.com

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Data Source: GA: Road, River / Watercourse (2007); DME:EPC1690 (2010); EPC1080 (2011); Adani: Mine Layout / Infrastructure, Alignment Opt9 Rev3 (2012); Gassman/Hyder: Mine (Offsite) (2012). Created by: JVC

### 3.2 Relevance of the EP Act to the Project (Mine)

An overview of the EP Act is included in Section 2 of this report. The following Section details the relevance of the EP Act to the Project (Mine).

Chapter 5 of the EP Act deals with EAs for mining activities, detailing types and processes for obtaining an EA (mining activities). Under Section 426 of the EP Act, a person must not carry out a mining activity unless the person holds, or is acting under, an Environmental Authority (mining activities) for the activity.

Mining activities are defined under Section 147 of the EP Act to be activities such as prospecting, exploring or mining, processing a mineral, rehabilitation and other activities that facilitate or support mining authorised under the MR Act to be carried out on land that relates to, or provides access to, a mining tenement.

#### 3.2.1 Relevance of the EP Act to the Project (Mine)

The Project (Mine) includes the following mining activities:

- ▶ coal mining
- ▶ processing mined materials, that is, coal
- ▶ a number of activities directly associated with, or facilitating or supporting, the mining and processing activities
- ▶ rehabilitation and remediation
- ▶ actions to prevent environmental harm.

##### *Level 1 mining project*

A mining project can be either a level 1 or level 2 mining project depending upon the level of environmental risk it is likely to generate. Under Section 151 of the EP Act and the criteria contained in Chapter 3, Part 3, Division 2 of the *Environmental Protection Regulation 2008* (EP Regulation), the Project (Mine) is a level 1 mining project, mining coal under Schedule 6, Item 5.

Adani:

- ▶ has lodged MLA 70441
- ▶ intends to lodge an MLA over the eastern portion of EPC 1080 during the public notification period of the EIS
- ▶ is seeking a single EA for the Project (Mine).

##### *Other Environmentally Relevant Activities*

Schedule 2 of the EP Regulation lists various activities designated as ERAs, for which approval is needed under either a development approval or EA. The ERAs listed below are those proposed to be undertaken on the Project (Mine), for which approval is sought to be included in the EA.

- ▶ ERA 8 – chemical storage:
  - storing chemicals of dangerous goods class 1, division 2.3

- storing 500 m<sup>3</sup> or more of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3
- storing 200 m<sup>3</sup> or more of chemicals that are liquids
- ERA 16 – extractive and screening activities
- ERA 17 – abrasive blasting: the cleaning of equipment or structures using a stream of abrasives
- ERA 18 – boiler making or engineering – boiler making, assembling or building a total of 200 tonnes or more of metal product in a year
- ERA 26 – fuel burning
- ERA 31 – mineral processing – processing in a year more than 100,000 tonnes per year
- ERA 33 – crushing, milling, grinding or screening
- ERA 43 – concrete batching
- ERA 50 – bulk material handling
- ERA 56 – regulated waste storage
- ERA 57 – regulated waste transport
- ERA 63 – sewage treatment: operating sewage treatment works, other than no-release works, with a total daily peak design capacity of 100 to 1500 equivalent persons
- ERA 64 – water treatment.

Under the SDPWO Act, Part 4, Division 6 (Relationship with Environmental Protection Act), the Coordinator-General's report may state conditions for the draft environmental authority (mining lease) (Section 49). Adani seeks recommendation from the Coordinator-General that the proposed EA be issued subject to appropriate conditions. The draft EM Plan for the Project (Mine) has been included at Volume 2, Section 12 to assist in developing conditions for the proposed EA. Additional information may be requested by the Coordinator-General in relation to the assessment of the EIS under Section 35(2) of the SDPWO Act.

In light of the term of the mine, Adani is committed to working with the relevant regulators to ensure the EA remains appropriate throughout the life of the mine. Adani proposes that the EA be subject to a condition that it is reviewed by Adani and the regulator by consultation after 30 years have elapsed, to ensure ongoing relevance of conditions.

#### ***Environmentally Relevant Activity – Electricity Generation***

The ToR requires electricity generation be specifically addressed in the EIS, particularly where and when electricity will be generated and supplied to the Project (Mine). As described in Volume 1 Section 2 Project Description, it is anticipated that diesel generators will be provided for electricity during construction.

Diesel Generator sets will be used for construction and temporary electrical power until the transmission line power system is commissioned. The environmental authority will need to condition the storage of this diesel once volumes are finalised.

Long term power supply infrastructure requirements have not yet been determined for the Project (Mine) but it is expected that offsite components of transmission lines will be constructed by the relevant electricity authority. Adani will be sub-contracting power supply and delivery between Strathmore and the Project (Mine).

Electricity generation undertaken on a mining tenure and used solely for mining activities contained within the mining tenure can be permitted under a mining environmental authority for ERA 14. If any electricity generated on the mining tenure is used for anything outside of the mining tenure, further approvals would be required.

### 3.3 Relevance of the SP Act to the Project (Mine)

An overview of the SP Act is included in Section 2 of this report.

Under the SP Act, development authorised to occur on a ML is generally exempt from the requirements for assessment and approval. However, there are some limited exceptions, such as approvals for building, plumbing and drainage work. These are described in the following Sections.

Under the SDPWO Act, Part 4, Divisions 4, 5, 7 and 8, Adani is seeking as many recommendations about SP Act conditions in the Coordinator-General's report. Additional information may be requested by the Coordinator-General in relation to the assessment of the EIS under Section 35(2) of the SDPWO Act.

### 3.4 Relevance of the Water Act to the Project (Mine)

An overview of the Water Act is included in Section 2 of this report. The following Section details the relevance of the Water Act to the Project (Mine).

The following Project (Mine) activities will require water licences under the Water Act and the *Water Resource (Burdekin Basin) Plan 2007*:

- ▶ a total of 20 GL water supply storage (dams) within the ML boundary that will contain mine affected water, treated water and raw water
- ▶ taking and or diverting overland flow harvesting from within the ML, including
  - taking water from the Belyando River and other watercourses
  - discharge of water at peak flows from the mine to the Carmichael and Belyando Rivers.

The principal activities during the operational phase of the Project (Mine) which may impact groundwater resources are considered to be:

- ▶ dewatering of open cut pits



- dewatering of underground mine workings
- spoil and tailings disposal to pits and/or tailings dams
- operation and processing and storage facilities and plant
- the diversion of minor ephemeral creeks along the western boundary of the Study Area
- operation of the general waste landfill;
- longwall mining of the underground workings.

Also, groundwater model predictions as outlined in Volume 4, Appendix R Mine Hydrogeology Report suggest the potential for some minor indirect impacts on groundwater levels and recharge to Triassic-age units, which form part of the GAB system. Given the importance of the GAB from a national water resource perspective additional monitoring bores have already been installed in the area to the west of the Study Area including the installation and monitoring of two multi-level facilities at sites HD02 and HD03 close to the Carmichael River, upstream of Study Area but downstream of the Doongmabulla Spring complex.

Groundwater model predictions also suggest the potential for some minor impacts at two of the nine mapped GAB springs at Doongmabulla. Impacts of up to 0.1 m are predicted after 40-70 years at the two closest springs to the proposed mining area, i.e. the Little Moses spring to the north and the Doongmabulla Spring to the east. Little or no data is currently available on the flow rate or chemistry of these springs and access was not possible during the majority of the current EIS monitoring period.

Given the importance of these springs from an ecological and cultural perspective, further investigations and monitoring are proposed prior to commencement of mining operations, to establish a reliable baseline data set of conditions at the springs and also of groundwater levels between the springs and the Project (Mine) site. The following investigations and monitoring are proposed at least 12 months prior to commencement of any dewatering operations:

An ecological survey of the spring complex to establish its 'health' and to establish any seasonal variations. The survey would include measurement or estimation of discharge flows, assessment of the water quality and assessment of the ecology (for example extent, health and species present).

The installation of two multi-level monitoring bores close to the Little Moses and Doongmabulla Springs. Data from these bores would be used to confirm the relative levels and quality of groundwater in the near surface and underlying Triassic-age strata. These facilities would complement similar monitoring already installed along the Carmichael River downstream.

Access to the Doongmabulla Springs area was negotiated allowing this work to be completed. The results of an initial ecological survey and sampling of the springs is described in Volume 4 Appendix Q of the EIS.

The following Project (Mine) activities will require water licences under the Water Act and the *Water Resource (Great Artesian Basin) Plan 2006* :

- interaction with the groundwater within the ML including:
  - advance dewatering prior to mining activities

- dewatering during mine operation
- possible indirect extraction of water inflows from the Great Artesian Basin through preferential flow to the mine.

Riverine protection permits are not required for work authorised under an EA (mining activities), as proposed to be obtained for the Project (Mine).

Adani is seeking recommendations from the Coordinator-General that all water licences identified as being required for the Project are granted. Relevant information for the Project (Mine) is provided in Volume 2, Section 6 Water Resources. Additional information may be requested by the Coordinator-General about workforce accommodation during the assessment of the EIS under Section 35(2) of the SDPWO Act.

### 3.5 Water Supply (Safety and Reliability) Act 2008

Failure impact assessment determines whether a dam is a referable dam, that is, a dam that would put population at risk in the event of failure, by reference to the provisions of the Water Act and the *Water Supply (Safety and Reliability) Act 2008* (WSSR Act).

#### 3.5.1 Relevance of the Water Supply (Safety and Reliability) Act 2008

As a large water supply dam is proposed within the ML boundary and potentially upstream of the mine worker population, a failure impact assessment will be carried out to determine if the dam is referable. It is also required under the Water Act and WSSR Act. The 10GL storage dam for the Project (Mine) will require failure impact assessment in the detailed design phase, and on an ongoing basis as required under the WSSR Act. Additional information may be requested by the Coordinator-General about workforce accommodation during the assessment of the EIS under Section 35(2) of the SDPWO Act.

### 3.6 Vegetation Management Act 1999

The VM Act, in conjunction with the SP Act, regulates the clearing of native vegetation, excluding grasses and mangroves. Under the SP Act, operational work that is the clearing of native vegetation is to be assessed against the purposes of the VM Act.

DNRM administers the VM Act and assesses any clearing required for the Project against the relevant Regional Vegetation Management Code for Ongoing Clearing Purposes. Only remnant vegetation (native vegetation that occurs in a mapped Regional Ecosystem (RE)) or that meets the structural and species requirements to be mapped as a RE will be assessed under this process. The type of vegetation clearing applications required for the Project is dependent on the type of vegetation present within the Project Area. Under the VM Act all remnant vegetation (including Endangered, Of Concern and Not Of Concern REs) irrespective of land tenure and all native vegetation on State land (regardless of conservation status) is protected. Clearing of vegetation on State land is also listed as assessable development under the SP Act.



### 3.6.1 Relevance of the VM Act to the Project (Mine)

Under Schedule 24, Part 1, Item 6 of the SP Regulation, clearing of native vegetation is exempt for a mining activity or a Chapter 5A activity. An operational works development approval for the clearing of native vegetation is not required for clearing associated with the construction and operation of the Project (Mine).

## 3.7 Nature Conservation Act 1992

The object of the NC Act is to conserve nature through an integrated and comprehensive conservation strategy for the whole of Queensland involving, amongst other things, the following:

- gathering of information and community education
- dedication and declaration of protected areas
- management of protected areas
- protection of native wildlife and its habitat
- use of protected wildlife and areas to be ecologically sustainable
- recognition of interest of Aborigines and Torres Strait Islanders in nature and their cooperative involvement in its conservation
- cooperative involvement of landholders.

Any activity that may have the potential to impact on wildlife or its values in an area may be seen as a threatening process and will be referred to the administering authority as part of the development approval process. In particular, the effect of the Project on Endangered, Vulnerable, or Rare wildlife, or the habitat on which that wildlife depends, including tampering with habitat, will be considered by the administering authority under Section 73 of the NC Act. The NC Act requires permits to be obtained for taking of protected plants and the moving of protected animals. The NC Act also provides for protected areas, including refuges.

### 3.7.1 Relevance of the Nature Conservation Act 1992 to the Project (Mine)

#### *Protected plants*

Section 41 of the *Nature Conservation (Protected Plants) Plan 2000* exempts the taking of protected plants under an ML; hence a permit is not required for the Project (Mine).

#### *Bygana West Nature Refuge*

The Bygana West Nature Refuge is a type of protected area under the NC Act and occurs over part of the southern extent of the EPC 1690, south of the Carmichael River. The nature refuge covers an area of approximately 1487 hectares.

The majority of the land to be affected during the mine construction phase consists of non-remnant vegetation. The proposed mining operation footprint will require approval for direct clearing, including clearing within the Bygana West Nature Refuge of non-remnant and remnant vegetation. Offsetting may be offered as an alternative solution and the EA may include conditions about offsets. Volume 1, Section 11 describes the Draft Offsets Strategy for the Project.

### 3.8 Land Protection (Pest and Stock Route Management) Act 2002

The purpose of the *Land Protection (Pest and Stock Route Management Act 2002* (LP Act) is to provide for pest management as well as land and stock route network management. A stock route is defined as a road reserve or road corridor, generally in the width of 60 to 1,600 metres that is used for the purposes of walking and agisting or stock grazing. Stock routes do not have a separate title or tenure. Once the declaration of a stock route is removed, it remains a road but is no longer named a stock route (DNRM, 2010). Stock routes are managed by the relevant local governments – in this case the Isaac Regional Council - and the LP Act is administered by the Department of Natural Resources and Mines.

#### 3.8.1 Relevance to the Project (Mine)

The Project (Mine) will require the closure of one stock route. Adani is liaising with Isaac Regional Council and DNRM about how to manage the closure of the stock route and any mitigation strategies.

Pests will be managed through the EMPs. See Volume 2, Sections 13 and 14 for the Project (Mine) draft EMP.

### 3.9 Building Act 1975

The *Building Act 1975* (Building Act) sets out the type of building work that is assessable development under SP Act. It also sets out the requirements and processes for obtaining approval for various types of building work. Under Section 319(3) of the MR Act, building work which is development authorised under the MR Act will still be subject to SP Act and the Building Act, and is taken to be self-assessable development under Section 21 of the Building Act. This means all building work for the Project must, and will, comply with the relevant codes.

#### 3.10 Plumbing and Drainage Act 2004

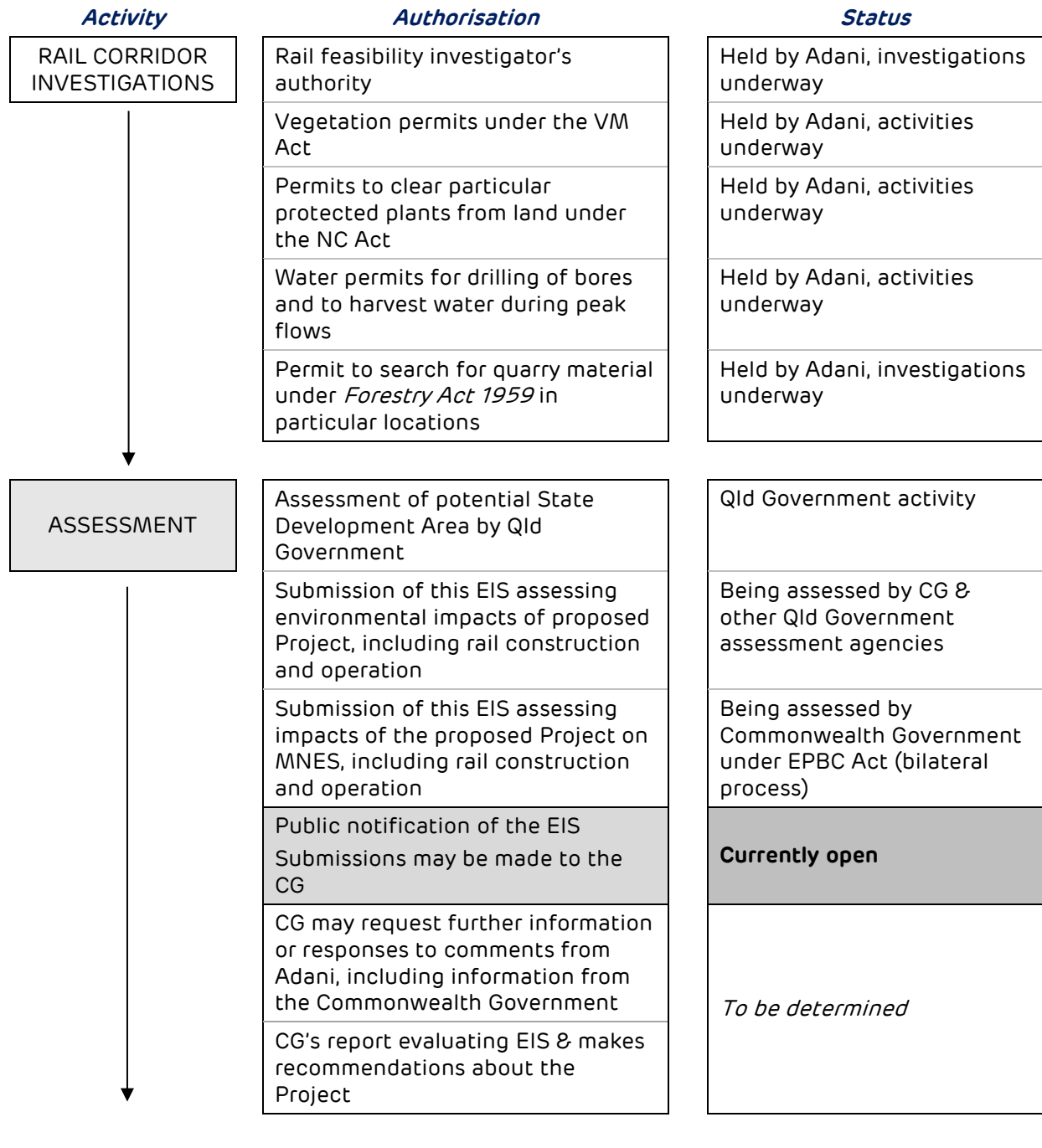
The *Plumbing and Drainage Act 2004* (P&D Act) regulates the carrying out of works relating to water, sewage, grey water and drainage in Queensland. The installation of water and sewage works for the temporary construction camps and facilities at the Project (Rail) will require compliance assessment under the Act, and will be carried out by appropriately licensed persons.

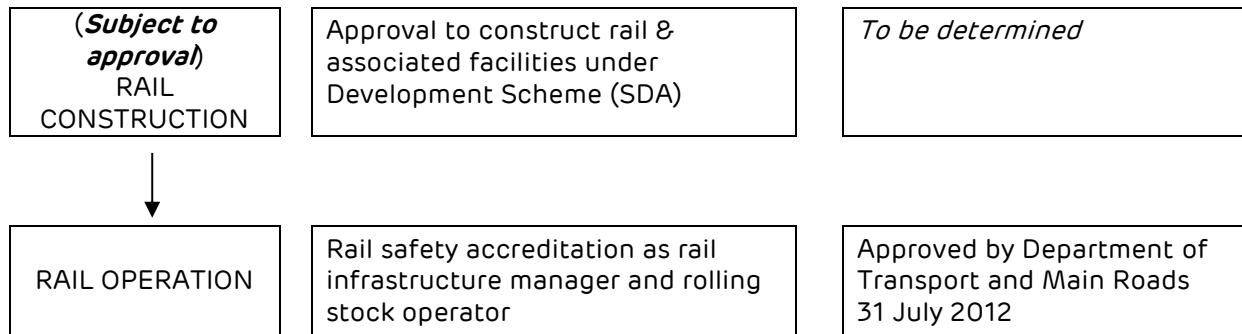
The installation of water and sewage works for facilities at the Project will require assessment under the P&D Act. Applications will be made as triggered during the process.

## 4 Project (Rail) approvals

The following Figure 4 outlines assessment process for the Project (Rail), including investigation, construction and operation.

*Figure 4 – Authorisation and assessment process for the Project (Rail)*





#### 4.1 Relevance of the SDPWO Act to the Project (Rail)

An overview of the SDPWO Act is included in Section 2 of this report.

Adani is working with the Office of the Coordinator-General towards the declaration of an SDA encompassing the Project (Rail) area. Should an SDA not be declared over the area, other provisions of the SDPWO Act could be considered, such as an Infrastructure Facility of Significance under Section 125. Alternatively, a Community Infrastructure designation under the SP Act could be considered.

The following Figure 5 shows the Project (Rail) location.



