

MS15-002327

To: Minister (for decision)

**Approval Decision Brief (assessment report) – Carmichael Coal Mine and Rail Project,
Queensland (EPBC 2010/5736)****Timing:** As soon as possible – the statutory timeframe for this decision has passed. Noting that the decision of 24 July 2014 has been set aside by the Federal Court.**Recommendations:**

1. Consider the information provided in this brief, in the proposed decision brief at **Attachment A** (and the information at Attachments A, B, G – I, K and M of that brief) and the addendum brief at **Attachment B**.

Considered / please discuss

2. Consider the advice from the Independent Expert Scientific Committee and the other advice and information in relation to impacts on water resources at Attachment C of the proposed decision brief (**Attachment A**).

Considered / please discuss

3. Consider, and have regard to, the approved conservation advices, recovery plans and threat abatement plans relevant to the proposed action at Attachment J of the proposed decision brief (**Attachment A**) and confirm that you have done so.

Confirmed / please discuss

4. Consider and take into account the legislative provisions at Attachment N of the proposed decision brief (**Attachment A**).

Considered / please discuss

5. Consider, where relevant to the Carmichael Coal Mine and Rail Project, the advice from the Independent Expert Scientific Committee in relation to impacts on water resources from the MacMines Austasia Pty Ltd's China Stone Coal Mine Project (EPBC 2014-7353) at **Attachment C**.

Considered / please discuss

6. Consider the responses to the invitation for comment on the proposed decision at **Attachment D**.

Considered / please discuss

7. Agree that you have enough information to make the decision set out in the notice at **Attachment G**.

Agreed / Not agreed

8. Approve the proposed action for each controlling provision set out in the table below.

Approved / Not approved

9. Agree to attach the conditions of approval as set out in **Attachment G**.

Agreed / Not agreed

10. Sign the notice of your decision at **Attachment G**.

Signed / Not signed

11. Sign the letters at **Attachment H** advising the person proposing to take the action, and other relevant parties, of your decision.

Signed / Not signed

12. Consider the attached draft statement of reasons at **Attachment I** and make any modification you consider necessary to ensure that the statement reflects your reasoning.

Considered / please discuss

13. Sign the statement of reasons at **Attachment I**.

Signed / Not signed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to approve
World heritage properties		
section 12	Approve	
section 15A	Approve	
National heritage places		
section 15B	Approve	
section 15C	Approve	
Wetlands of international importance		
section 16	Approve	
section 17B	Approve	
Listed threatened species and communities		
section 18	Approve	
section 18A	Approve	
Listed migratory species		
section 20	Approve	
section 20A	Approve	
Great Barrier Reef Marine Park		
section 24B	Approve	
section 24C	Approve	
A water resource, in relation to coal seam gas development and large coal mining developments		
section 24D	Approve	
section 24E	Approve	

Minister for the Environment,
The Hon Greg Hunt MP



Date: 14:10:15

Comments:

Key Points:

Background

1. On 21 September 2015, as recommended by the Department in the proposed decision brief (**Attachment A**) and noting the changes to ministerial arrangements set out in the addendum brief at **Attachment B**, you proposed to approve a proposal by Adani Mining Pty Ltd (the proponent) to develop the Carmichael Coal Mine and Rail Project in central Queensland, under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act).
2. Also on that date, in accordance with sections 131 and 131AA of the EPBC Act, you wrote to the following parties, inviting comments on your proposed approval decision:
 - the proponent (and person proposing to take the action), Adani Mining Pty Ltd;
 - the Minister for Industry, Innovation and Science, the Hon Christopher Pyne MP;
 - the Minister for Infrastructure and Regional Development, the Hon Warren Truss MP;
 - the Minister for Agriculture and Water Resources, the Hon Barnaby Joyce MP; and
 - the Minister for Resources, Energy and Northern Australia, the Hon Josh Frydenberg MP.

Although not required under the EPBC Act, you also provided the proposed decision to the Queensland Coordinator-General, Mr Barry Broe, for his information.

3. You are now required under sections 130 and 133 of the EPBC Act to decide whether to approve the action and if you decide to approve, what conditions you will attach to the approval under section 134 of the EPBC Act. The Department considers that you have enough information to make an informed decision on whether to approve the action.

Issues/Sensitivities

4. On 9 October 2015 the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) provided advice (**Attachment C**) in relation to impacts on water resources from the MacMines Austasia Pty Ltd's China Stone Coal Project (EPBC 2014-7353). The IESC advice primarily relates to the China Stone Coal Project, including the lack of baseline data available and subsequent uncertainty in the hydrogeological conceptualisation and numerical groundwater model predictions. The

advice also relates to the cumulative impacts to water resources from the adjacent Carmichael coal mine.

5. In summary, the advice from the IESC in relation to the potential cumulative impacts states that:
 - a. Cumulative impacts to the Great Artesian Basin are more likely to be significant at the local scale [e.g. Lake Buchanan] rather than the regional scale.
 - b. There are potential cumulative impacts to the Belyando River catchment, due to water supply needs, water discharges and loss of contributing catchment.
 - c. There is the potential for cumulative impacts as a result of groundwater depressurisation and subsequent impacts to the Doongmabulla Springs Complex and associated downstream ecosystems (e.g. Waxy Cabbage Palm). Impacts remain uncertain as a thorough assessment of cumulative impacts on the springs has not been undertaken and the source of the springs is not certain (see Webb et al., 2015).
 - d. Appropriate monitoring and adaptive management should be put in place for potential cumulative impacts to Lake Buchanan and the Doongmabulla Springs Complex, in conjunction with specific assessment of the risks to these specific assets.
6. The recommended conditions of approval for the Carmichael Coal Mine and Rail Project will address the impacts from that proposal on the Great Artesian Basin and the Doongmabulla Springs Complex. The additional cumulative impacts from the China Stone Coal Project will undergo further assessment and measures may be required by that project proponent to address the additional impacts if that proposal is to be approved.
7. Responses to your invitation to comment on your proposed approval decision were received from the following parties and have been considered in finalising the Department's recommended decision:
 - s22 [redacted] responded on behalf of Ministers Pyne and Frydenberg on 1 October 2015. The response was generally supportive of the proposed decision, noting the economic importance of the project (**Attachment D2**).
 - s22 [redacted] responded on behalf of Minister Joyce on 29 September 2015. The response made a number of recommendations to be undertaken by the proponent to reduce impacts of the proposed action on affected landholders. The response also recommended the conditions of approval stipulate the requirements for rehabilitation work after mine closure. The Department notes that these issues are for the most part the responsibility of the Queensland Government and will be managed through the Queensland conditions of approval (**Attachment D3**).
 - s22 [redacted] responded on behalf of Minister Truss on 23 September 2015. The response noted that Minister Truss would not be providing a comment on the proposed project (**Attachment D4**).
 - Mr Hamish Manzi responded on behalf of the proponent on 7 October 2015. The response made a number of comments on the proposed conditions, in particular in relation to the offset requirements for the black-throated finch and the 0.2 metre drawdown limit for the Doongmabulla Springs Complex. The response also proposed a change to the approach to be used to ensure that appropriately qualified and experienced persons are used to monitor, review and implement

several plans. A number of administrative clarifications were also proposed. A copy of the proponent's response is at (**Attachment D1**).

8. A table summarising the key issues raised by the proponent and other relevant parties and the Department's response is at **Attachment E**.
9. Key recommended changes from your proposed decision are:
 - An amendment to Condition 3d) which sets an interim limit on allowable drawdown at the Doongmabulla Springs Complex, and includes the relevant requirements under the Queensland Government's environmental authority issued under the *Environmental Protection Act (1994) Qld*. This will provide for a more adaptive approach as further modelling, monitoring and research becomes available, but still ensures that Matters of National Environmental Significance are protected.
 - An amendment to Conditions 6j) and 11g) to alter the approach to be used to ensure that suitably qualified and experienced persons undertake monitoring, review and implementation of the Matters of National Environmental Significance Management Plan and the Biodiversity Offset Strategy.
10. It is not recommended that any change be made to Condition 8 in response to the proponent's request for an amendment to allow for a reassessment of the offset requirements for the black-throated finch. Reasons for this are further elaborated in **Attachment E**, page 4.
11. A number of administrative changes were also made to improve consistency and clarity of the conditions. Those changes do not materially alter the intent or affect of the approval.
12. A version of the recommended approval notice, showing all tracked changes since your proposed decision, is provided at **Attachment F**.
13. Except for issues discussed in this brief, the matters for your consideration and factors to be taken into account in making your decision remain as set out in our proposed approval decision brief (**Attachment A**).
14. The Department considers the proposed changes to the conditions are appropriate and do not affect the acceptability of the potential impact, or the enforceability of the final conditions. On this basis, the Department recommends that you approve the proposed action subject to the conditions at **Attachment G**.
15. If you agree, letters advising the person proposing to take the action and Commonwealth Ministers referred to in paragraph 2 of this brief are at **Attachment H**.
16. Communications material to accompany your decision has been provided to your office separately.

Statement of reasons

17. The Department also recommends you review the attached draft statement of reasons (**Attachment I**) and make any modifications you consider necessary to ensure the statement reflects your reasoning.
18. Once you are satisfied the statement accurately reflects your reasoning, the Department recommends you sign the statement (**Attachment I**).

Internal consultation

19. The General Counsel Branch was consulted in the preparation of this brief. The Office of Water Science provided input to matters relating to water. The Compliance and Enforcement Branch was consulted on the Department's recommended conditions, and the Protected Species and Communities Branch was consulted to ensure that all Conservation Advices, Recovery Plans or Threat Abatement Plans relevant to this proposed action have been considered.

Deb Callister
Assistant Secretary
Assessment and Policy Implementation Branch

s22 [REDACTED]

s22 [REDACTED]

Date: 12 October 2015

s22 [REDACTED]

Director

Queensland Major Projects Section

[REDACTED]

s22 [REDACTED]

ATTACHMENTS

- A: Proposed decision brief (MS15-002225)
- B: Addendum to proposed decision brief (MS15-002265)
- C: IESC Advice provided in relation to China Stone Coal Mine Project (IESC 2015-070)
- D: Responses to invitation to comment on proposed approval
 - D1: Response to invitation to comment - Adani Mining Pty Ltd
 - D2: Response to invitation to comment - Joint Departmental response on behalf of Ministers Pyne and Frydenberg
 - D3: Response to invitation to comment – Departmental response on behalf of Minister Joyce
 - D4: Response to invitation to comment - Departmental response on behalf of Minister Truss
- E: Table summarising responses and Department's comments
- F: Approval decision notice showing track changes from proposed approval.
- G: Approval decision notice – FOR SIGNATURE
- H: Letters advising of your decision – FOR SIGNATURE
- I: Statement of reasons – FOR SIGNATURE



Approval

Carmichael Coal Mine and Rail Infrastructure Project, Queensland (EPBC 2010/5736)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted	Adani Mining Pty Ltd
proponent's ACN	145 455 205
proposed action	To develop an open cut and underground coal mine, 189 km rail link and associated infrastructure approximately 160 km north west of Clermont in central Queensland [See EPBC Act referral 2010/5736 and approved variations dated 19 April 2012, 9 October 2012 and 24 July 2013].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Wetlands of international importance (sections 16 & 17B)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved
A water resource, in relation to coal seam gas development and large coal mining development (sections 24D & 24E)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 June 2090.

Decision-maker

name and position The Hon Greg Hunt MP
Minister for the Environment

signature



date of decision

14 = 10:15

Conditions attached to the approval

1. **The Minister** may determine that a plan, strategy or program approved by the Queensland Government satisfies a plan, strategy or program required under these conditions.

Project area

2. For the purpose of the action, the **approval holder** must not clear vegetation outside the **Project Area** shown at Appendix A unless targeted surveys have demonstrated that **Matters of National Environmental Significance** are unlikely to be impacted.

Groundwater management and monitoring plan

3. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit to the **Minister** for approval a Groundwater Management and Monitoring Plan (GMMP). The GMMP must be informed by the results of the groundwater flow model re-run (condition 23) and contain the following:
 - a) details of a groundwater monitoring network that includes:
 - (i) control monitoring sites
 - (ii) sufficient bores to monitor potential **impacts** on the Great Artesian Basin (GAB) aquifers (whether inside or outside the **Project Area**)
 - (iii) a rationale for the design of the monitoring network with respect to the nature of potential **impacts** and the location and occurrence of **Matters of National Environmental Significance** (whether inside or outside the **Project Area**).
 - b) baseline monitoring data
 - c) details of proposed trigger values for detecting **impacts** on groundwater levels and a description of how and when they will be finalised and subsequently reviewed in accordance with **state approvals**
 - d) details of groundwater level early warning triggers and impact thresholds for the Doongmabulla Springs Complex, informed by groundwater modelling and corrective actions and/or mitigation measures to be taken if the triggers are exceeded where

caused by mining operations, to ensure that groundwater drawdown as a result of the project does not exceed an interim threshold of 0.2 metres at the Doongmabulla Springs Complex

- (i) the early warning triggers and impact thresholds must be informed by groundwater modelling in accordance with Conditions 3e)i, 22, 23 and 24 and the relevant requirements of the environmental authority held under the Environmental Protection Act (1994) Qld (in particular requirements arising in response to the conditions at Appendix 1, Section 1, Schedule E of the Coordinator-General's Assessment Report)
 - (ii) the interim drawdown threshold required under condition 3d) may be replaced with a new drawdown threshold, if the approval holder applies to the Minister for approval to change it, and submits further evidence supported by further groundwater modelling and other scientific investigations (such as those required in conditions 25 and 27), that a new drawdown threshold will ensure the protection and long-term viability of the Doongmabulla Springs Complex
- e) details of the timeframe for a regular review of the GMMP in accordance with the requirements of the environmental authority issued under the *Environmental Protection Act 1994 (Qld)*, and subsequent updates of the GMMP, including how each of the outcomes of the following will be incorporated:
- (i) independent review and update of the **groundwater conceptual model**, as well as the **numerical groundwater model** and water balance calculations as necessary, to incorporate monitoring data
 - (ii) future baseline research required by the Queensland Coordinator-General into the **Mellaluka Springs Complex** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**)
 - (iii) the GAB Springs Research Plan (Conditions 25 and 26)
 - (iv) the Rewan Formation Connectivity Research Plan (Conditions 27 and 28).
- f) provisions to make monitoring data available to **the Department** and Queensland Government authorities (if requested) on a six monthly basis for inclusion in any cumulative impact assessment, regional water balance model, bioregional assessment or relevant research required by the **Bioregional Assessment of the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
- g) provisions to make monitoring results publicly available on the **approval holder's** website for the life of the project
- h) a peer review by a **suitably qualified independent expert** and a table of changes made in response to the peer review.
4. The **approval holder** must not commence excavation of the first box cut until the GMMP has been approved by **the Minister** in writing. The approved GMMP must be implemented.

Note: Many elements of the GMMP are also required under the state approval for the project. Where possible, a combined document should be prepared that addresses both state government and EPBC Act approval conditions.

Matters of National Environmental Significance management plan/s

5. At least three months prior to **commencement of mining operations**, the **approval holder** must submit to **the Minister** for approval **Matters of National Environmental Significance** plan/s for the management of direct and indirect **impacts of mining operations** on MNES.

Note: If the MNESMP does not address any specific future activities (eg possible additional seismic surveys or specific mining stages) it should be updated in accordance with Condition 33.

6. The MNESMP must incorporate the results of the groundwater flow model re-run (condition 23) where relevant, and be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
- a) a description of **environmental values** for each of the **Matters of National Environmental Significance** addressed in the plan
 - b) details of baseline and **impact** monitoring measures to be implemented for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from **mining operations**, including **subsidence** and changes in groundwater levels, to set habitat management goals (Conditions 6e) and 6f))
 - c) details of potential **impacts**, including area of **impact**, on each of the **Matters of National Environmental Significance** from **mining operations**, including **impacts** from:
 - (i) vegetation clearing
 - (ii) **subsidence** from underground mining, including **subsidence** induced fracturing and any changes to groundwater or surface water flow
 - (iii) mine dewatering
 - (iv) earthworks
 - (v) noise and vibration
 - (vi) emissions (including dust)
 - (vii) light spill and other visual **impacts**
 - (viii) stream diversion and flood levees
 - (ix) weeds and pests.
 - d) measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from **mining operations**. These measures must include but not be limited to:
 - (i) the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised
 - (ii) measures to avoid **impacts** on **Matters of National Environmental Significance** and their habitat located in the **Project Area**, but outside areas

- to be cleared, constructed upon and / or undermined, including adjacent to cleared areas
- (iii) measures to rehabilitate all areas of **Matters of National Environmental Significance** habitat
 - (iv) habitat management measures including but not limited to management of **subsidence** and groundwater **impacts** of the project.
- e) goals for habitat management for each relevant **Matters of National Environmental Significance**
 - f) a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. This table must include but not be limited to measures relating to **subsidence** and groundwater **impacts**, including early warning triggers for **impacts** on groundwater at the **Doongmabulla Springs Complex** and the **Carmichael River**. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Conditions 3b) and 6b)). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes (see Conditions 11m) and 11o))
 - g) an ongoing monitoring program to determine the success of mitigation and management measures against the stated criteria in Condition 6f), including monitoring locations, parameters and timing. Monitoring for water resource **Matters of National Environmental Significance** must include hydrogeological, hydrological and ecological parameters
 - h) details of how compliance will be reported
 - i) details of how the MNESMP will be updated to incorporate and address outcomes from research undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 3c), 3d), 6e) and 6f))
 - j) provisions to ensure that **suitably qualified and experienced persons** are responsible for undertaking monitoring, review, and implementation of the MNESMP
 - k) In the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must include management measures to address **impacts** resulting from drawdown at the **Mellaluka Springs Complex** in the MNESMP
 - l) details of how, where habitat for an EPBC Act listed threatened species or **community** not previously identified and reported to the **Department** is found in the **Project Area**, the **approval holder** will notify the **Department** in writing within five business days of finding this habitat, and within 20 business days of finding this habitat will outline in writing how the conditions of this approval will still be met (refer Condition 11h)).

7. **Mining operations must not commence** until the required MNESMP have been approved by **the Minister** in writing. The approved plan/s must be implemented.

Note: Management plans (such as the Black Throated Finch Management Plan and the Groundwater Dependent Ecosystems Management Plan) may also be required under state approvals. Whenever possible a combined document should be prepared to address both state government and EPBC Act approval conditions.

Note: Impacts of the action other than mining operations will be offset as required in accordance with Conditions 8 to 11, but will be otherwise managed in accordance with state approvals – this is of particular relevance when impacts may occur prior to approval of the MNESMP.

Offset requirements

8. The **approval holder must legally secure** the minimum offset areas detailed in Table 1 within two years of **commencement** of the **specified component** of the action.

Table 1. Minimum offset areas required for impacts on EPBC Act listed threatened species and communities and initial contribution to offsets for subsidence impacts from underground mining.

<i>Environmental value</i>	<i>Offset for mining operations north of Carmichael River (hectares)</i>	<i>Offset for mining operations south of Carmichael River (hectares)</i>	<i>Initial offset for underground mining component (hectares)</i>	<i>Offset for off-lease infrastructure (hectares)</i>	<i>Offset for rail east component (hectares)</i>	<i>Offset for rail west component (hectares)</i>
Black throated finch (southern)	18 204.06	10 739.39	2,000.00	7.62	2.44	46.48
Brigalow ecological community	15.12	721.11		0.00	6.26	72.50
Ornamental snake	96.39	38.61		0.00	0.00	0.00
Squatter pigeon (southern)	1598.00	902.00		0.00	0.00	0.00
Waxy cabbage palm	90.00	0.00		0.00	0.00	0.00
Yakka skink	3770.48	1815.42		1.87	0.60	11.63

Note: Offsets for different species may overlap where they share the same habitat requirements.

Biodiversity Offset Strategy and biodiversity funding

9. To compensate for authorised unavoidable **impacts** on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) and a GAB Offset Strategy to the **Minister** for approval at least three months prior to **commencement** of **mining operations**.
10. Offsets for authorised unavoidable **impacts** (defined in Table 1), and water resource **impacts** must be managed in accordance with the BOS and the GAB Offset Strategy.

General requirements

11. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 6), including the Black Throated Finch Management Plan (Appendix 1, Section 1, Schedule I, condition I6 of the **Coordinator-General's Assessment Report**). The BOS must include the following (except for the matters at 11k) and 11l), which apply to the Great Artesian Basin (GAB) Offset Strategy):
 - a) location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
 - b) details of how offset sites have been or will be **legally secured** within required timeframes to ensure their long-term protection
 - c) a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
 - d) a description of the potential risks to the successful implementation of the BOS, and details of contingency measures that will be implemented to mitigate these risks
 - e) details of how the BOS will be updated to incorporate outcomes from research undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 3c), 3d), 6e) and 6f)). This must include outcomes of baseline research required by the Queensland Coordinator-General to identify whether the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**)
 - f) an outline of how compliance will be reported
 - g) provisions to ensure that **suitably qualified and experienced persons** are responsible for undertaking monitoring, review, and implementation of the BOS
 - h) detailed processes for any residual **impacts** on **Matters of National Environmental Significance**, (see Condition 6f)) to be offset in accordance with the **EPBC Act Offsets Policy** including a process for offset requirement to be developed in consultation with the **Department** and relevant Queensland Government agencies
 - i) a detailed process for any significant residual **impact** on any **EPBC listed threatened species or ecological community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (refer Condition 6l))

- j) in the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must:
 - (i) revise **black throated finch** offset requirement in the BOS in accordance with the **EPBC Act Offsets Policy** and submit the revised BOS to **the Minister** for approval
 - (ii) management of any additional **black throated finch** offsets in accordance with Conditions 13 and 14 must commence prior to hydrological **impacts** on the **Mellaluka Springs Complex**, with sites being **legally secured** within two years of that time.

Requirements for GAB Offsets Strategy

- k) implementation of an annual GAB offset measure, of returning at least 730 megalitres per annum to the GAB for a minimum five year period from **commencement of excavation of the first box cut**, to offset the predicted annual **water take** associated with the action. This offset measure is to achieve a measurable outcome in accordance with one or more of the following principles:
 - (i) reduce current extraction rates from the GAB to increase hydraulic pressure
 - (ii) increase pressure in the GAB
 - (iii) protect and rehabilitate the GAB springs
 - (iv) other measures consistent with government policies and strategies to protect and manage the GAB.
- l) the offset measure described in Condition 11k) is to be developed and delivered in consultation with the Queensland Government department administering the authorisation of the **water take**

*Requirements for offsets for potential **subsidence**, groundwater and water resource **impacts***

- m) details of how staged **subsidence**, groundwater and water resource **impacts** in the **Project Area** will be addressed in the BOS, including:
 - (i) description and map of the proposed stages of underground mining. The **approval holder** must advise **the Minister** of any changes to these staging details. **Underground mining Stage 1** must be consistent with the corresponding definition in these conditions
 - (ii) description of how actual **subsidence**, groundwater and water resource **impacts** for all completed stages (as defined through Condition 11m)(i)) will be assessed at each stage
 - (iii) description of the extent, magnitude and timing of actual **subsidence impacts** observed in completed stages (as defined through Condition 11m)(i))
 - (iv) description of how actual **subsidence** and groundwater **impacts** from completed stages (as defined through Condition 11m)(i)) will be used to revise and update predicted **impact** areas for future stages

- (v) table of predicted **impact** areas for each **EPBC Act listed threatened species and community** in Table 1 within the underground mining area (consistent with Condition 6c)) that allows comparison of actual **impact** areas with initial **impact** area predictions and updated **impact** area predictions. If additional **impacted** areas are identified as a result of the predictions, additional offsets must be implemented in line with Condition 11h)
 - (vi) written commitments from the **approval holder** that the balance of offset requirement at each stage (as defined through Condition 11m)(i)) will be implemented prior to **commencement** of that stage.
- n) rationale for the balance of offset required for underground mining **impacts** to be updated at each underground mining stage (as defined through Condition 11m)(i)) that includes detailed comparison of the ecological status of **EPBC Act listed threatened species and communities** within the **subsidence impact area** between baseline conditions and the end of the most recent underground mining stage
 - o) details of how groundwater and water resource **impacts** on the **Matters of National Environmental Significance** will be addressed in the BOS including identification of additional potential offsets (see Condition 6f)) for the **Carmichael River** and **Doongmabulla Springs Complex**, to be developed in consultation with **the Department** and relevant Queensland Government agencies
 - p) detail of how the BOS will be revised and provided to **the Minister** for approval prior to **commencement** of each underground mining stage (as defined through Condition 11m)(i)) including timeframes for revision that allow three months for review and approval of the plan.
12. **Mining operations** must not **commence** until the BOS and the GAB Offset Strategy is approved by **the Minister** in writing. The approved BOS and the GAB Offset Strategy must be implemented.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A combined document should be prepared to address both State Government and EPBC Act approval conditions where possible.

Offset area management plans

13. Within three months of approval of the BOS, and thereafter within three months of the approval of a revised BOS in accordance with Conditions 6, 8, 11 or 20, the **approval holder** must submit to **the Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:
- a) detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed threatened species and community**, connectivity with other habitat areas and biodiversity corridors
 - b) management measures and offset plans for each offset area to improve the habitats of **Matters of National Environmental Significance**

- c) a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met

14. Once approved, offset area management plans must be implemented.

Biodiversity Funding

- 15. The **approval holder** must establish and/or contribute to a pool of funds established for the better protection and long term conservation of **EPBC Act listed threatened species and communities** listed in Table 1.
- 16. The mechanism to establish and/or contribute to a pool of funds, including terms of reference to support a regional approach, funding mechanisms and an initial work plan, must be provided to **the Minister** for approval three months prior to **commencement of mining operations**. The mechanism may be in the form of a trust fund, or other mechanism/s as agreed by **the Minister** in writing.
- 17. The **approval holder** must contribute \$100 000 (GST exclusive) per annum for 10 consecutive years to the pool of funds beginning from **commencement of mining operations**. The **approval holder** must provide notice of the establishment of and/or contribution to the pool of funds to **the Department** in writing prior to **commencement of mining operations**. Documentary evidence must be provided to **the Department** showing that the annual financial contributions to the pool of funds have been provided within 30 calendar days of each payment.
- 18. These funds must facilitate the development and implementation of research programs consistent with priorities to manage development **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 which are consistent with, and take into consideration, any relevant recovery plans, threat abatement plans and/or conservation advices. Research programs should identify measures to mitigate and manage the **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 and should address where relevant:
 - a) methodologies for a baseline survey that will report on each species' life history, movement patterns, habitat requirements and population dynamics. Survey methodologies must be in accordance with **the Department's survey guidelines** or alternative best practice methodologies that are agreed to in writing by **the Minister** prior to **commencement** and endorsed by a **suitably qualified independent expert**. The baseline survey must begin with the first year of the date of this approval
 - b) an ongoing monitoring program (developed from the baseline monitoring) for each species, to continue for the duration of the research programs, with annual reporting to **the Department**
 - c) commitments, including financial commitments and associated timeframes, that will be implemented by the **approval holder** to support the undertaking of research
 - d) the time frames for undertaking each research component
 - e) timing and methods of reporting research outcomes to **the Minister**, the scientific community and the public

- f) outcomes of consultation with **the Department** on how the proposed Research Programs align with other studies for **EPBC Act listed threatened species and communities** listed in Table 1
 - g) identification of priority actions for funding must be decided in consultation with the Queensland Department of Environment and Heritage Protection and members of relevant Recovery Teams.
19. A review of funding must be undertaken five years after the establishment of the pool of funds and/or the **commencement** of the action or as otherwise agreed by **the Minister** in writing. This review must take into account progress of the research programs and any subsequent on ground actions, as well as the involvement of other holders of approvals under **the EPBC Act** in funding and administrative arrangements. The review must be provided to **the Department** within six months after the five year period.

3D Seismic Survey Management Plan

20. The **approval holder** must submit a 3D Seismic Survey Management Plan to **the Minister** for approval, allowing at least one month for approval. The Seismic Survey Management Plan must include the following information in relation to the **seismic survey activities**:
- a) a description of **seismic survey activities**
 - b) a description of **impacts of seismic survey activities on Matters of National Environmental Significance**
 - c) mitigation measures for **seismic survey activities**
 - d) identification of offsets for residual **impacts** on at least 115 ha of **black throated finch** habitat, to be **legally secured** within two years of **commencement of seismic survey activities** and managed in accordance with the Biodiversity Offset Strategy under Condition 12.

Note: Offset areas identified are not intended to duplicate offset areas identified in accordance with Condition 11 j).

21. **Seismic survey activities** must not **commence** until the 3D Seismic Survey Management Plan has been approved by **the Minister** in writing. The approved 3D Seismic Survey Management Plan must be implemented.

Groundwater Flow Model Review

22. The **approval holder** must submit to **the Minister**, within one month of this approval, a peer review of the adequacy of the current groundwater flow model to characterise groundwater **impacts**. This review must consider the parameters used into the groundwater flow model, the required additional modelling information and the model re-runs outlined in Condition 23. The peer review must be undertaken by a **suitably qualified independent expert**. The peer review report should identify any additional information requirements.