1:750,000 (at A4)  
0 5 10 15 20 25  
Kilometres  
Map Projection: Universal Transverse Mercator  
Horizontal Datum: Geocentric Datum of Australia (GDA)  
Grid: Map Grid of Australia 1994, Zone 55



**LEGEND**

- Town
- Other Rail Network
- Mine (Onsite)
- Mine (Offsite)
- Rail (West)
- Rail (East)
- State Road
- Cadastral Parcel
- Local Road



**Adani Mining Pty Ltd**  
Carmichael Coal Mine and Rail Project

Job Number 41-25215  
Revision C  
Date 06-12-2012

**Aboriginal Party Interest Areas**

**Figure 5**

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Level 4, 201 Charlotte St Brisbane QLD 4000 T +61 7 3316 3000 F +61 7 3316 3333 E bnemal@ghd.com W www.ghd.com  
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Data source: DERM: DEM (2008), DOD (2010), DME: EPC1680 (2010), EPC1680 (2011); © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads (2007), Register of Native Title Claims (2011); GHD: Barada Barna Kabalbara Yetimarla People (2011); Adani: Alignment Op9 Rev3 (2012); Gassman/Hyder: Mine (Offsite) (2012). Created by: BW.MS

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## 4.2 Relevance of the EP Act to the Project (Rail)

An overview of the EP Act is included in Section 2 of this report. The following Section details the relevance of the EP Act to the Project (Rail).

The ERAs listed below are relevant to the construction and operation of the Project (Rail):

- ERA 8 – chemical storage
- ERA 15 – fuel burning
- ERA 16 – extractive and screening activities
- ERA 18 – boiler making and engineering
- ERA 21 – motor vehicle workshop
- ERA 38 – surface coating
- ERA 43 – concrete batching, which may possibly be a mobile concrete batching plant
- ERA 50 – bulk material handling
- ERA 56 – regulated waste storage
- ERA 57 – regulated waste transport
- ERA 63 – sewage treatment
- ERA 64 – water treatment.

Under the SDPWO Act, Part 4, Division 6 (Relationship with Environmental Protection Act), the Coordinator-General's report may streamline the environmental authority process. Under these provisions, Adani is seeking as many recommendations about conditions in the Coordinator-General's report. Additional information may be requested by the Coordinator-General in relation to the assessment of the EIS under Section 35(2) of the SDPWO Act.

## 4.3 Relevance of the SP Act to the Project (Rail)

An overview of the SP Act is included in Section 2 of this report. The following Section details the relevance of the SP Act to the Project (Rail).

Development, as regulated under SP Act, includes:

- making a material change of use
- reconfiguring a lot
- carrying out operational work
- carrying out building work.

The SP Regulation prescribes various matters for specific items of development, including development which is exempt from assessment, the level of assessment for some items of development and who the assessment manager and referral agents are for various development applications.

Where the SP Regulation or other state planning documents do not delineate the level of assessment for a particular development application, it is determined by reference to the relevant local planning scheme.

#### 4.3.1 Relevance of the Sustainable Planning Act 2009 to the Project (Rail)

The Project (Rail) will trigger development applications for the following aspects of development:

- excavating and filling for construction of the Project (Rail)
- clearing native vegetation under the VM Act
- taking or interfering with water under the Water Act
- taking of artesian and sub artesian water under the Water Act
- constructing waterway barrier works under the Fisheries Act
- undertaking road works on a local government road.

Building works for temporary construction camps and facility buildings will also trigger applications for development approval under the SP Act. This report also includes supporting information for temporary workforce accommodation located in Appendix IV.

Adani seeks recommendations from the Coordinator-General that development approval be given for all of the identified aspects of assessable development for the Project (Rail), subject to appropriate conditions. Relevant information is presented in Volume 3 of the EIS. If further information is identified as being relevant to the development, Adani will work with the Coordinator-General and stakeholders to ensure that information is provided.

As an alternative, if considered more appropriate by Coordinator-General, Adani seeks a recommendation that a preliminary approval for a material change of use for the development be granted, subject to appropriate conditions.

#### 4.4 Relevance of resource entitlements to the Project (Rail)

The SP Regulation, Section 14 and Schedule 14 prescribes the States resources and the evidence required to support a development application to use those resources. Resources in Schedule 14 of the SP Regulation applicable to the Project, which are:

- leasehold land
- land that is unallocated State Land (USL)
- land that is State Controlled Road (SCR)
- land that is road (other than State controlled) or is stock route
- water taken or interfered with under the Water Act.

These are addressed in specific Sections in this report.

Under proposed amendments to the SP Act (*Sustainable Planning and Other Legislation Amendment Bill 2012*), state resource entitlements would not be required before making a development application. This would allow the state resource entitlement application process to proceed in parallel with the development

application process. However, the amendments have not commenced. Adani seeks streamlined processes under the provisions to the maximum extent possible.

#### 4.5 Relevance of the VM Act to the Project (Rail)

An overview of the VM Act is included in Section 3 of this report. The following Section details the relevance of the VM Act to the Project (Rail).

A development permit for operational works that is the clearing of native vegetation will be required to facilitate construction of the Project (Rail). The Project (Rail) related activities require an operational works development application for clearing of native vegetation, as triggered under the SP Regulation, Schedule 3, Part 1, Table 4, Item 1 and also the VM Act. Adani seeks a recommendation from the Coordinator-General that this development approval be granted.

As detailed within Volume 3, Section 5 Nature Conservation, the Project (Rail) will require removal of approximately 804.9 ha of remnant vegetation within the Brigalow Belt Bioregion and Desert Uplands Bioregion. This area of vegetation clearing includes approximately 131.9 hectares of endangered regional ecosystems, 417.7 hectares of concern regional ecosystems, and 255.3 hectares of least concern regional ecosystems.

The application for clearing of native vegetation will be assessed against the set of performance criteria in Part 5 (Requirements for clearing for significant projects) of the Regional Vegetation Management Code for Brigalow Belt and New England Bioregions (DEHP, 2009b) and the Regional Vegetation Management Code for Western Bioregions – Version 2 (DEHP, 2009c).

The purpose of the performance requirements in the codes is to “regulate the clearing of vegetation in a way that conserves remnant vegetation that are regional ecosystems, does not cause land degradation, prevents the loss of biodiversity and maintains ecological processes.” The Regional Vegetation Management Codes offer an acceptable solution for each of the performance criteria listed. Where these acceptable solutions cannot be met, offsetting can be offered as an alternative solution for meeting the performance requirements. Volume 1, Section 11 describes the Draft Offsets Strategy for the Project.

#### *Property Vegetation Management Plans and Property Maps of Assessable Vegetation*

Under the VM Act, Division 6, Section 21 (3) – ‘Modifying Effect on Vegetation Clearing Applications’, if the Chief Executive is a concurrence agency for the application, a Property Vegetation Management Plan (PVMP) must be provided by the applicant. For a PVMP to be lodged it will be necessary for a site visit to take place in order to produce a Property Map of Assessable Vegetation (PMAV).

The PVMP and PMAV are submitted for the Project (Rail) (95 m rail corridor) as part of the operational works application for clearing of native vegetation. These have been mapped and assessed against the relevant regional vegetation management codes for the Project (Rail) and are included in this EIS in Volume 4, Appendix AA1 (Property Map of Assessable Vegetation SP1) and AA2 (Property Map of Assessable Vegetation SP2).



## 4.6 Relevance of the NC Act to the Project (Rail)

An overview of the NC Act is included in Section 3 of this report. The following Section details the relevance of the NC Act to the Project (Rail).

The NC Act provides for the conservation of nature in Queensland by protecting numerous plant and animal species. Protected species are listed in the *Nature Conservation (Wildlife) Regulation 2006* and are each categorised as being 'extinct in the wild', 'endangered', 'vulnerable', 'rare', 'near threatened' or 'least concern'.

DEHP administers the NC Act. Under Section 73 (a) of the NC Act, DEHP is required to conserve wildlife and its values to:

- ▶ Ensure the survival and natural development of the wildlife in the wild
- ▶ Conserve the biological diversity of the wildlife to the greatest possible extent
- ▶ Identify, reduce or remove, the effects of threatening processes relating to the wildlife
- ▶ Identify the wildlife's critical habitat and conserve it to the greatest possible extent

A description of all permits, licences and approvals available under the NC Act is contained in the *Nature Conservation (Administration) Regulation 2006*.

### 4.6.1 Protected Plants

Permits will be required for the removal of rare, threatened, vulnerable and endangered plants under the NC Act. However, a number of exemptions as listed under Section 41 of the *Nature Conservation (Protected Plants) Conservation Plan 2000* are potentially relevant to clearing of 'Least Concern' plants associated with rail corridor and temporary work areas.

Adani is seeking confirmation of relevant exemptions and, where exemptions do not apply, will apply for the relevant clearing permits.

Supporting information to clear 'Least Concern' plants within a Section of the rail corridor Rail (east), being a 69 km narrow gauge portion running east from Diamond Creek connecting to the Goonyella rail system south of Moranbah, has been prepared and included in Appendix V. Supporting information for vegetation clearing permits is also included in Appendix V for laydown and temporary works areas on the same rail system.

### 4.6.2 Protected Wildlife

Clearing associated with the Project (Rail) will require disturbance to animal breeding places. A Species Management Program, under Section 88 of the NC Act and Section 332 of the *Nature Conservation (Wildlife Management) Regulation 2006*, allows for the tampering of animal breeding places) can be obtained.

Adani is registering for approval to operate under a Generic Species Management Program. Adani will seek approval for an additional Species Management Program where disturbance to animal breeding places is required for species outside of the scope of the Generic Species Management Program.

#### 4.7 Strategic Cropping Land Act 2011

The *Strategic Cropping Land Act 2011* (SCL Act) commenced on 30 January 2012. The SCL Act applies despite the application of the EP and MR Acts. The objectives of the Act are to:

- protect land that is highly suitable for cropping
- manage the impacts of development on that land
- preserve the productive capacity of that land for future generations.

The SCL Act aims to achieve these objectives by:

- identifying potential strategic cropping land (SCL)
- provide provision criteria to decide whether or not land is SCL
- establishing protection and management areas
- providing for development assessment
- imposing conditions on development
- preventing permanent impacts on SCL in protection areas (unless the development is in exceptional circumstances)
- requiring mitigation to be paid by developers if SCL is permanently impacted in the management area, or by a development in exceptional circumstances.

##### 4.7.1 Relevance of the Strategic Cropping Land Act 2011 to the Project (Rail)

Maps published by the former Department of Environment and Resource Management (DERM) (2010) that identify SCL and trigger application processes were reviewed. The following were identified:

- for SCL Management Areas - approximately 120 km of the Project (Rail) corridor traverses the western extent of the SCL Management Area in the western cropping zone
- for SCL Protection Areas - there are no SCL Protection Areas within the Project (Rail) vicinity.

No SCL areas will be impacted by the Project (Mine).

If areas are confirmed as SCL mitigation will be required for infrastructure and activities considered permanent (that is, rail and service road infrastructure, and power line tower footprint). A Deed of Agreement will be established between Adani and the Department of Agricultural, Fisheries and Forestry (DAFF) to facilitate mitigation.

Volume 3, Section 3 (Land) addresses the mapped SCL within the vicinity of the Project (Rail) and outlines mitigation measures in detail.

## 4.8 Relevance of the Water Act to the Project (Rail)

An overview of the Water Act is included in Section 2 of this report. The following Section details the relevance of the Water Act to the Project (Rail).

The Project (Rail) crosses two Water Resource Plan areas under the Water Act. The majority of the Project (Rail) falls within the WR (BB) Plan, however, approximately 20 kms of the alignment falls within the WR (FB) Plan.

### 4.8.1 Development approvals

The Project (Rail) will trigger approvals under the SP and Water Acts. Development approval for operational works for taking or interfering with water from a watercourse, lake or spring will be required for the Project (Rail) construction.

### 4.8.2 Water licences

The following Project (Rail) activities will require water licences under the Water Act:

- ▶ pump from river or diversion bund into dam located near waterway in flood plain
- ▶ interaction with the groundwater
- ▶ water course diversions.

A water licence will also be required for taking overland flow water, unless the taking is allowed under Section 79 of the *Water Resource (Burdekin Basin) Plan 2007*.

Water permits will be required for the Project (Rail) for the taking of water from groundwater supply bores and the extraction of water from creeks and rivers located at various points along the rail alignment.

Adani is seeking recommendations from the Coordinator-General that these approvals be granted. Relevant information is contained in Volume 3 of this EIS. Additional information may be requested by the Coordinator-General in relation to the assessment of these approvals under Section 35(2) of the SDPWO Act.

### 4.8.3 Riverine protection permits

Activities involving destruction of vegetation, placing fill or excavating in a watercourse require a riverine protection permit unless an exemption applies. Relevant exemptions include:

- ▶ activities permitted under a water licence
- ▶ activities authorised by a development permit for operational work that:
  - allows taking or interfering with water
  - allows interfering with overland flow water in a drainage embankment area
  - is the construction of a dam requiring failure impact assessment
- ▶ activities undertaken in accordance with the *Guideline – Activities in a watercourse, lake or spring carried out by a landowner*.

A number of waterway crossings to be constructed for the Project (Rail) will not be the subject of an exemption and riverine protection permits will need to be obtained. Further discussions with DNRM will be held to determine which activities require a riverine protection permit. Adani is seeking a recommendation from the Coordinator-General that these riverine protection permits be granted following the successful resolution of those discussions.

## 4.9 Fisheries Act 1994

The Fisheries Act provides for the use, conservation and enhancement of fisheries resources and fish habitats in a way that seeks to promote, apply and balance the principles of ecologically sustainable development (Section 3).

The Fisheries Act is administered by the Department of Agriculture, Fisheries and Forestry (DAFF). The SP Act assigns the Chief Executive administering the *Fisheries Act 1994* as the assessment manager for fisheries development.

### 4.9.1 Relevance of the Fisheries Act to the Project (Rail)

The Project will entail construction of waterway crossings that are likely to trigger an operational works permit for constructing or raising waterway barrier works under the SP Act, Schedule 3, Part 1, Table 4, Item 6 and the Fisheries Act.

A number of waterway barrier works will be constructed to facilitate crossings for the Project (Rail). In many instances, it will not be possible to comply with the self-assessable guidelines for these works and a development approval will be required.

The construction of waterway barrier works require development approval under SP Act and the Fisheries Act, unless they comply with one of the codes for self-assessable development. The relevant codes are:

- ▶ WWBW01 – Minor waterway barrier works – Part 1: minor dams and weirs
- ▶ WWBW01 – Minor waterway barrier works – Part 3: culverts
- ▶ WWBW01 – Minor waterway barrier works – Part 4: bed level crossing
- ▶ WWBW02 – Temporary waterway barrier works.

Where proposed waterway barrier works cannot comply with the relevant code for self-assessable development, a development permit under the SP Act will be applied for. Adani is aware that these codes are currently being revised by the Department, and is committed to assessing its development under the codes that apply at the time.

Initial indications are that 12 of the 88 possible waterway crossings will trigger a waterway barrier permit, however the permanent crossings will be reviewed against the definition of waterway barrier works under the legislation and policies. Adani understands that the relevant guidelines are currently being revised. Further information to support an application for waterway barrier works under Section 35(2) of the SDPWO Act may be requested by the Coordinator-General.

## 4.10 Transport Infrastructure Act 1994

The object of the *Transport Infrastructure Act 1994* (TI Act) is to provide a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure (Section 2). The objectives of the TI Act, with regard to rail, are to establish a regime that:

- contributes to overall transport effectiveness and efficiency
- provides for the safety of railways and persons at, on or near railways
- contributes to lower transport costs by allowing the maximum flexibility in rail transport operations consistent with achieving safety objectives
- allows railway managers and operators to make decisions on a commercial basis.

The TI Act also:

- regulates the management of the state-controlled road (SCR) network
- provides for creation of 'common areas', which are defined as areas of land where a relevant road interrupts the route of a future railway land (Section 249).

The Department of Transport and Main Roads (DTMR) is the administering authority for the TI Act.

#### **4.10.1 Relevance of the TI Act to the Project (Rail)**

The Project (Rail) will:

- cross dedicated public road reserves (constructed and unconstructed)
- impact on six public dedicated roads (constructed or unconstructed)
- impact on four easements.

These are described in the following Sections.

##### ***Roads and reserves***

Adani has entered into a Road Maintenance Agreement with the Isaac Regional Council and will be responsible for the upgrade and maintenance of Moray Carmichael Road to a standard acceptable to the Isaac Regional Council in accordance with the Specification and Council Road Standards. While Adani is currently maintaining the road, further studies are underway to determine what upgrades are required to support the Project's exploration phase and through construction into operation (see Volume 2 Section 2 Project Description). Some realignment may be required.

##### ***Common areas***

The Project (Rail) will cross two SCRs, Kilcummin Diamond Downs Road and Gregory Developmental Road. Under Section 249(3) of the TI Act, the Minister may declare a "common area" if the following applies:

- the railway manager for the rail corridor land or future railway land may construct, maintain and operate a railway on the common area in a way not inconsistent with its use as a relevant road
- the relevant person for the relevant road may construct, maintain and operate the relevant road on the common area in a way not inconsistent with its use as a railway
- the relevant person for the road does not have any liability for the railway or its use or operation on the common area.

Adani is proposing to construct the Project (Rail) corridor with at grade crossings with the two SCRs and will apply for 'common area' declarations and volumetric titles under the TI Act.

### **Easements**

Sixteen easements have been identified within the vicinity of the Project (Rail) corridor. Of the 16 easements identified, only four cross the Project (Rail) where the rail line connects with the existing Goonyella rail system.

Access roads will be required along the alignment to allow drainage and bridge structure crews to access work locations. The primary access roads to the alignment will be designed and constructed (or upgraded) with due consideration to minimising disruption to landholders and public infrastructure.

### **Ancillary Works and Encroachments**

Under Section 50 of the TI Act, a road corridor permit (RCP) to construct, maintain, operate or conduct ancillary works and encroachments on a SCR is required.

Where construction and/or maintenance access to SCRs are required, approvals are triggered under Section 62 of the TI Act. Construction approval is also required under Section 33 of the TI Act. This will apply to the Project (Rail) only as it crosses one SCR, namely the Kilcummin Diamond Downs Road.

## **4.11 Local Government Act 2009**

The *Local Government Act 2009* (LG Act) designates the control and management of roads which are not SCRs to local governments. Under Section 75 of the LG Act, it is an offence to carry out works in a road controlled by a local government without the local government's written approval.

Local governments are also empowered to make local laws about matters including roads under the LG Act. Isaac Regional Council has made *Local Law No. 4 (Local Government Controlled Areas, Facilities and Roads) 2011* which establishes the framework for subordinate local laws to require approvals for works in local government controlled roads.

Aside from the SCRs, the Project (Rail) will intersect with five local government roads:

- ▶ Eaglefield Road
- ▶ Amaroo Road
- ▶ Avon Road
- ▶ Moray Bulliwallah Road
- ▶ Moray Carmichael Road.

Adani will require approvals under subordinate local laws to carry out works on or interfere with a road or its operation from Isaac Regional Council in respect of these crossings. Road works may also require approvals under the SP Act.

## **4.12 Relevance of the LP Act to the Project (Rail)**

An overview of the LP Act is included in Section 3 of this report. The following Section details the relevance of the LP Act to the Project (Rail).

The Stock Route Network is the network of stock routes and reserves for travelling stock in Queensland. The Project (Rail) alignment crosses three national stock routes. The stock routes and associated proposed crossing treatments (as agreed in principle with the Queensland Government and Isaac Regional Council) are as follows:

- ▶ Kilcummin Diamond Downs Road is a stock crossing (Stock route (M399BELY03) and it is proposed that the crossing treatment will comprise a large culvert
- ▶ Amaroo Road (stock route U402BELY03) is proposed to be grade separated with stock passing under the proposed rail bridge structure (ie rail over road) (to be confirmed through detailed design)
- ▶ Mistake Creek is also a stock crossing (stock route (U401BELY02). Mistake Creek crossing is proposed to be grade separated with stock passing under the proposed rail bridge structure necessary for crossing the watercourse.

Pest management, as required by this legislation, is addressed under Volume 3, Section 13 (draft EMP).

#### **4.13 Relevance of the Building Act 1975 to the Project (Rail)**

An overview of the Building Act is included in Section 3 of this report.

Building work approval will be required for the temporary construction camps and other structures within the corridor for the Project (Rail). Applications will be made as triggered during the process.

#### **4.14 Relevance of the P&D Act to the Project (Rail)**

An overview of the P&D Act is included in Section 3 of this report.

The installation of water and sewage works for facilities at the Project (Rail) will require assessment under the P&D Act. Applications will be made as triggered during the process.



## 5 Approvals for the Project (Offsite Infrastructure)

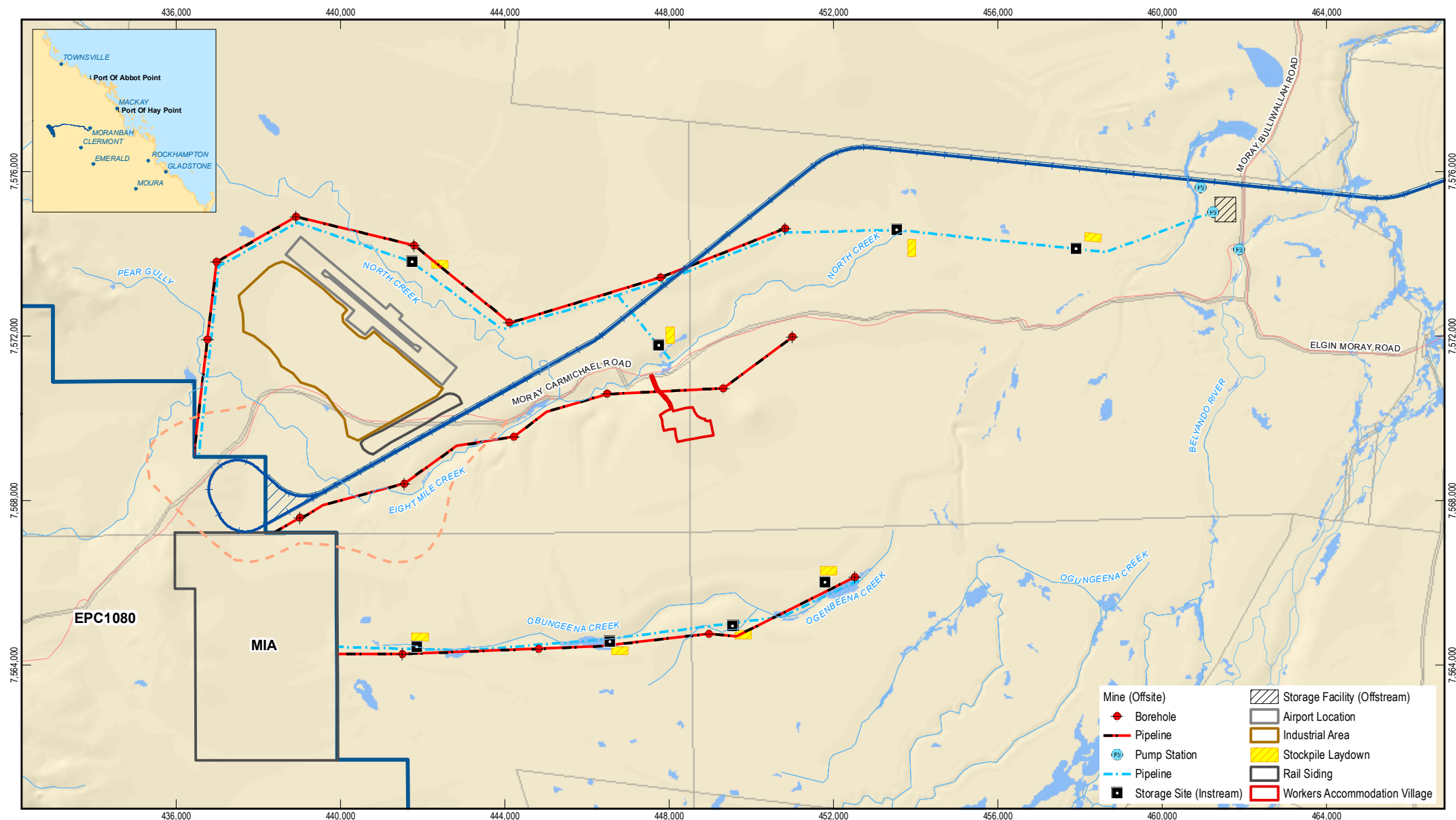
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### 5.1 Description of the Project (Offsite Infrastructure)

The offsite infrastructure is located outside EPC1690 and EPC1080, and is not within the proposed ML. See the following Figure 6 for a map showing the location of the Project (Offsite Infrastructure).

The Project (Offsite Infrastructure) includes:

- ▶ a workers accommodation village and associated facilities located approximately 12 km east of the Mine and accessed via the upgraded and realigned Moray Carmichael Road. The village is proposed to have a capacity of up to 2,000 persons to accommodate operational workforces for the Project (Mine)
- ▶ a permanent airport positioned approximately 5 km west of the workers accommodation village and will provide access for fly-in-fly-out workers
- ▶ an industrial area located near the airport to support the Project
- ▶ water supply infrastructure to enable the extraction, storage and delivery of water during the construction and operation phases of the Project (Mine). The infrastructure will extend along the waterways North Creek, Obungeena Creek and Belyando River, and the council road, Moray- Carmichael Rd, that runs through the Moray Downs property.



1:125,000 (at A4)  
0 1 2 3 4  
Kilometres  
Map Projection: Universal Transverse Mercator  
Horizontal Datum: Geocentric Datum of Australia (GDA)  
Grid: Map Grid of Australia 1994, Zone 55



#### LEGEND

- Town
- State Road
- Local Road
- Other Railway
- Cadastral Parcel
- Watercourse
- Waterbody
- Rail (West)
- Rail (West)
- Mine (Onsite)
- Mine Infrastructure Area
- Moray Carmichael Road (Realignment)
- Storage Facility (Offstream)
- Airport Location
- Stockpile Laydown
- Rail Siding
- Workers Accommodation Village



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**Adani Mining Pty Ltd**  
Carmichael Coal Mine and Rail Project

Job Number 41-25215  
Revision C  
Date 06-12-2012

Offsite Infrastructure Location

Figure 6

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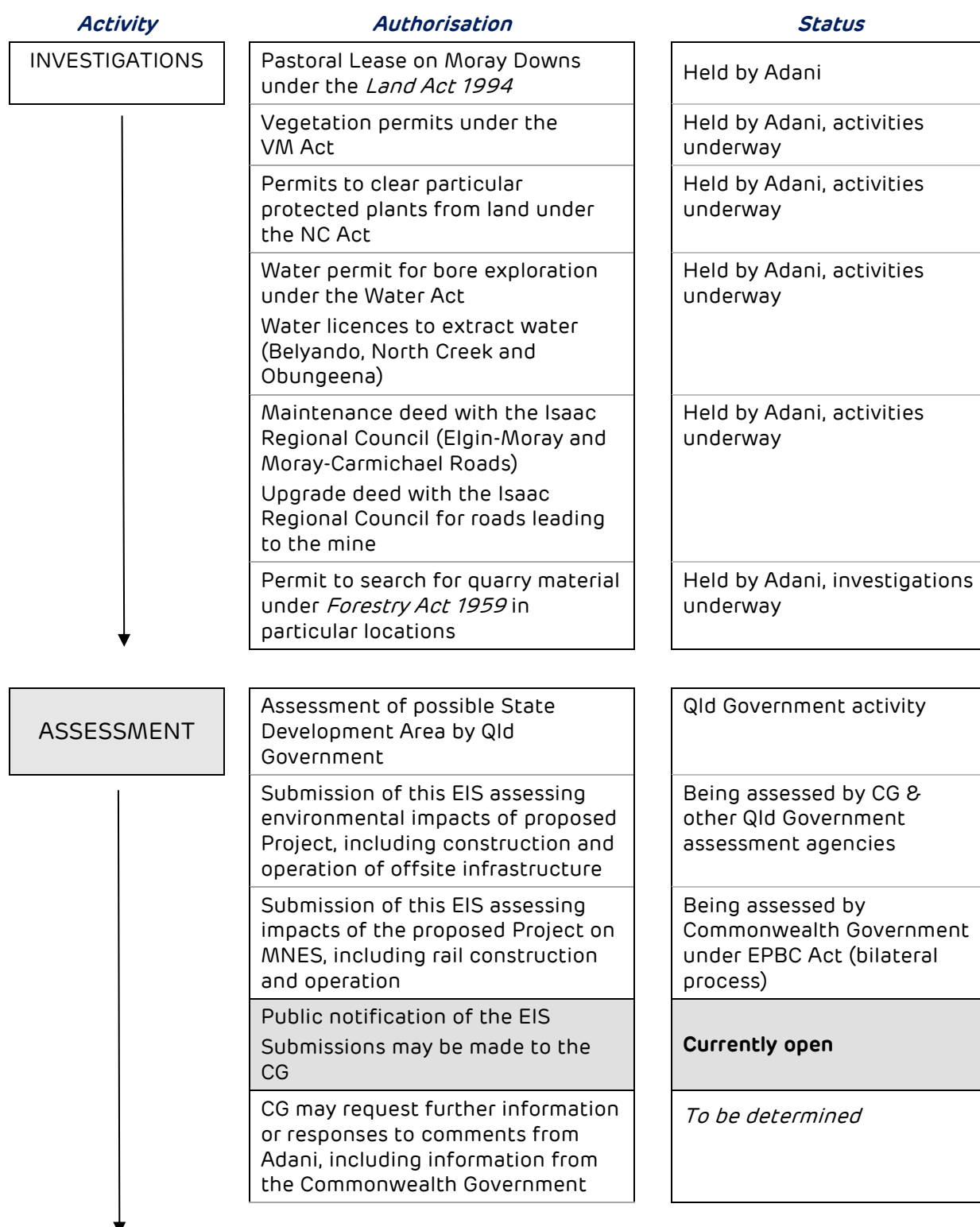
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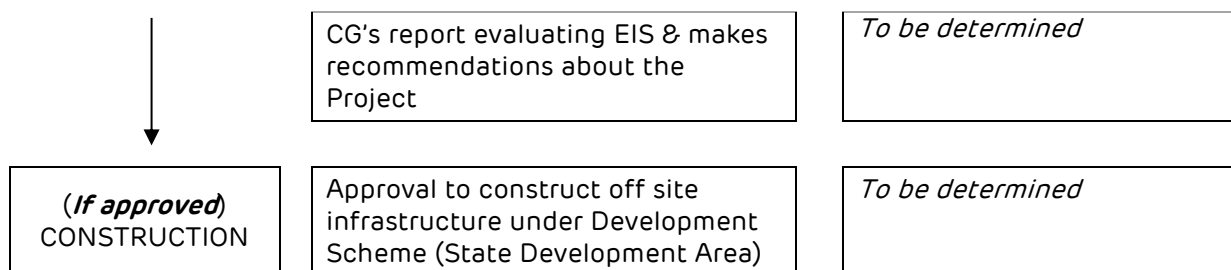
Data source: DERM: DEM (2008), DCDB (2010); DME: EPC1690 (2010) / EPC1080 (2011); Adani: Alignment Opt9 Rev3 (SP1&2) (SP3) (2012); © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads (2007); Gassman/Hyder: Mine (Offsite) Moray Carmichael Road Realignment (Opt 2) (2012). Created by: BW,MS

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The following Figure 7 outlines assessment process for the Project (Offsite Infrastructure), including investigation and construction.

**Figure 7 - Assessment process for the Project (Offsite infrastructure) – Overview**





## 5.2 Relevance of the SDPWO Act to the Project (Offsite Infrastructure)

An overview of the SDPWO Act is included in Section 2 of this report.

Adani is working with the Office of the Coordinator-General to determine the most appropriate approvals framework for the Project (Offsite Infrastructure). If the Coordinator-General declares the area to be an SDA, the Coordinator-General will have an active role in assessment, including acting as assessment manager for material change of use development applications.

## 5.3 Land Act 1994

The object of the *Land Act 1994* is for land to be managed for the benefit of the people of Queensland on the basis of the following seven principles: sustainability, evaluation, development, community purpose, protection, consultation and administration.

The Act deals with land tenure and land leases and is applicable to the Project. Relevant provisions of the Act will be applicable in dealings related to obtaining new tenure over land, or reconfiguring parcels of land, required for establishment of the Project.

### 5.3.1 Relevance of the Land Act 1994 to the Project (Offsite Infrastructure)

Adani currently holds a Pastoral Lease under the *Land Act 1994* for the Moray Downs property. The Moray Downs pastoral lease also covers the majority of the mining tenements EPC 1690 and the eastern portion of EPC 1080.

## 5.4 Relevance of the SP Act to the Project (Offsite Infrastructure)

An overview of the SP Act is included in Section 2 of this report. The following Section details the relevance of the SP Act to the Project (Offsite Infrastructure).

Regardless of whether an SDA is declared over the Project (Offsite Infrastructure) area, applications for MCU will be triggered and lodged with the relevant assessment manager. Operational works approvals will also be required under relevant schemes for numerous activities involved in the Project (Offsite Infrastructure). The aspects of assessable development for the Mine (Offsite) Infrastructure are listed below:

- ▶ making an MCU application, under Section 242 (Preliminary Approval) to vary the planning scheme, for:
  - workers accommodation village
  - permanent airport
  - industrial area

- quarries, if included in the SDA
- ▶ operational works for the following activities
  - excavating and filling for construction of the Project (Offsite Infrastructure)
  - clearing native vegetation under the VM Act
  - for taking or interfering with water in a watercourse, lake or spring for in-stream storages on North Creek and Obungeena Creek under the Water Act
  - constructing waterway barrier works under the Fisheries Act
  - constructing a dam that requires failure impact assessment under the WSSR Act
  - undertaking road works on a local government road
- ▶ building works for each structural component required, including such works as retaining walls
- ▶ making a MCU for environmentally relevant activities.

### 5.5 Relevance of the EP Act to the Project (Offsite Infrastructure)

An overview of the EP Act is included in Section 2 of this report. The following Section details the relevance of the EP Act to the Project (Offsite Infrastructure).

ERAs being conducted, other than for mining activities (authorised under an ML), require approval under the EP and SP Acts. The ERAs listed below are triggered by the Project (Offsite Infrastructure):

- ▶ ERA 8 – chemical storage: storing 500m<sup>3</sup> or more of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 dam
- ▶ ERA 16 – extractive and screening activities
- ▶ ERA 56 – regulated waste storage
- ▶ ERA 57 – regulated waste transport
- ▶ ERA 60 – waste disposal: operating a facility for disposal of general waste and regulated waste where the regulated waste is less than 10% of the total waste and the total quantity of waste is less than 2000 tonnes per year
- ▶ ERA 63 – sewage treatment: operating sewage treatment works, other than no-release works, with a total daily peak design capacity of 1500 to 4000 equivalent persons.

Legislative amendments scheduled to commence in March 2013 mean the relevant approval for these ERAs would be an EA. If the Coordinator-General's report evaluating the EIS is not provided before these changes take effect, Adani seeks a recommendation from the Coordinator-General that the EA be issued. Additional information about ERAs for the Project (Offsite Infrastructure) may be requested by the Coordinator-General in relation to the assessment of the EIS under Section 35(2) of the SDPWO Act.

It is anticipated that further ERA approvals will be required for the operation of the industrial area. Adani will obtain any approvals required to conduct its operations in this area.

## 5.6 Relevance of the VM Act to the Project (Offsite Infrastructure)

An overview of the VM Act is included in Section 2 of this report.

Clearing remnant vegetation will be required for the Project (Offsite Infrastructure). Under the VM Act, a development application for operational work that is clearing native vegetation can only be made for a relevant purpose included in Section 22A. Clearing for a project declared to be a significant project under the SDPWO Act is clearing for a relevant purpose.

Adani seeks the recommendation of the Coordinator-General that development approval for the clearing required for the Project (Offsite Infrastructure) be given. Relevant information is contained in Volume 2, Section 2 Project Description and Volume 2, Section 5 Nature Conservation of the EIS. Additional information may be requested about VM Act by the Coordinator-General under Section 35(2) of the SDPWO Act.

## 5.7 Relevance of the NC Act to the Project (Offsite Infrastructure)

An overview of the NC Act is included in Section 3 of this report.

Permits will be required for the removal of rare, threatened, vulnerable and endangered plants under the NC Act. However, a number of exemptions as listed under Section 41 of the *Nature Conservation (Protected Plants) Conservation Plan 2000* are potentially relevant to clearing of 'Least Concern' plants associated with rail corridor and temporary work areas.

Adani is seeking confirmation of relevant exemptions and, where exemptions do not apply, will apply for the relevant clearing permits.

Any moving of protected animals required for this process will be undertaken by appropriately qualified and licensed spotter/catchers.

## 5.8 Relevance of the Water Act to the Project (Offsite Infrastructure)

An overview of the Water Act is included in Section 2 of this report. The following Section details the relevance of the Water Act to the Project (Offsite Infrastructure).

### 5.8.1 Water licences

Water licences will be required for the Project (Offsite Infrastructure) for the taking of water from groundwater supply bores, storage of 5GL of water in a water supply storage (dams) within the current Moray Downs Property Boundary that will contain raw water, taking of surface water harvesting from the Belyando River and eight proposed in-stream storages on the North and Obungeena Creeks. These water licences are required under the Burdekin WRP.

A water licence will also be required for taking overland flow water, unless the taking is allowed under Section 79 of the Burdekin WRP.

Works can proceed under the code of self-assessable development for overland flow water using limited capacity works. The trigger for a permit under the Burdekin WRP is 250ML.

### 5.8.2 Riverine protection permits

Activities involving the destruction of vegetation or placing fill or excavating in a watercourse require a riverine protection permit unless an exemption applies. Relevant exemptions for the Project (Offsite Infrastructure) include activities:

- ▶ permitted under a water licence
- ▶ authorised by a development permit for operational work that:
  - allows taking or interfering with water
  - allows interfering with overland flow water in a drainage embankment area; or
  - is the construction of a dam requiring failure impact assessment; and
- ▶ undertaken in accordance with the *Guideline – Activities in a watercourse, lake or spring carried out by a landowner*.

Where these exemptions do not apply, a riverine protection permit will be obtained.

Adani seeks recommendations from the Coordinator-General that the water licences required for the Project (Offsite Infrastructure) be granted, subject to appropriate conditions. Relevant information is contained in Volume 2, Section 6 Water Resources of the EIS. Additional information may be requested about riverine protection permits under the Water Act by the Coordinator-General under Section 35(2) of the SDPWO Act.

### 5.9 Relevance of the WSSR Act to the Project (Offsite Infrastructure)

An overview of the WSSR Act is included in Section 3 of this report.

The 5GL storage dam will require failure impact assessment, both before construction and on an ongoing basis as required by the WSSR Act. As such, its construction requires development assessment under the SP Act. Additional information may be requested about the failure impact assessment by the Coordinator-General under Section 35(2) of the SDPWO Act.

### 5.10 Relevance of the Fisheries Act to the Project (Offsite Infrastructure)

An overview of the Fisheries Act is included in Section 4 of this report. The following Section details the relevance of the Fisheries Act to the Project (Offsite Infrastructure).

The construction of waterway barrier works require development approval under SP Act and the Fisheries Act, unless they comply with one of the codes for self-assessable development.

The relevant codes for the Project (Offsite Infrastructure) are:

- ▶ WWBW01 – Minor waterway barrier works – Part 1: minor dams and weirs
- ▶ WWBW01 – Minor waterway barrier works – Part 3: culverts
- ▶ WWBW01 – Minor waterway barrier works – Part 4: bed level crossing
- ▶ WWBW02 – Temporary waterway barrier works.



Where proposed waterway barrier works cannot comply with the relevant code for self-assessable development, a development permit under the SP Act will be applied for. Adani is aware that these codes are currently being revised by the Department, and is committed to assessing its development under the codes that apply at the time.

In line with Adani's goal of streamlining the approvals process to the greatest extent possible and avoid unnecessary administrative burden for the State, multiple aspects of development will be applied for in single applications, to minimise the total number of approval processes running at any given time.

### **5.11 Relevance of the Local Government Act 2009 to the Project (Offsite Infrastructure)**

The *Local Government Act 2009* (LG Act) provides a framework for the management of roads by local governments. Approval from Isaac Regional Council (Isaac Regional Council) will be required for alteration or improvement to local government roads as a result of works for the Project (Offsite Infrastructure).

Undertaking road works in a local government road, use of explosives and oversize traffic may also trigger a development approval requirement under the SP Act.

### **5.12 Relevance of the Building Act 1975 to the Project (Offsite Infrastructure)**

An overview of the Building Act is included in Section 3 of this report.

Building work approval will be required for workers accommodation village and other structures within the corridor for the Project (Offsite Infrastructure). Applications will be made as triggered during the process.

### **5.13 Relevance of the P&D Act to the Project (Offsite Infrastructure)**

An overview of the P&D Act is included in Section 3 of this report.

The installation of water and sewage works for facilities at the Project (Offsite Infrastructure) will require assessment under the P&D Act. Applications will be made as triggered during the process.

## 6 Conclusions

The relevant approval assessment processes for the various components of the Project are outlined below.

### Project-wide authorisations

- ▶ The Project is a controlled action for matters of MNES under the EPBC Act. This EIS supports an assessment of the Project under the EPBC Act.
- ▶ The Project has been declared a “significant project” by the Queensland Coordinator-General under the SDPWO Act and this EIS responds to the ToR. The information presented in the EIS is designed to enable the Coordinator-General to make recommendations about the approvals required for the Project. Additional information may be requested by the Coordinator-General about the MLAs during the assessment of the EIS under Section 35(2) of the SDPWO Act.
- ▶ Other project-wide requirements, such as agreements under Native Title legislation and quarrying assessment, are described in Section 2 of this report and the following tables.
- ▶ This report also includes development approval applications under the SP Act for temporary workforce accommodation in Appendix V.

### Project (Mine)

- ▶ MLAs under the MR Act over areas under exploration for coal, namely EPC 1690 and the eastern portion of EPC 1080.
- ▶ An environmental authority (mining activities) under Chapter 5 of the EP Act with conditions for the carrying out of ERAs.
- ▶ Applying for other permits individually, as triggered and listed in Sections 3 of this report and the following tables.