23. The **approval holder** must provide a report to the Minister for the re-run of the groundwater flow model. The model revisions and re-runs must incorporate the following parameters in the scenarios and address the following additional information requirements:
- a) re-define the current General Head Boundary (GHB) arrangement, as agreed by **the Department** in writing, including the following:
 - (i) remove the GHB from its current location in all layers to the western edge of the model domain
 - (ii) review and justify the GHB conductance values used in the model to reflect the differences between aquifers and aquitards and also between aquifers (e.g. Clematis and Colinlea Sandstones), and modify if required
 - (iii) GHB cell elevations to be re-set using data as agreed by **the Department** in writing
 - (iv) report on the **impacts** on groundwater levels and net flows between the model domain for the revised GHB boundaries and compare with previous modelling results.
 - b) review and justify the recharge parameters for the Clematis Sandstone to represent the flux into the recharge beds of the GAB, and modify if required
 - c) document outflow mechanisms used in the model for the **Doongmabulla Springs Complex** and individual model layers, using maps to show the spatial distribution of model discharges
 - d) document and incorporate known licensed groundwater extractions within the model domain
 - e) document and justify any other changes made as part of the model re-runs that are not outlined above
 - f) as per the **IESC information guidelines** provide an assessment of the quality of, and risks and uncertainty inherent in, the data used in the background data and modelling, particularly with respect to predicted potential scenarios
 - g) provide adequate data (spatially and geographically representative) to justify the conceptualisation of topographically driven flow from south to north (and west to east) in both shallow and deeper aquifers.
24. The outcomes of the model re-runs are to be reviewed in order to inform the development of the GMMP and the Rewan Formation Connectivity Research Plan, and to correct any subsequent inaccuracies in the **Matters of National Environmental Significance** management plan/s, prior to submitting to **the Minister** for approval.

Research and management requirements

GAB springs research plan

25. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit for the approval of the **Minister** a GAB Springs Research Plan that investigates, identifies and evaluates methods to prevent, mitigate and remediate ecological **impacts** on the **EPBC listed community of native species dependent on natural discharge of groundwater from the Great Artesian Basin** (GAB Springs community), including the **Doongmabulla Springs Complex**, in the Galilee Basin. The GAB Springs Research Plan must include but is not limited to the following:
- a) research aims and rationale with reference to existing scientific research on GAB spring hydrogeology and ecology
 - b) identify priority actions for potential offsets to protect and manage the GAB springs
 - c) personnel responsible for conducting research and their qualifications
 - d) timeframes for research and reporting
 - e) methods, including but not limited to, conceptualisation of the hydrogeology of the springs, geological and geochemical surveys to inform the source aquifer/s for the **Doongmabulla Springs Complex**, ecological surveys to determine the composition of the GAB springs community, an assessment of transferability of approaches to prevent and mitigate hydrological **impacts** on springs in the Surat Basin, determination of water requirements (including ecological response thresholds) of the GAB springs community, and development and evaluation of methods to prevent, remediate and mitigate ecological **impacts**
 - f) an analysis of potential mitigation activities, such as but not limited to, re-injection to the groundwater source aquifer to maintain pressure head, flows and ecological habitat at the **Doongmabulla Springs Complex**
 - g) an explanation of how research outcomes will directly inform the monitoring, management, prevention, mitigation and remediation of **impacts** on the **Doongmabulla Springs Complex**
 - h) a peer review of the draft GAB Springs Research Plan, by a **suitably qualified independent expert** and a table of changes made in response to the peer review
 - i) The GAB Springs Research Plan must be published on the proponent's website for the life of the project. Research outputs must be submitted to the **Minister** within ten business days of completion, and be made available for the **Bioregional Assessment of the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
26. The **approval holder** must not **commence excavation of the first box cut** until the GAB Springs Research Plan has been approved by the **Minister** in writing. The approved GAB Springs Research Plan must be implemented.

27. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit for the approval of **the Minister** a Rewan Formation Connectivity Research Plan ('Rewan Research Plan') that characterises the Rewan Formation within the area **impacted** by the mine. The Research Plan must be informed by the results of the groundwater flow model re-run (condition 23) and include but not be limited to the following:
- a) research aims
 - b) personnel responsible for conducting research and their qualifications
 - c) timeframes for research and reporting
 - d) methods, including, but not limited to, seismic surveys to determine the type, extent and location of fracturing, faulting and preferential pathways (including any fracturing induced by longwall mining **subsidence**, including any fracturing impacting on the **Doongmabulla Springs Complex**) and an examination of the hydraulic properties (including but not limited to petrophysical analysis and facies mapping) of the Rewan Formation, to better characterise the Rewan Formation and the contribution of fracturing, faulting and preferential pathways to connectivity, including a description of how research will be undertaken in a manner that does not cause **impacts on Matters of National Environmental Significance** (unless the activities will be undertaken in accordance with a plan approved pursuant to conditions of this approval)
 - e) an explanation of how research will inform the GMMP, any regional groundwater and surface water monitoring and assessment program, or **Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
 - f) a peer review of the Rewan Research Plan, by a **suitably qualified independent expert**, approved by **the Minister** in writing, and a table of changes made in response to the peer review
28. The **approval holder** must not **commence excavation of the first box cut** until the Rewan Research Plan has been approved by **the Minister** in writing. The approved Rewan Formation Connectivity Research Plan must be implemented.

Standard conditions

29. Within 30 days of the **commencement** of the action, the approval holder must advise **the Department** in writing of the actual date of **commencement**.
30. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and programs required by this approval, and make them available upon request to **the Department**. Such records may be subject to audit by **the Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on **the Department's** website. The results of audits may also be publicised through the general media.

31. Within three months of every 12 month anniversary of the **commencement** of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to **the Department** at the same time as the compliance report is published.
32. Upon the direction of **the Minister**, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to **the Minister**. The independent auditor must be approved by **the Minister** prior to the **commencement** of the audit. Audit criteria must be agreed to by **the Minister** and the audit report must address the criteria to the satisfaction of **the Minister**.
33. The approval holder may choose to revise a plan or strategy approved by the **Minister** under conditions 3, 5, 9, 20, 25 and 27 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan or strategy would not be likely to have a **new or increased impact**. If the approval holder makes this choice they must:
- a) notify the **Department** in writing that the approved plan or strategy has been revised and provide the **Department** with an electronic copy of the revised plan or strategy;
 - b) implement the revised plan or strategy from the date that the plan or strategy is submitted to the **Department**; and
 - c) for the life of this approval, maintain a record of the reasons the approval holder considers that taking the action in accordance with the revised plan or strategy would not be likely to have a **new or increased impact**.
- 33A. The approval holder may revoke their choice under condition 33 at any time by notice to the **Department**. If the approval holder revokes the choice to implement a revised plan or strategy, without approval under section 143A of the Act, the plan or strategy approved by the **Minister** must be implemented.
- 33B. Condition 33 does not apply if the revisions to the approved plan or strategy include changes to environmental offsets provided under the plan or strategy in relation to the matter, unless otherwise agreed in writing by the **Minister**. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised plan or strategy would, or would not, be likely to have **new or increased impacts**.
- 33C. If the **Minister** gives a notice to the approval holder that the **Minister** is satisfied that the taking of the action in accordance with the revised plan or strategy would be likely to have a **new or increased impact**, then:
- a) Condition 33 does not apply, or ceases to apply, in relation to the revised plan or strategy; and
 - b) The approval holder must implement the plan or strategy approved by the **Minister**.

To avoid any doubt, this condition does not affect any operation of conditions 33, 33A and 33B in the period before the day the notice is given.

At the time of giving the notice the **Minister** may also notify that for a specified period of time that condition 33 does not apply for one or more specified plans or strategies required under the approval.

- 33D. Conditions 33, 33A, 33B and 33C are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised plan or strategy to the **Minister** for approval.

34. If **the Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, Wetlands of international importance, listed threatened species and communities, listed migratory species, the Great Barrier Reef Marine Park or a water resource, in relation to coal seam gas development and large coal mining development to do so, **the Minister** may request that the approval holder make specified revisions to the management plans, reports, and programs specified in the conditions and submit the revised management plans, reports, and programs for **the Minister's** written approval. The approval holder must comply with any such request. The revised approved management plans, reports, and programs must be implemented. Unless **the Minister** has approved the revised management plans, reports, and programs, then the approval holder must continue to implement the management plans, reports, and programs originally approved, as specified in the conditions.
35. If, at any time after 10 years from the date of this approval, the approval holder has not **substantially commenced** the action, then the approval holder must not **substantially commence** the action without the written agreement of **the Minister**.
36. Unless otherwise agreed to in writing by **the Minister**, the approval holder must publish all management plans, reports, and programs referred to in these conditions of approval on their website. Each management plan, report, and program must be published on the website within one month of being approved.

Definitions

Approval holder: The person to whom the approval is granted.

Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations: will be conducted in conjunction with relevant state and territory government agencies and natural resource management bodies and entails a scientific analysis of the ecology, hydrology and geology for the purpose of assessing the potential risks to water resources in the area as a result of the direct and indirect **impacts** of coal seam gas development and large coal mining development.

Black throated finch: means the black throated finch (southern) (*Poephila cincta* subsp. *cincta*) listed as a threatened species under **the EPBC Act**

Blue devil: means the blue devil (*Eryngium fontanum*) listed as a threatened species under **the EPBC Act**

Brigalow ecological community: means Brigalow (*Acacia harpophylla* dominant and co-dominant), listed as a threatened ecological community under **the EPBC Act**.

Carmichael River: the Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River.

Commencement / commence / commenced / commencing: is the first instance of any specified activity. Unless the activity is specifically defined for the purposes of these conditions, commencement of an activity includes any physical disturbance including clearing of vegetation, earthworks, new road works, new rail works, construction of new camps, development of mining associated infrastructure and **mining operations**. Commencement does not include:

- a) erection of signage or fencing
- b) minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- c) activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of mine, railway or road development or construction only if such activities will have no adverse impact on MNES, and only if the **approval holder** has notified **the Department** in writing before an activity is undertaken.

Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin: means the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin, listed as a threatened ecological community under **the EPBC Act**.

Coordinator-General's Assessment Report: The Queensland Coordinator-General (2014) *Carmichael Coal Mine and Rail Project: Coordinator-General's evaluation report on the environmental impact statement May 2014*. Department of State Development, Infrastructure and Planning, Brisbane, Queensland

The Department: is the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Doongmabulla Springs Complex: the groundwater-fed springs located approximately 8 kilometres from the western edge of the mining lease boundary and consisting of springs within the spring groups identified on page 108 of the Coordinator-General's Assessment Report.

Environmental values: includes but is not limited to habitat for **EPBC Act listed threatened species and communities** and hydrology of identified water resources.

EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed threatened species and/or community/ies: means a threatened species or community, or a migratory species listed under **the EPBC Act**.

Excavation of the first box cut: means bulk earthworks excavating the first box cut required for either underground or open cut mining, which for the avoidance of doubt does not include clearing or topsoil stripping.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Groundwater conceptual model: is the conceptual groundwater model developed for the project as described in the Adani Mining Pty Ltd (2013) *Carmichael Coal Mine and Rail Project Supplementary Environmental Impact Statement* at Appendix K6.

Impact/s/ed: as defined in section 527E of **the EPBC Act**.

IESC Information Guidelines: are *Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals*, April 2014.

Legally secure: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matters of National Environmental Significance: in the context of this approval includes the following:

<i>Listed Threatened Species and Communities</i>
Black throated finch (southern) (<i>Poephila cincta</i> subsp. <i>cincta</i>)
Brigalow ecological community
Ornamental snake (<i>Denisonia maculata</i>)
Squatter pigeon (southern) (<i>Geophaps scripta</i> subsp. <i>scripta</i>)
Waxy cabbage palm (<i>Livistona lanuginosa</i>)
Yakka skink (<i>Egernia rugosa</i>)
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex) including the Salt pipewort <i>Eriocaulon carsonii</i> ; and the Blue devil <i>Eryngium fontanum</i>
<i>Water Resources</i>
Carmichael River (Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River)
Mellaluka Springs Complex
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex) including the Salt pipewort <i>Eriocaulon carsonii</i> ; and the Blue devil <i>Eryngium fontanum</i>
Waxy cabbage palm (<i>Livistona lanuginosa</i>)

Mellaluka Springs Complex: the groundwater-fed springs located to the south-eastern section of the mine area and consisting of Mellaluka Spring, Stories Spring and Lignum Spring (refer pp. 168-169 of the Coordinator-General's Assessment Report).

Mining operations: are the extraction of ore from the ground as well as any immediately associated activities, including initial clearing of vegetation, removal and storage of overburden, storage of ore and dewatering, but not including exploratory surveys or the construction or operation of transport, accommodation or power generation infrastructure.

The Minister: is the Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

New or increased impact: A new or increased impact on any matter protected by the controlling provisions for the action, when compared to the plan, program, or strategy that has been approved by the Minister.

Numerical groundwater model: means any computational method that represents an approximation of an underground water system that simulates hydraulic heads (and watertable elevations in the case of unconfined aquifers) and groundwater flow rates within and across the boundaries of the system under consideration.

Ornamental Snake: means the ornamental snake (*Denisonia maculata*), listed as a threatened species under **the EPBC Act**.

Project Area: all disturbance areas as defined in the maps at Appendix A. It is noted that minor alterations may be made in order to avoid **Matters of National Environmental Significance** or State Significant Biodiversity Values found during pre-clearance surveys. These are permitted only where they will result in a lower level of impact to these matters.

Rail (west): is a 120 km dual gauge greenfield rail line connecting the mine as far east as Diamond Creek, to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point.

Rail (east): is a 69 km narrow gauge portion of greenfield rail line running east from Diamond Creek to the existing Goonyella and Newlands rail systems, to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point.

Salt pipewort: means the salt pipewort (*Eriocaulon carsonii*) listed as a threatened species under **the EPBC Act**

Seismic survey activities: includes any activity involving ground disturbance associated with 3D seismic survey over an area of 2304 ha within mining lease EPC 1690.

Specified component: is any part of the approved action that **the Minister** has agreed in writing to consider individually for the purposes of these conditions, and also includes the six components specified in Table 1.

Squatter Pigeon: means the squatter pigeon (Southern) (*Geophaps scripta* subsp. *scripta*), listed as a threatened species under **the EPBC Act**.

State approvals: include any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Subsidence: means the totality of subsidence effects and **subsidence impacts**; where 'subsidence effects': means deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature; and 'subsidence **impacts**': means physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs.

Suitably qualified and experienced persons: means persons who have professional qualifications, training, skills or experiences related to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relative protocols, standards, methods or literature

Suitably qualified independent expert: means a person who has professional qualifications, training, skills or experiences related to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relative protocols, standards, methods or literature

Survey Guidelines: include the following:

Matters of National Environmental Significance, Significant Impact Guidelines 1.1, *Environment Protection and Biodiversity Conservation Act 1999*:

<http://www.environment.gov.au/epbc/publications/nes-guidelines.html>

Survey Guidelines for Australia's Threatened Frogs, Threatened Mammals, Threatened Reptiles and Threatened Bats: <http://www.environment.gov.au/epbc/guidelines-policies.html>

Survey Guidelines for Australia's Threatened Birds:

<http://www.environment.gov.au/resource/survey-guidelines-australias-threatened-birds-guidelines-detecting-birds-listed-threatened>

Underground mining Stage 1: means years 1-10 of underground mining including all associated activities including box cut excavation, portal construction, long wall construction and longwall panel mining. Multi seam mining within the first underground mine will occur during this time period. This definition and timing provides certainty and confidence in regards to the

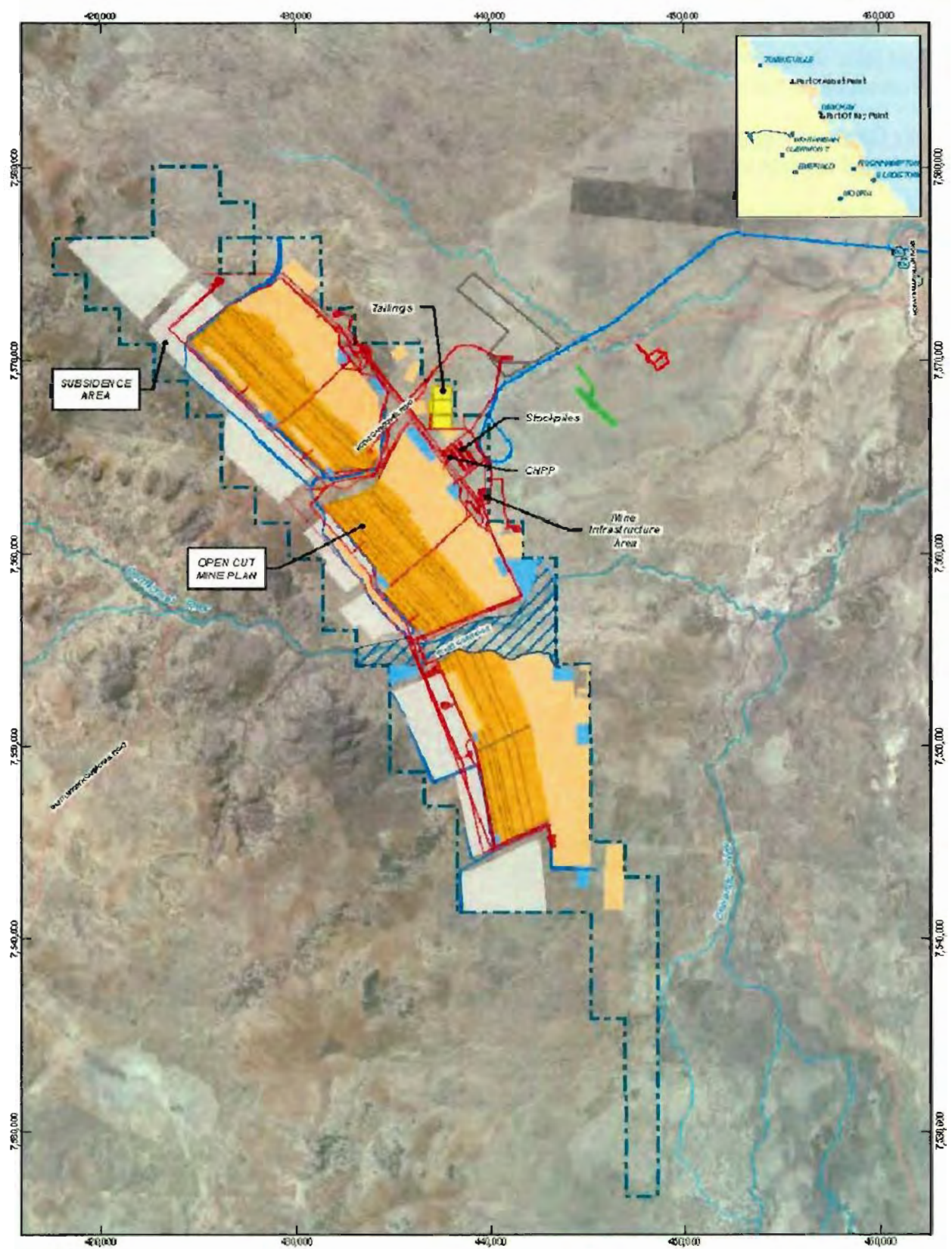
assessment of actual **subsidence** related **impacts** versus predicted **subsidence** related **impacts** that is required to be undertaken at the conclusion of underground mining Stage 1.

Water take: is extraction of water from a regulated water resource, in accordance with an authorisation by the regulating body.

Waxy Cabbage Palm: means the waxy cabbage palm (*Livistona lanuginosa*) listed as a threatened species under **the EPBC Act**.

Yakka Skink: means the yakka skink (*Egernia rugosa*), listed as a threatened species under **the EPBC Act**.

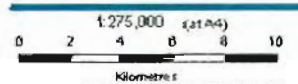
Appendix A



LEGEND

- Local road	Mine Domain	Open-cut voids and slopes	Mine (Offsite)	Airport
Water course	Mine infrastructure	Out-of-pit spoil dumps	Pump Station	Industrial Area
Mine (Onsite)	Tailings drying cells	Carmichael River corridor	Storage Facility (Offstream)	Accommodation Village
Project (Rail)	Water storage areas	Underground mining areas		
	Stream diversions			

The data on this map is derived from the data provided by the State of QLD (DNRMP [2014]). In consideration of the State's permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness or timely use) and that you accept full liability for any loss, damage, or costs (including consequential damage) relating to any use of the data. Data provided for use for marketing or financial purposes is the responsibility of the user.



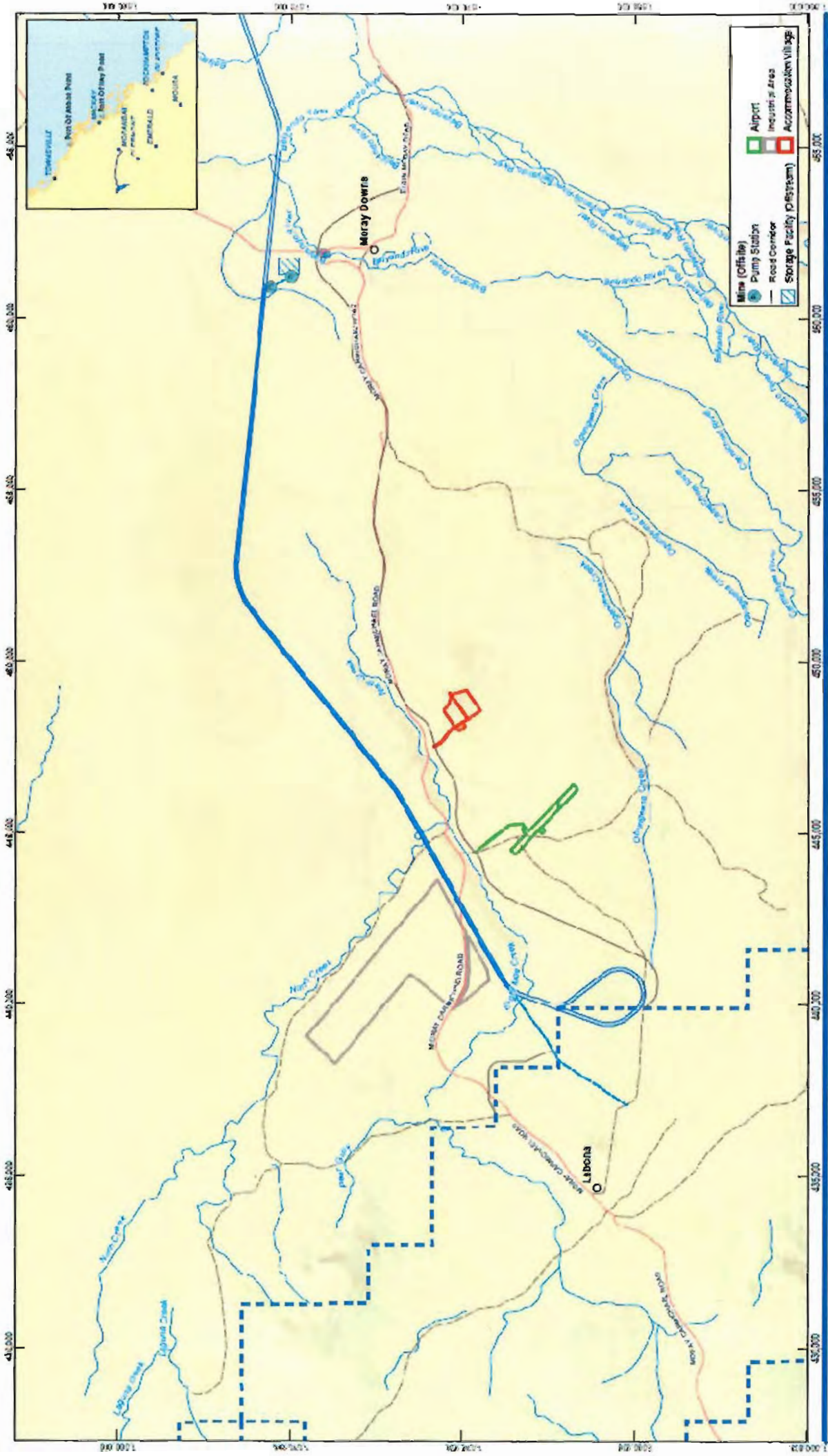
Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Job Number: 41-20922
Revision: A
Date: 10-02-2014

Disturbance Area - Mine Domains



Australian Government



Legend

- Mine (Offsite)
- Pump Station
- Road Corridor
- Storage Facility (System)
- Airport
- Accommodation Village

LEGEND

- Homehead
- Local Road
- Track
- Watercourse
- Rail Corridor
- Water Supply Pipeline
- 1 Mile (Onsite)

Scale
 1:150,000 (at A4)
 Kilometres
 0 2.5 5

Map Projection
 Universal Transverse Mercator
 GDA 1984
 Zone 55

Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project

Disturbance Area - Offsite Infrastructure

Job Number 41-38-02
Revision B
Date 19-03-14

CHD adani

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1:200,000 (A4) 0 1 2 3 4 5 Kilometres
 Map Projection: Universal Transverse Mercator
 Authority: Geoscience Australia
 Grid: Map Grid of Australia 1984, Zone 55
 L: 151° 00' 00" E
 B: 28° 00' 00" S
 © 2014, Adani Mining Pty Ltd. All rights reserved. This map is a technical drawing and is not intended to be used for any other purpose. It is a technical drawing and is not intended to be used for any other purpose. It is a technical drawing and is not intended to be used for any other purpose.

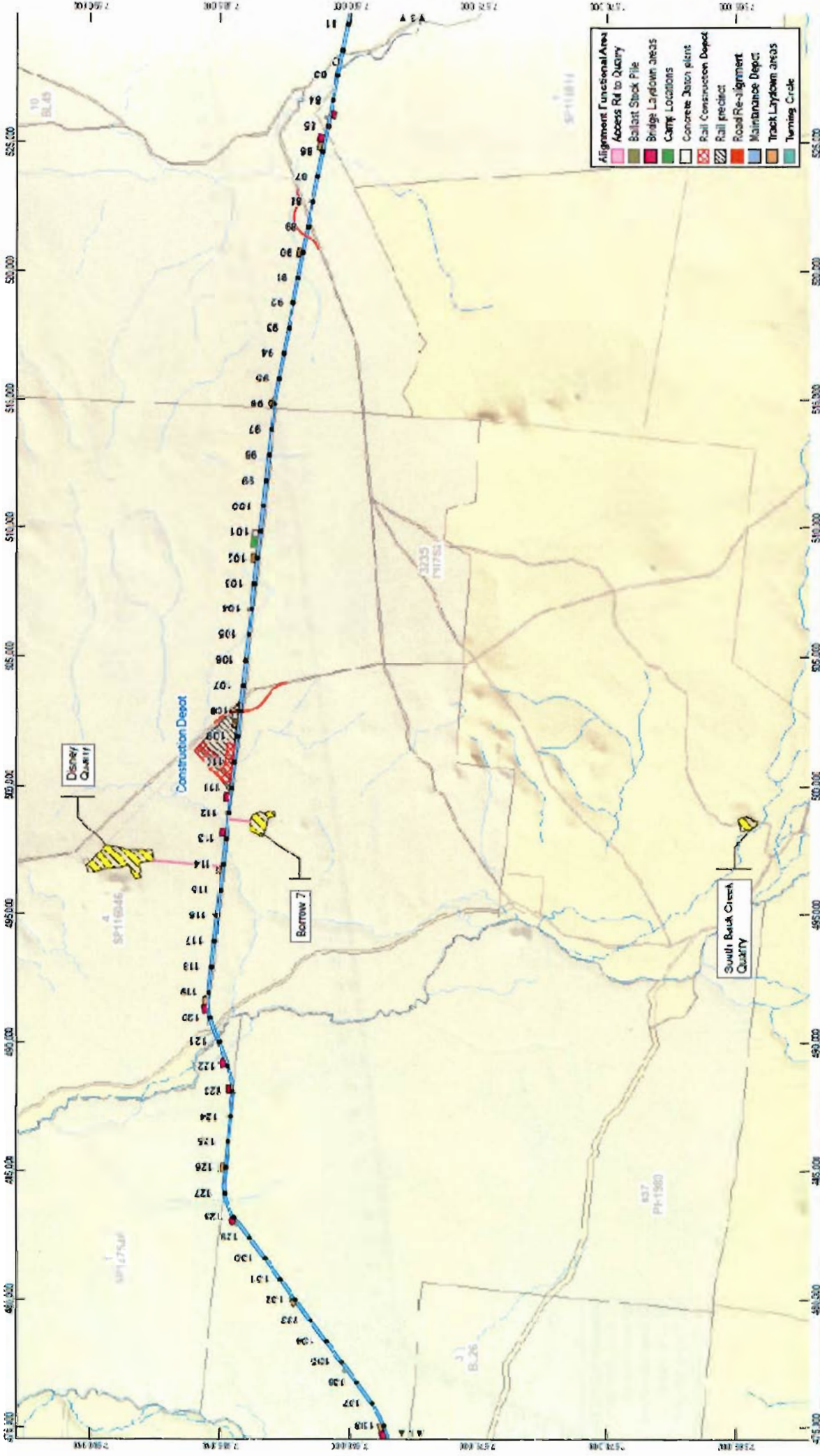
Legend
 • Town
 — Road
 — Other Railway
 — Watercourse
 □ Rail (West)
 □ Rail (East)
 □ Project (West)
 □ Project (East)
 □ Quarry
 □ Property Boundary
 □ Impacted Property

Alignment Functional Area
 Accesses to Quarry
 Balast Stock Pile
 Bridge Laydown areas
 Camp Locations
 Concrete Batch plant
 Rail Construction Depot
 Rail prevent
 Road Re-alignment
 Maintenance Depot
 Track Laydown areas
 Turning Circle

Job Number: L-28422
 Station: C
 Date: 19-03-2014

Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project
Disturbance Area - Project (Rail)

Page 1 of 4



Access Rd to Quarry	Ballast Stock Pile	Bridge Laydown areas	Camp Locations	Concrete Batch plant	Rail Construction Depot	Rail precinct	Road Re-alignment	Maintenance Depot	Track Laydown areas	Turning Circle
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Job Number: 4126422
Revision: C
Date: 10-02-2014

Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Legend:
Project (Rail) Change
Flood
Other Railway
Watercourse
Rail (West)
Rail (East)
Proposed (Mine)
Quarry
Property Boundary
Impacted Property

Disturbance Area - Proposed (Rail)

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Map Projection: Universal Transverse Mercator
Data Source: Geomatics Data (VicMap)
Date: 10/02/2014

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1:200,000 (at A4)

Map Projection: Universal Transverse Mercator
 Map Datum: GDA 2011
 Contour Interval: 10m

LEGEND

- Project (Rail) Change
- Road
- Other Railway
- Watercourse
- Rail (West)
- Rail (East)
- Project (Mine)
- Quarry
- Property Boundary
- Impacted Property



Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project

Disturbance Area - Project (Rail)

Job Number: 41-25422
 Revision: C
 Date: 10-05-2014

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Based on information submitted by the proponent (CHD) (2014) in accordance with the requirements of the Environmental Planning and Assessment Act 1979. The information is provided for your reference only and should not be relied upon for any purpose. The information is provided for your reference only and should not be relied upon for any purpose. The information is provided for your reference only and should not be relied upon for any purpose.



DEPARTMENT OF THE ENVIRONMENT

FOI 190426
Document 2

MS15-002225



To: Minister for the Environment, the Hon Greg Hunt MP (for decision)

Proposed Decision Brief:

Carmichael Coal Mine & Rail Project, Queensland (EPBC 2010/5736)

Timing: As soon as possible – the statutory timeframe for this decision has passed. Noting that the decision of 24 July 2014 has been set aside by the Federal Court.

Recommendations:

1. That you consider the information in this brief, the Queensland Coordinator-General's Assessment Report (**Attachment A**), the Legal Considerations at **Attachment B**, the Environmental Impact Statement (EIS), Supplementary EIS and additional information at **Attachment G**, the departmental advice at **Attachment H** and **Attachment K**, and the further additional information provided after the Federal Court decision at **Attachment M**.

Considered / please discuss

2. That you consider the advice from the Independent Expert Scientific Committee, information from Adani, and the analysis from the Office of Water Science in relation to impacts on water resources at **Attachment C**.

Considered / please discuss

3. That you have regard to the approved conservation advices, recovery plans and threat abatement plans relevant to the proposed action at **Attachment J** and confirm that you have done so.

Confirmed / please discuss

4. That you consider and take into account the legislative provisions at **Attachment N** in making your decision.

Considered / please discuss

5. That you agree with the Department's recommendation that you have enough information to make the proposed decision summarised in the **table below**.

Agreed / not agreed

6. That you agree that the recommended decision at **Attachment D1**, and summarised in the table below, reflects your proposed decision.

Agreed / Not agreed

7. That you agree to the proposed conditions of approval as set out in **Attachment D1**.

Agreed / Not agreed

8. That you agree with the Department's advice in paragraph 52, regarding consultation with Commonwealth Ministers under section 131 of the EPBC Act.

Agreed / Not agreed

9. If you agree with recommendations 5, 6, 7 and 8, that you sign the letters at **Attachment E** to consult with the proponent and relevant Commonwealth Ministers and to notify the Queensland Coordinator-General of your proposed decision.

Signed / Not signed

10. That you agree to not publish the proposed decision (**Attachment D1**) on the internet for public comment.

Agreed / Not agreed

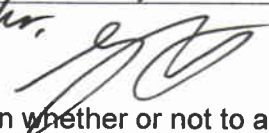
Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to approve
World heritage properties		
section 12	Approve	
section 15A	Approve	
National heritage places		
section 15B	Approve	
section 15C	Approve	
Wetlands of international importance		
section 16	Approve	
section 17B	Approve	
Listed threatened species and communities		
section 18	Approve	
section 18A	Approve	
Listed migratory species		
section 20	Approve	
section 20A	Approve	
Great Barrier Reef Marine Park		
section 24B	Approve	
section 24C	Approve	
A water resource, in relation to coal seam gas development and large coal mining developments		
section 24D	Approve	
section 24E	Approve	

Minister for the Environment,
The Hon Greg Hunt MP

Comments:

Date: 21:9:2015

1:35^{PM} : 9:15
After consideration &
briefing over a period
of weeks. 

Key points

1. This brief seeks your consideration of the proposed decision on whether or not to approve the Carmichael Coal and Rail Project (EPBC 2010/5736) (the **proposed action**). A new decision is required following the setting aside by the Federal Court of the previous approval, with the consent of all parties.
2. Since your previous approval decision on this project, additional information has been provided by the proponent and environment groups. The Department has reviewed this and updated its advice to you. No additional information was provided by environment groups on the Ornamental Snake or Yakka Skink. The five main issues raised were:

Black-throated finch (southern) sub-species

- *Issues raised:* importance of the population on the mining lease and adjacent areas; availability/adequacy of suitable offsets; long-term implications for the survival of the sub-species.
- *Response:* Issues were identified and considered in the Queensland Coordinator-General's Assessment Report (Coordinator-General's Report); conditions recommended to adaptively manage this sub-species, including provision of suitable offsets.

Doongmabulla Springs and Waxy Cabbage Palm

- *Issues raised:* that the source aquifer for the springs is uncertain and so impacts may be more severe than identified in the Coordinator-General's report; groundwater changes impacting on the Carmichael River and (EPBC-listed) Waxy Cabbage Palm.
- *Response:* conditions require comprehensive adaptive monitoring and management of groundwater impacts, including triggers for management responses to ensure no adverse impact to the springs; identifying a trigger for the spring of a 20 cm drawdown limit would meet this objective and be consistent with modelled predicted maximum drawdown; conditions recommended to adaptively manage the Waxy Cabbage Palm, including provision of offsets.

Greenhouse Gas Impacts from burning coal from the project overseas

- *Issues raised:* emissions from the burning of coal from the mine overseas will have a significant impact on the Great Barrier Reef and should be considered in the assessment.
- *Response:* **Attachment B** contains additional data and discusses how emissions from the burning of coal from the mine overseas will be managed through international climate change mitigation/reduction frameworks.

Adani's environmental record

- *Issues raised:* alleged poor environmental record of Adani Group companies in India, particularly associated with Mundra Port and Adani Ports & Special Economic Zone Ltd
- *Response:* additional information provided by Adani on company structure, executive officers and environmental history; Adani Ports and Special Economic Zone Ltd operations is not within direct 'parent body' corporate structure of Adani Mining Pty Ltd (the **proponent**). Some Adani Ports and Special Economic Zone Ltd directors are also directors of a company within the parent company structure. This does not affect the Department's recommendation about the suitability of the proponent to be granted an approval.

Socio-economic considerations – employment and economic benefits

- *Issues raised:* claims that predicted employment numbers and economic benefits from the project have been overstated; declining coal prices have made the project uneconomic.
 - *Response:* different economic modelling approaches have resulted in different predictions but overall the project is predicted to have significant positive employment and economic benefits; investment decisions – including those based on projected coal price – relating to the project are a matter for Adani and potential investors and customers.
3. Further discussion of these and other relevant considerations for your proposed decision is provided in the remainder of this brief and in **Attachments B and H** in particular.
 4. The proposed action was assessed by the Queensland Government under the Bilateral Agreement with the Commonwealth. The Department worked closely with the Queensland Coordinator-General in developing proposed approval conditions that reduce duplication of conditions (see analysis at **Attachment D3**).
 5. The Department is of the view that given the mitigation measures proposed by the proponent and the availability of offsets, the impacts from the proposed action can be adequately addressed by a combination of the Queensland Coordinator-General's conditions of approval (**Attachment A**) and conditions in the draft Environmental Authority at **Attachment M4**, and the conditions of approval recommended by the Department at **Attachment D1**.
 6. The Department recommends you approve the proposed action with changes to the conditions of approval from the previous (24 July 2014) decision, including minor clarifying administrative revisions (see **Attachment D4**). The changes relating to the Doongmabulla Springs seek to emphasise requirements that were already implicit in the original condition set, to provide improved visibility that they are being addressed.

Background

7. The proponent is proposing to develop an open-cut and underground coal mine in the northern Galilee Basin, Central Queensland (see maps at **Attachment F** and assessment documentation and additional information at **Attachment G**). The proposed mine will produce up to 60 million tonnes per annum of thermal coal from six open cut pits and five multi-seam underground mines and have a mine life of 60 years. The proposed action will also involve the construction of a 189 kilometre rail link.
8. The Galilee Basin is a largely greenfield mining area in central Queensland. Total vegetation clearing during construction and operation will be 20,237 hectares, with an additional 7,787 hectares potentially impacted by subsidence. Impacts to vegetation from groundwater changes may extend beyond this area.
9. Coal from the Carmichael Coal Mine will be exported via rail to the Port of Abbot Point. The proposed action is related to the North Galilee Basin Rail Project (EPBC 2013/6885), Abbot Point Coal Terminal 0 (EPBC 2011/6194) and the Abbot Point Growth Gateway Project (EPBC 2015/7467).
10. On 6 January 2011, a delegate decided that the proposed action was a controlled action and that the following Part 3 provisions were controlling provisions for the action:
 - sections 12 and 15A (World Heritage properties);
 - sections 15B and 15C (National Heritage places);
 - sections 16 and 17B (wetlands of international importance);
 - sections 18 and 18A (listed threatened species and communities);
 - sections 20 and 20A (listed migratory species); and
 - sections 24B and 24C (the Great Barrier Reef Marine Park).
11. Following amendments to the EPBC Act, you decided on 24 October 2013 that sections 24D and 24E (water resources) would also be controlling provisions for the action.
12. The Queensland Coordinator-General completed his assessment of the proposed action on 7 May 2014, recommending the proposed action proceed with conditions (**Attachment A**).
13. On 24 July 2014, the proposed action was approved with conditions under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**). On 21 November 2014 a variation to the approval was granted to provide the proponent with a three month extension of time to provide the peer review of the adequacy of their current groundwater flow model.
14. On 12 January 2015, the Mackay Conservation Group filed an application for judicial review of the approval decision alleging that the impacts of global greenhouse emissions from the burning of the coal, and Adani's environmental history were not considered. On 15 June 2015, Mackay Conservation Group revised its application (for a second time, it had also done so in March 2015) to claim that two conservation advices (Yakka Skink, Ornamental Snake) were not taken into account when the approval decision was made.
15. On 4 August 2015, with the consent of all parties, Justice Katzmann of the Federal Court dismissed Mackay Conservation Group's application for review and set aside the original approval decision.

16. A timeline of dates for assessments, approvals and legal challenges for this project is at **Attachment L**.

Mandatory considerations

17. In making the proposed decision on whether or not to approve the proposed action, and what conditions to attach, you are required to consider:

- a. matters relevant to matters protected by the controlling provisions for the proposed action (see paragraphs 10 -11); and
- b. economic and social matters.

18. In considering those matters, you are required to take into account, have regard to, or not act inconsistently with the matters set out in section 136(2), 137, 137A, 138, 139, 140 and 391 of the EPBC Act (**Attachment N**).

19. Further, in deciding whether to attach a condition to an approval of the proposed action, you are required to consider:

- a. any relevant conditions that have been imposed, or you consider are likely to be imposed, under a law of a State or self-governing Territory or another law of the Commonwealth on the taking of the action; and
- b. information provided by the person proposing to take the action or by the designated proponent of the action; and
- c. the desirability of ensuring, as far as practicable, that the condition is a cost-effective means for the Commonwealth and a person taking the action to achieve the object of the condition.

20. A detailed analysis of your legal considerations is set out at **Attachment B**. In considering that report, you are also required to consider, or have regard to, the material in **Attachments A, C, F to K, M and N**. A discussion of GHG emissions is in **Attachment B** and paragraph 2 of this brief.

Additional information submitted since your previous decision

21. The proponent, Mackay Conservation Group, Birdlife Australia, the Black-throated Finch Recovery Team and the Australian Conservation Foundation have provided information they believe is relevant to your decision and should be considered (**Attachment M1**). For the most part it is submissions for Queensland Land Court proceedings and covers issues that had already been considered during the assessment of the proposed action. See paragraph 2 above for a summary, and **Attachment O** for the information request sent to the proponent.

22. The submitted information has been considered by the Department in its preparation of the briefing package for your proposed decision. For discussion of the information relevant to potential impacts to matters of national environmental significance refer **Attachment H**. For discussion of social and economic matters refer **Attachment B**.

Impacts to threatened species and ecological communities (**Attachment B**, paragraph 11, and paragraphs 66 to 85; **Attachment H**, paragraphs 21 to 53)

23. The main potential impacts to listed threatened species and ecological communities that will result from the proposed action are to the habitat of listed threatened species and communities through the clearance of remnant vegetation, subsidence and dewatering impacts, including:

- the endangered black-throated finch (southern) subspecies;
- the vulnerable squatter pigeon (southern) subspecies;
- the vulnerable yakka skink;
- the vulnerable ornamental snake;
- the vulnerable waxy cabbage palm;
- the endangered salt pipewort;
- the endangered blue devil;
- the endangered Brigalow (*Acacia harpophylla* dominant and co-dominant) ecological community; and
- the endangered community of native species dependent on natural discharge of groundwater from the Great Artesian Basin.

24. The Department considers that the impacts to listed threatened species and communities can be addressed through proposed conditions (refer to **Attachment D1** and summary at **Attachment D2**) that require the proponent to:

- adaptively manage uncleared habitat to address potential impacts from subsidence and groundwater changes;
- offset impacts from habitat cleared for open cut mining and infrastructure, and review offset requirements if uncleared habitat is subsequently impacted through subsidence or groundwater changes;
- contribute funding to address cumulative impacts to listed threatened species and communities; and
- undertake research on potential groundwater changes and monitoring to adaptively manage risks of impacts.

25. Under section 139(1) of the EPBC Act, in deciding whether or not to approve the proposed action for the purposes of section 18 or section 18A, and what conditions to attach to the approval, you must not act inconsistently with a recovery plan or threat abatement plan. Plans that the Department considers are relevant are at **Attachment J1 and J2.**

26. Under section 139(2) of the EPBC Act, you are required to have regard to any approved conservation advice for the listed threatened species or communities that will or are likely to incur a significant impact as a result of the proposed action. The relevant approved conservation advices are at **Attachment J3**. The currency of this list has been confirmed by the relevant area of Wildlife, Heritage and Marine Division.

Impacts to a water resource (Attachment B, paragraph 11; Attachment C; Attachment H, paragraphs 59 to 106)

27. The proposed action includes mining beneath the water table and mining operations will cause a lowering of groundwater levels in aquifers in the vicinity of the coal seams.
28. The Coordinator-General's Report (**Attachment A**), concluded that drawdown in the aquifers, and changes to surface and groundwater hydrology, will have impacts on water resources. The Department considers that impacts to EPBC protected matters along the Carmichael River and at the Mellaluka Springs Complex are adequately assessed in the Assessment Report.
29. The advice of the Independent Expert Scientific Committee (IESC), a letter to you from the IESC Chair, responses to the advice and analysis of water impacts are at **Attachment C**. The conditions of the original approval decision of 24 July 2014 set out research, mitigation, management and offsets to address impacts to water resources. A table outlining how the IESC's concerns have been addressed is at **Attachment C2**. In compliance with these conditions, the proponent has completed a re-run of the groundwater flow model (**Attachment M2**). This model re-run, together with other conditions, address concerns raised by the Independent Expert Scientific Committee (IESC).
30. Additional material on potential impacts on water, received since the original approval decision of 24 July 2014, is provided for your consideration in **Attachment M1-M3**. An analysis of the key issues has been prepared by the Office of Water Science (**Attachment C6**).
31. This additional information primarily relates to impacts at the Doongmabulla Springs Complex, which is around 8 km to the west of the mine site. The Doongmabulla Springs Complex are part of the EPBC listed threatened 'community of native species dependent on natural discharge of groundwater from the Great Artesian Basin', and three EPBC listed threatened species are present at the springs.
32. The Department considers that the flow of the Doongmabulla Springs Complex is critical to the survival of the ecosystems supported by the springs, which includes one of only two populations of the EPBC listed endangered blue devil (*Eryngium fontanum*), and other endemic species. The Department considers, given the endemic or very limited distribution of the protected matters, that offsets could not provide an appropriate environmental outcome in the event that the Doongmabulla Springs Complex ceases to flow entirely.
33. It raises the possibility that there may be greater impacts on the Doongmabulla Springs Complex than would be expected, based upon the proponent's modelling which was relied on in the Assessment Report. The Department considers that the bulk of the evidence available supports the proponent's modelled impacts and the conclusions in the Assessment Report. However, the additional information raises the possibility of greater impacts to the springs, with the 'worst-case' potential that they may cease to flow.
34. Based on this information, and taking a precautionary approach, the Department recommends a drawdown limit be specified for the Doongmabulla Springs Complex that is aligned with the proponent's modelled groundwater impacts (20 cm of drawdown). This adds additional specificity to the original conditions, which already required that a trigger value for this impact be proposed by the proponent in their Groundwater Monitoring and Management Program.

35. The Department's recommended condition specifically states that actions to protect the Springs may include altering the scale of mining operations. The Department notes, if impacts are greater than modelled by the proponent and other mitigation options are not available, that the protection of the Doongmabulla Springs Complex could result in sterilisation of some of the coal resource. Given the uncertainty that such impacts are even likely, estimates of potential impacts on mining operations have not been quantified.
36. The Department has also recommended that further specificity be added to existing conditions regarding research into the source of the Springs and the potential impacts of subsidence on the Springs. This additional specificity will ensure that these matters are transparently addressed by the proponent. Again, the intent is to clarify the implicit intent of the original condition set, rather than to address gaps or omissions.
37. The IESC is scheduled to consider the proposed China Stone Project, which is directly to the north of the proposed Carmichael Coal Mine, at its meeting to be held on 7-8 October 2015. The Department notes that the Doongmabulla Springs Complex lies outside the China Stone proponents' modelled area of drawdown overlap between the projects, and that the assessment of the China Stone project will include an assessment of cumulative impacts. In reviewing the Coordinator-General's Report (**Attachment A**) of this proposed action, the conditions of approval imposed by Queensland, and the proposed conditions of approval recommended to you in this brief, the Department considers that this will be sufficient to manage cumulative impacts. Therefore, it is reasonable for you to conclude that a decision to approve this proposed action may be made prior to receiving advice from the IESC on the China Stone Project.
38. The Department considers that the risks of potential impacts to water resources identified by the IESC and raised subsequently can be addressed through conditions (refer to **Attachment D1** and summary at **Attachment D2**) that require the proponent to:
- offset an agreed portion of likely impacts on water resources up front;
 - conduct extensive groundwater monitoring and research programmes;
 - update the groundwater model and require additional offsets if necessary; and
 - set and manage to trigger levels for impacts to water resources, including no more than 20 cm of drawdown in the Doongmabulla Springs Complex.

Impacts to the Great Barrier Reef Marine Park, Great Barrier Reef World Heritage Area and Great Barrier Reef National Heritage Place (**Attachment B**, paragraph 11 and paragraphs 55 to 65; **Attachment H**, paragraphs 9 to 16)

39. Potential impacts to the Great Barrier Reef Marine Park and the Great Barrier Reef World Heritage Area and National Heritage Place include lowered water quality due to fine sediments and contaminants potentially released from the mine site.
40. To mitigate any potential impacts from mine water release, the proponent will implement water management and sediment control measures. The Queensland Coordinator-General has imposed conditions that mitigate any impact to the Great Barrier Reef Marine Park and the Great Barrier Reef World Heritage Area and National Heritage Place. These conditions specify the source, release point, maximum release rates, receiving waters, monitoring points and trigger levels for release of mine affected water to external waters.

41. The Department considers that the risks of potential impacts to the Great Barrier Reef Marine Park, Great Barrier Reef World Heritage Area and National Heritage Place from discharged mine water can be addressed through conditions imposed by the Queensland Coordinator-General (refer to **Attachment D3**).

Social and economic matters

42. Three different modelling approaches have been undertaken to assess the future economic impacts of the proposed action. These approaches have generated a wide range of results and it should be noted that significant levels of uncertainty may be expected in any modelling of this complexity and involving such long time horizons. Those opposed to the project have highlighted the fact that there have been differing employment figures for the proposed action and have claimed that the proponent has supplied incorrect or misleading information.

43. Even on the most conservative of these models, you can consider that this material demonstrates that there will be appreciable benefits from the proposed action to the Mackay Region economy and the Queensland economy, as part of your consideration of social and economic matters in deciding whether or not to approve the proposed action.

44. The proponent completed a social impact assessment for the proposed action (**Attachment G2, Volume 4**) and a summary of the social and economic impacts is at **Attachment B**.

45. Representations were made on behalf of the Wangan and Jagalingou People, during the public comment period for the EIS, on indigenous cultural heritage issues pertaining to the proposed mine site. Indigenous cultural matters are discussed in the Coordinator-General's Report (**Attachment A**, pages 222 to 225). The Department's notes that Mr Adrian Burragubba, a member of the Wangan and Jagalingou People, has subsequently initiated a legal challenge in the Federal Court regarding a Native Title Tribunal Determination dated 16 April 2015 to allow the granting of mining leases for the Carmichael mine and rail project.

Environmental history

46. Section 136(4) of the EPBC Act provides that, in deciding whether to approve the taking of an action, and what conditions to attach to the approval, you may consider whether the person proposing to take the action is a suitable person to be granted an approval, having regard to:

- a. the person's history in relation environmental matters;
- b. if the person is a body corporate – the history of its executive officers in relation to environmental matters; and
- c. if the person is a body corporate that it is a subsidiary of another body or company (the parent body) – the history in relation to environmental matters of the parent body and its executive officers.

47. The proponent has provided information regarding its history in relation to environmental matters and that of its executive officers, its parent bodies and the executive officers of its parent bodies (**Attachment M1**). A number of environmental groups have also provided the Department with information regarding the environmental history of companies in the Adani Group (**Attachment M1**).

48. The Department's analysis of the relevant environmental history is detailed in the Legal Considerations Report (**Attachment B**). Having regard to the information provided to the Department, the Department considers that it is open to you to conclude that the proponent is a suitable person to be granted an approval.

Department's analysis and recommended decision

49. The Department considers, and recommends that you agree, that you have enough information to make an informed decision on whether or not to make a proposed decision to approve the taking of the action for the purposes of each of the controlling provisions.

50. The Department recommends that your proposed decision should be to approve the proposed action subject to the proposed conditions of approval at Attachment D1. The Department reached this conclusion having regard to the likely impacts of the proposed action for the purpose of each controlling provision, the conservation advices at **Attachment J3** and social and economic matters. The Department also advises that approval would not be inconsistent with relevant recovery plans, threat abatement plans, and international conventions and agreements, the Australian World Heritage management principles, and the National Heritage management principles.

Consultation on proposed approval

51. Before you make your decision on whether or not to approve the proposed action, and what conditions (if any) to attach to an approval, you are required to:

- a. inform the proponent and any other Commonwealth Minister(s) whom you believe has administrative responsibilities relating to the proposed action, of the decision which you propose to make; and
- b. invite the proponent and the Commonwealth Minister(s) to comment on your proposed decision within 10 business days (sections 131(1) and 131AA(1) of the EPBC Act).

52. The Department recommends that you inform and invite comment from the Minister for Infrastructure and Regional Development, The Hon Warren Truss MP, and the Minister for Industry and Science, the Hon Ian Macfarlane MP, on your proposed decision and conditions of approval.

53. The Department also recommends you notify the Queensland Coordinator-General, Mr Barry Broe, of your proposed approval. Draft letters for your signature are at **Attachment E**.

Inviting comments from the public on your proposed decision

54. Under section 131A of the EPBC Act, you may invite public comment on your proposed decision and any conditions that you are proposing to attach to the approval.

55. The draft environmental impact statement was released twice for public comment as part of the assessment of the proposed action. 18 537 submissions were received. The public comments are at **Attachments I1 and I2** and summarised at **Attachment I3**.

56. The majority of public comments did not support the proposed Carmichael Mine and Rail Project. The issues raised included:


- impacts of greenhouse gas emissions from the burning of the coal mined from the proposed action on the World Heritage values of the Great Barrier Reef;

- impacts to the black-throated finch; and
- whether the proponent was a suitable person to be granted an approval on the basis of their environmental record.

57. Following the setting aside of the previous approval decision by the Federal Court, approximately 38 500 primarily campaign style ministerial correspondence items (emails) have been received as of 15 September 2015. The majority of correspondents do not support the proposed Carmichael Mine and Rail Project. The issues of concern are similar to those raised during public consultation.

58. The Department considers that extensive consultation has occurred for this proposed action and major stakeholders have been actively engaged throughout the process. The Department considers that publishing your proposed decision and any conditions that you are proposing to attach to the approval for a further public comment period is unlikely to elicit views or information that has not already been thoroughly considered.

59. This brief, the briefing material and the proposed conditions were developed in consultation with the Department's General Counsel Branch, the Office of Water Science, the Protected Species and Communities Branch and the Compliance and Enforcement Branch.



Deb Callister
Assistant Secretary
Assessment and Policy Implementation Branch

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Director
Queensland Major Projects Section

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16 September 2015

ATTACHMENTS

- A: Queensland Coordinator-General's Assessment Report
- B: EPBC Act Legal Considerations Report
- C: Independent Expert Scientific Committee advice, responses and analysis
 - C1: Independent Expert Scientific Committee advice
 - C2: Table of responses to Independent Expert Scientific Committee advice
 - C3: Letter from Independent Expert Scientific Committee Chair to the Minister
 - C4: Office of Water Science review of additional hydro-geological information from Adani
 - C5: Letter from the proponent in response to review from the Office of Water Science
 - C6: Office of Water Science advice
- D: Proposed decision
 - D1: Proposed decision notice
 - D2: Summary of proposed conditions

- D3: Comparison of proposed conditions with the Coordinator-General's recommendations table
- D4: Track changed version of proposed decision notice showing changes since previous approval decision
- E: Letters to proponent, Commonwealth Ministers and the Queensland Coordinator-General
- F: Maps
- G: Proponent's Assessment Documentation and Additional Information
 - G1: Environmental Impact Statement
 - G2: Supplementary Environmental Impact Statement
 - G3: Additional Information
- H: Departmental Advice on Matters of National Environmental Significance
- I: Public comment submissions
 - I1: Environmental Impact Statement submissions
 - I2: Supplementary Environmental Impact Statement submissions
 - I3: Public comment submissions summary
- J: Recovery Plans, Threat Abatement Plans and Conservation Advices
 - J1: Recovery Plans
 - J2: Threat Abatement Plans
 - J3: Approved Conservation Advices
- K: Office of Environmental Science & Economics Advice
- L: Timeline of relevant events
- M: Information provided to the Department since the previous approval decision
 - M1: Information provided by environmental groups and Adani Mining Pty Ltd
 - M2: Plans provided to the Department to comply with previous conditions
 - M3: Draft hydrogeological reports provided by the Office of Water Science
 - M4: Draft environmental authority EPML01470513- Carmichael Coal Mine
- N: Legislative provisions
- O: Letters sent to the proponent requesting further information

ATTACHMENTS

Attachment	Package/Box Number
A: Queensland Coordinator General's Assessment Report	package
B: EPBC Act legal considerations report	package
C: Independent Expert Scientific Committee advice, responses and analysis	
C1: Independent Expert Scientific Committee advice	package
C2: Table of responses to Independent Expert Scientific Committee advice	package
C3: Letter from Independent Expert Scientific Committee Chair to the Minister	package
C4: Advice from Office of Water Science to the Department	package
C5: Letter from the proponent on advice from the Office of Water Science	package
C6: Office of Water Science advice	package
D: Recommended decision	
D1: Recommended decision notice	package
D2: Summary of proposed conditions	package
D3: Comparison of proposed conditions with the Coordinator-General's recommendations table	package
D4: tracked change version of decision notice showing changes since previous approval decision	package
E: Letters to proponent, Queensland Coordinator-General and Commonwealth Ministers (FOR SIGNATURE)	package
F: Maps on project location	package
G: Proponent's Assessment Documentation and Additional Information	
G1: Environmental Impact Statement	BOX 1-4
G2: Supplementary Environmental Impact Statement	BOX 5-10
G3: Additional Information	BOX 11
H: Departmental Advice on MNES	package
I: Public comment submissions	

I1: EIS submissions	USB and BOX 12-13
I2: SEIS submissions	USB and BOX 14-15
I3: Public comment submissions summary	package
J: Recovery Plans, Threat Abatement Plans and Conservation Advice	
J1: Recovery Plans	package
J2: Threat Abatement Plans	package
J3: Approved Conservation Advices	package
K: Departmental advice from Economics and Behavioural Insights Section	package
L: Timeline of relevant events	package
M: Additional information provided after previous approval decision	
M1: <u>Additional information from environmental groups and Adani</u>	BOX 16-18
M2: <u>Plans provided post previous decision to comply with previous conditions</u>	BOX 18
M3: Office of Water Science hydrogeological reports	BOX 18
M4: <u>Queensland Draft environmental authority for Carmichael Coal Mine</u>	BOX 18
N: Legislative provisions	package
O: Letters to proponent requesting further information	package

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Order



Proposed Approval

Carmichael Coal Mine and Rail Infrastructure Project, Queensland (EPBC 2010/5736)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN 145 455 205

proposed action To develop an open cut and underground coal mine, 189 km rail link and associated infrastructure approximately 160 km north west of Clermont in central Queensland [See EPBC Act referral 2010/5736].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Wetlands of international importance (sections 16 & 17B)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved
A water resource, in relation to coal seam gas development and large coal mining development (sections 24D & 24E)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 June 2090.

Decision-maker

name and position The Hon Greg Hunt MP
Minister for the Environment

signature

NOT FOR SIGNATURE

date of decision **Proposed decision only**

Conditions attached to the approval

1. **The Minister** may determine that a plan, strategy or program approved by the Queensland Government satisfies a plan, strategy or program required under these conditions.