### Project (Rail)

- ▶ Adani is in discussions with the Office of the Coordinator-General regarding a declaration of land relating to the Project (Rail) as a SDA under the SDPWO Act. It is proposed the SDA include temporary construction camps to support the construction of the rail, and other facilities such as maintenance areas.
- ▶ Other permits will be required as listed in Sections 4 of this report and the following tables.
- ▶ This report also includes applications for a number of vegetation clearing permits for part of the Project (Rail) under the NC Act in Appendix V and the following tables.

### Project (Offsite Infrastructure)

- ▶ It is also proposed that an SDA include the Project (Offsite Infrastructure), such incorporating a workers accommodation village, airport, industrial area and water supply infrastructure.
- ▶ Other permits, as triggered, such as licences for the taking of water under the *Water Act 2000* and as listed in Sections 4 of this report and the following tables.

Adani is actively working to reduce the complexity associated with the large number of approvals which are relevant to significant projects. Adani is seeking recommendations through the Coordinator-General's Report about this EIS and individual permits, authorisations and approvals as summarised in the following tables.

Adani seeks that the Coordinator-General recommend the grant of each of the relevant approvals set out in the tables below together with any other approvals the Coordinator-General identifies as being required for the Project, and that appropriate conditions be recommended as part of the Coordinator-General's report.

Applications are included in Appendices IV and V for the Coordinator-General to consider when making recommendations, such as conditions about:

- temporary workforce accommodation camps
- vegetation approvals for some parts of the Project (Rail) construction.

## 6.1 Project-wide authorisations

Legislation	Authorisation or agreement	Relevance	Relevant EIS Sections
EPBC Act	Approval for taking of a controlled action	The Project has been determined as likely to have a significant impact on MNES	Volume 1, Section 11 (Matters of national environmental significance) and this report, Section 2
SDPWO Act	Environmental assessment 0- the Coordinator-General's report evaluating the EIS	The Project was declared as a "significant project" on 26 November 2010, for which an EIS is required	This EIS addresses the ToR as set by the Coordinator-General
SDPWO Act (or SP Act)	Development approval for MCU	Quarrying activities	See Section 2 and the below tables for individual authorisations.
<i>Forestry Act 1959</i>	Quarry sales permit	The use quarry materials belonging to the State	See Section 2 and the below tables for individual authorisations.

## 6.2 Project (Mine) approvals

Legislation	Approval, Permit or Agreement	Relevance	Relevant EIS Sections
MR Act	Mining Lease 70441; mining lease over eastern portion of EPC 1080	A mining lease is required in order to win coal and carry out the associated activities proposed for the Project (Mine)	Volume 2, Sections 2 (Project Description) and 4 (Land)
EP Act	Environmental authority for mining activities, and numerous associated ERAs	Mining activities and associated ERAs cannot be carried out without an Environmental Authority	Volume 2, Sections 2 (Project Description), 10 (Waste), 12 (Hazard and Risk) and 13 (EM Plan)
SP Act (and Water Act)	Water licences for storage dams, totalling 20 GL	A water licence is required for the taking of water, including overland flow water where it exceeds the trigger limits in the WRP	Volume 2, Sections 2 (Project Description), 4 (Land) and 6 (Water Resources)
LP Act	Agreement with department and Isaac Regional Council	Closure of one stock route	Volume 2, Sections 2 (Project Description) and 4 (Land)
Building Act	Self-assessable building works	Section 319(3) RA provides for building work on –lease to be self-assessable for Section 21 of the Building Act	Volume 2, Section 2 (Project Description)
P&D Act	Compliance permit for plumbing and drainage works	All plumbing and drainage works are required to comply with the P&D Act	N/A

### 6.3 Project (Rail) approvals

Project (Rail) approvals			
Legislation	Approval, Permit or Agreement	Relevance	Relevant EIS Sections
SDPWO Act	Possible SDA declaration	Adani is in discussions with the Coordinator-General about the possible declaration of an SDA over the Project (Rail) and associated facilities	This report, Sections 2 to 5
SP Act	MCU for the construction of: <ul style="list-style-type: none"><li>▶ rail</li><li>▶ workers accommodation camps.</li></ul>	The change of use will trigger a material change of use application to be assessed against the development scheme for the SDA, another mechanism for infrastructure or the local government planning scheme (potentially under a preliminary approval overriding the planning scheme)	Volume 3, Sections 2 (Project Description) and 4 (Land Use)
(and EP Act)	Operational work (excavation or filling)	Excavation and potentially filling work will be required to prepare the land for construction activities	Volume 3, Sections 2 (Project Description) and 4 (Land Use)
	Operational work that is undertaking road works on a local government road	Road crossings will be required for the Project (Rail)	Volume 3, Section 2 (Project Description)
	ERAs [Note: legislation is proposed to require an EA rather than development approval for these activities. Adani is committed to meeting the relevant legislative requirements as they apply.]	Environmentally relevant activities are required to be carried out as part of the Project (Rail)	Volume 3, Sections 2 (Project Description), 4 (Land Use), 6 (Water Resources), 10 (Waste), 12 (Hazard and Risk) and 13 (EM Plan)
	(and VM Act)	Operational work that is clearing native vegetation	Vegetation will be required to be cleared prior to construction

Project (Rail) approvals			
Legislation	Approval, Permit or Agreement	Relevance	Relevant EIS Sections
(and Building Act)	Building works	Planning scheme may trigger building work approval for temporary accommodation camps and facilities associated with the Project (Rail) corridor. It is expected that some of these works will in fact be self-assessable	Volume 3, Section 2 (Project Description)
(and Water Act)	Operational work that allows taking or interfering with water	A number of waterway crossing and drainage devices will be constructed for the Project (Rail), necessitating this approval Temporary extraction of water from waterways or overland flow paths	Volume 3, Sections 2 (Project Description), 4 (Land Use) and 6 (Water Resources)
	Operational work that allows taking or interfering with artesian or sub artesian water	A number of groundwater bores are required for the sourcing of construction water	Volume 3, Sections 2 (Project Description), 4 (Land Use) and 6 (Water Resources)
(and Fisheries Act)	Operational work that is constructing waterway barrier works	A number of the waterway crossings required for the Project (Rail) will not be able to comply with the self-assessable development guidelines	Volume 3, Sections 2 (Project Description), 4 (Land Use) and 6 (Water Resources)
Water Act	Water licences	Construction of waterway crossing involves interfering with water	Volume 3, Sections 2 (Project Description), 4 (Land) and 6 (Water Resources)
	Riverine protection permits	The construction of waterway crossings will involve destruction of vegetation, placing fill or excavating in a watercourse which will not always be the subject of an exemption	Volume 3, Sections 2 (Project Description), 4 (Land) and 6 (Water Resources)

Project (Rail) approvals			
Legislation	Approval, Permit or Agreement	Relevance	Relevant EIS Sections
NC Act	Permit to take protected plants	Seeking confirmation of relevant exemptions and, where exemptions do not apply, will apply for the relevant clearing permits.	Application to clear 'Least Concern' plants within a Section of the rail corridor Rail (east) have been prepared and included in Appendix V.  Supporting information for vegetation clearing permits included in Appendix V for laydown and temporary works areas on same rail system
TI Act	Ancillary works and encroachment	Construction of Project (Rail) involves undertaking works with SCRs	Volume 3, Sections 2 (Project Description), 4 (Land)
	Declaration of common areas	Construction of Project (Rail) involves undertaking works with SCRs	Volume 3, Sections 2 (Project Description), 4 (Land)
	Approval for construction and maintenance access to SCRs	Construction of Project (Rail) involves undertaking works with SCRs	Volume 3, Sections 2 (Project Description), 4 (Land)
Forestry Act	Quarry sales permit	Depending on the locations of the quarries, a sales permit to use quarry material owned by the State may be required	Volume 3, Section 2 (Project Description)
<i>Local Government Act 2009</i>	Approval for alteration or improvement to local government controlled roads and approval for carrying out works on a road	Local laws trigger the requirement for this approval in association with road crossings to be construction	Volume 3, Section 2 (Project Description)
P&D Act	Compliance permit for plumbing and drainage works	All plumbing and drainage works are required to comply with the P&D Act	Volume 3, Section 2 (Project Description)



## 6.4 Project (Offsite Infrastructure) approvals

Project (Offsite Infrastructure) approvals			
Legislation	Approval, Permit or Agreement	Relevance	Relevant EIS Sections
SDPWO Act	Possible SDA declaration	Adani is in discussions with the Coordinator-General about the possible declaration of an SDA over the Project (Offsite Infrastructure)	This report, Sections 2 to 5
SP Act          (and EP Act)   (and VM Act)	MCU to vary the effect of the planning scheme: <ul style="list-style-type: none"> <li>workers accommodation village</li> <li>permanent airport</li> <li>industrial area.</li> </ul>	The change of use will trigger a material change of use application, either under the development scheme for the SDA or the local government planning scheme (potentially under a preliminary approval overriding the planning scheme)	Volume 2, Sections 2 (Project Description) and 4 (Land Use)
	Operational work (excavation or filling)	Excavation and potentially filling work will be required to prepare the land for construction activities	Volume 2, Sections 2 (Project Description) and 4 (Land Use)
	Undertaking road works on a local government road	Upgrades proposed to local trigger development assessment	Volume 2, Section 2 (Project Description)
	ERAs	ERAs proposed to be carried out as part of the Project (Offsite Infrastructure)	Volume 2, Sections 2 (Project Description), 4 (Land Use), 6 (Water Resources), 10 (Waste), 12 (Hazard and Risk), 13 (Mine EM Plan) and 14 (Offsite EM Plan).
	Operational work that is the clearing of native vegetation	Vegetation will be required to be cleared prior to construction	Volume 2, Section 4 (Land)
	Undertaking road works on a local government road	Upgrades proposed to local trigger development assessment	Volume 2, Section 2 (Project Description)

Project (Offsite Infrastructure) approvals			
Legislation	Approval, Permit or Agreement	Relevance	Relevant EIS Sections
(and Building Act)	Building work	Planning scheme will trigger building work approval requirements for the various buildings for workers accommodation, airport and industrial uses, and potentially aspects of the water infrastructure.	Volume 2, Section 2 (Project Description)
(and Water Act)	Operational work that allows taking or interfering with water	Construction of a number of proposed in-stream storages will require this approval	Volume 2, Sections 2 (Project Description), 4 (Land Use) and 6 (Water Resources)
(and Fisheries Act)	Operational work that is constructing waterway barrier works	Construction of the proposed in-stream storages, associated pipelines and 5GL storage will require approval if the self-assessable guidelines determine this	Volume 2, Sections 2 (Project Description), 4 (Land Use) and 6 (Water Resources)
(and WSSR Act)	Operational work that is the construction of a dam that must be failure impact assessed	The 5GL storage will trigger the requirement for failure impact assessment	Volume 2, Sections 2 (Project Description), 4 (Land Use) and 6 (Water Resources)
Water Act	Water licence	Taking of water for 5GL storage and interfering with water for in-stream storages, as well as taking of water from groundwater supply bores	Volume 2, Sections 2 (Project Description), 4 (Land) and 6 (Water Resources).
NC Act	Permit to take protected plans	Seeking confirmation of relevant exemptions and, where exemptions do not apply, will apply for the relevant clearing permits	Volume 2, Chapter 5 (Nature Conservation)
<i>Local Government Act 2009</i>	Approval for alteration or improvement to local government controlled roads	Local laws trigger the requirement for this approval in association with road upgrades to be undertaken	Volume 2, Section 2 (Project Description)
P&D Act	Compliance permit for plumbing and drainage works	All plumbing and drainage works are required to comply with the P&D Act	Volume 2, Section 2 (Project Description)

## Appendix I – Terms of Reference

Extract from ToR	Where ToR addressed
<b>Section 1.9 Project Approvals</b>	
Describe and list Commonwealth, state and local legislation and policies relevant to the planning, approval, construction and operation of the project. Identify all approvals, permits, licences and authorities that will need to be obtained for the proposed project. Outline the triggers for the application of each of these and identify relevant approval requirements.	Sections 2 to 6 of this report
Relevant Commonwealth Government legislation may include, but is not limited to:  <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1994</i>  <i>Environment Protection and Biodiversity Conservation Act 1999</i>  <i>Native Title Act 1993</i>	Section 2 of this report
Outline and identify relevant Commonwealth obligations such as:	
<ul style="list-style-type: none"> <li>protection of World Heritage Values</li> <li>migratory animals (China-Australia Migratory Bird Agreement (CAMBA), Japan-Australia Migratory Bird Agreement (JAMBA), Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA) and Bonn Convention)</li> <li>biodiversity, climate and wetlands of international importance (Ramsar)</li> </ul>	EIS Volume 1, Section 11
Where relevant, refer to applicable Queensland legislation, which may include but is not limited to:	
<i>Aboriginal Cultural Heritage Act 2003</i>	Sections 2 and 6 of this report
<i>Environmental Protection Act 1994</i>	Sections 2 to 6 of this report
<i>Fisheries Act 1994</i>	Sections 3 to 6 of this report
<i>Forestry Act 1959</i>	Sections 4, 5 and 6 of this report
<i>Land Act 1994</i>	Sections 5 and 6 of this report
<i>Land Protection (Pest and Stock Route Management) Act 2002</i>	Sections 4 to 6 of this report
<i>Mineral Resources Act 1989</i>	Sections 3 and 6 of this report
<i>Nature Conservation Act 1992</i>	Sections 3 to 6 of this report
<i>Queensland Heritage Act 1992</i>	Appendix II of this report

Extract from ToR	Where ToR addressed
<i>State Development and Public Works Organisation Act 1971</i>	Sections 2 to 6 of this report
<i>Sustainable Planning Act 2009</i>	Sections 2 to 6 of this report
<i>Torres Strait Islander Cultural Heritage Act 2003</i>	Appendix II of this report
<i>Transport Infrastructure Act 1994</i>	Sections 4 and 6 of this report
<i>Transport Operations (Road Use Management) Act 1995</i>	
<i>Transport Planning and Coordination Act 1994</i>	
<i>Vegetation Management Act 1999</i>	Sections 2 to 6 of this report
<i>Water Act 2000</i>	Sections 2 to 6 of this report
<p>Note that the Government intends to introduce and enact legislation in 2011 for regulating development on land determined to be strategic cropping land. If this EIS process is not finalised by the time the legislation comes into force, further requirements may be placed on the EIS process relating to land determined to be strategic cropping land prior to a decision being made.</p> <p>"Protecting Queensland's strategic cropping land: a policy framework" is available on the DEHP website and provides details of the Government's current policy about strategic cropping land. For further information about the strategic cropping land policy framework, refer to the DEHP website or email <a href="mailto:scenquiries@derm.qld.gov.au">scenquiries@derm.qld.gov.au</a>.</p> <p>Legislation on dealing with offsets in development assessment and conditions has recently been passed</p>	<p>Noted.</p> <p>Section 4 of this report addresses the <i>Strategic Cropping Land Act 2011</i></p>
<b>Section 1.10 Relevant Plans</b>	
Outline the project's consistency with the existing national, state, regional and local planning frameworks that apply to the project location. Refer to all relevant statutory and non-statutory plans, including water resource plans under the Water Act 2000, planning policies, guidelines, strategies and agreements.	<p>Appendix III of this report</p> <p>Also EIS Volume 2, Section 6 and Volume 3, Section 6</p>
This project is located within the Whitsunday, Hinterland and Mackay (WHAM) planning region. On 5 March 2011, the Queensland Government announced that a statutory regional plan will be prepared for the WHAM region, a draft of which is expected to be released for public comment in the first half of 2011. This plan is in an advanced state of finalisation, and will be recognised as a state interest under the <i>Sustainable Planning Act 2009</i> . An assessment of this project against relevant policies and provisions of the draft WHAM regional plan, once released, must be provided.	Appendix III of this report

Extract from ToR	Where ToR addressed
Similarly, the project may potentially impact on the Central West and Central Queensland planning regions. An assessment of this project against the Central West Regional Plan (2009) must be provided.	This Regional Plan does not apply to the Project and has not been utilised in this assessment. Refer to Appendix III of this report
The proposed mine site for this project lies within the <i>Water Resource (Burdekin) Plan 2007</i> and the <i>Water Resource (Great Artesian Basin) Plan 2006</i> areas. Any relevance of these plans, the <i>Water Act 2000</i> and the <i>Water Regulation 2002</i> to the project must be addressed as part of the EIS.	Sections 2 to 6 of this report EIS Volume 2, Section 6 and EIS Volume 3, Section 6
<b>Section 1.11 Environmentally relevant activities</b>	
Briefly describe each environmentally relevant activity (ERA) and associated activities that are to be carried out in connection with the project. Present a detailed description of each ERA in Section 3, Environmental values and management of impacts and provide details of the impact on land, water, air, noise and any other relevant environmental values.	Sections 3 to 6 of this report
Permitting requirements for environmentally relevant activity 14 - electricity generation differs depending on connection to the grid. Should ERA 14- electricity generation be undertaken on the mining tenure, the EIS must identify if the plant will or intends to be connected to the State power network grid. Electricity generation undertaken on a mining tenure that is, or intends to be, connected to the State power network grid will require a separate development permit. Electricity generation undertaken on a mining tenure and utilized solely for mining activities contained within the mining tenure can be permitted under a mining environmental authority. If any electricity generated on the mining tenure is used for anything outside of the mining tenure, a separate development approval under the <i>Sustainable Planning Act 2009</i> will be required.	Section 3 of this report
<p>The EIS must identify if construction/operation camps and extractive industries located off the mining tenure will be conducting an ERA, such as sewage treatment, motor vehicle workshops, abrasive blasting, and boiler making.</p> <p>If an ERA is to be undertaken, sufficient detail must be provided about the activity, potential environmental impacts and strategies to mitigate the environmental impacts. The permitting of ERA's under a development permit will require the submission of a Site Based Management Plan and should be a separate document from a mining Environmental Management Plan. The above information will allow for informed decisions to be made with respect to the project, consistent with the provisions of the EP Act.</p>	<p>Section 2 and Appendix IV of this report</p> <p>Refer also to Volume 2, Section 13 (Mine EMP) and Section 14 (Offsite EMP)</p>

Extract from ToR	Where ToR addressed
Outline the project's consistency with existing national, state, regional and local planning frameworks, their policies and provisions:	
Central West Regional Plan	This Regional Plan has been assessed and it is considered not to apply to the Project
<i>Mackay, Isaac and Whitsunday Regional Plan 2011</i>	Appendix III of this report
<i>Whitsunday, Hinterland and Mackay Regional Plan 2006</i>	Appendix III of this report
<i>Water Resource (Burdekin Basin) Plan 2007</i>	Sections 2 to 5 of this report EIS Volume 2, Section 6 and EIS Volume 3, Section 6
<i>Burdekin Resource Operations Plan 2009</i>	Sections 2 to 5 this report
<i>Water Resource (Great Artesian Basin) Plan 2006</i>	EIS Volume 4, Appendices R and AC
<i>Nature Conservation (Protected Plants) Conservation Plan 2000</i>	Sections 3 to 5 of this report

## Appendix II – Summary of Other Relevant Legislation

Other legislation relevant to the Project also applies and is summarised below.

### *Civil Aviation Act 1998 (Cth)*

The Civil Aviation Safety Authority (CASA) has been established for the purposes of conducting the safety regulation of civil air operations in Australia and the operation of Australian aircraft overseas. *Civil Aviation Regulations 1988* and the *Civil Aviation Safety Regulations 1998* were made under the *Civil Aviation Act 1988* and provide for general regulatory controls for the safety of air navigation (CASA, 2011). The airport proposed as part of the Project (Offsite Infrastructure) will need to comply with air safety regulations.

The construction and operation of the proposed airport complies with the above legislation and the following instruments:

- ▶ Civil Aviation Orders (CA) 20.9) and
- ▶ Manual of Standards part 139 Aerodromes (MOS139).

The following documents will also be prepared to meet CASA regulations:

- ▶ Aerodrome Manual
- ▶ Emergency Response Manual
- ▶ Environmental Management Plan.

### *Environmental Protection Act 1994*

The EP Act regulates a broad number of activities, in addition to ERAs as described in the body of this report. This Appendix summarises the other broader aspects of the EP Act relevant to the Project. These are:

- ▶ Contaminated land provisions in the EP Act
- ▶ *Environmental Protection (Waste Management) Regulation 2000*
- ▶ *Environmental Protection (Air) Policy 2008*
- ▶ *Environmental Protection (Noise) Policy 2008*
- ▶ *Environmental Protection (Waste Management) Policy 2000*
- ▶ *Environmental Protection (Water) Policy 2009.*

### *Contaminated land under the EP Act*

Part 8 of the EP Act deals with managing contaminated land. Schedule 3 of the EP Act lists notifiable activities likely to cause land contamination. Under Section 371 of the EP Act, landowners and occupiers must within 22 business days after becoming aware a notifiable activity is being carried out on their land, give notice to the DEHP.



Land that has been, or is being, used for a notifiable activity, is recorded on the EMR, which is maintained by the DEHP. Adani will be required to advise the DEHP if notifiable activities are to occur within the Project Area.

Section 424 of the EP Act means that any removal of contaminated land is required as part of Project works, a permit for removal and treatment or disposal contaminated soils must be obtained from the DEHP.