Project area

2. For the purpose of the action, the **approval holder** must not clear vegetation outside the **Project Area** shown at [Appendix A](#) unless targeted surveys have demonstrated that **Matters of National Environmental Significance** are unlikely to be impacted.

Groundwater management and monitoring plan

3. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit to **the Minister** for approval a Groundwater Management and Monitoring Plan (GMMP). The GMMP must incorporate the results of the groundwater flow model re-run (condition 23) and contain the following:
 - a) details of a groundwater monitoring network that includes:
 - (i) control monitoring sites
 - (ii) sufficient bores to monitor potential **impacts** on the Great Artesian Basin (GAB) aquifers (whether inside or outside the **Project Area**)
 - (iii) a rationale for the design of the monitoring network with respect to the nature of potential **impacts** and the location and occurrence of **Matters of National Environmental Significance** (whether inside or outside the **Project Area**).
 - b) baseline monitoring data
 - c) details of proposed trigger values for detecting **impacts** on groundwater levels and a description of how and when they will be finalised and subsequently reviewed in accordance with **state approvals**
 - d) details of early warning triggers, and actions to be taken if the triggers are exceeded, including if necessary the scaling of mine operations, to ensure that groundwater drawdown does not exceed 0.2 metres at the **Doongmabulla Springs Complex** as a result of the project

- e) details of the timeframe for a regular review of the GMMP in accordance with the requirements of the environmental authority issued under the *Environmental Protection Act 1994* (Qld), and subsequent updates of the GMMP, including how each of the outcomes of the following will be incorporated:
 - (i) independent review and update of the **groundwater conceptual model**, as well as the **numerical groundwater model** and water balance calculations as necessary, to incorporate monitoring data
 - (ii) future baseline research required by the Queensland Coordinator-General into the **Mellaluka Springs Complex** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**)
 - (iii) the GAB Springs Research Plan (Conditions 25 and 26)
 - (iv) the Rewan Formation Connectivity Research Plan (Conditions 27 and 28).
 - f) provisions to make monitoring data available to **the Department** and Queensland Government authorities (if requested) on a six monthly basis for inclusion in any cumulative impact assessment, regional water balance model, bioregional assessment or relevant research required by the **Bioregional Assessment of the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
 - g) provisions to make monitoring results publicly available on the **approval holder's** website for the life of the project
 - h) a peer review by a **suitably qualified independent expert** and a table of changes made in response to the peer review.
4. The **approval holder** must not **commence excavation of the first box cut** until the GMMP has been approved by **the Minister** in writing. The approved GMMP must be implemented.

Note: Many elements of the GMMP are also required under the state approval for the project. Where possible, a combined document should be prepared that addresses both state government and EPBC Act approval conditions.

Matters of National Environmental Significance management plan/s

5. At least three months prior to **commencement of mining operations**, the **approval holder** must submit to **the Minister** for approval **Matters of National Environmental Significance** plan/s for the management of direct and indirect **impacts of mining operations** on MNES.

Note: If the MNESMP does not address any specific future activities (eg possible additional seismic surveys or specific mining stages) it should be updated in accordance with Condition 33.

6. The MNESMP must incorporate the results of the groundwater flow model re-run (condition 23) where relevant, and be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
- a) a description of **environmental values** for each of the **Matters of National Environmental Significance** addressed in the plan

- b) details of baseline and **impact** monitoring measures to be implemented for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from **mining operations**, including **subsidence** and changes in groundwater levels, to set habitat management goals (Conditions 6e) and 6f))
- c) details of potential **impacts**, including area of **impact**, on each of the **Matters of National Environmental Significance** from **mining operations**, including **impacts** from:
 - (i) vegetation clearing
 - (ii) **subsidence** from underground mining, including **subsidence** induced fracturing and any changes to groundwater or surface water flow
 - (iii) mine dewatering
 - (iv) earthworks
 - (v) noise and vibration
 - (vi) emissions (including dust)
 - (vii) light spill and other visual **impacts**
 - (viii) stream diversion and flood levees
 - (ix) weeds and pests.
- d) measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from **mining operations**. These measures must include but not be limited to:
 - (i) the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised
 - (ii) measures to avoid **impacts** on **Matters of National Environmental Significance** and their habitat located in the **Project Area**, but outside areas to be cleared, constructed upon and / or undermined, including adjacent to cleared areas
 - (iii) measures to rehabilitate all areas of **Matters of National Environmental Significance** habitat
 - (iv) habitat management measures including but not limited to management of **subsidence** and groundwater **impacts** of the project.
- e) goals for habitat management for each relevant **Matters of National Environmental Significance**
- f) a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. This table must include but not be limited to measures relating to **subsidence** and groundwater **impacts**, including early warning triggers for **impacts** on groundwater at the **Doongmabulla Springs**

Complex and the **Carmichael River**. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Conditions 3b) and 6b)). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes (see Conditions 11m) and 11o))

- g) an ongoing monitoring program to determine the success of mitigation and management measures against the stated criteria in Condition 6f), including monitoring locations, parameters and timing. Monitoring for water resource **Matters of National Environmental Significance** must include hydrogeological, hydrological and ecological parameters
 - h) details of how compliance will be reported
 - i) details of how the MNESMP will be updated to incorporate and address outcomes from research undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 3c), 3d), 6e) and 6f))
 - j) details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the MNESMP
 - k) In the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must include management measures to address **impacts** resulting from drawdown at the **Mellaluka Springs Complex** in the MNESMP
 - l) details of how, where habitat for an **EPBC Act listed threatened species or community** not previously identified and reported to **the Department** is found in the **Project Area**, the **approval holder** will notify **the Department** in writing within five business days of finding this habitat, and within 20 business days of finding this habitat will outline in writing how the conditions of this approval will still be met (refer Condition 11h)).
7. **Mining operations** must not **commence** until the required MNESMP have been approved by **the Minister** in writing. The approved plan/s must be implemented.

***Note:** Management plans (such as the Black Throated Finch Management Plan and the Groundwater Dependent Ecosystems Management Plan) may also be required under **state approvals**. Whenever possible a combined document should be prepared to address both state government and EPBC Act approval conditions.*

***Note:** Impacts of the action other than **mining operations** will be offset as required in accordance with Conditions 8 to 11, but will be otherwise managed in accordance with **state approvals** – this is of particular relevance when **impacts** may occur prior to approval of the MNESMP.*

Offset requirements

8. The **approval holder** must **legally secure** the minimum offset areas detailed in Table 1 within two years of **commencement** of the **specified component** of the action.

Table 1. Minimum offset areas required for **impacts** on **EPBC Act listed threatened species and communities** and initial contribution to offsets for **subsidence impacts** from underground mining.

<i>Environmental value</i>	<i>Offset for mining operations north of Carmichael River (hectares)</i>	<i>Offset for mining operations south of Carmichael River (hectares)</i>	<i>Initial offset for underground mining component (hectares)</i>	<i>Offset for off-lease infrastructure (hectares)</i>	<i>Offset for rail east component (hectares)</i>	<i>Offset for rail west component (hectares)</i>
Black throated finch (southern)	18 204.06	10 739.39	2,000.00	7.62	2.44	46.48
Brigalow ecological community	15.12	721.11		0.00	6.26	72.50
Ornamental snake	96.39	38.61		0.00	0.00	0.00
Squatter pigeon (southern)	1598.00	902.00		0.00	0.00	0.00
Waxy cabbage palm	90.00	0.00		0.00	0.00	0.00
Yakka skink	3770.48	1815.42		1.87	0.60	11.63

Note: Offsets for different species may overlap where they share the same habitat requirements.

Biodiversity Offset Strategy and biodiversity funding

9. To compensate for authorised unavoidable **impacts** on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to **the Minister** for approval at least three months prior to **commencement of mining operations**.
10. Offsets for authorised unavoidable **impacts** (defined in Table 1), and water resource **impacts** must be managed in accordance with the BOS.

General requirements

11. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 6), including the Black Throated Finch Management Plan (Appendix 1, Section 1, Schedule I, condition I6 of the **Coordinator-General's Assessment Report**) and must include:
 - a) location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
 - b) details of how offset sites have been or will be **legally secured** within required timeframes to ensure their long-term protection
 - c) a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing

- d) a description of the potential risks to the successful implementation of the BOS, and details of contingency measures that will be implemented to mitigate these risks
- e) details of how the BOS will be updated to incorporate outcomes from research undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 3c), 3d), 6e) and 6f)). This must include outcomes of baseline research required by the Queensland Coordinator-General to identify whether the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**)
- f) an outline of how compliance will be reported
- g) details of persons responsible for undertaking monitoring, review, and implementation of the BOS
- h) detailed processes for any residual **impacts on Matters of National Environmental Significance**, (see Condition 6f)) to be offset in accordance with the **EPBC Act Offsets Policy** including a process for offset requirement to be developed in consultation with **the Department** and relevant Queensland Government agencies
- i) a detailed process for any significant residual **impact** on any **EPBC listed threatened species or ecological community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (refer Condition 6l))
- j) in the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must:
 - (i) revise **black throated finch** offset requirement in the BOS in accordance with the **EPBC Act Offsets Policy** and submit the revised BOS to **the Minister** for approval
 - (ii) management of any additional **black throated finch** offsets in accordance with Conditions 13 and 14 must commence prior to hydrological **impacts** on the **Mellaluka Springs Complex**, with sites being **legally secured** within two years of that time.

Requirements for GAB offsets

- k) implementation of an annual GAB offset measure, of returning at least 730 megalitres per annum to the GAB for a minimum five year period from **commencement of excavation of the first box cut**, to offset the predicted annual **water take** associated with the action. This offset measure is to achieve a measurable outcome in accordance with one or more of the following principles:
 - (i) reduce current extraction rates from the GAB to increase hydraulic pressure
 - (ii) increase pressure in the GAB
 - (iii) protect and rehabilitate the GAB springs

- (iv) other measures consistent with government policies and strategies to protect and manage the GAB.
- l) the offset measure described in Condition 11k) is to be developed and delivered in consultation with the Queensland Government department administering the authorisation of the **water take**

*Requirements for offsets for potential **subsidence**, groundwater and water resource **impacts***

- m) details of how staged **subsidence**, groundwater and water resource **impacts** in the **Project Area** will be addressed in the BOS, including:
 - (i) description and map of the proposed stages of underground mining. The **approval holder** must advise **the Minister** of any changes to these staging details. **Underground mining Stage 1** must be consistent with the corresponding definition in these conditions
 - (ii) description of how actual **subsidence**, groundwater and water resource **impacts** for all completed stages (as defined through Condition 11m)(i)) will be assessed at each stage
 - (iii) description of the extent, magnitude and timing of actual **subsidence impacts** observed in completed stages (as defined through Condition 11m)(i))
 - (iv) description of how actual **subsidence** and groundwater **impacts** from completed stages (as defined through Condition 11m)(i)) will be used to revise and update predicted **impact** areas for future stages
 - (v) table of predicted **impact** areas for each **EPBC Act listed threatened species and community** in Table 1 within the underground mining area (consistent with Condition 6c)) that allows comparison of actual **impact** areas with initial **impact** area predictions and updated **impact** area predictions. If additional **impacted** areas are identified as a result of the predictions, additional offsets must be implemented in line with Condition 11h)
 - (vi) written commitments from the **approval holder** that the balance of offset requirement at each stage (as defined through Condition 11m)(i)) will be implemented prior to **commencement** of that stage.
- n) rationale for the balance of offset required for underground mining **impacts** to be updated at each underground mining stage (as defined through Condition 11m)(i)) that includes detailed comparison of the ecological status of **EPBC Act listed threatened species and communities** within the **subsidence impact** area between baseline conditions and the end of the most recent underground mining stage
- o) details of how groundwater and water resource **impacts** on the **Matters of National Environmental Significance** will be addressed in the BOS including identification of additional potential offsets (see Condition 6f)) for the **Carmichael River** and **Doongmabulla Springs Complex**, to be developed in consultation with **the Department** and relevant Queensland Government agencies
- p) detail of how the BOS will be revised and provided to **the Minister** for approval prior to **commencement** of each underground mining stage (as defined through

Condition 11m)(i)) including timeframes for revision that allow three months for review and approval of the plan.

12. **Mining operations** must not **commence** until the BOS is approved by **the Minister** in writing. The approved BOS must be implemented.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A combined document should be prepared to address both State Government and EPBC Act approval conditions where possible.

Offset area management plans

13. Within three months of approval of the BOS, and thereafter within three months of identifying any additional offset area in accordance with Conditions 6, 8, 11 or 20, the **approval holder** must submit to **the Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:
 - a) detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed threatened species and community**, connectivity with other habitat areas and biodiversity corridors
 - b) management measures and offset plans for each offset area to improve the habitats of **Matters of National Environmental Significance**
 - c) a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
14. Once approved, offset area management plans must be implemented.

Biodiversity Funding

15. The **approval holder** must establish and/or contribute to a pool of funds established for the better protection and long term conservation of **EPBC Act listed threatened species and communities** listed in Table 1.
16. The mechanism to establish and/or contribute to a pool of funds, including terms of reference to support a regional approach, funding mechanisms and an initial work plan, must be provided to **the Minister** for approval three months prior to **commencement of mining operations**. The mechanism may be in the form of a trust fund, or other mechanism/s as agreed by **the Minister** in writing.
17. The **approval holder** must contribute \$100 000 (GST exclusive) per annum for 10 consecutive years to the pool of funds beginning from **commencement of mining activities**. The **approval holder** must provide notice of the establishment of and/or contribution to the pool of funds to **the Department** in writing prior to **commencement of mining activities**. Documentary evidence must be provided to **the Department** showing that the annual financial contributions to the pool of funds have been provided within 30 calendar days of each payment.
18. These funds must facilitate the development and implementation of research programs consistent with priorities to manage development **impacts** on **EPBC Act listed**

threatened species and communities listed in Table 1 which are consistent with, and take into consideration, any relevant recovery plans, threat abatement plans and/or conservation advices. Research programs should identify measures to mitigate and manage the **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 and should address:

- a) methodologies for a baseline survey that will report on each species' life history, movement patterns, habitat requirements and population dynamics. Survey methodologies must be in accordance with **the Department's survey guidelines** or alternative best practice methodologies that are agreed to in writing by **the Minister** prior to **commencement** and endorsed by a **suitably qualified independent expert**. The baseline survey must begin with the first year of the date of this approval
 - b) an ongoing monitoring program (developed from the baseline monitoring) for each species, to continue for the duration of the project approval, with annual reporting to **the Department**
 - c) commitments, including financial commitments and associated timeframes, that will be implemented by the **approval holder** to support the undertaking of research
 - d) the time frames for undertaking each research component
 - e) timing and methods of reporting research outcomes to **the Minister**, the scientific community and the public
 - f) outcomes of consultation with **the Department** on how the proposed Research Programs align with other studies for **EPBC Act listed threatened species and communities** listed in Table 1
 - g) identification of priority actions for funding must be decided in consultation with the Queensland Department of Environment and Heritage Protection and members of relevant Recovery Teams.
19. A review of funding must be undertaken five years after the establishment of the pool of funds and/or the **commencement** of the action or as otherwise agreed by **the Minister** in writing. This review must take into account progress of the research programs and any subsequent on ground actions, as well as the involvement of other holders of approvals under **the EPBC Act** in funding and administrative arrangements. The review must be provided to **the Department** within six months after the five year period.

3D Seismic Survey Management Plan

20. The **approval holder** must submit a 3D Seismic Survey Management Plan to **the Minister** for approval, allowing at least one month for approval. The Seismic Survey Management Plan must include the following information in relation to the **seismic survey activities**:
- a) a description of **seismic survey activities**
 - b) a description of **impacts** of **seismic survey activities** on **Matters of National Environmental Significance**
 - c) mitigation measures for **seismic survey activities**

- d) identification of offsets for residual **impacts** on at least 115 ha of **black throated finch** habitat, to be **legally secured** within two years of **commencement** of **seismic survey activities** and managed in accordance with the Biodiversity Offset Strategy.

Note: Offset areas identified are not intended to duplicate offset areas identified in accordance with Condition 11j).

- 21. **Seismic survey activities** must not **commence** until the 3D Seismic Survey Management Plan has been approved by **the Minister** in writing. The approved 3D Seismic Survey Management Plan must be implemented.

Groundwater Flow Model Review

- 22. The **approval holder** must submit to **the Minister**, within one month of this approval, a peer review of the adequacy of the current groundwater flow model to characterise groundwater **impacts**. This review must consider the parameters used into the groundwater flow model, the required additional modelling information and the model re-runs outlined in Condition 23. The peer review must be undertaken by a **suitably qualified independent expert**. The peer review report should identify any additional information requirements.
- 23. The **approval holder** must provide a report to the Minister for the re-run of the groundwater flow model. The model revisions and re-runs must incorporate the following parameters in the scenarios and address the following additional information requirements:
 - a) re-define the current General Head Boundary (GHB) arrangement, as agreed by **the Department** in writing, including the following:
 - (i) remove the GHB from its current location in all layers to the western edge of the model domain
 - (ii) review and justify the GHB conductance values used in the model to reflect the differences between aquifers and aquitards and also between aquifers (e.g. Clematis and Colinlea Sandstones), and modify if required
 - (iii) GHB cell elevations to be re-set using data as agreed by **the Department** in writing
 - (iv) report on the **impacts** on groundwater levels and net flows between the model domain for the revised GHB boundaries and compare with previous modelling results.
 - b) review and justify the recharge parameters for the Clematis Sandstone to represent the flux into the recharge beds of the GAB, and modify if required
 - c) document outflow mechanisms used in the model for the **Doongmabulla Springs Complex** and individual model layers, using maps to show the spatial distribution of model discharges
 - d) document and incorporate known licensed groundwater extractions within the model domain

- e) document and justify any other changes made as part of the model re-runs that are not outlined above
 - f) as per the **IESC information guidelines** provide an assessment of the quality of, and risks and uncertainty inherent in, the data used in the background data and modelling, particularly with respect to predicted potential scenarios
 - g) provide adequate data (spatially and geographically representative) to justify the conceptualisation of topographically driven flow from south to north (and west to east) in both shallow and deeper aquifers.
24. The outcomes of the model re-runs are to be reviewed in order to inform the review of the GMMP and the Rewan Formation Connectivity Research Plan, and to correct any subsequent inaccuracies in the **Matters of National Environmental Significance** management plan/s, prior to submitting to **the Minister** for approval.

Research and management requirements

GAB springs research plan

25. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit for the approval of **the Minister** a GAB Springs Research Plan that investigates, identifies and evaluates methods to prevent, mitigate and remediate ecological **impacts** on the **EPBC listed community of native species dependent on natural discharge of groundwater from the Great Artesian Basin** (GAB Springs community), including the **Doongmabulla Springs Complex**, in the Galilee Basin. The GAB Springs Research Plan must include but is not limited to the following:
- a) research aims and rationale with reference to existing scientific research on GAB spring hydrogeology and ecology
 - b) identify priority actions for potential offsets to protect and manage the GAB springs
 - c) personnel responsible for conducting research and their qualifications
 - d) timeframes for research and reporting
 - e) methods, including but not limited to, conceptualisation of the hydrogeology of the springs, geological and geochemical surveys to inform the source aquifer/s for the **Doongmabulla Springs Complex**, ecological surveys to determine the composition of the GAB springs community, an assessment of transferability of approaches to prevent and mitigate hydrological **impacts** on springs in the Surat Basin, determination of water requirements (including ecological response thresholds) of the GAB springs community, and development and evaluation of methods to prevent, remediate and mitigate ecological **impacts**
 - f) an analysis of potential mitigation activities, such as but not limited to, re-injection to the groundwater source aquifer to maintain pressure head, flows and ecological habitat at the **Doongmabulla Springs Complex**
 - g) an explanation of how research outcomes will directly inform the monitoring, management, prevention, mitigation and remediation of **impacts** on the **Doongmabulla Springs Complex**

- h) a peer review of the draft GAB Springs Research Plan, by a **suitably qualified independent expert** and a table of changes made in response to the peer review
 - i) The GAB Springs Research Plan must be published on the proponent's website for the life of the project. Research outputs must be submitted to **the Minister** within ten business days of completion, and be made available for the **Bioregional Assessment of the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
26. The **approval holder** must not **commence excavation of the first box cut** until the GAB Springs Research Plan has been approved by **the Minister** in writing. The approved GAB Springs Research Plan must be implemented.

Rewan Formation Connectivity Research Plan

27. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit for the approval of **the Minister** a Rewan Formation Connectivity Research Plan ('Rewan Research Plan') that characterises the Rewan Formation within the area **impacted** by the mine. The Research Plan must incorporate the results of the groundwater flow model re-run (condition 23) and include but not be limited to the following:
- a) research aims
 - b) personnel responsible for conducting research and their qualifications
 - c) timeframes for research and reporting
 - d) methods, including, but not limited to, seismic surveys to determine the type, extent and location of fracturing, faulting and preferential pathways (including any fracturing induced by longwall mining **subsidence**, including any fracturing impacting on the **Doongmabulla Springs Complex**) and an examination of the hydraulic properties (including but not limited to petrophysical analysis and facies mapping) of the Rewan Formation, to better characterise the Rewan Formation and the contribution of fracturing, faulting and preferential pathways to connectivity, including a description of how research will be undertaken in a manner that does not cause **impacts** on **Matters of National Environmental Significance** (unless the activities will be undertaken in accordance with a plan approved pursuant to conditions of this approval)
 - e) an explanation of how research will inform the GMMP, any regional groundwater and surface water monitoring and assessment program, or **Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
 - f) a peer review of the Rewan Research Plan, by a **suitably qualified independent expert**, approved by **the Minister** in writing, and a table of changes made in response to the peer review
28. The **approval holder** must not **commence excavation of the first box cut** until the Rewan Research Plan has been approved by **the Minister** in writing. The approved Rewan Formation Connectivity Research Plan must be implemented.

Standard conditions

29. Within 30 days of the **commencement** of the action, the approval holder must advise **the Department** in writing of the actual date of **commencement**.
30. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and programs required by this approval, and make them available upon request to **the Department**. Such records may be subject to audit by **the Department** or an independent auditor in accordance with section 458 of **the EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on **the Department's** website. The results of audits may also be publicised through the general media.
31. Within three months of every 12 month anniversary of the **commencement** of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to **the Department** at the same time as the compliance report is published.
32. Upon the direction of **the Minister**, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to **the Minister**. The independent auditor must be approved by **the Minister** prior to the **commencement** of the audit. Audit criteria must be agreed to by **the Minister** and the audit report must address the criteria to the satisfaction of **the Minister**.
33. The approval holder may choose to revise a plan or strategy approved by the **Minister** under conditions 3, 5, 9, 20, 25 and 27 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan or strategy would not be likely to have a **new or increased impact**. If the approval holder makes this choice they must:
- a) notify the **Department** in writing that the approved plan or strategy has been revised and provide the **Department** with an electronic copy of the revised plan or strategy;
 - b) implement the revised plan or strategy from the date that the plan or strategy is submitted to the **Department**; and
 - c) for the life of this approval, maintain a record of the reasons the approval holder considers that taking the action in accordance with the revised plan or strategy would not be likely to have a **new or increased impact**.
- 33A. The approval holder may revoke their choice under condition 33 at any time by notice to the **Department**. If the approval holder revokes the choice to implement a revised plan or strategy, without approval under section 143A of the Act, the plan or strategy approved by the **Minister** must be implemented.
- 33B. Condition 33 does not apply if the revisions to the approved plan or strategy include changes to environmental offsets provided under the plan or strategy in relation to the matter, unless otherwise agreed in writing by the **Minister**. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised plan or strategy would, or would not, be likely to have **new or increased impacts**.
- 33C. If the **Minister** gives a notice to the approval holder that the **Minister** is satisfied that the taking of the action in accordance with the revised plan or strategy would be likely to have a **new or increased impact**, then:
- a) Condition 33 does not apply, or ceases to apply, in relation to the revised plan or strategy; and

b) The approval holder must implement the plan or strategy approved by the **Minister**.

To avoid any doubt, this condition does not affect any operation of conditions 33, 33A and 33B in the period before the day the notice is given.

At the time of giving the notice the **Minister** may also notify that for a specified period of time that condition 33 does not apply for one or more specified plans or strategies required under the approval.

33D. Conditions 33, 33A, 33B and 33C are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised plan or strategy to the **Minister** for approval.

34. If **the Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, Wetlands of international importance, listed threatened species and communities, listed migratory species, the Great Barrier Reef Marine Park or a water resource, in relation to coal seam gas development and large coal mining development to do so, **the Minister** may request that the approval holder make specified revisions to the management plans, reports, and programs specified in the conditions and submit the revised management plans, reports, and programs for **the Minister's** written approval. The approval holder must comply with any such request. The revised approved management plans, reports, and programs must be implemented. Unless **the Minister** has approved the revised management plans, reports, and programs, then the approval holder must continue to implement the management plans, reports, and programs originally approved, as specified in the conditions.

35. If, at any time after 10 years from the date of this approval, the approval holder has not **substantially commenced** the action, then the approval holder must not **substantially commence** the action without the written agreement of **the Minister**.

36. Unless otherwise agreed to in writing by **the Minister**, the approval holder must publish all management plans, reports, and programs referred to in these conditions of approval on their website. Each management plan, report, and program must be published on the website within one month of being approved.

Definitions

Approval holder: The person to whom the approval is granted.

Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations: will be conducted in conjunction with relevant state and territory government agencies and natural resource management bodies and entails a scientific analysis of the ecology, hydrology and geology for the purpose of assessing the potential risks to water resources in the area as a result of the direct and indirect **impacts** of coal seam gas development and large coal mining development.

Black throated finch: means the black throated finch (southern) (*Poephila cincta* subsp. *cincta*) listed as a threatened species under **the EPBC Act**

Blue devil: means the blue devil (*Eryngium fontanum*) listed as a threatened species under **the EPBC Act**

Brigalow ecological community: means Brigalow (*Acacia harpophylla* dominant and co-dominant), listed as a threatened ecological community under **the EPBC Act**.

Carmichael River: the Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River.

Commencement / commence / commenced / commencing: is the first instance of any specified activity. Unless the activity is specifically defined for the purposes of these conditions, commencement of an activity includes any physical disturbance including clearing of vegetation, earthworks, new road works, new rail works, construction of new camps, development of mining associated infrastructure and **mining operations**. Commencement does not include:

- a) erection of signage or fencing
- b) minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- c) activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse impact on MNES, and only if the **approval holder** has notified **the Department** in writing before an activity is undertaken.

Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin: means the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin, listed as a threatened ecological community under **the EPBC Act**.

Coordinator-General's Assessment Report: The Queensland Coordinator-General (2014) *Carmichael Coal Mine and Rail Project: Coordinator-General's evaluation report on the environmental impact statement May 2014*. Department of State Development, Infrastructure and Planning, Brisbane, Queensland

The Department: is the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Doongmabulla Springs Complex: the groundwater-fed springs located approximately 8 kilometres from the western edge of the mining lease boundary and consisting of springs within the spring groups identified on page 108 of the Coordinator-General's Assessment Report.

Environmental values: includes but is not limited to habitat for **EPBC Act listed threatened species and communities** and hydrology of identified water resources.

EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed threatened species and/or community/ies: means a threatened species or community, or a migratory species listed under **the EPBC Act**.

Excavation of the first box cut: means bulk earthworks excavating the first box cut required for either underground or open cut mining, which for the avoidance of doubt does not include clearing or topsoil stripping.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Groundwater conceptual model: is the conceptual groundwater model developed for the project as described in the Adani Mining Pty Ltd (2013) *Carmichael Coal Mine and Rail Project Supplementary Environmental Impact Statement* at Appendix K6.

Impact/s/ed: as defined in section 527E of **the EPBC Act**.

IESC Information Guidelines: are *Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals*, April 2014.

Legally secure: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matters of National Environmental Significance: in the context of this approval includes the following:

<i>Listed Threatened Species and Communities</i>
Black throated finch (southern) (<i>Poephila cincta</i> subsp. <i>cincta</i>)
Brigalow ecological community
Ornamental snake (<i>Denisonia maculata</i>)
Squatter pigeon (southern) (<i>Geophaps scripta</i> subsp. <i>scripta</i>)
Waxy cabbage palm (<i>Livistona lanuginosa</i>)
Yakka skink (<i>Egernia rugosa</i>)
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex) including the Salt pipewort <i>Eriocaulon carsonii</i> ; and the Blue devil <i>Eryngium fontanum</i>
<i>Water Resources</i>
Carmichael River (Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River)
Mellaluka Springs Complex
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla)

Springs Complex including the **Salt pipewort** *Eriocaulon carsonii*; and the **Blue devil** *Eryngium fontanum*

Waxy cabbage palm (*Livistona lanuginosa*)

Mellaluka Springs Complex: the groundwater-fed springs located to the south-eastern section of the mine area and consisting of Mellaluka Spring, Stories Spring and Lignum Spring (refer pp. 168-169 of the Coordinator-General's Assessment Report).

Mining operations: are the extraction of ore from the ground as well as any immediately associated activities, including initial clearing of vegetation, removal and storage of overburden, storage of ore and dewatering, but not including exploratory surveys or the construction or operation of transport, accommodation or power generation infrastructure.

The Minister: is the Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

New or increased impact: A new or increased impact on any matter protected by the controlling provisions for the action, when compared to the plan, program, or strategy that has been approved by the Minister.

Numerical groundwater model: means any computational method that represents an approximation of an underground water system that simulates hydraulic heads (and watertable elevations in the case of unconfined aquifers) and groundwater flow rates within and across the boundaries of the system under consideration.

Ornamental Snake: means the ornamental snake (*Denisonia maculata*), listed as a threatened species under **the EPBC Act**.