A search of the contaminated land register has been undertaken for the Project and the search did not identify any land identified or registered as contaminated. This does not mean that during the construction /operation process, that some may be uncovered. In the event that potentially contaminated land is uncovered during construction, the EP Act provisions will be complied with. For example, construction activities may uncover old cattle dips that will need remediation according to the provisions.

### *Environmental Protection (Waste Management) Regulation 2000*

Under Section 4 of the *Environmental Protection (Waste Management) Regulation 2000*, the object is to protect the environment by:

- ▶ minimising the impact of waste on the environment including, in particular, the impact of waste so far as it directly affects human health; and
- ▶ establishing an integrated framework for minimising and managing waste under the principles of ecologically sustainable development.

The *Environmental Protection (Waste Management) Regulation 2000* identifies:

- ▶ offences for littering, waste dumping, unlawful disposal of hypodermic needles and unlawful activities at waste facilities
- ▶ a waste tracking system that tracks the movement of specific waste to ensure correct disposal
- ▶ clinical and related waste management planning including segregation, storage and disposal
- ▶ requirements for managing polychlorinated biphenyls (PCBs)
- ▶ design rules for waste equipment.

### *Dams containing Hazardous Waste*

According to Section 9 of the *Code of Environmental Compliance – Environmental Authorities for High Hazard Dams Containing Hazardous Waste (DEHP, 2011)*, hazardous waste is defined as *any substance, whether liquid, solid, or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.*

According to Queensland Government guidelines, a dam contains hazardous waste if the contents of the dam exceeds any of the criteria listed in Table 1 of the *Information Sheet for Determining Dams Containing Hazardous Waste 2011* or in the case of pH, if it does not comply with the limits detailed within Table 1 of the

Information Sheet. Listed hazardous wastes include arsenic, boron, copper, lead and mercury.

Dams containing hazardous waste must be determined as either a low, high or significant hazard dam. The difference between the two is based on a range of factors, including proximity to water supplies and dam surface area. The holder of an Environmental Authority must comply with the specific conditions related to hazardous contaminants and the standard environmental conditions contained in the *Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste* if the operation includes a hazardous dam containing high hazard waste.

The large 10GL water supply storage at the edge of (and within) the mining lease will not contain hazardous substances, and will receive raw water from both on and off-site sources.

### ***Environmental Protection Policies***

EPPs may be made with regard to the environment or anything that affects, or may affect, the environment. The EP Act outlines the scope and content for preparing EPPs to protect Queensland's environment.

EPPs describe how objectives of the EP Act are met through the following:

- ▶ environmental quality standards
- ▶ emissions standards
- ▶ monitoring procedures and requirements.

The EPPs provide a policy framework for the determination of appropriate conditions for development permits for material change of use for ERAs and/or EAs. EPPs are legally enforceable (EP Act Section 25(3)). Where relevant to particular environmental impacts, the matters required to be considered or procedures to be followed under the EPPs have been addressed in this EIS:

- ▶ *Environmental Protection (Air) Policy 2008*
- ▶ *Environmental Protection (Noise) Policy 2008*
- ▶ *Environmental Protection (Water) Policy 2009.*

### ***Environmental Protection (Air) Policy 2008***

The purpose of this policy is to achieve the objectives of the EP Act in relation to Queensland's air environment. Section 9 of the EPP (Air) identifies the following management hierarchy for an activity involving air emissions:

- ▶ Firstly – avoid
- ▶ Secondly – recycle
- ▶ Thirdly – minimise
- ▶ Fourthly – manage

Schedule 1, Section 8 of the EPP (Air) details the air quality objectives for enhancing or protecting environmental values which include health and wellbeing, health and biodiversity of ecosystems, protecting aesthetics and agriculture.

An air quality assessment has been carried out for the mine and rail components of the Project. The air quality study adopted baseline levels from literature and the adopted levels were within the relevant objectives. Results at some homesteads were also gathered, but as the modelling is quite conservative, the approach is to install monitoring equipment and make changes if the monitoring indicates higher than expected dust levels. See Volume 2, Section 7 Air Quality, Volume 3, Section 7 Air Quality and Volume 4, Appendix S Air Quality Assessment.

### *Environmental Protection (Noise) Policy 2008*

The purpose of the Environmental Protection (Noise) Policy 2008 (EPP (Noise)) is to achieve the object of the EP Act in relation to the acoustic environment. Section 7 of the EPP (Noise) identifies the following environmental values for the acoustic environment:

- ▶ the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems
- ▶ the qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following – sleep, study or learn, be involved in recreation, including relaxation and conversation
- ▶ the qualities of the acoustic environment that are conducive to protecting the amenity of the community.

The management hierarchy for noise is detailed in Section 9 of the EPP (Noise) and involves the following:

- ▶ firstly – avoid
- ▶ secondly – minimise, in the following order of preference:
  - firstly – orientate an activity to minimise noise
  - secondly – use best available technology
  - thirdly – manage.

Schedule 1 of the EPP (Noise) details the acoustic quality objectives for sensitive receptors. It is noted that the EP Act does not cover railway noise from construction activities and hence, these are not assessed under the EPP (Noise).

A noise assessment has been undertaken for the Project against the requirements of the EPP (Noise). See Volume 2, Section 9 Noise and Vibration, Volume 3, Section 9 Noise and Vibration, Volume 4, Appendix U Mine Noise and Vibration and Volume 4, Appendix AF Rail Noise and Vibration.

### ***Environmental Protection (Water) Policy 2009***

The purpose of the *Environmental Protection (Water) Policy 2009* is to achieve the object of the EP Act in relation to Queensland waters (EP Water Policy, 2009, Part 2). In relation to private sector development activities this purpose is to be achieved within a framework that encapsulates the following:

- ▶ identifying environmental values (EVs) for aquatic ecosystems and for human uses (e.g. Water for drinking, farm supply, agriculture, industry and recreational use)
- ▶ determining water quality guidelines (WQGs) and water quality objectives (WQO) to enhance or protect the environmental *values*

Environmental values and water quality objectives for waters in Queensland are specified in Schedule 1 of the EPP (Water). However, environmental values and water quality objectives have not yet been set for the Burdekin Basin, within which the majority of the Project, including the mine, off-site infrastructure and most of the rail component takes place.

Where environmental values and water quality objectives have not been set for a particular location, water quality objectives may be taken from the Queensland Water Quality Guidelines, or, if these do not provide relevant guidelines the Australian and New Zealand Water Quality Guidelines (ANZECC) 2000.

Water quality objectives are not provided for groundwater in-situ, however guidelines relating to aquatic ecosystem health may be used to assess groundwater quality if there is to be a release of groundwater to a surface system. Water quality objectives for various water supply uses can be utilised if groundwater is to be used for water supply.

An assessment of the impacts of the mine and rail components on surface water quality and groundwater has been undertaken.

### ***Queensland Heritage Act 1992***

The *Queensland Heritage Act 1992* provides for "the conservation of Queensland's cultural heritage for the benefit of the community and future generations." Section 2 of the Act states the object is to be primarily achieved by:

- “(a) establishing the Queensland Heritage Council; and
- (b) keeping the Queensland heritage register; and
- (c) keeping local heritage registers; and
- (d) regulating, in conjunction with other legislation, development affecting the cultural heritage significance of Queensland heritage places; and
- (e) providing for heritage agreements to encourage appropriate management of Queensland heritage places; and
- (f) providing for appropriate enforcement powers to help protect Queensland's cultural heritage”.

The Act does not apply to a place that is of cultural heritage significance solely through its association with Aboriginal tradition or Island custom. Nor does it apply to a place situated on Aboriginal or Torres Strait Islander land unless the place is of

cultural heritage significance because of its association with Aboriginal tradition or Island custom and with European or other culture, in which case this Act applies to the place if the trustees of the land consent. Other legislation in Queensland regulates these circumstances.

There are no aspects of the Project that trigger the *Queensland Heritage Act 1992*.

### ***Transport Operations (Road Use Management—Mass, Dimensions and Loading) Regulation 2005***

The Guideline for Excess Dimension – Vehicles Carrying Indivisible Articles, Special Purpose Vehicles, Vehicles that require a Pilot or Escort, 2012 (DTMR 2012) specifies the requirements for permitting the transport of oversized loads. The requirements of this regulation will be relevant during the construction and operation of the Project (Mine) where the transport of oversized loads is required.

### ***Torres Strait Islander Cultural Heritage Act 2003***

Under Section 4 of the *Torres Strait Islander Cultural Heritage Act 2003*, the main purpose is to “provide effective recognition, protection and conservation of Torres Strait Islander cultural heritage.” Section 5 states the fundamental principles that underlie the Act’s purpose are:

- “(a) the recognition, protection and conservation of Torres Strait Islander cultural heritage should be based on respect for Torres Strait Islander knowledge, culture and customary practices;
- (b) Torres Strait Islanders should be recognised as the primary guardians, keepers and knowledge holders of Torres Strait Islander cultural heritage;
- (c) it is important to respect, preserve and maintain knowledge, innovations and practices of Torres Strait Islander communities and to promote understanding of Torres Strait Islander cultural heritage;
- (d) activities involved in recognition, protection and conservation of Torres Strait Islander cultural heritage are important because they allow Torres Strait Islanders to reaffirm their obligations to Island custom;
- (e) there is a need to establish timely and efficient processes for the management of activities that may harm Torres Strait Islander cultural heritage”.

The Act also provides that ways to carry out the following:

- “(a) recognising Torres Strait Islander ownership of Torres Strait Islander human remains wherever held;
- (b) recognising Torres Strait Islander ownership of Torres Strait Islander cultural heritage of a secret or sacred nature held in State collections;
- (c) recognising Torres Strait Islander ownership of Torres Strait Islander cultural heritage that is lawfully taken away from an area by a Torres Strait Islander party for the area;
- (d) establishing a duty of care for activities that may harm Torres Strait Islander cultural heritage;

- (e) establishing powers of protection, investigation and enforcement;
- (f) establishing a database and a register for recording Torres Strait Islander cultural heritage;
- (g) ensuring Torres Strait Islanders are involved in processes for managing the recognition, protection and conservation of Torres Strait Islander cultural heritage;
- (h) establishing a process for the comprehensive study of Torres Strait Islander cultural heritage;
- (i) establishing processes for the timely and efficient management of activities to avoid or minimise harm to Torres Strait Islander cultural heritage."

As the Project is not located near the Torres Strait, the Act is unlikely to be triggered.

### ***Waste Reduction and Recycling Act 2011***

The *Waste Reduction and Recycling Act 2011* (WRR Act) aims to encourage proper use of resources by improving ways of reducing and dealing with waste. The WRR Act repeals the *Environmental Protection (Waste Management) Policy 2000*. The objects of the WRR Act are to:

- ▶ promote waste avoidance and reduction, and resource recovery and efficiency actions
- ▶ reduce the consumption of natural resources and minimise the disposal of waste by encouraging waste avoidance and the recovery, re-use and recycling of waste
- ▶ minimise the overall impact of waste generation and disposal
- ▶ ensure a shared responsibility between government, business and industry and the community in waste management and resource recovery
- ▶ support and implement national frameworks, objectives and priorities for waste management and resource recovery.

The main provisions of the WRR Act include but are not limited to the following:

- ▶ a requirement for State and local governments to prepare waste management plans introduction of product stewardship arrangements for any waste products that are identified as a growing problem for landfill in the future
- ▶ strengthen litter and illegal dumping offences.

## Appendix III –Planning analysis

### State Planning Policies

SPPs are created for the purposes of protecting things that are of interest to the State, including agricultural land, separating agricultural land from residential land, development within close proximity to airport land and protecting development from adverse effects of bushfire, floods and landslides (DLGP, 2011). SPPs are created under Part 4 of the SP Act and are enforced through local planning schemes. SPPs are not applicable to the Project (Mine) and may not be applicable to an SDA.

### State Planning Policy 1/92 Development and the Conservation of Agricultural Land

The purpose of the SPP 1/92 is to address the conservation of good quality agricultural land (GQAL) and provide guidance to local authorities on how to manage this issue throughout the development assessment process.

Department of Primary Industries (DPI) and Department of Housing, Local Government and Planning (DHLGP), *Planning Guidelines: The Identification of Good Quality Agricultural Land* (1993, pg.1) defines GQAL as land *which is capable of sustainable use for agriculture, with a reasonable level of inputs, and without causing degradation of land or other natural resources*. It is further defined *as land used for crop or animal production, but excluding intensive animal uses such as feedlots, piggeries, poultry farms and plant nurseries based on either hydroponics or imported growth media*.

GQAL is defined as 'Class A' agricultural land, and in some cases includes "Class B" agricultural land, under the Agricultural Land Class ranking. That is, GQAL is land that is capable of sustainable use for agriculture with a reasonable level of inputs and without causing degradation of land or other natural resources. There are four classes (A to D) of agricultural land defined for Queensland as detailed in Table 2 below. Class C of GQAL is further categorised into three classes (C1, C2 and C3).

**Table 2: Agricultural Land Classes (DPI & DHLGP, 1993)**

Class	Description
<b>Class A</b>	<b>Crop land</b> – Land that is suitable for current and potential crops with limitations to production which range from none to moderate levels.
<b>Class B</b>	<b>Limited crop land</b> – land that is marginal for current and potential crops due to severe limitations; and suitable for pastures. Engineering and/or agronomic improvements may be required before the land is considered suitable for cropping.
<b>Class C</b>	<b>Pasture land</b> – land that is suitable only for improved or native pastures due to limitations which preclude continuous cultivation for crop production; but some areas may tolerate a short period of ground disturbance for pasture establishment.
<b>C1</b>	Land suitable for sown pastures with moderate limitations



Class	Description
<b>C2</b>	Land suitable for sown pastures with severe limitations
<b>C3</b>	Land suitable for light grazing of native pastures in inaccessible areas
<b>Class D</b>	<b>Non-agricultural land</b> – land not suitable for agricultural uses due to extreme limitations. This may be undisturbed land with significant habitat, conservation and/or catchment values or land that may be unsuitable because of very steep slopes, shallow soils, rock outcrop or poor drainage.

### Policy Principle 1

*Good quality agricultural land has a special importance and should not be built on unless there is an overriding need for the development in terms of public benefit and no other site is suitable for the particular purpose.*

#### **Project (Rail) Compatibility**

The Project (Rail) will potentially have the greatest impact on Class B GQAL, which is land that is marginal for current and potential crops due to severe limitations; and suitable for pastures. The alignment of the rail infrastructure corridor has sought to avoid the alienation of GQAL by maintaining viable access across properties impacted by the Project. A targeted soil survey will be undertaken to identify the GQAL classes within the Project (Rail) corridor. Temporary disturbances such as access tracks and construction laydown areas will be rehabilitated as much as practicable.

#### **Project (Mine) Compatibility**

A soil survey has been undertaken over the EPC1690 component of the Project Area. The survey confirmed that the Project Area has very limited GQAL and is assessed as 'breeding country'. The Project (Mine) will have an impact upon 964 ha of C1 and 18,502 ha of C2 GQAL within the EPC1690. Given that this class of GQAL is defined as land suitable for sown pastures with moderate limitations (C1) and land suitable for sown pastures with severe limitations (C2), the Project (Mine) will not have significant impacts upon GQAL within EPC1690.

### Policy Principle 2

*The alienation of some productive agricultural land will inevitably occur as a consequence of development, but the Government will not support such alienation when equally viable alternatives exist, particularly where developments that do not have very specific locational requirements (for example, 'rural residential') are involved (Paragraphs 4.6-4.7).*

#### **Project (Rail) Compatibility**

A soil survey has not yet been undertaken for the Project (Rail) corridor as such an assessment against this policy principle cannot be undertaken. A detailed assessment against this principle will be submitted to DEHP as part of relevant development applications for the Project (Rail).

***Project (Mine) Compatibility***

The Project (Mine) will not alienate productive agricultural land as the EPC1690 component of the Project Area consists of C1 and C2 GQAL, which is land suitable for sown pastures with moderate and severe limitations.

***State Planning Policy 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities***

SPP 1/02 sets out the State's interest concerning development in the vicinity of those airports and aviation facilities considered essential for the State's transport infrastructure or the national defence system (DLGP, 2002). The intent of the policy is to protect airports and aviation facilities from development that could undermine their safety or operational efficiency both directly and indirectly. The SPP applies to development that:

- involves the actions or activities (described in Annex 2 of SPP 1/02) where these could adversely affect the safety and operational efficiency of operational airspace or the functioning of aviation facilities
- has the potential to increase the number of people living, working, congregating or attending education establishments, hospitals or public buildings within areas defined by the 20 Australian Noise Exposure Forecast (ANEF) contour
- has the potential to increase the number of people or the use/storage of hazardous materials within public safety areas (DLGP, 2002).

The Project is not located in the vicinity of any such airport, and SPP1/02 is not relevant to the planning analysis of the Project.

***State Planning Policy 2/02 Planning and Managing Development Involving Acid Sulphate Soils***

SPP 2/02 sets out the State's interests concerning development involving acid sulphate soils (ASS) in low-lying coastal areas. The Project does not fall within any such areas, so the SPP is not relevant to the Project.

***State Planning Policy 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide***

SPP 1/03 sets out the State's interest in ensuring that the natural hazards of flood, bushfire, and landslide are adequately considered when making decisions about development (DLGP, 2003). SPP 1/03 generally applies throughout Queensland. However, the application of SPP 1/03 for bushfire and landslide is limited to the local governments (pre-amalgamation) listed in Annex 2 of the SPP. The Project (Rail) is located entirely within the Belyando Shire, while the Project (Mine) is located within the Belyando Shire and the Dalrymple Shire. The Belyando Shire is not listed within Annex 2, however Dalrymple Shire is listed within Annex 2 and an assessment of the Project against SPP 1/03 for landslide and bushfire is required.

In addition, all local government areas are subject to flooding, as such the Project requires assessment against SPP 1/03 for flooding. SPP1/03 applies to assessable development under the SP Act.

**Outcome 1**

*Within natural hazard management areas, development to which this SPP applies is compatible with the nature of the natural hazard, except where:*

- ▶ *the development proposal is a development commitment; or*
- ▶ *there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal.*

**Project Compatibility**

The Project (Rail) will form part of an existing rail network and therefore can be considered community infrastructure. The design of the rail infrastructure has considered natural hazards including floods and fire so as to achieve reasonable immunity levels during such events. These features coupled with a suitable maintenance regime and incorporation of procedures from the Project Draft EMP will mitigate risks associated with natural hazards. mineral resources, with coal mining a major industry and the largest employer in the region (DLGP, 2011, pg. 5). The Project will contribute to the growth of the mining industry through the development of Queensland's largest coal mine which will in turn generate economic growth and investment within the region, particularly in the primary service centres of Moranbah and Clermont.

To manage the potential hazards and risks associated with the Project, an EMPs have been prepared as part of this EIS. These EMPs identify appropriate ways of managing potential flooding, bushfire, cyclones and any other natural hazards that may occur within the Project Area. Emergency Response Plans (ERPs) will be established prior to construction of the Project which will specify the appropriate actions to be undertaken in such circumstances.

**Outcome 2**

*Development that is not compatible with the nature of the natural hazard but is otherwise consistent with Outcome 1:*

- ▶ *minimises as far as practicable the adverse impacts from natural hazards; and*
- ▶ *does not result in an unacceptable risk to people or property.*

**Project Compatibility**

During the consultation for the Project EIS, landholders raised concerns in regard to increased risk of fire particularly due to the presence of trains, construction and rail maintenance workforce and vehicles on properties. The consequences of this can be extreme to families and businesses that rely upon their properties for their livelihoods. Landholders may find themselves burdened with increased demands to respond to fires.

To manage the potential risk of fire and other hazards that may occur as a result of the Project, draft EMPs have been prepared for the Project. For the Project (Rail), see Volume 3, Section 13. For the Project (Mine) see Volume 2, Section 13. For the Project (Offsite) see Volume 2, Section 14. The Draft EMPs identify appropriate ways of managing potential flooding, bushfire, cyclones and any other natural hazards that

may occur within the Project Area. ERPs will be established prior to construction of the Project which will specify appropriate actions to be undertaken in such circumstances.

### **Outcome 3**

*Wherever practicable, community infrastructure to which this SPP applies is located and designed to function effectively during and immediately after natural hazard events commensurate with a specified level of risk.*

### **Project Compatibility**

The Project (Rail) will form part of an existing rail network and therefore can be considered community infrastructure. The design of the rail infrastructure has considered natural hazards including floods and fire so as to achieve reasonable immunity levels during such events. These features coupled with a suitable maintenance regime and incorporation of procedures from the Project Draft EMPs (See Volume 2, Sections 13 and 14 and Volume 3, Section 13) will mitigate risks associated with natural hazards.

### **State Planning Policy 2/07 Protection of Extractive Resources**

The purpose of the SPP 2/07 is to maintain the long-term availability of major extractive resources by protecting the resources and their main transport routes from incompatible land uses (DEEDI, 2011). Key Resource Areas (KRA) are defined as locations across Queensland that contain important extractive materials of State or regional significance. A KRA encompasses an extractive resource and on site processing area, the associated transport route and a separation area around the resource, processing area and the transport route (DEEDI, Mines and Energy, 2011).

Review of the Queensland Government, Mining and Safety Key Resource Area Maps (2010) identified the following KRAs within the MIW region:

- ▶ KRA 26 – Foxdale, Whitsunday Shire
- ▶ KRA 23 – The Cedars, Mackay
- ▶ KRA 24 – Farleigh, Mackay
- ▶ KRA 33 – Waitara, Nebo Shire
- ▶ KRA 37 – West Euri Creek, Bowen.

The closest KRA to the Project is KRA 33 Waitara, which is located within the Nebo Shire, approximately 300 km to the east south of the Project (Mine) and 80 km north east of the Project (Rail). The Project will not have an impact upon any KRAs and as such the SPP 2/07 is not applicable to the Project.

### **State Planning Policy 4/11 Protecting Wetlands of High Ecological Significance in Great Barrier Reef Catchments**

The policy outcome sought by the SPP 4/11 can be described as follows:

*“Development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to*

*minimise or prevent the loss or degradation of the wetlands and their values, or enhances these values.” (DEHP, 2011)*

Developments that have potential to cause loss or degradation of wetlands, introduce pollutants and nutrients to wetlands, or change the natural water regime of wetlands are subject to the SPP 4/11. The SPP 4/11 applies to assessable development under schedule 3, Part 1 of the SP Regulation, if the development is operational work that involves high impact earthworks in a Great Barrier Reef Wetland Protection Area (GBRWPA), other than operational work for a domestic housing activity. The Project will require assessment against the SPP 4/11 where earthworks are proposed within wetlands protection areas identified under the EP Act. Some referable wetland areas have been identified within the Project (Mine) however the Project (Rail) will not impact any wetland protection areas.

The policy identifies (Section 4.3) that development that does not fully achieve the policy outcome can still be deemed acceptable if the development is a development commitment. Development that involves an EIS under the SDPWO Act (Part 4, Section 35 (3)) and the CG’s report recommends the development to be approved subject to conditions is considered a development commitment.

### ***State Planning Policy 1/12 Protection of Queensland’s strategic cropping land***

Under the SCL Act, Section 80 a State Planning Policy (SPP) must be created for SCL. The SPP includes applicable codes about purpose and how it can be achieved. The SPP will ensure that development assessment under local government planning schemes includes appropriate consideration of SCL.

The SPP operates with SPP 1/92 *Development and the Conservation of Agricultural Land*, which applies to a broader range of agricultural lands. SPP 1/92 protects a broad range of important agricultural land, including some areas of grazing land.

A review of DEHP mapping for SCL has been undertaken to identify if the Project (Mine) will interfere with any SCL. It has been identified that no SCL (protection areas) is located within or in near proximity to the Project Area. A small amount of SCL (management area) is located within the eastern end of the Project (Rail).

## ***Regional Plans***

### **Overview**

The SP Act provides for the preparation of regional plans for designated regions. Regional plans operate in conjunction with other statutory planning tools, including state planning policies, local government planning schemes, state planning regulatory provisions and development assessment processes (DLGP 2011). The *Mackay, Isaac and Whitsunday Regional Plan 2012* (MIWRP), covering the Mackay, Isaac and Whitsunday local government areas applies to the Project. The Project (Mine) and Project (Rail) has been identified within the regional landscape, rural production area.

### **Mackay, Isaac and Whitsunday Regional Plan 2012**

The MIWRP recognises the mineral resources located in the region, the region has significant coal, gas, mineral and extractive resources and reserves. Within the

strategy for natural resources a key principle is to manage the region's mineral and extractive resources to sustainably and efficiently meet the needs of existing and future communities; with programs being identified to identify, protect and sustainably manage the region's mineral resources; and identify and protect mineral resources within the region from incompatible development.

Part C of the MIWRP identifies ten desired regional outcomes (DROs) for the MIW region. These DROs are very broad objectives for the region and are underpinned by more specific principles, policies and programs. The applicable DROs have been listed and their compatibility to the Project discussed below.

## **1. Sustainability and Climate Change**

*The region grows and changes in a sustainable manner, generating prosperity, maintaining and enhancing quality of life, minimising the use of resources, providing high levels of environmental protection, reducing greenhouse gas emissions and increasing resilience to natural hazards and the anticipated effects of climate change.*

### ***Project Compatibility***

The Project EIS has been developed with the objective to avoid or minimise potential environmental, social and economic impacts of the Project upon the existing environment. Several technical environmental studies have been undertaken to address impacts upon sustainability, greenhouse gas emissions and community values.

## **2. Natural Environment and Regional Landscapes**

*Environmental, economic, social and cultural values of the regional landscape are identified and secured to meet community needs and achieve ecological sustainability.*

### ***Project Compatibility***

The Project EIS has been developed with the objective to avoid or minimise potential environmental, social and economic impacts of the Project upon the existing environment. While the Project will have an impact upon the environmental values of the existing environment, appropriate mitigation measures have been established as part of the Project EIS to avoid or alleviate such impacts. Where impacts cannot be avoided, appropriate offsets will be implemented

## **3. Natural Resource Management**

*Regional natural resources and primary areas continue to provide cultural, social, economic and environmental values to the region, while being protected, managed, enhanced and use sustainably.*

### ***Project Compatibility***

An assessment of the Project's impacts upon soils has been undertaken. Access to the region's natural resources will be protected and enhanced by the Project infrastructure where possible and any potential impacts will be managed through the Draft EMP contained within Volume 2, Sections 13 and 14 and Volume 3 Section 13.



#### 4. Strong Communities

*The region has vibrant, inclusive, safe, active and healthy communities, where a range of social services are accessible by all, and where unique cultural heritage and diversity is acknowledged, valued and celebrated.*

##### **Project Compatibility**

Many communities have clear aspirations as to how mining development should benefit their communities, and what is undesirable. The Clermont community in particular have indicated what the desired community outcomes are for their locality. The Clermont Preferred Futures Project (CPF Project) was developed in line with the communities desire to retain their vibrant community, which benefits from 'a highly regarded lifestyle, sense of community wellbeing and good community cohesion'. Adani has made a commitment to work with Isaac Regional Council and the CPF group to contribute to the sustainable development of Clermont through the development of a similar plan for the life of this Project.

#### 5. Strong Economy

*A thriving economy that is sustainable, resilient and robust, and advances the prosperity and liveability of communities across the region.*

##### **Project Compatibility**

The coal industry is a major contributor to Queensland's economy and is a major driver of employment and economic prosperity in many regional communities (DIP, 2010). On this basis, the Project supports this outcome as it will contribute to the viability of the mining industry through the development of the largest coal mine in Queensland.

#### 6. Infrastructure

*The region's communities have access to well-planned, coordinated, accessible, sustainable and reliable infrastructure.*

##### **Project Compatibility**

The Project will assist with the development, management and coordination of adequate infrastructure in the region through the provision of water infrastructure, power infrastructure and upgrades to road infrastructure.

#### 7. Transport

*An integrated and efficient transport system and network that supports and responds to growth consistent with the intended settlement pattern, economic development and community needs.*

##### **Project Compatibility**

The volume and intensity of truck movements will increase over varying amounts during the construction period of the Project. The short-term increases in traffic volumes on the road network and their duration have been determined. Based on the nominal capacity of the road network, the additional construction traffic due to the Project can be adequately accommodated at acceptable levels of service, so long as the communities affected are kept informed of progress and safeguards implemented. The delivery of materials and equipment that will be spread over the construction



period can be arranged to minimise impact on the local community. Construction of level crossings will be planned and managed to minimise delays as well as to ensure that adequate warning is available to motorists.

## Planning Schemes

### Local Schemes

Planning schemes are created by local governments for the purposes of managing growth and change in their local government jurisdiction (DLGP, 2011). The Project is located predominantly within the Isaac Regional Council, with a small amount of the Project within the Charters Towers Regional Council jurisdiction. Development within the Isaac Regional Council is regulated through the *Planning Scheme for the Belyando Shire 2008* while development within the CTRC is regulated through the *Planning Scheme for the Dalrymple Shire 2006*.

### Zoning

Zoning is as a common term given to broad land use allocation in local government planning schemes. Zones identified in the *Planning Scheme for the Belyando Shire 2008* organise the local government area into broad land use allocations. The Belyando Shire comprises of the following zone classifications:

- ▶ Rural Zone
- ▶ Urban Zone
- ▶ Commercial Zone
- ▶ Industrial Zone
- ▶ Open Space and Recreation Zone.

### Applicable Definitions

Part 2 of the *Planning Scheme for the Belyando Shire 2008* details the applicable definitions for different uses. The following definitions are applicable to the Project:

- ▶ "Railway activities" which are defined *as premises used for the purposes of planning, construction, maintaining and operating rail infrastructure, facilities and rolling stock, including:*
  - (1) rail maintenance depots;
  - (2) rail workshops; and
  - (3) rail freight centres.
- ▶ "Airport" means *all site facilities and any building, installation and equipment used for the control of aircraft operations and any facility provided at such premises for the housing, servicing, maintenance and repair of aircraft, and for the assembly of passengers or goods.* This definition applies to the establishment of the Project (Mine) supporting infrastructure, specifically the air strip.
- ▶ "Accommodation building" *means premises comprising primarily of accommodation units such as motels, boarding-houses, guest-houses, accommodation centres or villages, hostels, unlicensed hotels, nursing homes,*

*serviced rooms or residential clubs. The term includes dining, laundry and recreation facilities which cater exclusively for the residents of the accommodation building and a manager's office and residence. This definition is applicable to the Project (Mine) mine village and Project (Rail) construction camps.*

► "Industry" means "premises" used for:

*(1) an industrial activity such as:*

*(a) a manufacturing process whether or not such process results in the production of a finished article;*

*(b) the breaking up or dismantling of any goods or article for trade, sale, or gain, or ancillary to any business;*

*(c) repairing, servicing and cleaning of articles, including vehicles, machinery; or*

*(d) an operation connected with the installation of equipment and services but not including on-site work on "premises"; and*

*(2) the following activities when carried out in connection with an industrial activity:*

*(a) the storage of goods used in connection with or resulting from an industrial activity;*

*(b) the provision of amenities for persons engaged in an industrial activity;*

*(c) the sale of goods resulting from but ancillary to an industrial activity; and*

*(d) any work of administration or accounting.*

Under the *Planning Scheme for the Belyando Shire 2008*, the uses trigger a Material Change of Use Development (MCU) Impact Assessable application for a development approval, if outside a SDA. If the Project triggers an application for development approval which is not defined within the planning scheme, the development will also be impact assessable.

## Overlays

The *Planning Scheme for the Belyando Shire 2008* provides land characteristic areas mapping or overlays which spatially identifies particular areas of environmental, economic, or cultural importance where specific outcomes are sought to protect or promote the identified qualities, resources or constraints (Belyando Shire Council, 2009).

The land characteristic areas mapping for the Belyando Shire includes:

- Features Map – identifies key environmental areas across the Belyando Shire
- Good Quality Agricultural Land (GQAL) – identifies areas of Class A, B and C1 GQAL across the Belyando Shire.

Aviation Facilities – identifies 150 m buffer area around the Non-Directional Beacon (NDB) at the Clermont airport within which development cannot occur

The Project is subject to the GQAL overlay, which has been taken into consideration as part of the SPP 1/92. The Project will not impact on the NDB located at Clermont airport.

### ***Desired Environmental Outcomes***

An assessment of the Project against the DEOs of the *Belyando Shire Planning Scheme 2008* and *Dalrymple Shire Planning Scheme 2006* has been undertaken in the following paragraphs so as to consider the overarching planning intents and assess the Project's compatibility with these planning intents and objectives for the Project Area. Furthermore, only the Project (Mine) has been assessed against the DEOs of the *Dalrymple Shire Planning Scheme 2006*.

### ***Planning Scheme for the Belyando Shire 2008***

#### **Natural Environment and Cultural Heritage**

Section 3.1 Natural Environment and Cultural Heritage in the Planning Scheme for the Belyando Shire 2008 states as follows.

*In Belyando Shire, ecological systems, the natural environment (including natural features and unique habitats such as Peak Range National Park, Wilandspey Conservation Park, Doongmabulla Springs Important Wetland and the declared catchment) and items and places of cultural and heritage significance are protected such that biodiversity, cultural heritage values and existing or intended landscape character are maintained.*

#### ***Strategies***

*2a) Development is regulated to minimise any adverse impacts on air and water quality, to prevent land degradation, loss of unique habitat and biodiversity and to maintain the integrity of riparian areas, ridgelines and escarpments.*

*2b) Development is regulated to be compatible with the environmental, habitat, biodiversity and landscape values and historic significance of protected areas (including Peak Range National Park, Mazeppa National Park, Narrien Range National Park, Epping Forest National Park, Wilandspey Conservation Park, Doongmabulla Springs Important Wetland and the declared catchment) and areas, local items and places of cultural significance (including areas along water courses).*

#### **Economic Development**

Section 3.2 Economic Development in the Planning Scheme for the Belyando Shire 2008 states as follows.

*1. The viability of the mining industry is protected, while the economy of Belyando Shire is diversified in a manner that supports the intended land use structure and character of the urban centres of Clermont and Moranbah and the rural parts of the Shire.*

*Moranbah's role as the primary service centre for the northern Bowen Basin mining industry is enhanced.*

*Activities that do not require a rural location are consolidated within the towns of Clermont and Moranbah, so that investment in the towns is maximised.*

*Town centres in each of the Shire's urban communities form vibrant and compact commercial and community cores. Industrial nodes in Clermont and Moranbah are consolidated.*

*Natural resources (including land, water and mineral resources) are used sustainably.*

#### *Strategies*

*2a) The planning scheme reinforces the role of Clermont and Moranbah as the principal places for administrative services, business, industry, retail, education and community services and transport services within the Shire.*

*2b) Sufficient and suitable areas are identified for urban development, and key transport infrastructure are identified and protected.*

*2c) Residential activities (with minor exceptions) are required to be located within the towns of Moranbah and Clermont.*

*2d) Commercial activities are limited (with minor exceptions) to identified centres in the towns of Clermont and Moranbah.*

*2e) Confidence in investment in the Shire's towns and in its major industries is maintained by identifying clear development intentions.*

*2f) Urban and other sensitive forms of development are regulated to avoid or minimise potential conflicts with existing or future mining operations.*

*2g) Productive rural land, rural industries and unique natural features (including mineral and extractive resources and tourist resources such as national parks, conservation parks and wetlands) are protected to preserve their continued economic potential and viability.*

*2h) Industrial activities are directed to identifiable industrial nodes in the towns of Moranbah and Clermont.*

### **Community Wellbeing**

Section 3.3 Community Wellbeing in the Planning Scheme for the Belyando Shire 2008 states as follows.

*1) Moranbah and Clermont provide a wide range of government and community services and employment opportunities. Moranbah continues to have a significant role as the primary service centres for the northern Bowen Basin mining industry.*

*The towns of Moranbah and Clermont accommodate strong, connected and vibrant communities, well supported by recreational and other community facilities, highly accessible by walking and cycling. Town centres provide a clear community focal point.*

*Moranbah and Clermont are characterised by a strong and growing permanent resident population. A wide range of affordable housing types is available and all housing is designed to contribute to the quality of the urban environment. Dwelling units providing for permanent accommodation are predominant, with a significantly smaller proportion of other forms of accommodation intended for temporary residents.*

*The rural amenity and productive capacity of other parts of the Shire is maintained.*

### **Strategies**

*2a) The planning scheme seeks to ensure that people are connected to public spaces (including recreational areas) and community services through an appropriate land use structure and the provision of infrastructure within the towns of Clermont and Moranbah.*

*2b) Increased opportunities are created for a larger proportion of mining (and related) workforce and their families to permanently reside in the Shire's towns through:*

- ▀ *The designation of sufficient urban land to accommodate expected population growth;*
- ▀ *The encouragement of medium density, small lot and other forms of permanent housing to increased housing choices available within the Shire's towns; and*
- ▀ *Limitations on the size of accommodation facilities for non-resident workers.*

*2c) The planning scheme seeks to ensure all residential activities (with minor exceptions) are located within the towns of Clermont and Moranbah.*

*2d) All forms of 'residential activities' (including accommodation intended for visitors and temporary residents) are required to be designed to integrate with the surrounding urban environment and be of high quality urban design.*

*2e) Development is regulated to protect the health and safety of people.*

*2f) Infrastructure reflects community expectations and needs, meets appropriate engineering and environmental standards and is provided in an orderly and logical sequence to ensure cost effectiveness.*

*2g) Rural communities are protected from incompatible forms of development, and rural residential development is not supported by the planning scheme.*

### **Project Compatibility**

The Project includes the development of new permanent and temporary accommodation facilities to meet the predicted demands during the construction and operation phases of the development. This will minimise any direct impacts upon the role and character of Moranbah and Clermont as the Project will not rely exclusively on the townships for accommodation supply.

However, a concern for the regional community is that the cumulative effects of mining development will exacerbate shortages in housing supply and decrease housing affordability in the long term. The construction and operational workforce will be primarily fly in-fly out with self-contained accommodation, with the potential for drive in, drive out and employees to live locally in Clermont and/or Moranbah at a later stage. An increase in population may potentially lead to an increase in demand for housing, temporary accommodation, social services, especially emergency (social) housing which at present, are all under considerable pressure in Moranbah and Clermont.

To manage the potential impacts on housing and accommodation, Adani is actively engaged with the Isaac Regional Council and community to address affordable housing within Moranbah and Clermont. Furthermore, businesses have a desire to grow, but with difficulties in expanding their workforce and competing demands from the agricultural and mining sectors, it will be difficult for local businesses to continue to grow and contribute to a vibrant and expanding local economy. However, the Project may result in increased commercial activities as it is expected that local businesses will be engaged to provide goods and services during construction of the rail, which may lead to an increased requirement for local business employees. Refer to Volume 1 Section 6 for the Project SIMP for further information.

### ***Planning Scheme for the Dalrymple Shire 2006***

An assessment of only the Project (Mine) against the DEOs of the *Planning Scheme for the Dalrymple Shire 2006* has been undertaken in the following paragraphs. The Project (Rail) is not located within the Dalrymple Shire and therefore an assessment has not been undertaken for this aspect of the Project.

#### **Character**

Section 2.1.1 in the Planning Scheme for the Dalrymple Shire is as follows.

##### *DEO 1*

*The rural character and amenity of the Shire including settlements is maintained to ensure the health and safety of people is maximised.*

##### *Shire Strategies*

*DEO 1 is intended to be achieved by –*

- a) Facilitating development that incorporates sound land management practices, specifically intended to preserve those biological and physical resources which make up the rural land bank on which rural activities are dependant.*
- b) Ensuring places, areas or sites identified as being susceptible to land degradation or natural hazard, (including contamination, erosion, salinity and landslip flood areas) are protected and further degradation is minimised.*

### ***Project (Mine) Compatibility***

A part of the Project (Mine) onsite infrastructure is proposed to be located within the rural zone of the Dalrymple Shire, which is intended for development of varying scales and intensities including resource extraction (mining). The establishment and operation of the Project (Mine) will not have a negative impact upon the rural character, amenity and health and safety of the Shire. The Project (Mine) is not located within close proximity to any residential settlements; accordingly it is unlikely that the Project (Mine) will generate any effects upon the community's health and safety.

**Land use**

Section 2.2.1 in the Planning Scheme for the Dalrymple Shire is as follows.

*DEO 3*

*The environs area abutting the City of Charters Towers is the main settlement area within the Shire and its role as the business and community centre of the Shire is to be consolidated and complement that of Charters Towers. The Townships of Ravenswood, Mingela, Sellheim, Balfes Creek, Homestead, Pentland and Greenvale will remain as small communities providing a level of services that meet community expectation and reflect needs of community.*

*Shire Strategies*

*DEO 3 is intended to be achieved by –*

- a) Consolidating the role and identity of the Environs area abutting the City of Charters Towers as the main business and community centre of the Shire.*
- b) Encourage development in the Townships and Environs areas that will provide a wide range of housing styles, in terms of lot size and intensity. Support businesses, commercial and industrial activities (including light and service oriented industries) will be encouraged only where they demonstrate service to local residents.*

**Project (Mine) Compatibility**

The Project (Mine) is not located in vicinity to the Shire's townships and the environs area. As a result, no Project (Mine) impacts are likely to be generated upon the role of the townships or associated supporting services and businesses within the townships.

**Economy**

Section 2.3.1 in the Planning Scheme for the Dalrymple Shire is as follows.

*DEO 5*

*Resources, including natural areas, good quality agricultural land, extractive and mineral resources, are to be protected and made available.*

*Shire Strategies*

*DEO 5 is intended to be achieved by –*

- a) Facilitating development that complements rather than conflicts with the natural and cultural features of the Shire.*
- b) Ensuring the protection of resources such as extractive and mineral resources, natural areas and good quality agricultural land is maximised.*



***Project (Mine) Compatibility***

The impact of the Project (Mine) upon natural environment is detailed within Volume 2 Section 5, GQAL within Volume 2 Section 4. The Project (Mine) is unlikely to have a significant impact upon these areas of the Dalrymple Shire.