Project Area: all disturbance areas as defined in the maps at Appendix A. It is noted that minor alterations may be made in order to avoid **Matters of National Environmental Significance** or State Significant Biodiversity Values found during pre-clearance surveys. These are permitted only where they will result in a lower level of impact to these matters.

Rail (west): is a 120 km dual gauge greenfield rail line connecting the mine as far east as Diamond Creek, to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point.

Rail (east): is a 69 km narrow gauge portion of greenfield rail line running east from Diamond Creek to the existing Goonyella and Newlands rail systems, to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point.

Salt pipewort: means the salt pipewort (*Eriocaulon carsonii*) listed as a threatened species under **the EPBC Act**

Seismic survey activities: includes any activity involving ground disturbance associated with 3D seismic survey over an area of 2304 ha within mining lease EPC 1690.

Specified component: is any part of the approved action that **the Minister** has agreed in writing to consider individually for the purposes of these conditions, and also includes the six components specified in Table 1.

Squatter Pigeon: means the squatter pigeon (Southern) (*Geophaps scripta* subsp. *scripta*), listed as a threatened species under **the EPBC Act**.

State approvals: include any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Subsidence: means the totality of subsidence effects and subsidence **impacts**; where 'subsidence effects': means deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature; and 'subsidence **impacts**': means physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs.

Suitably qualified independent expert: means a person who has professional qualifications, training, skills or experiences related to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relative protocols, standards, methods or literature

Survey Guidelines: include the following:

Matters of National Environmental Significance, Significant Impact Guidelines 1.1, *Environment Protection and Biodiversity Conservation Act 1999*:

<http://www.environment.gov.au/epbc/publications/nes-guidelines.html>

Survey Guidelines for Australia's Threatened Frogs, Threatened Mammals, Threatened Reptiles and Threatened Bats: <http://www.environment.gov.au/epbc/guidelines-policies.html>

Survey Guidelines for Australia's Threatened Birds:

<http://www.environment.gov.au/resource/survey-guidelines-australias-threatened-birds-guidelines-detecting-birds-listed-threatened>

Underground mining Stage 1: means years 1-10 of underground mining including all associated activities including box cut excavation, portal construction, long wall construction and longwall panel mining. Multi seam mining within the first underground mine will occur during this time period. This definition and timing provides certainty and confidence in regards to the assessment of actual **subsidence** related **impacts** versus predicted **subsidence** related **impacts** that is required to be undertaken at the conclusion of underground mining Stage 1.

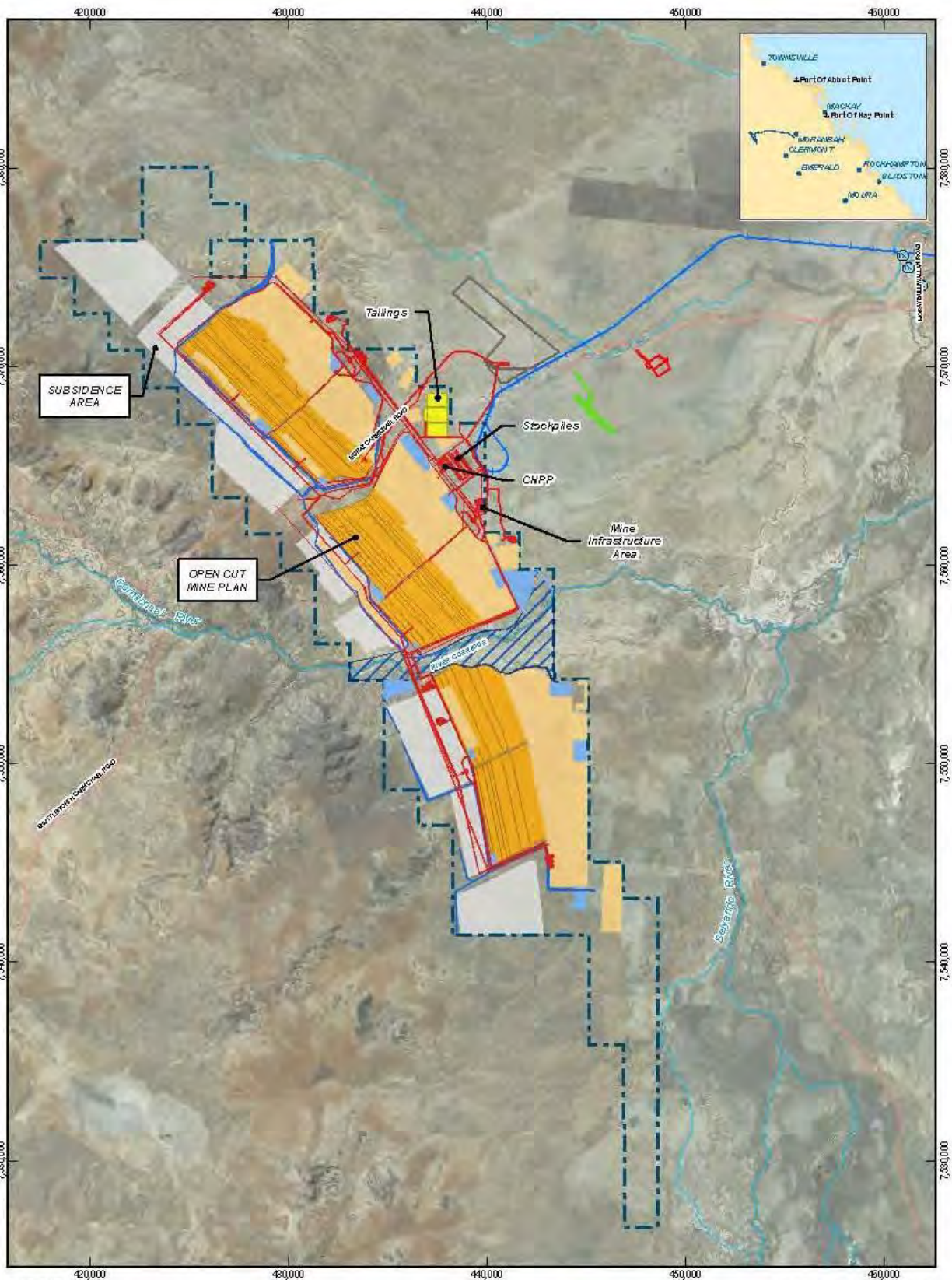
Water take: is extraction of water from a regulated water resource, in accordance with an authorisation by the regulating body.

Waxy Cabbage Palm: means the waxy cabbage palm (*Livistona lanuginosa*) listed as a threatened species under **the EPBC Act**.

Yakka Skink: means the yakka skink (*Egernia rugosa*), listed as a threatened species under **the EPBC Act**.

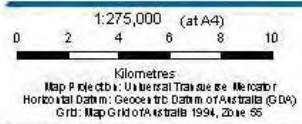
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Appendix A



LEGEND	
Local road	Mine Domain
Watercourse	Mine infrastructure
Mine (Onsite)	Tailings drying cells
Project (Rail)	Water storage areas
	Stream diversions
	Mine (Offsite)
	Pump Station
	Storage Facility (Off-stream)
	Other
	Airport
	Industrial Area
	Accommodation Village

Based on or on-site data provided by the State of QLD (DNRM [2014]). 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.

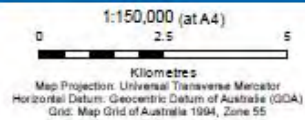
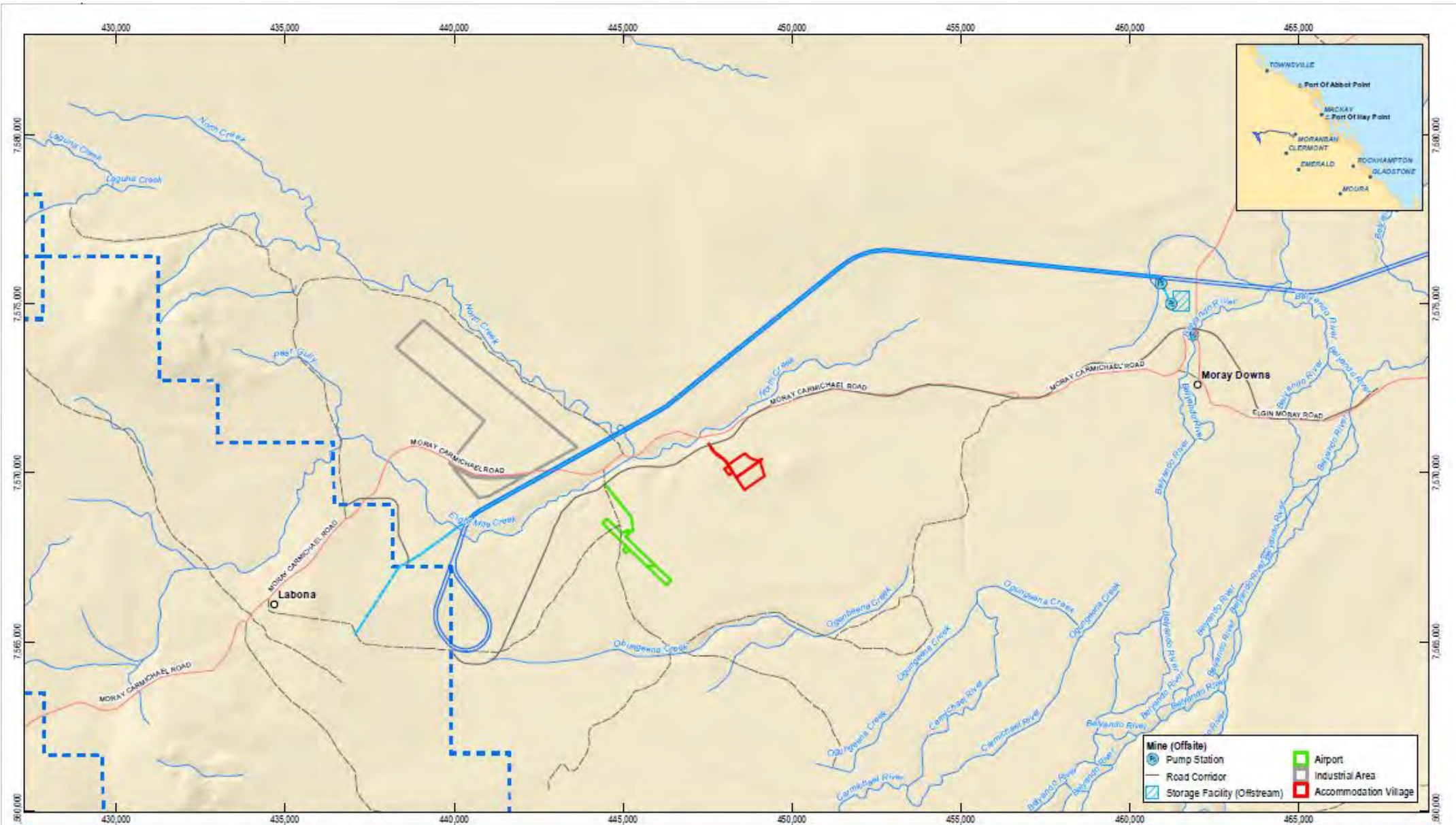


Adani Mining Pty Ltd
Carrichael Coal Mine and Rail Project

Jcb Number: 41-26422
Revision: A
Date: 10-02-2014

Disturbance Area - Mine Domains

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Data Source: GA: Road, River/Watercourse (2007); DME:EPC1690 (2010), EPC1080 (2011); Adani: Alignment, Onsite (2013), Mine Domains (2016); Digital Globe: Satellite (2009). Created by: MS



LEGEND		
○ Homestead	— Watercourse	■ Mine (Onsite)
— Local Road	— Rail Corridor	
— Track	— Water Supply Pipeline	



Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

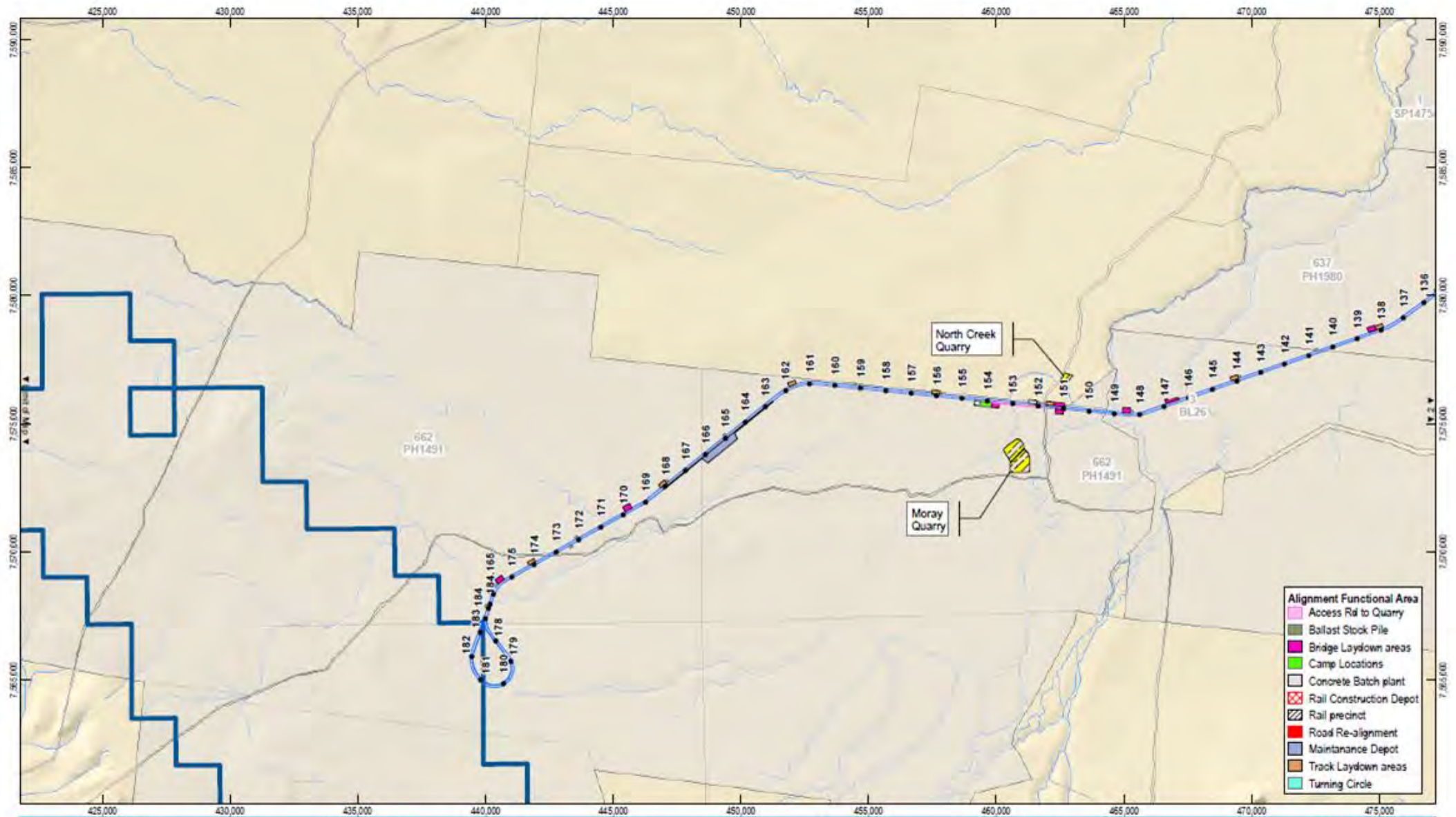
Job Number	41-26422
Revision	B
Date	10-02-2014

Disturbance Area - Offsite Infrastructure

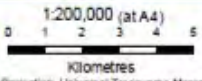
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 Date source: DME: EPC1900 (2010)/EPC1080 (2011); DNRM: Bioregion Boundary (2011); © Commonwealth of Australia (Geoscience Australia); Watercourse, Tracks (2007); Adani: Alignment Opt11 Rev 2 (BP1 and 2)(2013); Offsite Infrastructure (2013). Created by: AJ

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- Alignment Functional Area**
- Access Rai to Quarry
 - Ballast Stock Pile
 - Bridge Laydown areas
 - Camp Locations
 - Concrete Batch plant
 - Rail Construction Depot
 - Rail precinct
 - Road Re-alignment
 - Maintenance Depot
 - Track Laydown areas
 - Turning Circle



- LEGEND**
- Project (Rail) Chainage
 - Town
 - Road
 - Other Railway
 - Watercourse
 - Rail (West)
 - Rail (East)
 - Project (Mine)
 - Property Boundary
 - Impacted Property
 - Quarry
 - Property Boundary
 - Impacted Property



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Carmichael Coal Mine and Rail Project

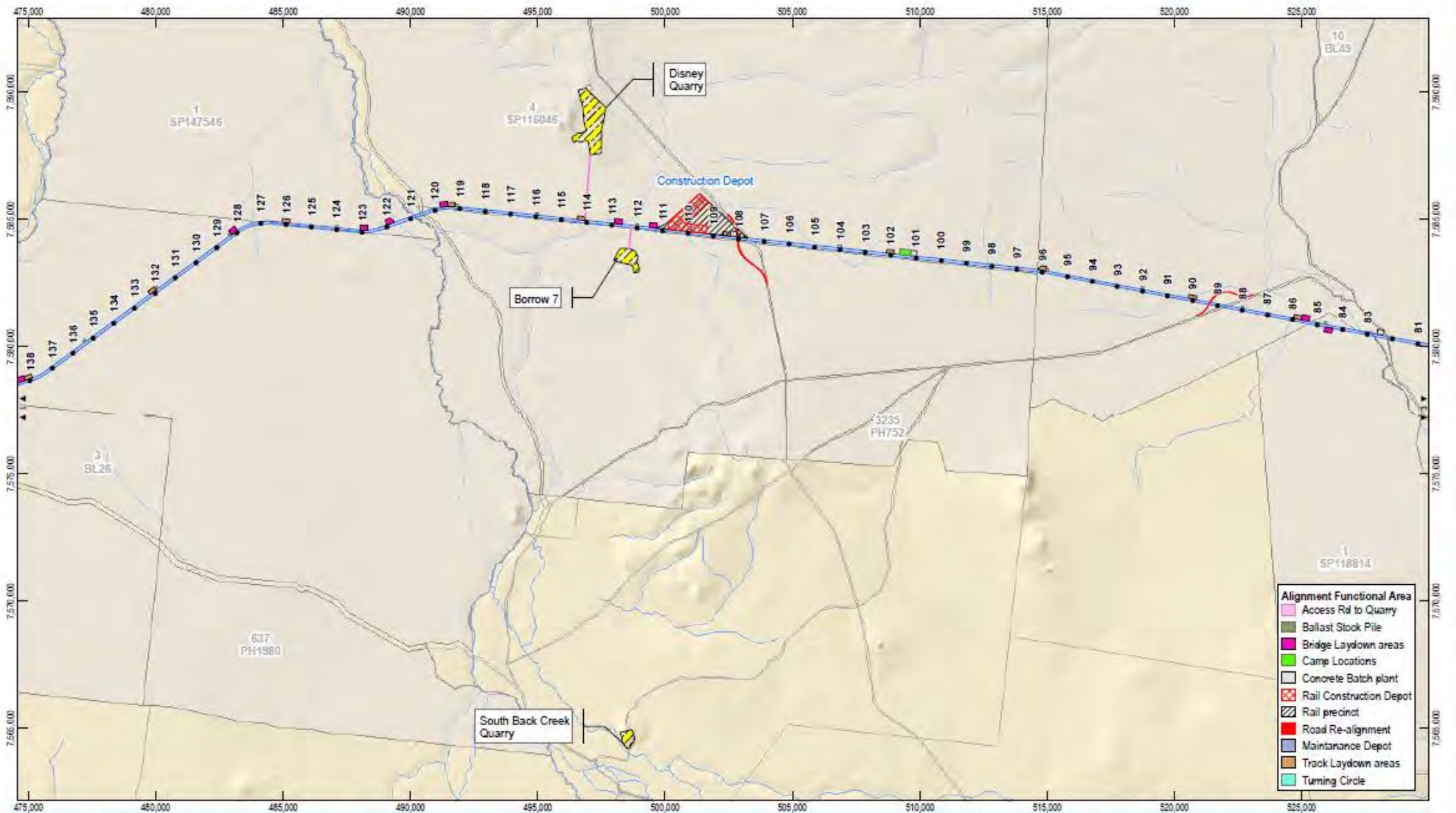
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Revision C
Date 10-02-2014

Disturbance Area - Project (Rail)

Page 1 of 4

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Data source: DNRM: DEM (2008), DCOB (2013), © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads, Watercourse (2007); Adani: Project changes, Functional Areas, Alignment SP1 Opt11 Rev2, SP2 Opt 9 Rev 3 (2013); DME: EPC1690 (2010) / EPC1060 (2011). Created by: MS

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 - Road Re-alignment
 - Maintenance Depot
 - Track Laydown areas
 - Turning Circle

1:200,000 (at A4)

0 1 2 3 4 5
Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 55

LEGEND

- Project (Rail) Chainage
- Town
- Road
- Other Railway
- Watercourse
- Rail (West)
- Rail (East)
- Project (Mine)
- Quarry
- Property Boundary
- Impacted Property



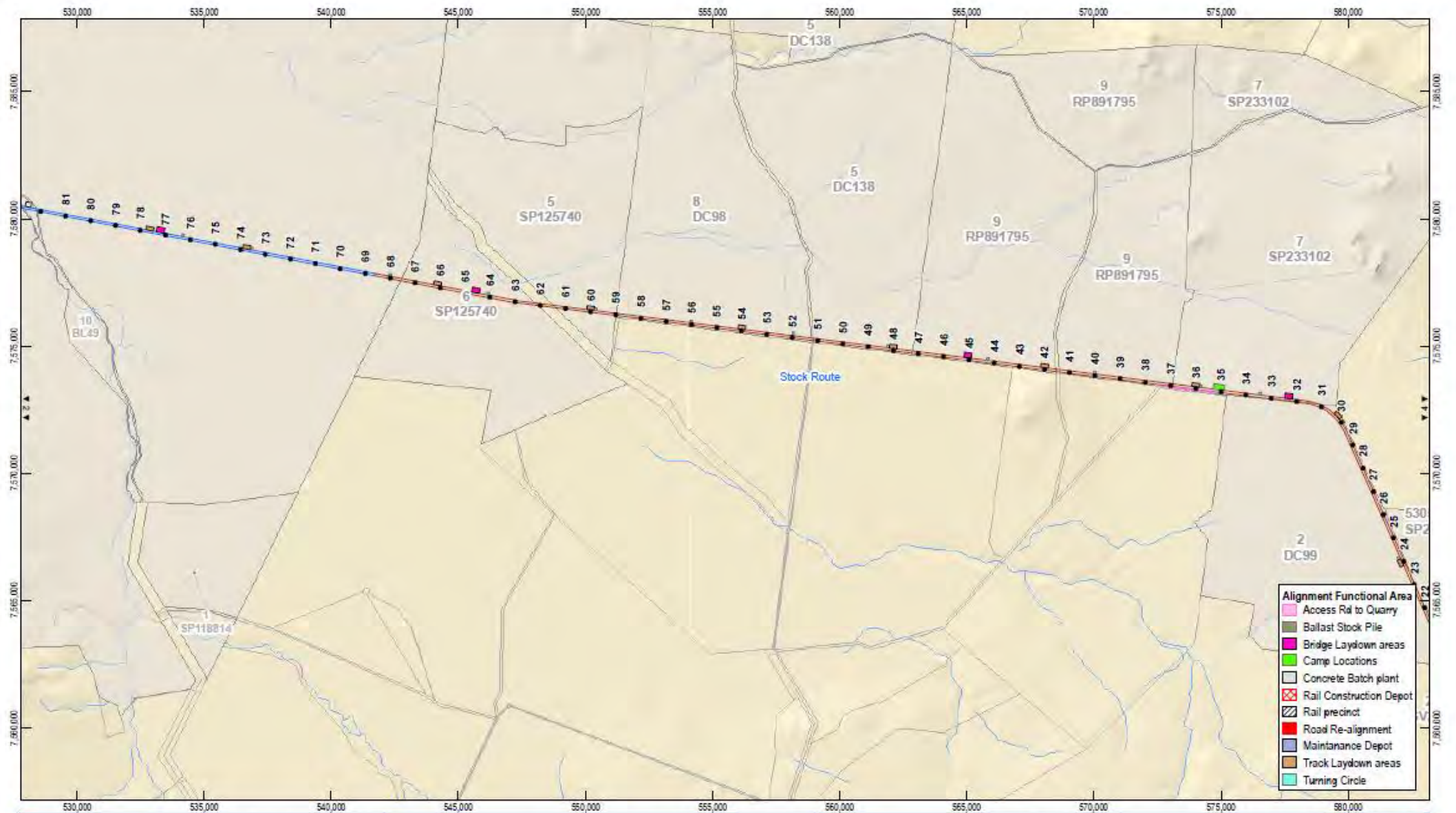
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Carmichael Coal Mine and Rail Project

Job Number | 41-26422
Revision | C
Date | 10-02-2014

Disturbance Area - Project (Rail)

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Alignment Functional Area

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1:200,000 (at A4)

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Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 55



LEGEND

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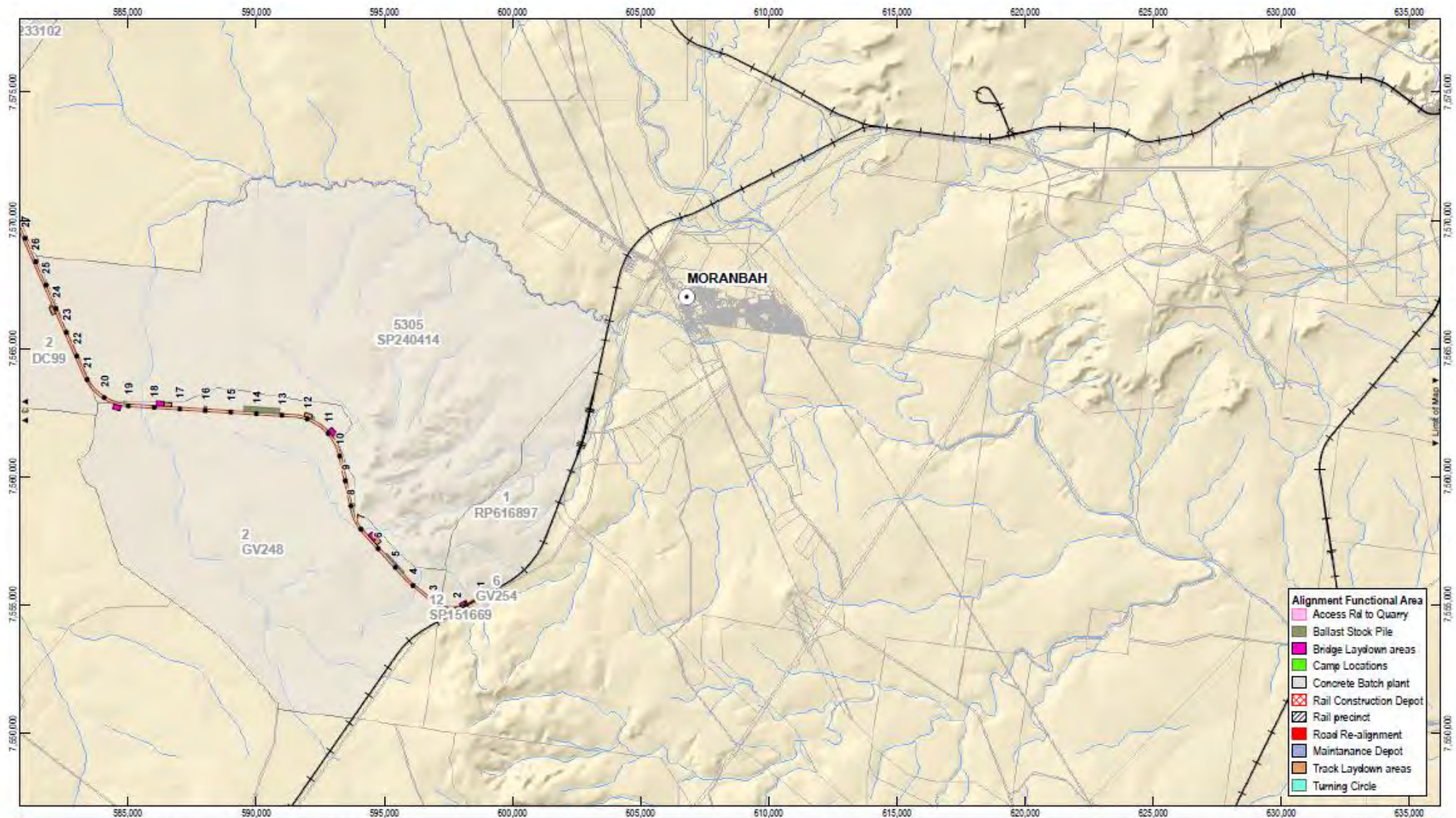
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Disturbance Area - Project (Rail)

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Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project

Job Number | 41-26422
 Revision | C
 Date | 10-02-2014

Disturbance Area - Project (Rail)

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 DME: EPC1690 (2010) / EPC1060 (2011). Created by MS

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To: Minister (for decision)

Approval Decision Brief (assessment report) – Carmichael Coal Mine and Rail Project, Queensland (EPBC 2010/5736)

Timing: 1 August 2014 - Statutory timeframe



Recommendation/s:

1. Consider the Queensland Assessment Report at **Attachment A**, the Legal Considerations at **Attachment B**, the Departmental advice at **Attachment C** and the Independent Expert Scientific Committee advice, responses and analysis at **Attachment D**.
Considered / please discuss
2. Consider the responses to the invitation for comment on the proposed decision at **Attachment E1 to E3**.
Considered / please discuss
3. Approve for each controlling provision, the action as summarised in the table below.
Approved / Not approved
4. Agree to attach the conditions of approval as set out in **Attachment F1**.
Agreed / Not agreed
5. If you agree to 3 and 4, accept the reasoning in the departmental briefing package as the reasons for your decision.
Accepted / Not accepted
6. Sign the notice of your decision at **Attachment F1**.
Signed / Not signed
7. Sign the letters at **Attachment G** advising the person proposing to take the action, and other relevant parties, of your decision.
Signed / Not signed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World heritage properties (ss 12, 15A)	Approve	
National heritage places (ss 15B, 15C)	Approve	
Wetlands of international importance (ss 16, 17B)	Approve	
Listed threatened species and communities (ss 18, 18A)	Approve	
Listed migratory species (ss 20, 20A)	Approve	
Great Barrier Reef Marine Park (ss 24B, 24C)	Approve	
A water resource, in relation to coal seam gas development and large coal mining development (ss 24D, 24E)	Approve	

Minister:

Comments:

Date: 24:7:2014

Key Points:

1. On 18 June 2014, as recommended by the Department in our proposed approval decision brief (**Attachment H**), you proposed to approve a proposal by Adani Mining Pty Ltd to develop the Carmichael Coal Mine and Rail Project in central Queensland, under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act).
2. Also on that date, in accordance with sections 131 and 131AA of the EPBC Act, you wrote to the following parties (or their nominated representatives), inviting comments on your proposed approval decision:
 - the proponent (and person proposing to take the action), Adani Mining Pty Ltd
 - the Minister for Industry, the Hon Ian Macfarlane MP
 - the Minister for Infrastructure and Regional Development, the Hon Warren Truss MP

Although not required under the EPBC Act, you also consulted the Queensland Coordinator-General, Mr Barry Broe.