**Sufficient Grounds for Approval**

Section 326 of the SP Act requires that the Assessment Manager's decision must not conflict with a relevant instrument unless:

- a) the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) there are sufficient grounds to justify the decision, despite the conflict; or*
- c) the conflict arises because of a conflict between —*
  - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments;*
  - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.*

The Project does not conflict with the planning scheme or any other relevant instrument for the following reasons:

- ▀ it been declared a “significant project” under the SDPWO Act and will contribute significantly to the economy of the region
- ▀ proposed infrastructure located within the applicable planning scheme areas cannot be efficiently provided elsewhere
- ▀ the Project proposes efficient use of suitable land
- ▀ the proposal will not result in significant adverse impacts upon the rural amenity of the surrounding areas
- ▀ any impacts on the environment are proposed to be appropriately mitigated and managed
- ▀ the land will be rehabilitated progressively upon completion of activities.

## Appendix IV – Supporting information for temporary workforce accommodation camps

*Due to the size of the application for temporary rail construction camp material, it has not been included in this document. Extracts from planning assessment reports prepared by consultants on behalf of Adani for the temporary mine camp and three rail camps are included in this Appendix.*

*Please see the accompanying CD titled "Volume 4, Appendix D, Appendices IV and V" for this information.*

### Extract from Planning Assessment Report - Mine Camp

#### Site Details

Real Description	Lot 662 on Crown Plan PH1491
Address	Moray Carmichael Road – 60 km west of Gregory Developmental Road
Area	117000 ha
Owner(s)	State Government - Adani Mining Pty Ltd
Existing Uses	Mineral Exploration / Cattle Grazing
Local Government Authority	Isaac Regional Council
Regional Planning Designation	Regional Landscape and Rural Production Area
Planning Scheme Designation	Rural Zone
Previous Council Approvals	Nil

**Application Details**

<b>Development type</b>	<b>Development Permit</b> Material Change of Use – Accommodation Building (Temporary Workers Camp) Environmentally Relevant Activity 8 – Chemical Storage Environmentally Relevant Activity 63 – Sewage Treatment
<b>Defined Planning Scheme Use</b>	<p>&gt; Accommodation Building</p> <p><i>means “premises” comprising primarily of “accommodation units” such as motels, boarding-houses, guest-houses, accommodation centres or villages, hostels, unlicensed hotels, nursing homes, serviced rooms, or residential clubs. The term includes dining, laundry and recreation facilities which cater exclusively for the residents of the accommodation building and a manager’s office and residence. The term does not include a “shop” or “hotel” as herein defined.</i></p>
<b>IDAS Process</b>	Development Permit
<b>Level of Assessment</b>	Impact Assessment
<b>Proposal Summary</b>	<p>The proposal involves the establishment of a temporary construction camp that is intended to accommodate workers involved in the construction of the proposed Carmichael Coal Mine facility.</p> <p>The development is comprised of single storey temporary accommodation buildings that are supported by communal mess, office and recreation facilities. The development is indented to accommodate a maximum of 500 persons on the site at any one time.</p> <p>The site will function independently in terms of stormwater and sewage treatment with water being imported to the site and treated for drinking purposes by an on-site water treatment plant.</p> <p>The camp is intended to operate on a temporary basis and will be fully removed once completion of the mine facility is complete. The camp is located in what will eventually become the site of the permanent settlement in the future.</p> <p>The camp is essential to the construction of the mine facility and ensures that workers are accommodated within close proximity to the mine construction site. The isolated nature of the land in which the mine will be situated does not present any reasonable permanent accommodations facilities within reasonable distance that can accommodate the required number of workers.</p> <p>The accommodation facility is a high standard and will have minimal impacts upon the land which it is proposed to be situated with all potential external impacts being appropriately mitigated.</p> <p>The camp is essential in ensuring that the proposed Carmichael Coal mine, which is deemed to be of State Significance, can proceed in a timely manner. Should works be required to be accommodated at another location, the economic viability of the construction process could be jeopardised.</p>
<b>Referral Agencies</b>	No Queensland Government Agencies will be referred this development application as the exemptions provided under Section 37 of the <i>State Development and Public Works Organisation Act 1971</i> are sought as part of this application.
<b>Applicant</b>	Adani Mining Pty Ltd
<b>Applicant's Representative</b>	Cardno HRP

Relevant plan(s)	Proposed Camp Layout and Building Plans a dated October 2012 as prepared by Cardno. Civil Engineering Drawings dated October 2012 as prepared by Cardno
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## Introduction

### Overview

This planning report has been prepared for Adani Mining Pty Ltd, the proponents of the development described within the table below. The purpose of this Planning Report is to provide a Town Planning assessment in support of the proposed temporary construction accommodation camp associated with the proposed Carmichael Coal Mine located approximately 165 km west of Moranbah on land described as Lot 662 on Crown Plan PH1491. The site is located within a cattle grazing property colloquially known as 'Moray Downs'.

The subject development application is intended to be provided to the Coordinator General as part of the overall Environmental Impact Statement (EIS) submission for the Carmichael Coal Mine Project. The purpose of the inclusion of this document within the EIS is to facilitate particular exemptions from the supplementary IDAS process that are afforded under the *State Development and Public Works Organisation Act 1971*.

The proposed camp facility is directly associated with the construction of the proposed Carmichael Coal Mine Project. The camp is intended to accommodate 500 beds and has been proposed to accommodate all workers required for the construction process of the mine facility.

The isolated nature of the land in which the mine camp is located necessitates the accommodation of workers in a temporary location as the provision of accommodation within an existing urban centre is not a feasible or cost effective option to facilitate the construction process. The establishment of a temporary camp facility is therefore required in order to accommodate the large number of workers associated with the construction of the mine facility. The establishment of a permanent accommodation facility is not feasible at this point in time and the only economically viable method of housing workers is through the construction of this temporary facility.

The proposed camp facility has been appropriately designed from both a liveability and operational perspective and is expected to have minimal impacts upon the local environment. The camp will be essentially self-sufficient in terms of water treatment, stormwater management, wastewater treatment and wastewater disposal.

The proposal forms part of a larger infrastructure project within the region that has been deemed to be of State Significance. When completed, the Carmichael Coal Mine Project will represent a major increase in employment opportunities within the region and the establishment of the required worker accommodation is essential in ensuring that the project proceeds accordingly.

As outlined throughout this report, the proposal is appropriate for the land in which it is situated and will not result in any significant adverse impacts upon the local environment.

A summary of the proposed development is outlined below:

Total Site Area	20.7 ha excluding sewage and water treatment areas (total lot area – 47600 ha)
Accommodation Units	500 beds (including 6 disabled units)
Maximum Building Height	Single storey
Open Space Areas	<ul style="list-style-type: none"> <li>&gt; 16.4 ha total including firebreak</li> <li>&gt; Dedicated as a sports fields</li> <li>&gt; Communal open space areas adjacent to each building pod</li> </ul>
Vehicular Access Points	Single access point and single exit point
Car Parking Allocation	<ul style="list-style-type: none"> <li>&gt; 215 regular vehicle spaces</li> <li>&gt; Two (2) bus spaces and bus drop off area</li> </ul>
Effluent Disposal Area	5 ha
Detention Basin Area	0.32 ha

This report should be read in conjunction with the following documentation:

- > Stormwater Management Plan prepared by Cardno (**Part 6**);
- > Electrical Report prepared by Cardno (**Part 6**)
- > Information in Support of Application for Multiple Environmentally Relevant Activities prepared by Cardno (**Part 7**);
- > Traffic Impact Assessment prepared by Cardno (**Part 8**);
- > Camp Design and Layout Plans prepared by Cardno (**Part 10**); and
- > Civil Engineering Drawings prepared by Cardno (**Part 10**)

Summaries of these reports are included in **Parts 6 to 11** of this Application Package, with full copies of the technical reports appended, as noted above.

### **Key Planning Matters**

The proposed development of the site constitutes development as defined by Section 7 of the *Sustainable Planning Act 2009* (“the SPA”). In this regard, the proposal seeks a development permit for an Impact Assessable Material Change of Use (“MCU”).

The impact assessable component of the proposal relates to the establishment of a residential use within the Rural Zone of the *Planning Scheme for Belyando Shire*.

The key planning issues considered necessary to be addressed in the assessment of this proposal are as follows:

- > **Appropriateness of ‘Accommodation Building’ use within Rural Zone**– The proposal involves the establishment of a temporary works camp within the Rural Zone designation. It must therefore be demonstrated as part of this report that the proposed land use is appropriate for the site in which it is proposed to be located.

## Background

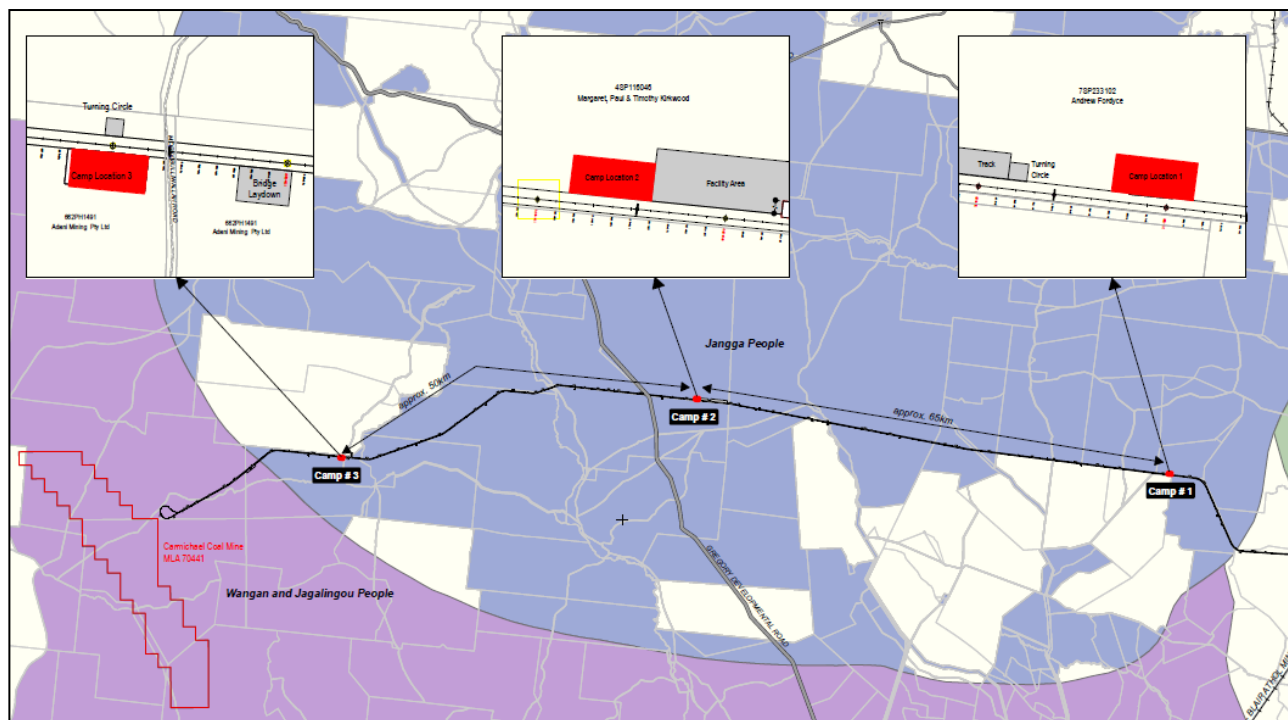
### *Carmichael Coal Mine Project and Required Construction Worker Accommodation*

Adani Mining Pty Ltd proposes to develop an open cut and underground thermal coal mine in the north Galilee Basin known as the Carmichael Coal Mine Project. The proposed mine will have a total per annum production of approximately 60 million tonnes and an operational lifespan of 90 years. The mine site is situated approximately 160 km northwest of Clermont and is proposed to be serviced by a new 189 km rail corridor along which all coal will be transported.

The construction of the proposed coal mine and rail corridor requires the employment of large volumes of workers that are separate from those that will be employed when the mine is in operation. These workers must be accommodated in locations that are within close proximity to the rail corridor and the mine site itself to reduce travel times to the required work locations. Given the remote nature of the locality and lack of accommodation infrastructure, temporary construction workers accommodation camps must be established.

The construction of the required rail infrastructure involves the establishment of a total of three (3) temporary rail construction camps at regular intervals along the rail corridor each containing a total of 400 beds. The construction of the mine facility requires the establishment of one (1) camp located at the mine site itself accommodating a total of 500 beds. The project therefore involves the establishment of a total of four (4) temporary workers camps.

**Figure 1** below provides a general illustration of the overall proposal including the three (3) proposed rail construction camps. It is noted that the proposed mine camp is not shown on the figure below but is located east of the mine lease area. It is noted that the exact locations of Camps 2 and 3 have altered slightly since this drawing was produced for the purposes of the EIS.



**Figure 1: General Outline of Rail Corridor and Camp Locations (Source GDP)**

[END OF EXTRACT FROM MINE CAMP APPLICATION]

**Extract from Planning Assessment Report – Rail Camp 1****Site Details**

Real Description	Lot 7 on SP233102
Address	Kilcummin – Diamond Downs Road
Area	Lot area – 11668.6 ha Camp area – 9.33 ha
Existing Uses	Cattle grazing
Local Government Authority	Isaac Regional Council
Regional Planning Designation	Regional Landscape and Rural Production Area of the Mackay Isaac and Whitsunday Regional Plan
Applicable Planning Scheme	Planning Scheme for the Shire of Belyando
Planning Scheme Designation	Rural Zone
Previous Council Approvals	Nil

**Application Details**

Development type	<b>Development Permit</b> Material Change of Use – Accommodation Building (Temporary Workers Camp) Environmentally Relevant Activity 8 – Chemical Storage Environmentally Relevant Activity 63 – Sewage Treatment
Defined Planning Scheme Use	> Accommodation Building <i>means “premises” comprising primarily of “accommodation units” such as motels, boarding-houses, guest-houses, accommodation centres or villages, hostels, unlicensed hotels, nursing homes, serviced rooms, or residential clubs. The term includes dining, laundry and recreation facilities which cater exclusively for the residents of the accommodation building and a manager’s office and residence. The term does not include a “shop” or “hotel” as herein defined.</i>
IDAS Process	Development Permit
Level of Assessment	Impact Assessment



<b>Proposal Summary</b>	<p>The proposal involves the establishment of a temporary accommodation camp that is intended to accommodate workers involved in the construction of the railway line associated with the proposed Carmichael Coal Mine Project. The proposed rail line will travel from the existing QR network just south of Moranbah to the site of the proposed Carmichael Coal Mine approximately 160 km to the west.</p> <p>The development is indented to accommodate 40 persons and is comprised of single storey temporary accommodation buildings that are supported by communal mess, office and recreation facilities.</p> <p>The site will function independently in terms of stormwater and sewage treatment with water being imported to the site and treated for drinking purposes by an on-site water treatment plant.</p> <p>The camp is intended to operate for approximately two (2) years and will be fully removed once completion of the first third of the proposed rail corridor is complete. The camp represents the first of three (3) camps that will facilitate the construction of the proposed rail corridor.</p> <p>The camp is essential to the construction of the rail corridor and ensures that reasonable travel distances can be achieved for construction workers on a daily basis. The isolated nature of the land which the corridor traverses does not present any reasonable permanent accommodation facilities that can accommodate the required number of workers. The creation of a temporary camp is therefore the only economically viable option to accommodate workers and facilitate the construction of the rail line.</p> <p>The accommodation facility is a high standard and will have minimal impacts upon the land which it is proposed to be situated.</p> <p>Once the camp has been removed it is proposed to fully rehabilitate the site to its existing state in terms of vegetation and the camp is not expected to result in any long lasting impacts on the local environment.</p> <p>The camp is essential in ensuring that the proposed Carmichael Coal Mine Project, which is deemed to be of State Significance, can proceed in a timely manner. Should workers be required to be accommodated within permanent accommodation within an existing centre, the economic viability of the rail corridor construction process and the project as a whole could potentially be jeopardized.</p>
<b>Referral Agencies</b>	No Queensland Government Agencies will be referred this development application as the exemptions provided under Section 37 of the <i>State Development and Public Works Organisation Act 1971</i> are sought as part of this application.
<b>Applicant</b>	Adani Mining Pty Ltd
<b>Applicant's Representative</b>	Cardno HRP
<b>Relevant plan(s)</b>	<p>Proposed Camp Layout and Building Plans a dated October 2012 as prepared by Cardno.</p> <p>Civil Engineering Drawings dated October 2012 as prepared by Cardno</p>

## Introduction

### Overview

This planning report has been prepared for Adani Mining Pty Ltd, the proponents of the development described within table below. The purpose of this Planning Report is to provide a Town Planning assessment in support of the proposed temporary construction accommodation camp located approximately 35 km west of Moranbah on land described as Lot 7 on SP233102.

The subject development application is intended to be provided to the Coordinator General as part of the overall Environmental Impact Statement submission for the Carmichael Coal Mine Project. The purpose of the inclusion of this document within the EIS is to facilitate particular exemptions from the supplementary IDAS process that are afforded under the *State Development and Public Works Organisation Act 1971*.

The proposed facility represents the first of three (3) camps associated with the construction of a new rail corridor that is proposed to service the proposed Carmichael Coal Mine Project to the west of the site. The rail line is proposed to branch from the existing QR network south of Moranbah and travel approximately 160 km west to the site of the proposed mine facility.

The camp is intended to accommodate 400 beds and has been proposed in conjunction with two other rail camps along the proposed rail corridor which are located almost equal distances apart to ensure that workers are not required to travel in excess of 35 km to access work site locations. Given the safe maximum speed for large vehicles on the roads that provide access to the length of the rail corridor, distances greater than 35 km would result in unreasonable travel times to construction locations.

The isolated nature of the land that proposed the rail corridor traverses necessitates the accommodation of workers in a temporary location as the provision of accommodation within an existing urban centre is not a feasible or cost effective option to facilitate the construction process. The establishment of a temporary camp facility is therefore required in order to accommodate the large number of workers associated with the construction of the rail corridor.

The proposed camp facility has been appropriately designed from both a liveability and operational perspective and is expected to have minimal impacts upon the local environment. The camp will be essentially self sufficient in terms of water treatment, stormwater management, wastewater treatment and wastewater disposal.

The proposal is not expected to result in any significant environmental impacts to the local area and it is proposed to rehabilitate the site and restore the land to its current pre development state upon completion of the rail corridor.

The proposal forms part of a larger infrastructure project within the region that has been deemed to be of State Significance. When completed, the Carmichael Coal Mine Project will represent a major increase in employment opportunities within the region and the establishment of the required worker accommodation is essential ensuring that the project proceeds accordingly.

As outlined throughout this report, the proposal is appropriate for the land in which it is situated and will not result in any significant adverse impacts upon the local environment.

A summary of the proposed development is outlined below:

Site Area	9.33 ha (total lot area 11668.6 ha)
Accommodation Units	400 beds (including 2 disabled units)
Maximum Building Height	One storey
Open Space Areas	<ul style="list-style-type: none"> <li>&gt; 5.68 ha total including firebreak</li> <li>&gt; Two (2) large communal open space areas with one dedicated as a sports field</li> <li>&gt; BBQ and shelter areas adjacent to each pod of accommodation buildings</li> </ul>
Car Parking Allocation	<ul style="list-style-type: none"> <li>&gt; 125 regular vehicle spaces</li> <li>&gt; 2 disabled spaces</li> <li>&gt; Two (2) bus spaces and bus drop off area</li> </ul>
Effluent Disposal Area	4 ha
Detention Basin Area	0.32 ha

This report should be read in conjunction with the following documentation:

- > Stormwater Management Plan prepared by Cardno (**Part 6**);
- > Information in Support of Application for Multiple Environmentally Relevant Activities prepared by Cardno (**Part 7**);
- > Rehabilitation Plan prepared by Cardno Chenoweth (**Part 7**)
- > Traffic Impact Assessment prepared by Cardno (**Part 8**);
- > Camp Design and Layout Plans prepared by Cardno (**Part 10**); and
- > Civil Engineering Drawings prepared by Cardno (**Part 10**)

Summaries of these reports are included in **Parts 6 to 11** of this Application Package, with full copies of the technical reports appended, as noted above.

[END OF EXTRACT FROM RAIL CAMP 1 APPLICATION]

**Extract from Planning Assessment Report – Rail Camp 2****Details of Application**

<b>Real Description</b>	Lot 4 on SP116046
<b>Address</b>	N/A – 6 km east of Gregory Developmental Road
<b>Area</b>	Lot area – 47600 ha Camp area – 9.33 ha
<b>Existing Uses</b>	Cattle grazing
<b>Local Government Authority</b>	Isaac Regional Council
<b>Regional Planning Designation</b>	Regional Landscape and Rural Production Area of the Mackay Isaac and Whitsunday Regional Plan
<b>Applicable Planning Scheme</b>	Planning Scheme for the Shire of Belyando
<b>Planning Scheme Designation</b>	Rural Zone
<b>Previous Council Approvals</b>	Nil

**Application Details**

<b>Development type</b>	<b>Development Permit</b> Material Change of Use – Temporary Rail Workers Camp Environmentally Relevant Activity 8 – Chemical Storage Environmentally Relevant Activity 63 – Sewage Treatment
<b>Defined Planning Scheme Use</b>	> Accommodation Building <i>means “premises” comprising primarily of “accommodation units” such as motels, boarding-houses, guest-houses, accommodation centres or villages, hostels, unlicensed hotels, nursing homes, serviced rooms, or residential clubs. The term includes dining, laundry and recreation facilities which cater exclusively for the residents of the accommodation building and a manager’s office and residence. The term does not include a “shop” or “hotel” as herein defined.</i>
<b>IDAS Process</b>	Development Permit
<b>Level of Assessment</b>	Impact Assessment
<b>Proposal Summary</b>	<p>The proposal involves the establishment of a temporary accommodation camp that is intended to accommodate workers involved in the construction of the railway line associated with the proposed Carmichael Coal Mine Project. The proposed rail line will travel from the existing QR network just south of Moranbah to the site of the proposed Carmichael Coal Mine approximately 160 km to the west.</p> <p>The development is intended to accommodate 400 persons and is comprised of single storey temporary accommodation buildings that are supported by communal mess, office and recreation facilities.</p> <p>The site will function independently in terms of storm water and sewage treatment with water being imported to the site and treated for drinking purposes by an on-site water treatment plant.</p> <p>The camp is intended to operate for approximately two (2) years and will</p>

	<p>be fully removed once completion of the first third of the proposed rail corridor is complete. The camp represents the second of three (3) camps that will facilitate the construction of the proposed rail corridor.</p> <p>The camp is essential to the construction of the rail corridor and ensures that reasonable travel distances can be achieved for construction workers on a daily basis. The isolated nature of the land which the corridor traverses does not present any reasonable permanent accommodations facilities that can accommodate the required number of workers. The creation of a temporary camp is therefore the only economically viable option to accommodate construction workers and facilitate the construction of the rail line.</p> <p>The accommodation facility is a high standard and will have minimal impacts upon the land which it is proposed to be situated.</p> <p>Once the camp has been removed it is proposed to fully rehabilitate the site to its existing state in terms of vegetation and the camp is not expected to result in any long lasting impacts on the local environment.</p> <p>The camp is essential in ensuring that the proposed Carmichael Coal Mine Project, which is deemed to be of State Significance, can proceed in a timely manner. Should workers be required to be accommodated within permanent accommodation within an existing centre, the economic viability of the rail corridor construction process and the project as a whole could potentially be jeopardized.</p>
Referral Agencies	No Queensland Government Agencies will be referred this development application as the exemptions provided under Section 37 of the <i>State Development and Public Works Organisation Act 1971</i> are sought as part of this application.
Applicant	Adani Mining Pty Ltd
Applicant's Representative	Cardno HRP
Relevant plan(s)	Proposed Camp Layout and Building Plans a dated October 2012 as prepared by Cardno. Civil Engineering Drawings dated October 2012 as prepared by Cardno

## Introduction

### Overview

This planning report has been prepared for Adani Mining Pty Ltd, the proponents of the development described within the table below. The purpose of this Planning Report is to provide a Town Planning assessment in support of the proposed temporary construction accommodation camp located approximately 65 km west of Moranbah on land described as Lot 4 on SP116046.

The subject development application is intended to be provided to the Coordinator General as part of the overall Environmental Impact Statement submission for the Carmichael Coal Mine Project. The purpose of the inclusion of this document within the EIS is to facilitate particular exemptions from the supplementary IDAS process that are afforded under the *State Development and Public Works Organisation Act 1971*.

The proposed facility represents the second of three (3) camps associated with the construction of a new rail corridor that is proposed to service the proposed Carmichael Coal Mine Project to the west of the site. The rail line is proposed to branch from the existing QR network south of Moranbah and travel approximately 160 km west to the site of the proposed mine facility.

The camp is intended to accommodate 400 beds and has been proposed in conjunction with two other rail camps along the proposed rail corridor which are located almost equal distances apart to

ensure that workers are not required to travel in excess of 35 km to access work site locations. Given the safe maximum speed for large vehicles on the roads that provide access to the length of the rail corridor, distances greater than 35 km would result in unreasonable travel times to construction locations.

The isolated nature of the land that proposed the rail corridor traverses necessitates the accommodation of workers in a temporary location as the provision of accommodation within an existing urban centre is not a feasible or cost effective option to facilitate the construction process. The establishment of a temporary camp facility is therefore required in order to accommodate the large number of workers associated with the construction of the rail corridor.

The proposed camp facility has been appropriately designed from both a liveability and operational perspective and is expected to have minimal impacts upon the local environment. The camp will be essentially self sufficient in terms of water treatment, stormwater management, wastewater treatment and wastewater disposal.

The proposal is not expected to result in any significant environmental impacts to the local area and it is proposed to rehabilitate the site and restore the land to its current pre development state upon completion of the rail corridor.

The proposal forms part of a larger infrastructure project within the region that has been deemed to be of State Significance. When completed, the Carmichael Coal Mine Project will represent a major increase in employment opportunities within the region and the establishment of the required worker accommodation is essential ensuring that the project proceeds accordingly.

As outlined throughout this report, the proposal is appropriate for the land in which it is situated and will not result in any significant adverse impacts upon the local environment.

A summary of the proposed development is outlined below:

<b>Total Site Area</b>	9.33 ha (total lot area – 47600 ha)
<b>Accommodation Units</b>	400 beds (including 2 disabled units)
<b>Maximum Building Height</b>	One storey
<b>Open Space Areas</b>	<ul style="list-style-type: none"> <li>&gt; 5.68 ha total including firebreak</li> <li>&gt; Two (2) large communal open space areas with one dedicated as a sports field</li> <li>&gt; BBQ and shelter areas adjacent to each pod of accommodation buildings</li> </ul>
<b>Vehicular Access Points</b>	Single access point and single exit point
<b>Car Parking Allocation</b>	<ul style="list-style-type: none"> <li>&gt; 125 regular vehicle spaces</li> <li>&gt; Two (2) disabled spaces</li> <li>&gt; Two (2) bus spaces and bus drop off area</li> </ul>
<b>Effluent Disposal Area</b>	4 ha
<b>Detention Basin Area</b>	0.32 ha

This report should be read in conjunction with the following documentation:

- > Stormwater Management Plan prepared by Cardno (**Part 6**);
- > Electrical report prepared by Cardno (**Part 6**)
- > Information in Support of Application for Multiple Environmentally Relevant Activities prepared by Cardno (**Part 7**);
- > Rehabilitation Plan prepared by Cardno Chenoweth (**Part 7**)
- > Traffic Impact Assessment prepared by Cardno (**Part 8**);
- > Camp Design and Layout Plans prepared by Cardno (**Part 10**); and
- > Civil Engineering Drawings prepared by Cardno (**Part 10**)

Summaries of these reports are included in **Parts 6 to 11** of this Application Package, with full copies of the technical reports appended, as noted above.

[END OF EXTRACT FROM RAIL CAMP 2 APPLICATION]



**Extract from Planning Assessment Report – Rail Camp 3****Details of Application**

Real Description	Lot 662 on Crown Plan PH1491
Address	Moray Carmichael Road—45 km west of Gregory Developmental Road
Area	117000 ha
Existing Uses	Mining Exploration / Cattle Grazing
Local Government Authority	Isaac Regional Council
Regional Planning Designation	Regional Landscape and Rural Production Area of the Mackay Isaac and Whitsunday Regional Plan
Applicable Planning Scheme	Planning Scheme for the Shire of Belyando
Planning Scheme Designation	Rural Zone
Previous Council Approvals	Nil

**Application Details**

Development type	<b>Development Permit</b> Material Change of Use – Accommodation Premises (Temporary Workers Camp) Environmentally Relevant Activity 8 – Chemical Storage Environmentally Relevant Activity 63 – Sewage Treatment
Defined Planning Scheme Use	> Accommodation Building <i>means “premises” comprising primarily of “accommodation units” such as motels, boarding-houses, guest-houses, accommodation centres or villages, hostels, unlicensed hotels, nursing homes, serviced rooms, or residential clubs. The term includes dining, laundry and recreation facilities which cater exclusively for the residents of the accommodation building and a manager’s office and residence. The term does not include a “shop” or “hotel” as herein defined.</i>
IDAS Process	Development Permit
Level of Assessment	Impact Assessment
Proposal Summary	<p>The proposal involves the establishment of a temporary accommodation camp that is intended to accommodate workers involved in the construction of the railway line associated with the proposed Carmichael Coal Mine Project. The proposed rail line will travel from the existing QR network just south of Moranbah to the site of the proposed Carmichael Coal Mine approximately 160 km to the west.</p> <p>The development is indented to accommodate 400 persons and is comprised of single storey temporary accommodation buildings that are supported by communal mess, office and recreation facilities.</p> <p>The site will function independently in terms of stormwater and sewage treatment with water being imported to the site and treated for drinking purposes by an on-site water treatment plant.</p> <p>The camp is intended to operate for approximately two (2) years and will be fully removed once completion of the first third of the proposed rail corridor is</p>

	<p>complete. The camp represents the third of three (3) camps that will facilitate the construction of the proposed rail corridor. The camps have been located at regular intervals to ensure that similar maximum travel distances to work locations are achieved for all three locations.</p> <p>The camp is essential to the construction of the rail corridor and ensures that reasonable travel distances can be achieved for construction workers on a daily basis. The isolated nature of the land which the corridor traverses does not present any reasonable permanent accommodation facilities that can accommodate the required number of workers. The creation of a temporary camp is therefore the only economically viable option to accommodate construction workers and facilitate the construction of the rail line.</p> <p>The accommodation facility is a high standard and will have minimal impacts upon the land which it is proposed to be situated.</p> <p>Once the camp has been removed it is proposed to fully rehabilitate the site to its existing state in terms of vegetation and the camp is not expected to result in any long lasting impacts on the local environment.</p> <p>The camp is essential in ensuring that the proposed Carmichael Coal Mine Project, which is deemed to be of State Significance, can proceed in a timely manner. Should workers be required to be accommodated within permanent accommodation within an existing centre, the economic viability of the rail corridor construction process and the project as a whole could potentially be jeopardized.</p>
Referral Agencies	No Queensland Government Agencies will be referred this development application as the exemptions provided under Section 37 of the <i>State Development and Public Works Organisation Act 1971</i> are sought as part of this application.
Applicant	Adani Mining Pty Ltd
Applicant's Representative	Cardno HRP
Relevant plan(s)	Proposed Camp Layout and Building Plans a dated October 2012 as prepared by Cardno. Civil Engineering Drawings dated October 2012 as prepared by Cardno

### Introduction

This planning report has been prepared for Adani Mining Pty Ltd, the proponents of the development described within the table below. The purpose of this Planning Report is to provide a Town Planning assessment in support of the proposed temporary construction accommodation camp located approximately 150 km west of Moranbah on land described as Lot 662 on Crown Plan PH1491. The site is located within a cattle grazing property colloquially known as 'Moray Downs'

The subject development application is intended to be provided to the Coordinator General as part of the overall Environmental Impact Statement submission for the Carmichael Coal Mine Project. The purpose of the inclusion of this document within the EIS is to facilitate particular exemptions from the supplementary IDAS process that are afforded under the *State Development and Public Works Organisation Act 1971*.

The proposed facility represents the third of three (3) camps associated with the construction of a new rail corridor that is proposed to service the proposed Carmichael Coal Mine Project to the west of the site. The rail line is proposed to branch from the existing QR network south of Moranbah and travel approximately 160 km west to the site of the proposed mine facility.

The camp is intended to accommodate 400 beds and has been proposed in conjunction with two other rail camps along the proposed rail corridor which are located almost equal distances apart to ensure that workers are not required to travel in excess of 35 km to access work site locations. Given

the safe maximum speed for large vehicles on the roads that provide access to the length of the rail corridor, distances greater than 35 km would result in unreasonable travel times to construction locations.

The isolated nature of the land that proposed the rail corridor traverses necessitates the accommodation of workers in a temporary location as the provision of accommodation within an existing urban centre is not a feasible or cost effective option to facilitate the construction process. The establishment of a temporary camp facility is therefore required in order to accommodate the large number of workers associated with the construction of the rail corridor.

The proposed camp facility has been appropriately designed from both a liveability and operational perspective and is expected to have minimal impacts upon the local environment. The camp will be essentially self sufficient in terms of water treatment, stormwater management, wastewater treatment and wastewater disposal.

The proposal is not expected to result in any significant environmental impacts to the local area and it is proposed to rehabilitate the site and restore the land to its current pre development state upon completion of the rail corridor.

The proposal forms part of a larger infrastructure project within the region that has been deemed to be of State Significance. When completed, the Carmichael Coal Mine Project will represent a major increase in employment opportunities within the region and the establishment of the required worker accommodation is essential ensuring that the project proceeds accordingly.

As outlined throughout this report, the proposal is appropriate for the land in which it is situated and will not result in any significant adverse impacts upon the local environment.

A summary of the proposed development is outlined below:

<b>Total Site Area</b>	9.33 ha (total lot area – 47600 ha)
<b>Accommodation Units</b>	400 beds (including 2 disabled units)
<b>Maximum Building Height</b>	Single storey
<b>Open Space Areas</b>	<ul style="list-style-type: none"> <li>&gt; 5.68 ha total including firebreak</li> <li>&gt; Two (2) large communal open space areas with one dedicated as a sports field</li> <li>&gt; BBQ and shelter areas adjacent to each pod of accommodation buildings</li> </ul>
<b>Vehicular Access Points</b>	Single access point and single exit point
<b>Car Parking Allocation</b>	<ul style="list-style-type: none"> <li>&gt; 125 regular vehicle spaces</li> <li>&gt; 2 disabled spaces</li> <li>&gt; Two (2) bus spaces and bus drop off area</li> </ul>
<b>Effluent Disposal Area</b>	4 ha
<b>Detention Basin Area</b>	0.32 ha

This report should be read in conjunction with the following documentation:

- > Stormwater Management Plan prepared by Cardno (**Part 6**);
- > Information in Support of Application for Multiple Environmentally Relevant Activities prepared by Cardno (**Part 7**);

- > Rehabilitation Plan prepared by Cardno Chenoweth (**Part 7**)
- > Traffic Impact Assessment prepared by Cardno (**Part 8**);
- > Camp Design and Layout Plans prepared by Cardno (**Part 10**); and
- > Civil Engineering Drawings prepared by Cardno (**Part 10**)

Summaries of these reports are included in **Parts 6 to 11** of this Application Package, with full copies of the technical reports appended, as noted above.

[END OF EXTRACT FROM RAIL CAMP 3 APPLICATION]

## Appendix V – Supporting information for some NC Act vegetation clearing permits for the Project (Rail)

*Due to the size of the material in this Appendix, it has not been included in this file. Extracts from the following reports prepared by consultants on behalf of Adani are been included in this Appendix:*

- *Vegetation Clearing Permit Report SP2 Rail*
- *Vegetation Clearing Permit Report SP2 Temporary Works.*

*Please see the accompanying CD titled "Volume 4, Appendix D, Appendices IV and V" for this information.*

### *Extract from Vegetation Clearing Permit Report SP2 Rail Report*

The Environmental Management Division of the Saunders Havill Group was engaged by Adani Mining Pty Ltd to prepare this Nature Conservation Act 1992 (NCA) vegetation clearing permit application to enable clearing for the Carmichael Coal Rail Project (SP1 section).

The Carmichael Coal Rail Project involves the construction of a rail line connecting the Carmichael mine site to the existing Goonyella and Newlands rail systems to provide for the export of coal via the Hay Point and Abbot Point coal terminals. The proposed mine is projected to have a total output capacity of 60 million tonnes per annum.

The Project has been declared a 'significant project' under the State Development and Public Works Organisation Act 1971 (SDPWO Act) and as such, an Environmental Impact Statement (EIS) is required for the Project. The rail line is divided into two (2) components as follows:

- Separable Portion 1 (SP1) – known as 'west rail' which traverses approximately 120 km from the Mine site east towards Moranbah; and
- Separable Portion 2 (SP2) – known as 'east rail' which connects 'west rail' with the existing Goonyella rail system and provides access to Dalrymple Bay and Hay Point coal terminals.

This report is prepared to accompany the EIS and seek approval to clear 'Least Concern' plants along the 95 m wide rail corridor. This document applies only to SP2 of the rail alignment with separate documents provided for clearing associated with SP1 alignment and temporary works areas.

Adani mining Pty Ltd is aware of a number of processes and exemptions under the Nature Conservation Act 1992 which may lead to the ability to clear 'Least Concern' plants for the Carmichael Coal Rail Project. These processes and exemptions are discussed in further detail within this report, however include:

- Various exemptions listed under Section 41(1) of the *Nature Conservation (Protected Plants) Conservation Plan 2000*;
- Receipt of a clearing permit for the clearing of Least Concern Plants.

In support of this clearing application detailed information regarding the type and approximate numbers of Least Concern plants present within the SP1 Rail corridor is provided.

### **Application Details**

The rail alignment is located within a nominal 95 metre (m) wide corridor that runs from the Mine approximately 189 km eastwards to connect with existing QR National Goonyella Coal Rail System (Plan 1). The Rail (west) portion is designed to accommodate a dual gauge (i.e. narrow gauge and standard gauge) with a capacity up to 100 Mtpa. This will allow for future connections to other existing

and/or proposed third party rail infrastructure via standard and/or narrow gauge lines. The Rail (east) will be a narrow gauge track with capacity assessed at 60 Mtpa.

The 95 m wide rail corridor is required to facilitate the construction of the rail including earthworks (cut and fill), drainage, associated utilities, access roads and fencing.

**Table: Application Summary**

**Applicant:** Adani Mining Pty Ltd

**Location:** SP2 Rail Corridor and associated infrastructure, including laydown areas, batching plants and construction camps

**RPD**

- ▶ Lot 6 on SP125740
- ▶ Lot 5 on SP125740
- ▶ Lot 8 on DC98
- ▶ Lot 5 on DC138
- ▶ Lot 9 on RP891795
- ▶ Lot 7 on SP233102
- ▶ Lot 2 on DC99
- ▶ Lot 5305 on SP240414
- ▶ Lot 2 on GV248
- ▶ Lot 1 on RP616897
- ▶ Lot 12 on SP151699

**Local Government:** Isaac Regional Council

[END OF EXTRACT FROM VEGETATION CLEARING PERMIT REPORT SP2 RAIL REPORT]

*Extract from Vegetation Clearing Permit Report SP2 Temporary Works Report***Application Details**

The rail alignment is located within a nominal 95 metre (m) wide corridor that runs from the Mine approximately 189 km eastwards to connect with existing QR National Goonyella Coal Rail System (Refer to Plan 1 Rail project overview SP2 ).

The Rail (west) portion is designed to accommodate a dual gauge (i.e. narrow gauge and standard gauge) with a capacity up to 100 Mtpa. This will allow for future connections to other existing and/or proposed third party rail infrastructure via standard and/or narrow gauge lines. The Rail (east) will be a narrow gauge track with capacity assessed at 60 Mtpa.

The laydown and temporary works areas are required to facilitate the construction of the rail. This associated infrastructure includes:

- ▶ Construction Camp – 1
- ▶ Laydown Area Turning Circle – 16
- ▶ Laydown Area – Track – 10
- ▶ Laydown Area Bridge – 7
- ▶ Ballast Stockpile – 1.

Refer to Appendix B for a location plan of the laydown and temporary works areas. Example drawings are presented in Appendix C.

**Table: Application Summary**

**Applicant:** Adani Mining Pty Ltd

**Location:** SP2 Rail Corridor - associated infrastructure, including laydown areas, batching plants and construction camps

**RPD**

- ▶ Lot 5 SP125740
- ▶ Lot 8 DC98
- ▶ Lot 5 DC138
- ▶ Lot 9 RP891795
- ▶ Lot 7 SP233102
- ▶ Lot 2 DC99
- ▶ Lot 2 GV248
- ▶ Lot 1 RP616897

**Local Government:** Isaac Regional Council

**Clearing Purpose:** Establishment of Carmichael Coal Mine rail infrastructure

[END OF EXTRACT FROM VEGETATION CLEARING PERMIT REPORT SP2 TEMPORARY WORKS REPORT]



## Appendix VI – References

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## Appendix VII – Project Team

Team Member Name / Company	Qualifications	Years of Experience
Melinda Bergmann	Bachelor of Science in Australian Environmental Studies	14+ years
Tim Hanmore, McCullough Robertson Lawyers	Bachelor of Laws (Hons)	10+ years
Claire Meiklejohn, McCullough Robertson Lawyers	Bachelor of Laws Bachelor of Environmental Management (Sustainable Development) (Hons) Graduate Diploma Legal Practice	4 years
<b>Technical review</b>		
Claire Gronow – Ashgrove Environmental	Bachelor of Science (Chemistry) Masters of Environmental Science Fellow of the environment institute of Australia and New Zealand Certified environmental practitioner	22 years