3. Responses to your invitation to comment on your proposed approval decision were received from the following parties and have been considered in finalising the Department's recommended decision:
 - s22 responded on behalf of Minister Macfarlane on 3 July 2014 (**Attachment E1**). The response was generally supportive of the proposed decision, noting the economic importance of the project. Ms Harman also forwarded comments from Geoscience Australia, several of which were of assistance in refining conditions relating to groundwater management and monitoring, and flow modelling.
 - Mr Hamish Manzi – General Manager Environment & Sustainability, Adani Mining Pty Ltd, responded on 3 July 2014 (**Attachment E2**). The response provided a more detailed commitment to an up-front offset for groundwater impacts on the Great Artesian Basin, and made a number of suggestions as to how conditions could better reflect project sequencing and be better aligned with conditions imposed by the Queensland Government. The response also notes that revisions of several conditions were discussed verbally with the Department.
 - Mr Barry Broe – Queensland Coordinator-General, responded on 3 July 2014 (**Attachment E3**). Mr Broe noted that the proposed conditions were largely consistent with conditions imposed by the Queensland Government, and proposed some revisions to improve alignment.

4. You are now required under sections 130 and 131 of the EPBC Act to decide whether to approve the action.
5. Except for issues discussed in this brief, the matters for your consideration and factors to be taken into account in making your decision remain as set out in our proposed approval decision brief.

6. Key recommended changes from your proposed decision are summarised in **Attachment I**. They are as follows:

✓✓

- specifying the requirement to deliver 730 megalitres per annum in water savings in the Great Artesian Basin over a 5 year period (Condition 11. b)). The Department understands that the proponent, in consultation with the Queensland Department of Natural Resource Management, has identified approximately 185 bores, previously associated with the Great Artesian Basin Sustainability Initiative, that are considered potentially suitable for delivering the offset.
- staging the offsets required for listed threatened species in line with the timing of the northern and southern components of the action (Condition 8.) *FOR WAX* ✓✓
- redrafting the Groundwater Flow Model Review conditions in consultation with the Office of Water Science and Geoscience Australia to improve their clarity (conditions 22. to 24.). *Cabbage palm* ✓✓

*Primarily
10 additional
bores
hole
capped*

7. A number of administrative changes were also made to improve consistency and clarity of the conditions, and to address the timing requirements to stage the construction and mining activities. Those changes do not materially alter the intent or effect of the approval and are not discussed further. A version of the recommended approval notice, showing all tracked changes since your proposed decision, is provided at **Attachment F2**.

8. Talking points will be provided to you separately by Public Affairs Section.

9. In finalising the conditions, the Department's Office of Water Science, Water Resources Branch and Approvals Monitoring Section have been consulted.

Viki Press
Acting Assistant Secretary
Queensland and Sea Dumping Assessment Branch
s22

s22
Director
Queensland 3 and Sea Dumping Section
s22

8 July 2014

ATTACHMENTS

- A: Assessment report
- B: Legal considerations
- C: Departmental advice
- D: Independent Expert Scientific Committee advice, responses and analysis
- E1: Response to invitation for comment - Department of Industry / Geoscience Australia
- E2: Response to invitation for comment – Adani Mining Pty Ltd
- E3: Response to invitation for comment – Queensland Coordinator-General
- F1: Approval decision notice – FOR SIGNATURE
- F2: Approval decision notice (tracked changes version)
- G: Correspondence advising of your decision – FOR SIGNATURE
- H: Proposed approval decision brief (MS14-001304)
- I: Summary of key changes to conditions



Approval

Carmichael Coal Mine and Rail Infrastructure Project, Queensland (EPBC 2010/5736)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN (if applicable) 27 145 455 205

proposed action To develop an open cut and underground coal mine, 189 km rail link and associated infrastructure approximately 160 km north west of Clermont in central Queensland [See EPBC Act referral 2010/5736].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Wetlands of international importance (sections 16 & 17B)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved
A water resource, in relation to coal seam gas development and large coal mining development (sections 24D & 24E)	Approved

conditions of approval

This approval is subject to the conditions specified below.

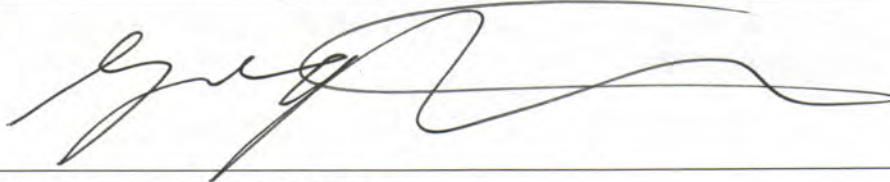
expiry date of approval

This approval has effect until 30 June 2090.

Decision-maker

name and position The Hon Greg Hunt MP
 Minister for the Environment

signature



date of decision 24 July 2014

Conditions attached to the approval

1. **The Minister** may determine that a plan, strategy or program approved by the Queensland Government satisfies a plan, strategy or program required under these conditions.

Project area

2. For the purpose of the action, the **approval holder** must not clear vegetation outside the **Project Area** shown at Appendix A unless targeted surveys have demonstrated that **Matters of National Environmental Significance** are unlikely to be impacted.

Groundwater management and monitoring plan

3. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit to the **Minister** for approval a Groundwater Management and Monitoring Plan (GMMP). The GMMP must contain the following:
 - a) details of a groundwater monitoring network that includes:
 - (i) control monitoring sites
 - (ii) sufficient bores to monitor potential **impacts** on the Great Artesian Basin (GAB) aquifers (whether inside or outside the **Project Area**)
 - (iii) a rationale for the design of the monitoring network with respect to the nature of potential **impacts** and the location and occurrence of **Matters of National Environmental Significance** (whether inside or outside the **Project Area**).
 - b) baseline monitoring data
 - c) details of proposed trigger values for detecting **impacts** on groundwater levels and a description of how and when they will be finalised and subsequently reviewed in accordance with **state approvals**
 - d) details of the timeframe for a regular review of the GMMP in accordance with the requirements of the environmental authority issued under the *Environmental Protection Act 1994* (Qld), and subsequent updates of the GMMP, including how each of the outcomes of the following will be incorporated:

- (i) independent review and update of the **groundwater conceptual model**, as well as the **numerical groundwater model** and water balance calculations (if recommended by the independent auditor), to incorporate monitoring data
 - (ii) future baseline research required by the Queensland Coordinator-General into the **Mellaluka Springs Complex** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**)
 - (iii) the GAB Springs Research Plan (Conditions 25 and 26)
 - (iv) the Rewan Formation Connectivity Research Plan (Conditions 27 and 28).
- e) provisions to make monitoring data available to **the Department** and Queensland Government authorities (if requested) on a six monthly basis for inclusion in any cumulative impact assessment, regional water balance model, bioregional assessment or relevant research required by the **Bioregional Assessment of the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
 - f) provisions to make monitoring results publicly available on the **approval holder's** website for the life of the project
 - g) a peer review by a **suitably qualified independent expert** approved by **the Minister** in writing, and a table of changes made in response to the peer review.
4. The **approval holder** must not **commence excavation of the first box cut** until the GMMP has been approved by **the Minister** in writing. The approved GMMP must be implemented.

***Note:** Many elements of the GMMP are also required under the state approval for the project. Where possible, a combined document should be prepared that addresses both state government and EPBC Act approval conditions.*

Matters of National Environmental Significance management plan/s

5. At least three months prior to **commencement of mining operations**, the **approval holder** must submit to **the Minister** for approval **Matters of National Environmental Significance** plan/s for the management of direct and indirect **impacts of mining operations** on (MNESMP).
- Note:** If the MNESMP does not address any specific future activities (eg possible additional seismic surveys or specific mining stages) it should be updated in accordance with Condition 33.*
6. The MNESMP must be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
- a) a description of **environmental values** for each of the **Matters of National Environmental Significance** addressed in the plan
 - b) details of baseline and **impact** monitoring measures to be implemented for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from **mining operations**, including **subsidence** and changes in groundwater levels, to set habitat management goals (Conditions 6e) and 6f))

- c) details of potential **impacts**, including area of **impact**, on each of the **Matters of National Environmental Significance** from **mining operations**, including **impacts** from:
- (i) vegetation clearing
 - (ii) **subsidence** from underground mining, including **subsidence** induced fracturing and any changes to groundwater or surface water flow
 - (iii) mine dewatering
 - (iv) earthworks
 - (v) noise and vibration
 - (vi) emissions (including dust)
 - (vii) light spill and other visual **impacts**
 - (viii) stream diversion and flood levees
 - (ix) weeds and pests.
- d) measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from **mining operations**. These measures must include but not be limited to:
- (i) the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised
 - (ii) measures to avoid **impacts** on **Matters of National Environmental Significance** and their habitat located in the **Project Area**, but outside areas to be cleared, constructed upon and / or undermined, including adjacent to cleared areas
 - (iii) measures to rehabilitate all areas of **Matters of National Environmental Significance** habitat
 - (iv) habitat management measures including but not limited to management of **subsidence** and groundwater **impacts** of the project.
- e) goals for habitat management for each relevant **Matters of National Environmental Significance**
- f) a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. This table must include but not be limited to measures relating to **subsidence** and groundwater **impacts**, including early warning triggers for **impacts** on groundwater at the **Doongmabulla Springs Complex** and the **Carmichael River**. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Conditions 3b) and 6b)). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes (see Conditions 11m) and 11o))

- g) an ongoing monitoring program to determine the success of mitigation and management measures against the stated criteria in Condition 6f), including monitoring locations, parameters and timing. Monitoring for water resource **Matters of National Environmental Significance** must include hydrogeological, hydrological and ecological parameters
 - h) details of how compliance will be reported
 - i) details of how the MNESMP will be updated to incorporate and address outcomes from research undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 6e) and 6f))
 - j) details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the MNESMP
 - k) In the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must include management measures to address **impacts** resulting from drawdown at the **Mellaluka Springs Complex** in the MNESMP
 - l) details of how, where habitat for an **EPBC Act listed threatened species or community** not previously identified and reported to **the Department** is found in the **Project Area**, the **approval holder** will notify **the Department** in writing within five business days of finding this habitat, and within 20 business days of finding this habitat will outline in writing how the conditions of this approval will still be met (refer Condition 11j)).
7. **Mining operations** must not **commence** until the required MNESMP have been approved by **the Minister** in writing. The approved plan/s must be implemented.

***Note:** Management plans (such as the Black Throated Finch Management Plan and the Groundwater Dependent Ecosystems Management Plan) may also be required under **state approvals**. Whenever possible a combined document should be prepared to address both state government and EPBC Act approval conditions.*

***Note:** **Impacts** of the action other than **mining operations** will be offset as required in accordance with Conditions 8 to 11, but will be otherwise managed in accordance with **state approvals** – this is of particular relevance when **impacts** may occur prior to approval of the MNESMP.*

Offset requirements

- 8. The **approval holder** must **legally secure** the minimum offset areas detailed in Table 1 within two years of **commencement** of the **specified component** of the action.

Table 1. Minimum offset areas required for **impacts** on **EPBC Act listed threatened species and communities** and initial contribution to offsets for **subsidence impacts** from underground mining.

<i>Environmental value</i>	<i>Offset for mining operations north of Carmichael River (hectares)</i>	<i>Offset for mining operations south of Carmichael River (hectares)</i>	<i>Initial offset for underground mining component (hectares)</i>	<i>Offset for off-lease infrastructure (hectares)</i>	<i>Offset for rail east component (hectares)</i>	<i>Offset for rail west component (hectares)</i>
Black throated finch (southern)	18 204.06	10 739.39	2,000.00	7.62	2.44	46.48
Brigalow ecological community	15.12	721.11		0.00	6.26	72.50
Ornamental snake*	96.39	38.61		0.00	0.00	0.00
Squatter pigeon (southern)*	1598.00	902.00		0.00	0.00	0.00
Waxy cabbage palm	90.00	0.00		0.00	0.00	0.00
Yakka skink*	3770.48	1815.42		1.87	0.60	11.63

Note: Offsets for different species may overlap where they share the same habitat requirements.

Biodiversity Offset Strategy and biodiversity funding

9. To compensate for authorised unavoidable **impacts** on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to **the Minister** for approval at least three months prior to **commencement of mining operations**.
10. Offsets for authorised unavoidable **impacts** (defined in Table 1), and water resource **impacts** must be managed in accordance with the BOS.

General requirements

11. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 6), including the Black Throated Finch Management Plan (Appendix 1, Section 1, Schedule I, condition I6 of the **Coordinator-General's Assessment Report**) and must include:
 - a) location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
 - b) implementation of an annual GAB offset measure, of returning at least 730 megalitres per annum for a minimum five year period from **commencement of excavation of the first box cut**, to offset the predicted annual **water take** associated with the action. This offset measure is to achieve a measurable outcome in accordance with one or more of the following principles:
 - (i) reduce current extraction rates from the GAB to increase hydraulic pressure

- (ii) increase pressure in the GAB
 - (iii) protect and rehabilitate the GAB springs
 - (iv) other measures consistent with government policies and strategies to protect and manage the GAB.
- c) the offset measure described in Condition 11b) is to be developed and delivered in consultation with the Queensland Government department administering the authorisation of the **water take**
- d) details of how offset sites have been or will be **legally secured** within required timeframes to ensure their long-term protection
- e) a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
- f) a description of the potential risks to the successful implementation of the BOS, and details of contingency measures that will be implemented to mitigate these risks
- g) details of how the BOS will be updated to incorporate outcomes from research undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 6e) and 6f)). This must include outcomes of baseline research required by the Queensland Coordinator-General to identify whether the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**)
- h) an outline of how compliance will be reported
- i) details of persons responsible for undertaking monitoring, review, and implementation of the BOS
- j) detailed processes for any residual **impacts on Matters of National Environmental Significance**, (see Condition 6f)) to be offset in accordance with the **EPBC Act Offsets Policy** including a process for offset requirement to be developed in consultation with **the Department** and relevant Queensland Government agencies
- k) a detailed process for any significant residual **impact on any EPBC listed threatened species or ecological community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (refer Condition 6I))
- l) in the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must:
- (i) revise **black throated finch** offset requirement in the BOS in accordance with the **EPBC Act Offsets Policy** and submit the revised BOS to **the Minister** for approval
 - (ii) management of any additional **black throated finch** offsets in accordance with Conditions 13 and 14 must commence prior to hydrological **impacts on**

the **Mellaluka Springs Complex**, with sites being **legally secured** within two years of that time.

*Requirements for offsets for potential **subsidence**, groundwater and water resource **impacts***

- m) details of how staged **subsidence**, groundwater and water resource **impacts** in the **Project Area** will be addressed in the BOS, including:
 - (i) description and map of the proposed stages of underground mining. The **approval holder** must advise **the Minister** of any changes to these staging details. **Underground mining Stage 1** must be consistent with the corresponding definition in these conditions
 - (ii) description of how actual **subsidence**, groundwater and water resource **impacts** for all completed stages (as defined through Condition 11m)(i)) will be assessed at each stage
 - (iii) description of the extent, magnitude and timing of actual **subsidence impacts** observed in completed stages (as defined through Condition 11m)(i))
 - (iv) description of how actual **subsidence** and groundwater **impacts** from completed stages (as defined through Condition 11m)(i)) will be used to revise and update predicted **impact** areas for future stages
 - (v) table of predicted **impact** areas for each **EPBC Act listed threatened species and community** in Table 1 within the underground mining area (consistent with Condition 6c)) that allows comparison of actual **impact** areas with initial **impact** area predictions and updated **impact** area predictions. If additional **impacted** areas are identified as a result of the predictions, additional offsets must be implemented in line with Condition 11j)
 - (vi) written commitments from the **approval holder** that the balance of offset requirement at each stage (as defined through Condition 11m)(i)) will be implemented prior to **commencement** of that stage.
- n) rationale for the balance of offset required for underground mining **impacts** to be updated at each underground mining stage (as defined through Condition 11m)(i)) that includes detailed comparison of the ecological status of **EPBC Act listed threatened species and communities** within the **subsidence impact** area between baseline conditions and the end of the most recent underground mining stage
- o) details of how groundwater and water resource **impacts** on the **Matters of National Environmental Significance** will be addressed in the BOS including identification of additional potential offsets (see Condition 6f)) for the **Carmichael River** and **Doongmabulla Springs Complex**, to be developed in consultation with **the Department** and relevant Queensland Government agencies
- p) detail of how the BOS will be revised and provided to **the Minister** for approval prior to **commencement** of each underground mining stage (as defined through Condition 11m)(i)) including timeframes for revision that allow three months for review and approval of the plan.

12. **Mining operations** must not **commence** until the BOS is approved by **the Minister** in writing. The approved BOS must be implemented.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A combined document should be prepared to address both State Government and EPBC Act approval conditions where possible.

Offset area management plans

13. Within three months of identifying any offset area in accordance with Conditions 6, 8, 11 or 20, the **approval holder** must submit to **the Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:
- a) detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed threatened species and community**, connectivity with other habitat areas and biodiversity corridors
 - b) management measures and offset plans for each offset area to improve the habitats of **Matters of National Environmental Significance**
 - c) a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
14. Once approved, offset area management plans must be implemented.

Biodiversity Funding

15. The **approval holder** must establish and/or contribute to a pool of funds established for the better protection and long term conservation of **EPBC Act listed threatened species and communities** listed in Table 1.
16. The mechanism to establish and/or contribute to a pool of funds, including terms of reference to support a regional approach, funding mechanisms and an initial work plan, must be provided to **the Minister** for approval three months prior to **commencement of mining operations**. The mechanism may be in the form of a trust fund, or other mechanism/s as agreed by **the Minister** in writing.
17. The **approval holder** must contribute \$100 000 (GST exclusive) per annum for 10 consecutive years to the pool of funds beginning from **commencement of mining activities**. The **approval holder** must provide notice of the establishment of and/or contribution to the pool of funds to **the Department** in writing prior to **commencement of mining activities**. Documentary evidence must be provided to **the Department** showing that the annual financial contributions to the pool of funds have been provided within 30 calendar days of each payment.

18. These funds must facilitate the development and implementation of research programs consistent with priorities to manage development **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 which are consistent with, and take into consideration, any relevant recovery plans, threat abatement plans and/or conservation advices. Research programs should identify measures to mitigate and manage the **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 and should address:
- a) methodologies for a baseline survey that will report on each species' life history, movement patterns, habitat requirements and population dynamics. Survey methodologies must be in accordance with **the Department's survey guidelines** or alternative best practice methodologies that are agreed to in writing by **the Minister** prior to **commencement** and endorsed by a **suitably qualified independent expert**. The baseline survey must begin with the first year of the date of this approval
 - b) an ongoing monitoring program (developed from the baseline monitoring) for each species, to continue for the duration of the project approval, with annual reporting to **the Department**
 - c) commitments, including financial commitments and associated timeframes, that will be implemented by the **approval holder** to support the undertaking of research
 - d) the time frames for undertaking each research component
 - e) timing and methods of reporting research outcomes to **the Minister**, the scientific community and the public
 - f) outcomes of consultation with **the Department** on how the proposed Research Programs align with other studies for **EPBC Act listed threatened species and communities** listed in Table 1
 - g) identification of priority actions for funding must be decided in consultation with the Queensland Department of Environment and Heritage Protection and members of relevant Recovery Teams.
19. A review of funding must be undertaken five years after the establishment of the pool of funds and/or the **commencement** of the action or as otherwise agreed by **the Minister** in writing. This review must take into account progress of the research programs and any subsequent on ground actions, as well as the involvement of other holders of approvals under **the EPBC Act** in funding and administrative arrangements. The review must be provided to **the Department** within six months after the five year period.

3D Seismic Survey Management Plan

20. The **approval holder** must submit a 3D Seismic Survey Management Plan to **the Minister** for approval, allowing at least one month for approval. The Seismic Survey Management Plan must include the following information in relation to the 2014 program of **seismic survey activities**:
- a) a description of **seismic survey activities**
 - b) a description of **impacts** of **seismic survey activities** on **Matters of National Environmental Significance**

- c) mitigation measures for **seismic survey activities**
- d) identification of offsets for residual **impacts** on at least 115 ha of **black throated finch** habitat, to be **legally secured** within two years of **commencement of seismic survey activities**.

Note: Offset areas identified are not intended to duplicate offset areas identified in accordance with Condition 11).

- 21. **Seismic survey activities** must not **commence** until the 3D Seismic Survey Management Plan has been approved by **the Minister** in writing. The approved 3D Seismic Survey Management Plan must be implemented.

Groundwater Flow Model Review

- 22. The **approval holder** must undertake a peer review of the adequacy of the current groundwater flow model to characterise groundwater **impacts**. This review must consider the parameters used into the groundwater flow model, the required additional modelling information and the model re-runs outlined in Condition 23. The peer review must be undertaken by a **suitably qualified independent expert**, approved by **the Minister** in writing. The peer review report must be submitted to **the Minister** within four months of this approval and should identify any additional information requirements
- 23. The **approval holder** must re-run the groundwater flow model. These model revisions and re-runs must incorporate the following parameters in the scenarios and address the following additional information requirements:
 - a) re-define the current General Head Boundary (GHB) arrangement, as agreed by **the Department** in writing, including the following:
 - (i) remove the GHB from its current location in all layers to the western edge of the model domain
 - (ii) review and justify the GHB conductance values used in the model to reflect the differences between aquifers and aquitards and also between aquifers (e.g. Clematis and Colinlea Sandstones), and modify if required
 - (iii) GHB cell elevations to be re-set using data as agreed by **the Department** in writing
 - (iv) report on the **impacts** on groundwater levels and net flows between the model domain for the revised GHB boundaries and compare with previous modelling results.
 - b) review and justify the recharge parameters for the Clematis Sandstone to represent the flux into the recharge beds of the GAB, and modify if required
 - c) document outflow mechanisms used in the model for the **Doongmabulla Springs Complex** and individual model layers, using maps to show the spatial distribution of model discharges
 - d) document and incorporate known licensed groundwater extractions within the model domain
 - e) document and justify any other changes made as part of the model re-runs that are not outlined above

- f) as per the **IESC information guidelines** provide an assessment of the quality of, and risks and uncertainty inherent in, the data used in the background data and modelling, particularly with respect to predicted potential scenarios
 - g) provide adequate data (spatially and geographically representative) to justify the conceptualisation of topographically driven flow from south to north (and west to east) in both shallow and deeper aquifers.
24. The outcomes of the model re-runs are to be reviewed in order to inform the review of the GMMP and the Rewan Formation Connectivity Research Plan, and to correct any subsequent inaccuracies in the **Matters of National Environmental Significance** management plan/s, prior to submitting to **the Minister** for approval.

Research and management requirements

GAB springs research plan

25. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit for the approval of **the Minister** a GAB Springs Research Plan that investigates, identifies and evaluates methods to prevent, mitigate and remediate ecological **impacts** on the **EPBC listed community of native species dependent on natural discharge of groundwater from the Great Artesian Basin**, including the **Doongmabulla Springs Complex**, in the Galilee Basin. The GAB Springs Research Plan must include but is not limited to the following:
- a) research aims and rationale with reference to existing scientific research on GAB spring hydrogeology and ecology
 - b) identify priority actions for potential offsets to protect and manage the GAB springs
 - c) personnel responsible for conducting research and their qualifications
 - d) timeframes for research and reporting
 - e) methods, including but not limited to, conceptualisation of the hydrogeology of the springs, ecological surveys to determine the composition of the GAB spring community, an assessment of transferability of approaches to prevent and mitigate hydrological **impacts** on springs in the Surat Basin, determination of water requirements (including ecological response thresholds) of the GAB spring community, and development and evaluation of methods to prevent, remediate and mitigate ecological **impacts**
 - f) an analysis of potential mitigation activities, such as but not limited to, re-injection to the groundwater source aquifer to maintain pressure head, flows and ecological habitat at the **Doongmabulla Springs Complex**
 - g) an explanation of how research outcomes will directly inform the monitoring, management, prevention, mitigation and remediation of **impacts** on the **Doongmabulla Springs Complex**
 - h) a peer review of the draft GAB Springs Research Plan, by a **suitably qualified independent expert**, approved by **the Minister** in writing, and a table of changes made in response to the peer review

- i) The GAB Springs Research Plan must be published on the proponent's website for the life of the project, submitted to **the Minister** within ten business days of completion, and be made available for the **Bioregional Assessment of the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
26. The **approval holder** must not **commence excavation of the first box cut** until the GAB Springs Research Plan has been approved by **the Minister** in writing. The approved GAB Springs Research Plan must be implemented.

Rewan Formation Connectivity Research Plan

27. At least three months prior to **commencing excavation of the first box cut**, the **approval holder** must submit for the approval of **the Minister** a Rewan Formation Connectivity Research Plan ('Rewan Research Plan') that characterises the Rewan Formation within the area **impacted** by the mine. The Research Plan must include but not be limited to the following:
- a) research aims
 - b) personnel responsible for conducting research and their qualifications
 - c) timeframes for research and reporting
 - d) methods, including, but not limited to, seismic surveys to determine the type, extent and location of fracturing, faulting and preferential pathways (including any fracturing induced by longwall mining **subsidence**) and an examination of the hydraulic properties (including but not limited to petrophysical analysis and facies mapping) of the Rewan Formation, to better characterise the Rewan Formation and the contribution of fracturing, faulting and preferential pathways to connectivity, including a description of how research will be undertaken in a manner that does not cause **impacts** on **Matters of National Environmental Significance** (unless the activities will be undertaken in accordance with a plan approved pursuant to conditions of this approval)
 - e) an explanation of how research will inform the GMMP, any regional groundwater and surface water monitoring and assessment program, or **Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations**
 - f) a peer review of the Rewan Research Plan, by a **suitably qualified independent expert**, approved by **the Minister** in writing, and a table of changes made in response to the peer review
28. The **approval holder** must not **commence excavation of the first box cut** until the Rewan Research Plan has been approved by **the Minister** in writing. The approved Rewan Formation Connectivity Research Plan must be implemented.

Standard conditions

29. Within 30 days of the **commencement** of the action, the person taking the action must advise **the Department** in writing of the actual date of **commencement**.

30. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and programs required by this approval, and make them available upon request to **the Department**. Such records may be subject to audit by **the Department** or an independent auditor in accordance with section 458 of **the EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on **the Department's** website. The results of audits may also be publicised through the general media.
31. Within three months of every 12 month anniversary of the **commencement** of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to **the Department** at the same time as the compliance report is published.
32. Upon the direction of **the Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to **the Minister**. The independent auditor must be approved by **the Minister** prior to the **commencement** of the audit. Audit criteria must be agreed to by **the Minister** and the audit report must address the criteria to the satisfaction of **the Minister**.
33. If the person taking the action wishes to carry out any activity otherwise than in accordance with the management plans, reports, and programs as specified in the conditions, the person taking the action must submit to **the Department** for **the Minister's** written approval a revised version of that management plans, reports, and programs. The varied activity shall not **commence** until **the Minister** has approved the varied management plans, reports, and programs in writing. **The Minister** will not approve a varied management plans, reports, and programs unless the revised management plans, reports, and programs would result in an equivalent or improved environmental outcome over time. If **the Minister** approves the revised management plans, reports, and programs, that management plans, reports, and programs must be implemented in place of the management plans, reports, and programs originally approved.
34. If **the Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, Wetlands of international importance, listed threatened species and communities, listed migratory species, the Great Barrier Reef Marine Park or a water resource, in relation to coal seam gas development and large coal mining development to do so, **the Minister** may request that the person taking the action make specified revisions to the management plans, reports, and programs specified in the conditions and submit the revised management plans, reports, and programs for **the Minister's** written approval. The person taking the action must comply with any such request. The revised approved management plans, reports, and programs must be implemented. Unless **the Minister** has approved the revised management plans, reports, and programs, then the person taking the action must continue to implement the management plans, reports, and programs originally approved, as specified in the conditions.
35. If, at any time after 10 years from the date of this approval, the person taking the action has not **substantially commenced** the action, then the person taking the action must not **substantially commence** the action without the written agreement of **the Minister**.

36. Unless otherwise agreed to in writing by **the Minister**, the person taking the action must publish all management plans, reports, and programs referred to in these conditions of approval on their website. Each management plan, report, and program must be published on the website within one month of being approved.

Definitions

Approval holder: The person to whom the approval is granted.

Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin and any subsequent iterations: will be conducted in conjunction with relevant state and territory government agencies and natural resource management bodies and entails a scientific analysis of the ecology, hydrology and geology for the purpose of assessing the potential risks to water resources in the area as a result of the direct and indirect **impacts** of coal seam gas development and large coal mining development.

Black throated finch: means the black throated finch (southern) (*Poephila cincta* subsp. *cincta*) listed as a threatened species under **the EPBC Act**

Brigalow ecological community: means Brigalow (*Acacia harpophylla* dominant and co-dominant), listed as a threatened ecological community under **the EPBC Act**.

Carmichael River: the Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River.

Commencement / commence / commenced / commencing: is the first instance of any specified activity. Unless the activity is specifically defined for the purposes of these conditions, commencement of an activity includes any physical disturbance including clearing of vegetation, earthworks, new road works, new rail works, construction of new camps, development of mining associated infrastructure and **mining operations**. Commencement does not include:

- a) erection of signage or fencing
- b) minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- c) activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse impact on MNES, and only if the **approval holder** has notified **the Department** in writing before an activity is undertaken.

Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin: means the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin, listed as a threatened ecological community under **the EPBC Act**.

Coordinator-General's Assessment Report: The Queensland Coordinator-General (2014) *Carmichael Coal Mine and Rail Project: Coordinator-General's evaluation report on the environmental impact statement May 2014*. Department of State Development, Infrastructure and Planning, Brisbane, Queensland

The Department: is the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Doongmabulla Springs Complex: the groundwater-fed springs located approximately 8 kilometres from the western edge of the mining lease boundary and consisting of Moses Spring, Little Moses Spring and Joshua Spring (refer pp. 106-108 of the Coordinator-General's Assessment Report).

Environmental values: includes but is not limited to habitat for **EPBC Act listed threatened species and communities** and hydrology of identified water resources.

EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed threatened species and/or community/ies: means a threatened species or community, or a migratory species listed under **the EPBC Act**.

Excavation of the first box cut: means bulk earthworks excavating the first box cut required for either underground or open cut mining, which for the avoidance of doubt does not include clearing or topsoil stripping.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Groundwater conceptual model: is the conceptual groundwater model developed for the project as described in the Adani Mining Pty Ltd (2013) *Carmichael Coal Mine and Rail Project Supplementary Environmental Impact Statement* at Appendix K6.

Impact/s/ed: as defined in section 527E of **the EPBC Act**.

IESC Information Guidelines: are *Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals*, April 2014.

Legally secure: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matters of National Environmental Significance: in the context of this approval includes the following:

<i>Listed Threatened Species and Communities</i>
Black throated finch (southern) (<i>Poephila cincta</i> subsp. <i>cincta</i>)
Brigalow ecological community
Ornamental snake (<i>Denisonia maculata</i>)
Squatter pigeon (southern) (<i>Geophaps scripta</i> subsp. <i>scripta</i>)
Waxy cabbage palm (<i>Livistona lanuginosa</i>)
Yakka skink (<i>Egernia rugosa</i>)
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex)
<i>Water Resources</i>
Carmichael River (Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River)
Mellaluka Springs Complex
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex)
Waxy cabbage palm (<i>Livistona lanuginosa</i>)

Mellaluka Springs Complex: the groundwater-fed springs located to the south-eastern section of the mine area and consisting of Mellaluka Spring, Stories Spring and Lignum Spring (refer pp. 168-169 of the Coordinator-General's Assessment Report).

Mining operations: are the extraction of ore from the ground as well as any immediately associated activities, including initial clearing of vegetation, removal and storage of overburden, storage of ore and dewatering, but not including exploratory surveys or the construction or operation of transport, accommodation or power generation infrastructure.

The Minister: is the Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

Numerical groundwater model: means any computational method that represents an approximation of an underground water system that simulates hydraulic heads (and watertable elevations in the case of unconfined aquifers) and groundwater flow rates within and across the boundaries of the system under consideration.

Ornamental Snake: means the ornamental snake (*Denisonia maculata*), listed as a threatened species under **the EPBC Act**.

Project Area: all disturbance areas as defined in the maps at Appendix A. It is noted that minor alterations may be made in order to avoid **Matters of National Environmental Significance** or State Significant Biodiversity Values found during pre-clearance surveys. These are permitted only where they will result in a lower level of impact to these matters.

Rail (west): is a 120 km dual gauge greenfield rail line connecting the mine as far east as Diamond Creek, to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point.

Rail (east): is a 69 km narrow gauge portion of greenfield rail line running east from Diamond Creek to the existing Goonyella and Newlands rail systems, to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point.

Seismic survey activities: includes any activity involving ground disturbance associated with 3D seismic survey over an area of 2304 ha within mining lease EPC 1690.

Specified component: is any part of the approved action that **the Minister** has agreed in writing to consider individually for the purposes of these conditions, and also includes the six components specified in Table 1.

Squatter Pigeon: means the squatter pigeon (Southern) (*Geophaps scripta* subsp. *scripta*), listed as a threatened species under **the EPBC Act**.

State approvals: include any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Subsidence: means the totality of subsidence effects and subsidence **impacts**; where 'subsidence effects': means deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature; and 'subsidence **impacts**': means physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs.

Suitably qualified independent expert: means a person who has professional qualifications, training, skills or experiences related to the nominated subject matter and can give authoritative

assessment, advice and analysis on performance relative to the subject matter using the relative protocols, standards, methods or literature

Survey Guidelines: include the following:

Matters of National Environmental Significance, Significant Impact Guidelines 1.1, *Environment Protection and Biodiversity Conservation Act 1999*:

<http://www.environment.gov.au/epbc/publications/nes-guidelines.html>

Survey Guidelines for Australia's Threatened Frogs, Threatened Mammals, Threatened Reptiles and Threatened Bats: <http://www.environment.gov.au/epbc/guidelines-policies.html>

Survey Guidelines for Australia's Threatened Birds:

<http://www.environment.gov.au/resource/survey-guidelines-australias-threatened-birds-guidelines-detecting-birds-listed-threatened>

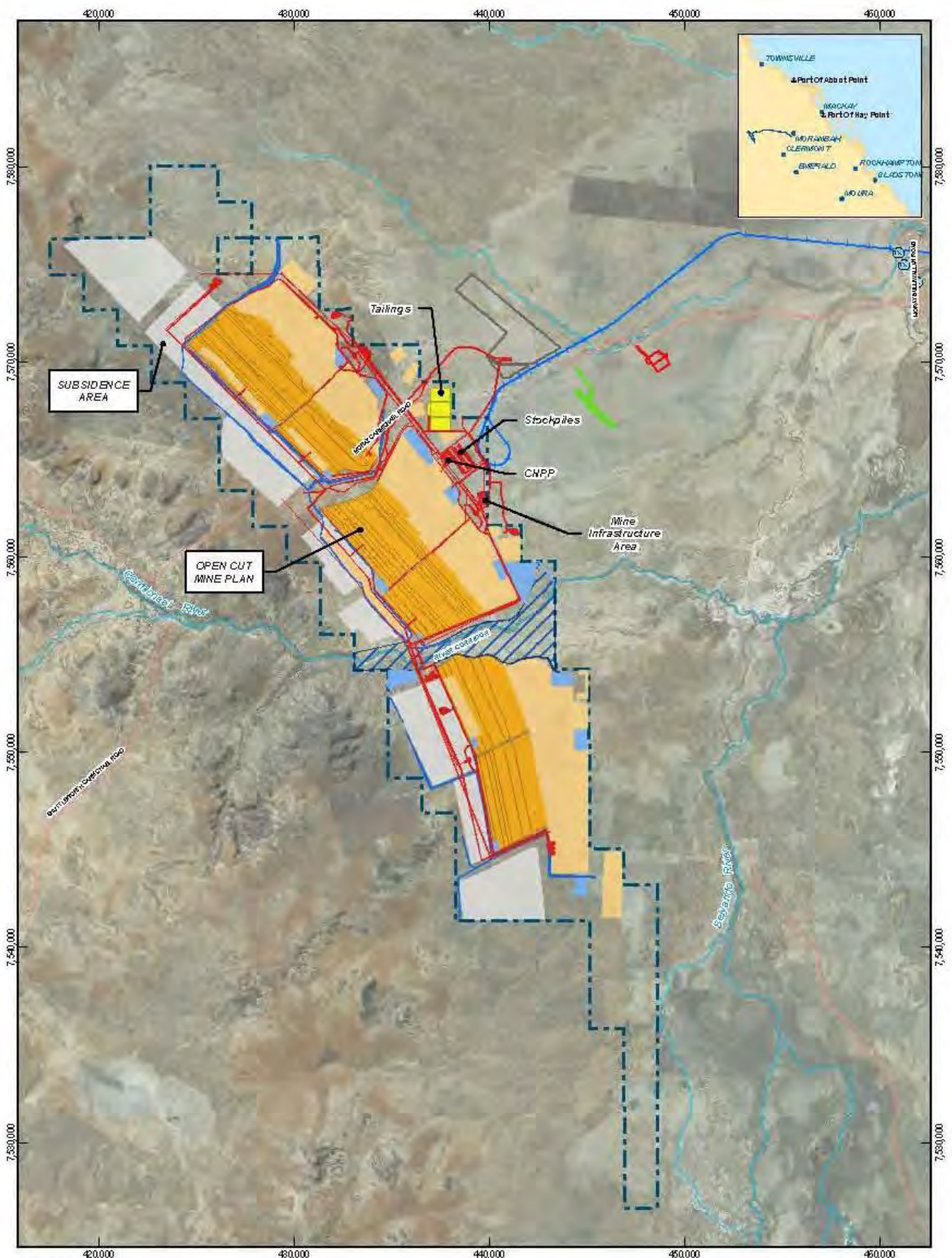
Underground mining Stage 1: means years 1-10 of underground mining including all associated activities including box cut excavation, portal construction, long wall construction and longwall panel mining. Multi seam mining within the first underground mine will occur during this time period. This definition and timing provides certainty and confidence in regards to the assessment of actual **subsidence** related **impacts** versus predicted **subsidence** related **impacts** that is required to be undertaken at the conclusion of underground mining Stage 1.

Water take: is extraction of water from a regulated water resource, in accordance with an authorisation by the regulating body.

Waxy Cabbage Palm: means the waxy cabbage palm (*Livistona lanuginosa*) listed as a threatened species under **the EPBC Act**.

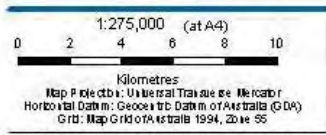
Yakka Skink: means the yakka skink (*Egernia rugosa*), listed as a threatened species under **the EPBC Act**.

Appendix A



LEGEND	
	Local road
	Watercourse
	Mine (Onsite)
	Project (Rail)
	Mine Domain
	Mine infrastructure
	Tailings drying cells
	Water storage areas
	Stream diversions
	Open-cut voids and slopes
	Out-of-pit spoil dumps
	Carmichael River corridor
	Underground mining areas
	Mine (Offsite)
	Pump Station
	Storage Facility (Off-stream)
	Airport
	Industrial Area
	Accommodation Village

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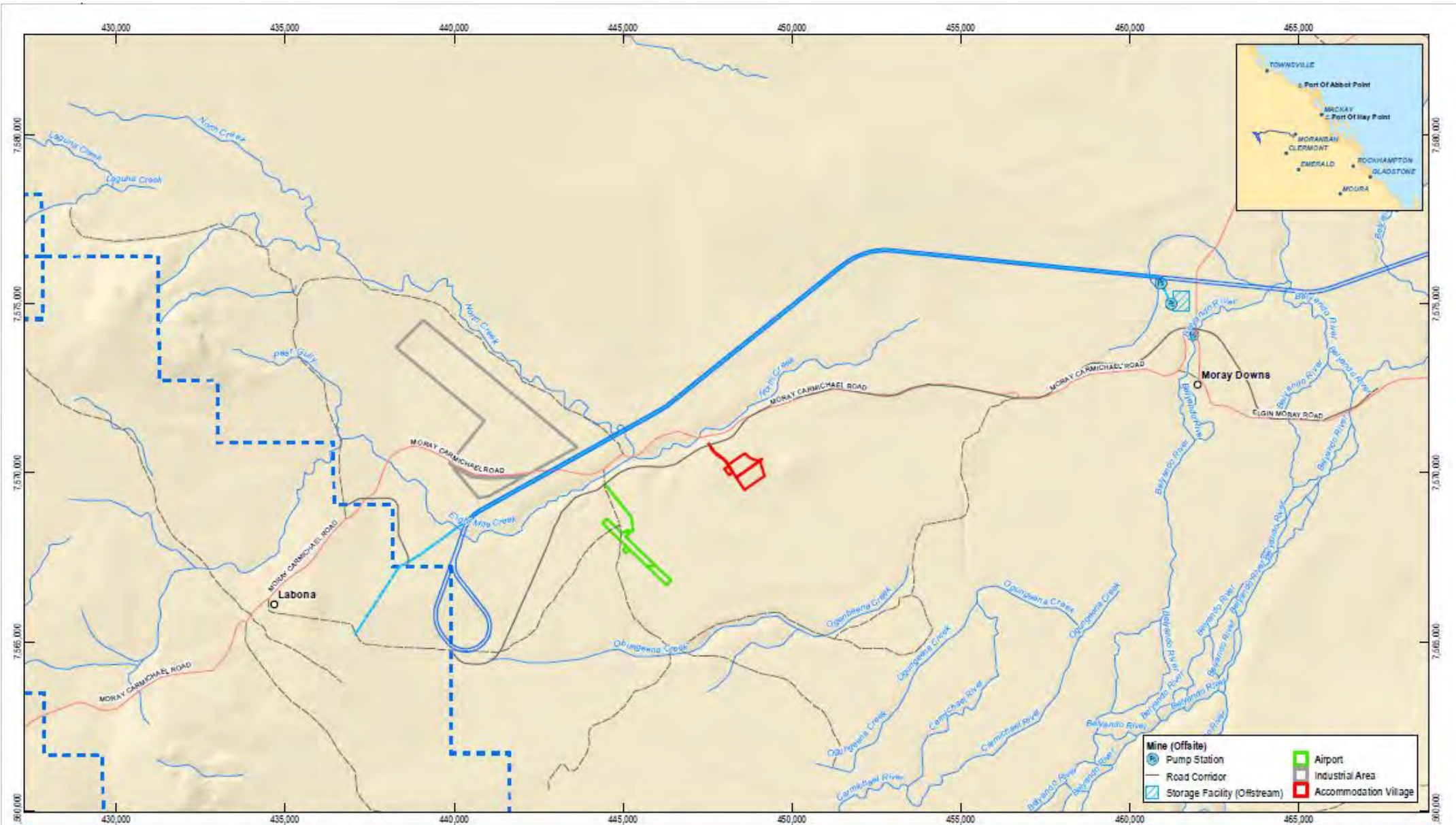


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Carmichael Coal Mine and Rail Project

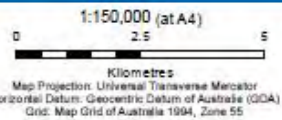
Jcb Number: 41-26422
Revision: A
Date: 10-02-2014

Disturbance Area - Mine Domains

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Data Source: GA: Road, Rail / Watercourse (2007); DME: EPC1690 (2010), EPC1080 (2011); Adani: Alignment, Onsite (2013); Mine Domains (2014); Digital Globe: Satellite (2009). Created by: MS



	Mine (Offsite)		Airport
	Pump Station		Industrial Area
	Road Corridor		Accommodation Village
	Storage Facility (Offstream)		



LEGEND

	Homestead		Watercourse		Mine (Onsite)
	Local Road		Rail Corridor		
	Track		Water Supply Pipeline		



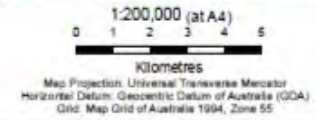
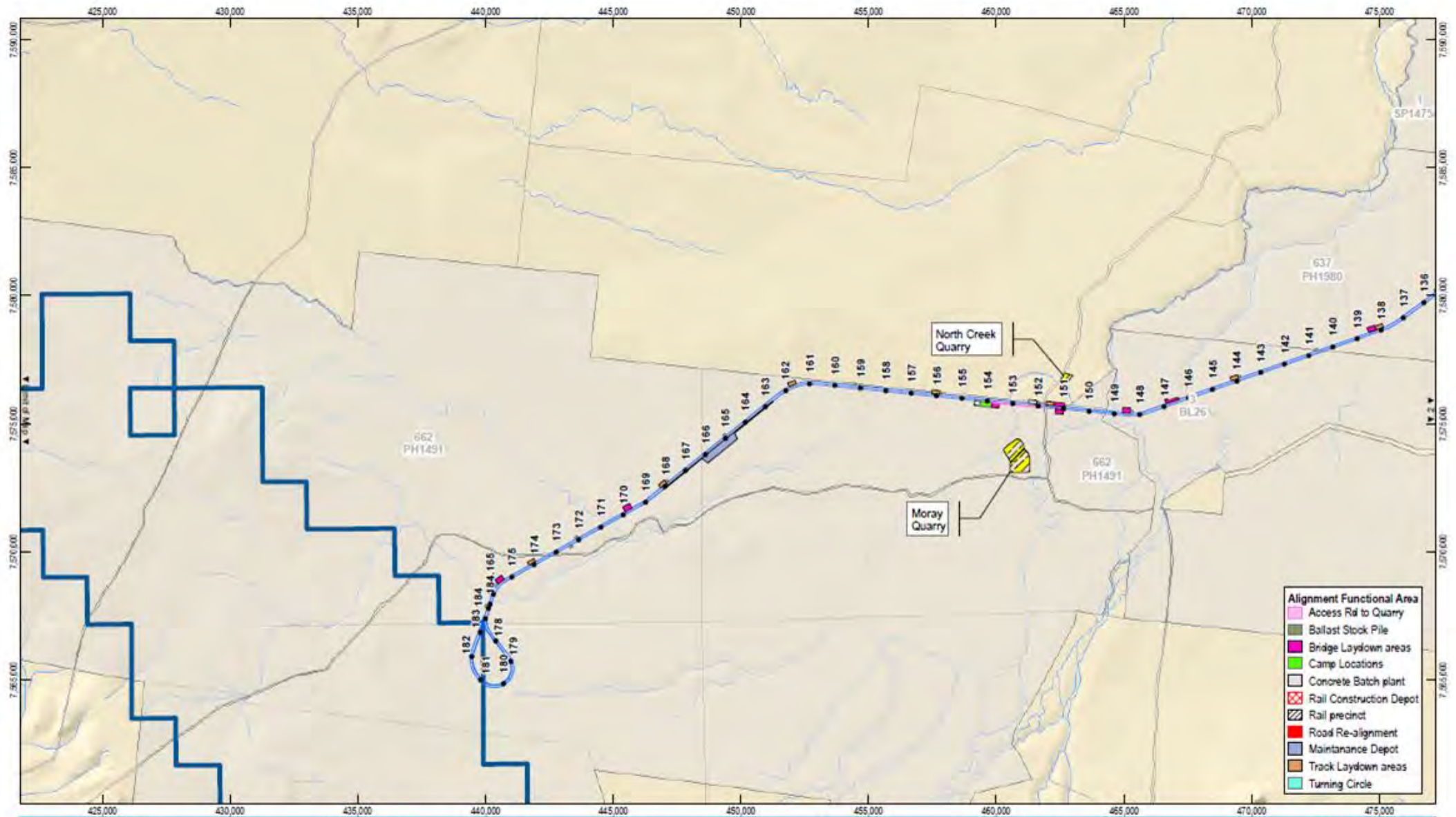
Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Job Number | 41-26422
Revision | B
Date | 10-02-2014

Disturbance Area - Offsite Infrastructure

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Level 9, 145 Ann St Brisbane QLD 4000 T +61 7 3316 3000 F +61 7 3316 3333 E bnenmal@ghd.com W www.ghd.com
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Data source: DME: EPC1900 (2010)/EPC1080 (2011); DNRM: Bioregion Boundary (2011); © Commonwealth of Australia (Geoscience Australia): Watercourse, Tracks (2007); Adani: Alignment Opt11 Rev 2 (BP1 and 2)(2013); Offsite Infrastructure (2013). Created by: AJ

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LEGEND

• Project (Rail) Chainage	— Road	□ Rail (West)	▨ Quarry
○ Town	— Other Railway	□ Rail (East)	□ Property Boundary
	— Watercourse	□ Project (Mine)	□ Impacted Property



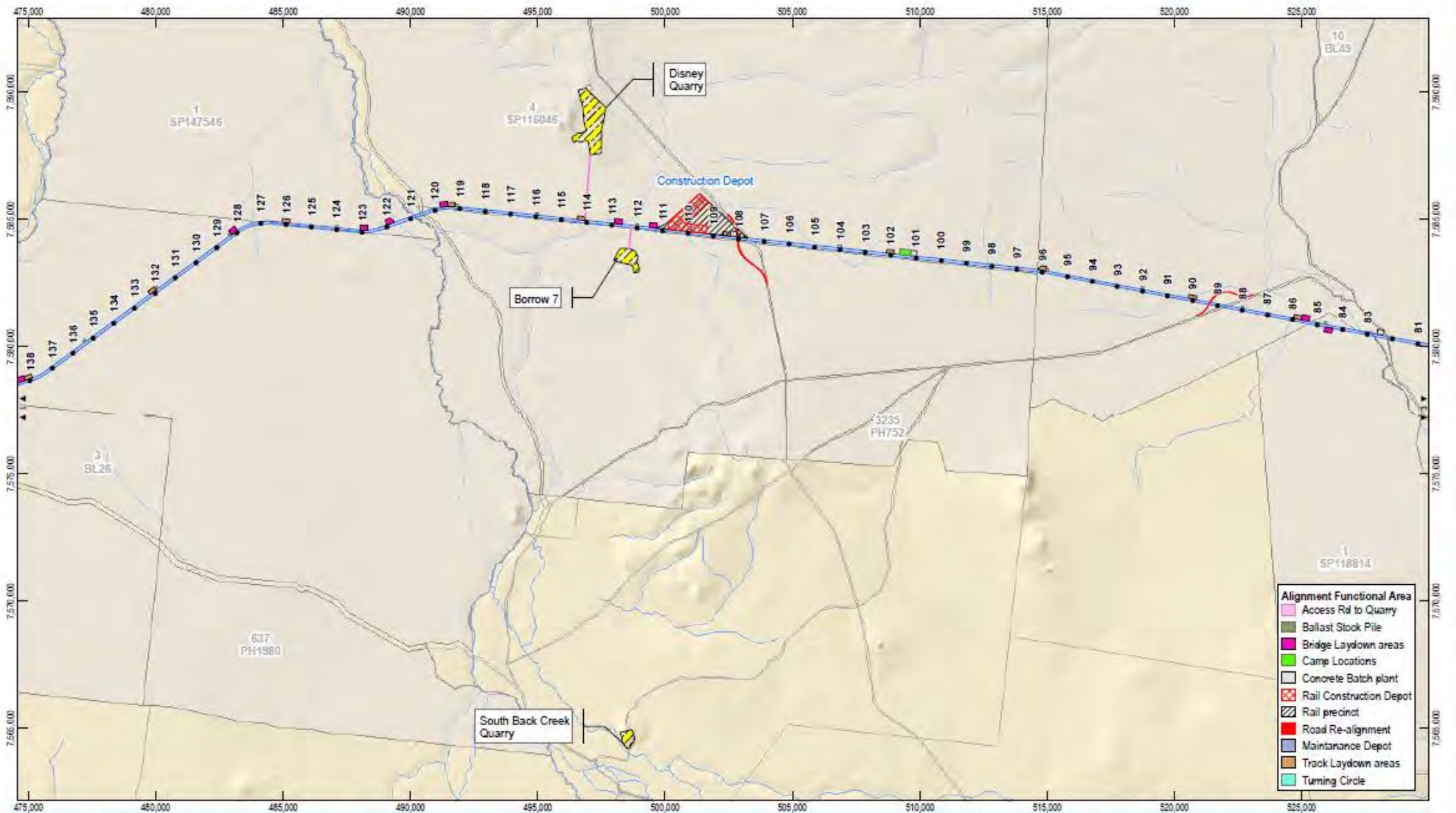
Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Job Number 41-26422
Revision C
Date 10-02-2014

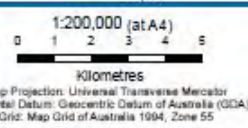
Disturbance Area - Project (Rail)

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- Alignment Functional Area**
- Access Rd to Quarry
 - Ballast Stock Pile
 - Bridge Laydown areas
 - Camp Locations
 - Concrete Batch plant
 - Rail Construction Depot
 - Rail precinct
 - Road Re-alignment
 - Maintenance Depot
 - Track Laydown areas
 - Turning Circle



- LEGEND**
- Project (Rail) Chainage
 - Town
 - Road
 - Rail (West)
 - Rail (East)
 - Project (Mine)
 - Other Railway
 - Watercourse
 - Quarry
 - Property Boundary
 - Impacted Property



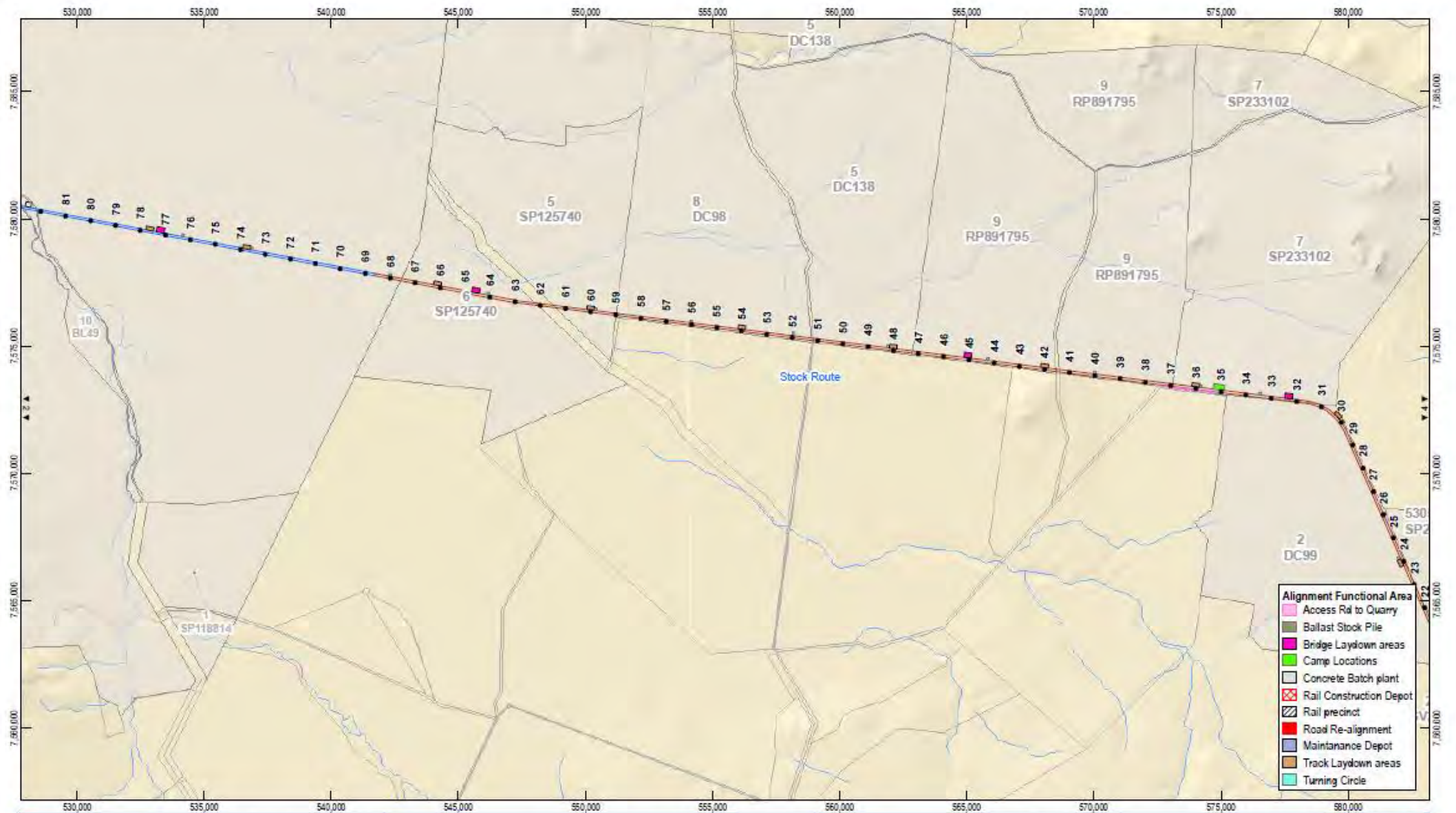
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Carmichael Coal Mine and Rail Project

Job Number | 41-26422
Revision | C
Date | 10-02-2014

Disturbance Area - Project (Rail)

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- Alignment Functional Area**
- Access Rd to Quarry
 - Ballast Stock Pile
 - Bridge Laydown areas
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 - Concrete Batch plant
 - Rail Construction Depot
 - Rail precinct
 - Road Re-alignment
 - Maintenance Depot
 - Track Laydown areas
 - Turning Circle

1:200,000 (at A4)
 0 1 2 3 4 5
 Kilometres
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia (GDA)
 Grid: Map Grid of Australia 1994, Zone 55



- LEGEND**
- Project (Rail) Chainage
 - Town
 - Road
 - Other Railway
 - Watercourse
 - Rail (West)
 - Rail (East)
 - Project (Mine)
 - Quarry
 - Property Boundary
 - Impacted Property



Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project

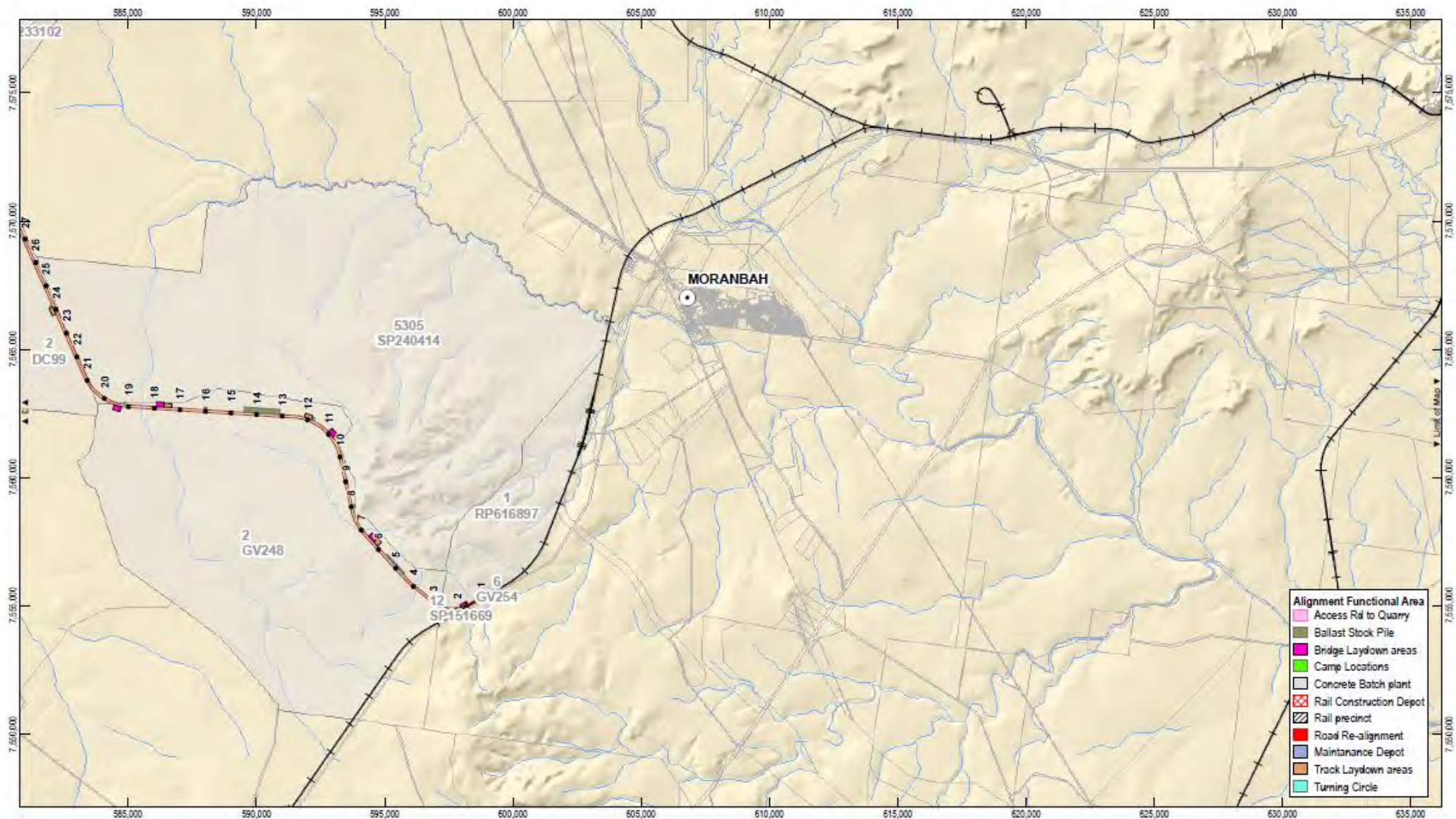
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Disturbance Area - Project (Rail)

Page 3 of 4

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- Alignment Functional Area**
- Access Rail to Quarry
 - Ballast Stock Pile
 - Bridge Laydown areas
 - Camp Locations
 - Concrete Batch plant
 - Rail Construction Depot
 - Rail precinct
 - Road Re-alignment
 - Maintenance Depot
 - Track Laydown areas
 - Turning Circle

1:200,000 (at A4)
 0 1 2 3 4 5
 Kilometres
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia (GDA)
 Grid: Map Grid of Australia 1994, Zone 55



- LEGEND**
- Project (Rail) Chainage
 - Town
 - Road
 - Rail (West)
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 - Property Boundary
 - Impacted Property



Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project

Job Number | 41-26422
 Revision | C
 Date | 10-02-2014

Disturbance Area - Project (Rail)

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 Data source: DNRM: DEM (2008), DCDB (2013), © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads, Watercourse (2007); Adani: Project changes, Functional Areas, Alignment SP1 Opt11 Rev2, SP2 Opt 9 Rev 5 (2013);
 DME: EPC1690 (2010) / EPC1060 (2011). Created by MS

Based on or contains data provided by the State of QLD (DNRM) [2013]. 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.

DEPARTMENT OF THE ENVIRONMENT

MS14-001304



To: Minister (for decision)

Proposed Approval Decision Brief (assessment report) – Carmichael Coal Mine and Rail Project, Queensland (EPBC 2010/5736)

Timing: Statutory timeframe for final decision is 1 August 2014.

Recommendation/s:

1. Consider the Queensland Assessment Report at **Attachment A**, the Legal Considerations at **Attachment B**, the Departmental advice at **Attachment H** and the Independent Expert Scientific Committee advice, responses and analysis at **Attachment C**.
Considered / please discuss
2. Agree that the recommended decision at **Attachment D1**, and summarised in the table below, reflects your proposed decision.
Agreed / Not agreed
3. Agree to the proposed conditions of approval as set out in **Attachment D1**.
Agreed / Not agreed
4. Sign the letters at **Attachment E** to consult with the proponent, and relevant Commonwealth Ministers and the Queensland Coordinator-General on your proposed decision.
Signed / Not signed
5. Agree not to publish the proposed decision (**Attachment D1**) on the internet for public comment.
Agreed / Not agreed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World heritage properties (ss 12, 15A)	Approve	
National heritage places (ss 15B, 15C)	Approve	
Wetlands of international importance (ss 16, 17B)	Approve	
Listed threatened species and communities (ss 18, 18A)	Approve	
Listed migratory species (ss 20, 20A)	Approve	
Great Barrier Reef Marine Park (ss 24B, 24C)	Approve	
A water resource, in relation to coal seam gas development and large coal mining development (ss 24D, 24E)	Approve	

Date: 18:6:2014

Minister:

Comments:

Please thank the IESC chair for her input and improvement

Key Points:

1. This brief seeks your proposed approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) of Adani Mining Pty Ltd's proposal to develop the Carmichael Coal Mine and Rail Project.

2. Under the EPBC Act, you are required to make a proposed decision on the project and consult with the proponent and relevant Commonwealth ministers for up to 10 business days prior to making a final decision. On 16 June 2014, the statutory timeframe for a final decision was extended from 20 June 2014 to 1 August 2014.
3. Adani Mining Pty Ltd is proposing to develop an open-cut and underground coal mine in the northern Galilee Basin, Central Queensland (see maps at **Attachment F** and assessment documentation and additional information at **Attachment G**). The proposed mine will produce up to 60 million tonnes per annum of thermal coal from six open cut pits and five multi-seam underground mines and have a mine life of 60 years. The project also involves the construction of a 189 kilometre rail link.
4. Coal from the Carmichael Coal Mine will be exported via rail to the Port of Abbot Point and the Port of Hay Point. This project is related to the North Galilee Basin Rail Project (EPBC 2013/6885), Dudgeon Point Coal Terminals Project (EPBC 2012/6260), Abbot Point Coal Terminal 0 (EPBC 2011/6194) and Abbot Point Terminal 0, 2 & 3 Capital Dredging (EPBC 2011/6213).
5. The project was determined a controlled action due to likely significant impacts on: World Heritage, National Heritage, wetlands of international importance, listed threatened species and communities, listed migratory species, and the Great Barrier Reef Marine Park on 6 January 2011; and for water resources on 24 October 2013.
6. The project has been assessed under the bilateral agreement with the Queensland Government. The Queensland Coordinator-General completed his assessment of the project on 7 May 2014, recommending the project proceed with conditions (**Attachment A**). A timeline of key decisions made during the assessment process is at **Attachment L**.

Issues/ Sensitivities

7. The Galilee Basin is a largely greenfield mining area in central Queensland. Coal mining in the Galilee Basin is a matter of significant public debate. Your decision on this project is expected to attract media interest and criticism from environmental groups, particularly in relation to groundwater concerns raised by the Independent Expert Scientific Committee (see paragraph 11). The resource sector is likely to welcome approval of this project.
8. Total vegetation clearing during construction and operation will be 20 237 hectares¹, with an additional 7,786.76 hectares potentially impacted by subsidence. Impacts from groundwater changes may extend beyond this area.
9. The key impacts that will result from the project are (also refer **Attachment H**):
 - a. to the habitat of listed threatened species and communities through the clearance of remnant vegetation, subsidence and dewatering impacts, including: the endangered black-throated finch, the vulnerable squatter pigeon (southern), the vulnerable yakka skink, the vulnerable ornamental snake, the vulnerable waxy cabbage palm, the endangered Brigalow ecological community (*Acacia harpophylla* dominant and co-dominant), and the endangered community of native species dependent on natural discharge of groundwater from the Great Artesian Basin;
 - b. to water resources due to drawdown for mine operation, subsidence impacts and changes to surface and groundwater hydrology.

¹ Derived from the Regional Ecosystems (RE) assessment in the Coordinator-General's evaluation report.
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10. The Department considers that the key impacts to threatened species and communities can be addressed through proposed conditions (**Attachment D1** and summarised at **Attachment D2**) that require the proponent to:
- a. monitor groundwater changes to verify and update modelling of impacts;
 - b. adaptively manage uncleared habitat to address potential impacts from subsidence and groundwater changes;
 - c. offset impacts from cleared habitat for open cut mining and infrastructure, and review offset requirements if uncleared habitat is subsequently impacted through subsidence or groundwater changes;
 - d. contribute funding to address cumulative impacts to threatened species and communities habitat; and
 - e. undertake research on potential groundwater changes to adaptively manage risks of impacts.
11. The Independent Expert Scientific Committee's advice raised several issues with the project's groundwater flow model and the associated impacts to groundwater dependent ecosystems including the Carmichael River and the Doongmabulla Spring Complex. The Committee's advice, a letter to you from the Committee Chair, responses to the advice and analysis of water impacts are at **Attachment C**. The primary issue relates to the accuracy of the proponent's conceptual and numerical groundwater models. The Department considers that this risk and its potential impacts can be addressed through setting conditions (refer to Attachments C2 and D1) that require the proponent to:
- a. undertake additional groundwater modelling with revised parameters;
 - b. offset agreed portion of likely impacts on the water resource up front;
 - c. conduct extensive groundwater monitoring; and
 - d. update the groundwater model and require additional offsets if necessary.
12. The Department has worked closely with the Queensland Coordinator-General in developing proposed approval conditions to reduce duplication – see comparison of the proposed conditions with the Coordinator-General's recommendations at **Attachment D3**.
13. The project went through two public comment phases. These covered the Environment Impact Statement period and the Supplementary Environment Impact Statement period. There were 14,463 submissions provided on the former (**Attachment I1**) and 4,074 submissions on the latter (**Attachment I2**). The majority of these did not support the proposed Carmichael Mine and Rail project. A summary of public comments is at **Attachment I3**.
14. The Department considers impacts to matters of national environmental significance will not be unacceptable (**Attachment H**), provided the action is undertaken in accordance with the recommended approval conditions (**Attachment D1**).
15. In making the proposed decision on whether or not to approve the proposal, and what conditions to attach, you are required to consider a range of EPBC Act mandatory considerations. These are described in the legal considerations at **Attachment B**, with relevant approved conservation advices, recovery plans and threat abatement plans at **Attachment J**.

16. You must consult with the proponent and relevant Commonwealth Ministers on the proposed conditions. The Department also recommends you consult with the Queensland Coordinator-General. Draft letters for your signature are at **Attachment E**.
17. Following this, the Department will brief you on a recommended final approval decision.

Consultation:

18. Office of Water Science, Governance and Legal Branch, Compliance and Enforcement Branch

s22
Director
Queensland 3 and Sea Dumping Section
s22
s22
17 June 2014

s22
Queensland 3 and Sea Dumping
Section
s22

ATTACHMENTS

- A: Queensland Coordinator-General's Assessment Report
- B: EPBC Act legal considerations
- C: Independent Expert Scientific Committee advice, responses and analysis
- C1: Independent Expert Scientific Committee advice
- C2: Table of responses to Independent Expert Scientific Committee advice
- C3: Letter from Independent Expert Scientific Committee Chair to the Minister
- C4: Office of Water Science review of additional hydro-geological information from Adani
- C5: Letter from the proponent in response to review from the Office of Water Science
- D: Proposed decision
- D1: Proposed decision notice
- D2: Summary of proposed conditions
- D3: Comparison of proposed conditions with the Coordinator-General's recommendations table
- E: Letters to proponent, Commonwealth Ministers and the Queensland Coordinator-General (FOR SIGNATURE)
- F: Maps on project location
- G: Proponent's Assessment Documentation and Additional Information

- G1: Environmental Impact Statement
- G2: Supplementary Environmental Impact Statement
- G3: Additional Information
- H: Departmental Advice on Matters of National Environmental Significance
- I: Public comment submissions
 - I1: Environmental Impact Statement submissions
 - I2: Supplementary Environmental Impact Statement submissions
 - I3: Public comment submissions summary
- J: Recovery Plans, Threat Abatement Plans and Conservation Advices
 - J1: Recovery Plans
 - J2: Threat Abatement Plans
 - J3: Approved Conservation Advices and Listing Advices
- K: Line Area Advice Office of Water Science
- L: Timeline for assessment process



Proposed Approval

Carmichael Coal Mine and Rail Infrastructure Project, Queensland (EPBC 2010/5736)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN (if applicable) 27 145 455 205

proposed action To develop an open cut and underground coal mine, 189 km rail link and associated infrastructure approximately 160 km north west of Clermont in central Queensland [See EPBC Act referral 2010/5736].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Wetlands of international importance (sections 16 & 17B)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved
A water resource, in relation to coal seam gas development and large coal mining development (sections 24D & 24E)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 June 2090.

Decision-maker

name and position The Hon Greg Hunt MP
Minister for the Environment

signature **NOT FOR SIGNATURE**

date of decision **Proposed decision only**

Conditions attached to the approval

1. The **Minister** may determine that a plan, strategy or program approved by the Queensland Government satisfies a plan, strategy or program required under these conditions.

Project area

2. For the purpose of the action, the **approval holder** must not clear vegetation outside the **Project Area** shown at Appendix A.

Groundwater management and monitoring program

3. The **approval holder** must submit a Groundwater Management and Monitoring Program (GMMP) for the **Minister's** approval at least three months prior to **commencement**. The GMMP must contain the following:
 - a) details of a groundwater monitoring network to measure impacts on Matters of National Environmental Significance, including sites outside of the mine lease, that includes:
 - (i) baseline monitoring;
 - (ii) **impact** monitoring;
 - (iii) control monitoring sites;
 - (iv) sufficient bores to monitor potential impacts on the Great Artesian Basin aquifers; and
 - (v) a rationale for the monitoring network.

- b) details of all potential groundwater **impacts** arising from the project, including an assessment of cumulative impacts from other coal mining projects in the **region**, and a water balance

Note: Information about cumulative impacts must include publicly available information and other related project information available to the proponent, such as information available for Queensland Government water balance modelling, monitoring and assessment programs.

- c) details of trigger values for detecting **impacts** to groundwater levels
- d) details of a timeframe for a regular review and update of the GMMP including how each of the outcomes of the following will be incorporated:
 - (i) regular independent review and update of the **numerical groundwater model** and the **groundwater conceptual model** to incorporate monitoring data
 - (ii) the GAB Springs Research Plan (Condition 24 of this approval); and
 - (iii) the Rewan Formation Connectivity Research Plan (Condition 26 of this approval).
- e) include provisions to make monitoring data available to the Department and Queensland Government authorities (if requested) on a six monthly basis for inclusion in any Regional Water Balance Model, Bioregional Assessment or relevant research required by the Office of Water Science research programme developed for the Galilee Basin or the broader Lake Eyre Basin

- f) include provisions to make monitoring results publicly available on the **approval holder's** website for the life of the project
 - g) a peer review by a **suitably qualified independent expert** approved by the **Minister** in writing, and a table of changes made in response to the peer review. The peer review must be submitted to the **Minister** at the same time the GMMP is submitted to the **Minister** for approval.
4. The **approval holder** must not **commence** the project until the GMMP has been approved by the **Minister** in writing. The approved GMMP must be implemented by the **approval holder**.

Note: Many elements of the GMMP are also required under the state approval for the project. Where possible, a combined document should be prepared that addresses both State Government and EPBC Act approval conditions.

Matters of National Environmental Significance management plan/s

- 5. The **approval holder** must submit plan/s (MNESMP) for the management of impacts on **Matters of National Environmental Significance** to the **Minister** for approval at least three months prior to **commencement**.
- 6. The MNESMP must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans and approved conservation advices and must include:
 - a) a description of **environmental values** for each of the **Matters of National Environmental Significance** impacted
 - b) details of baseline and **impact** monitoring for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from mining operations, including **subsidence** and changes in groundwater levels, to set habitat management goals (Conditions 6.e) and 6.f)).
 - c) details of potential **impacts**, including area of **impact**, to each of the **Matters of National Environmental Significance** from each component of the project at each project stage, including **impacts** from:
 - (i) vegetation clearing;
 - (ii) **subsidence** from underground mining, including subsidence induced fracturing and any changes to groundwater or surface water flow;
 - (iii) mine dewatering **impacts**;
 - (iv) disturbance;
 - (v) stream diversion and flood levees; and
 - (vi) weeds and pests;
 - d) measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from the action. These measures must include but not be limited to:
 - (i) the use of fauna spotters prior to and during all clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised;

- (ii) measures to avoid **impacts to Matters of National Environmental Significance** and their habitat located in the **project area**, but outside the **impact area**, including adjacent to cleared areas;
 - (iii) measures to rehabilitate all areas of **Matters of National Environmental Significance** habitat; and
 - (iv) habitat management measures including but not limited to management of **subsidence** and groundwater **impacts** of the project.
- e) goals for habitat management for each relevant **Matters of National Environmental Significance**
- f) a table of specific criteria for assessing the success of habitat management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. This table must include but not be limited to measures relating to **subsidence** and groundwater **impacts**, including early warning triggers for **impacts** to groundwater at the **Doongmabulla Springs Complex** and the **Carmichael River**. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Condition 3.a) and 6.b)). Corrective measures must include provision of offsets where corrective management measures do not achieve goals within specified timeframes (see Conditions 11.m and 11.p))
- g) an ongoing monitoring program to determine the success of mitigation and management measures against the stated criteria in Condition 6.f) including monitoring locations, parameters and timing. Monitoring for water resource **Matters of National Environmental Significance** must include hydrogeological, hydrological and ecological parameters.
- h) details of how compliance will be reported
- i) details of how the MNESMP will be updated to incorporate and address outcomes from research undertaken for **Matters of National Environmental Significance** under this and any State Government approval, including updating of goals, criteria and triggers (as required under Conditions 6.e) and 6.f))
- j) details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the MNESMP
- k) In the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must include management measures to address **impacts** resulting from drawdown at the **Mellaluka Springs Complex** in the MNESMP
- l) details of how, where habitat for an **EPBC Act listed threatened species or community** not previously identified and reported to the department is found in the project area, the approval holder will notify the Department in writing within five business days of finding this habitat, and within 20 business days of finding this habitat will outline in writing how these conditions of approval will still be met (refer Condition 11.n))

7. The **approval holder** must not **commence** the project until the required plan/s to address **impacts to Matters of National Environmental Significance** have been approved by the **Minister** in writing. The approved plan/s must be implemented by the **approval holder**.

Note: Species Management Plans (such as the Black throated finch Management Plan and the Groundwater Dependent Ecosystems Management Plan) may also be required under the State Government approval for the project. Where possible a combined document should be prepared to address both State Government and EPBC Act approval conditions.

Offset requirements

8. The **approval holder** must secure the minimum offset areas detailed in Table 1 prior to **commencement** of on-ground disturbance for the relevant component of the project as identified in Table 1.

Table 1. Minimum offset areas required for impacts to EPBC Act listed threatened species and communities and initial contribution to offsets for subsidence impacts from underground mining.

<i>Environmental value</i>	<i>Offset for mine & off-lease infrastructure component (hectares)</i>	<i>Offset for initial contribution to underground mining component (hectares)</i>	<i>Offset for off-lease infrastructure (hectares)</i>	<i>Offset for rail east component (hectares)</i>	<i>Offset for rail west component (hectares)</i>
Black-throated finch (southern)	28,943.45	2,000.00	7.62	2.44	46.48
Brigalow ecological community	736.23		0.00	6.26	72.50
Ornamental snake*	135.00		0.00	0.00	0.00
Squatter pigeon (southern)*	2,500.00		0.00	0.00	0.00
Waxy cabbage palm	90.00		0.00	0.00	0.00
Yakka skink*	5,585.90		1.87	0.60	11.63

Note: Offsets for different species may overlap where they share the same habitat requirements.

Biodiversity Offset Strategy and biodiversity funding

9. To compensate for authorised unavoidable **impacts on Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to the **Minister** for approval at least three months prior to **commencement**.
10. The offset for authorised unavoidable **impacts** (defined in Table 1), and groundwater and water resource **impacts** must be managed in accordance with the BOS.

General requirements

11. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 6), including the BTF Management Plan (Appendix 1, Section 1, Schedule I, condition I6 of the **Coordinator-General's Assessment Report**) and must include:

- a) location of offset species and communities habitat areas including maps in electronic Geographic Information System (GIS) format
- b) implementation of annual groundwater and water resource offset measures, to be undertaken over a minimum five year period from the **commencement** of the action, which addresses the following matters to protect the Great Artesian Basin springs and water resources in the Galilee Basin region:
 - (i) reduce current extraction rates from the Great Artesian Basin to increase hydraulic pressure;
 - (ii) increase recharge levels of the Great Artesian Basin;
 - (iii) protect and rehabilitate the Great Artesian Basin springs; and
 - (iv) other measures consistent with government policies and strategies to protect and manage the Great Artesian Basin.
- c) details of how the offsets have been or will be legally secured to ensure their long-term protection and timeframes for when they will be secured
- d) detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant environmental values, area of primary habitat for each **EPBC Act listed species and community**, connectivity with other habitat areas and biodiversity corridors
- e) management measures and offset plans for each offset area to improve the habitats of **Matters of National Environmental Significance**
- f) a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
- g) a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
- h) a description of the potential risks to the successful implementation of the BOS, and details of contingency measures that will be implemented to mitigate these risks
- i) details of how the BOS will be updated to incorporate outcomes from research undertaken for **Matters of National Environmental Significance** under this and any State Government approval, including updating of goals, criteria and triggers (as outlined at Conditions 6.e) and 6.f)). This must include outcomes of baseline research required by the Queensland Coordinator-General to identify whether the Mellaluka Springs Complex provides high value habitat for the **black throated finch** (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**);
- j) an outline of how compliance will be reported
- k) details of persons responsible for undertaking monitoring, review, and implementation of the BOS
- l) written commitments from the **approval holder** that demonstrate that the offset area/s required in Table 1 will be secured prior to **commencement** of on-ground disturbance for the relevant component of the project (identified in Table 1)

- m) detailed processes for any residual impacts to **Matters of National Environmental Significance**, (see Condition 6.f)) to be offset in accordance with the **EPBC Act Offsets Policy** including a process for offset requirement to be developed in consultation with the **Department** and relevant Queensland Government agencies
- n) a detailed process for any significant residual impact to any **EPBC listed threatened species or ecological community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (refer Condition 6.l))
- o) in the event that the future baseline research required by the Queensland Coordinator-General (Appendix 1, Section 3, Condition 1 of the **Coordinator-General's Assessment Report**) identifies that the **Mellaluka Springs Complex** provides high value habitat for the **black throated finch**, the **approval holder** must:
 - (i) revise **black throated finch** offset requirement in the BOS in accordance with the **EPBC Act Offsets Policy** and submit the revised BOS to the **Minister** for approval; and
 - (ii) secure any additional **black throated finch** offsets prior to hydrological **impacts** on the **Mellaluka Springs Complex**.

*Requirements for offsets for potential **subsidence**, groundwater and water resource **impacts***

- p) details of how staged **subsidence**, groundwater and water resource **impacts** in the **project area** will be addressed in the BOS, including:
 - (i) description and map of the proposed stages of underground mining. **Underground mining Stage 1** must be consistent with the corresponding definition in these conditions;
 - (ii) description of how actual **subsidence**, groundwater and water resource **impacts** for all completed stages will be assessed at each stage;
 - (iii) description of the extent, magnitude and timing of actual **subsidence impacts** observed in completed stages;
 - (iv) description of how actual **subsidence** and groundwater **impacts** from completed stages will be used to revise and update predicted **impact** areas for future stages;
 - (v) table of predicted **impact** areas for each **EPBC Act listed threatened species and community** in Table 1 within the underground mining area (consistent with Condition 6.c)) that allows comparison of actual **impact** areas with initial **impact** area predictions and updated **impact** area predictions. If additional **impacted** areas are identified as a result of the predictions, additional offsets must be secured in line with Condition 11.m); and
 - (vi) written commitments from the **approval holder** that the balance of offset requirement at each stage will be secured prior to **commencement** of that stage.
- q) rationale for the balance of offset required for underground mining **impacts** to be updated at each underground mining stage that includes detailed comparison of the ecological status of **EPBC Act listed threatened species and communities** within

the **subsidence impact** area between baseline conditions and the end of the most recent underground mining stage

- r) details of how groundwater and water resource **impacts** to the **Matters of National Environmental Significance** will be addressed in the BOS including identification of additional potential offsets (see Condition 6.f)) for the **Carmichael River and Doongmabulla Springs Complex**, to be developed in consultation with the **Department** and relevant Queensland Government agencies
- s) detail of how the BOS will be revised and provided to the **Minister** for approval prior to **commencement** of each underground mining stage including timeframes for revision that allow three months for review and approval of the plan

12. The **approval holder** must not **commence** the project until the BOS is approved by the **Minister** in writing. The approved BOS must be implemented by the **approval holder**.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A combined document should be prepared to address both State Government and EPBC Act approval conditions where possible.

Biodiversity Funding

- 13. The **approval holder** must establish and/or contribute to a pool of funds established for the better protection and long term conservation of **EPBC Act listed threatened species and communities** listed in Table 1.
- 14. The mechanism to establish and/or contribute to a pool of funds, including terms of reference to support a regional approach, funding mechanisms and an initial work plan, must be provided to the **Minister** for approval three months prior to **commencement**. The mechanism may be in the form of a trust fund, or other mechanism/s as agreed by the **Minister** in writing.
- 15. The **approval holder** must contribute \$100,000 (GST exclusive) per annum for 10 consecutive years to the pool of funds beginning from **commencement**. The **approval holder** must provide notice of the establishment of and/or contribution to the pool of funds to the **Department** in writing prior to **commencement**. Documentary evidence must be provided to the **Department** showing that the annual financial contributions to the pool of funds have been provided within 30 calendar days of each payment.
- 16. These funds must facilitate the development and implementation of research programs identified as a priority to manage development **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 which are consistent with, and take into consideration, any Recovery Plans, Threat Abatement Plans and/or Conservation Advices for **EPBC Act listed threatened species and communities** listed in Table 1. Research programs must identify measures to mitigate and manage the **impacts** on **EPBC Act listed threatened species and communities** listed in Table 1 and must include:
 - a) methodologies for a baseline survey that will report on each species' life history, movement patterns, habitat requirements and population dynamics. Survey methodologies must be in accordance with the **Department's survey guidelines** or alternative best practice methodologies that are agreed to in writing by the **Minister** prior to **commencement** and endorsed by a **suitably qualified ecologist**. The baseline survey must begin with the first year of the date of this approval

- b) an ongoing monitoring program (developed from the baseline monitoring) for each species, to continue for the duration of the project approval, with annual reporting to the **Department**
 - c) commitments, including financial commitments and associated timeframes, that will be implemented by the **approval holder** to support the undertaking of research
 - d) the time frames for undertaking each research component
 - e) timing and methods of reporting research outcomes to the **Minister**, the scientific community and the public
 - f) outcomes of consultation with the **Department** on how the proposed Research Programs align with other studies for **EPBC Act listed threatened species and communities** listed in Table 1
 - g) identification of priority actions for funding must be decided in consultation with the Queensland Department of Environment and Heritage Protection and members of relevant Recovery Teams
17. The **approval holder** must not commence the project until the research program is approved by the Minister in writing. The approved research program must be implemented by the **approval holder**.
18. A review of funding must be undertaken five years after the **commencement** of the establishment of the pool of funds and/or the **commencement** of contributions or as otherwise agreed by the **Minister** in writing. This review must take into account progress of the research programs and any subsequent on ground actions, as well as the involvement of other **approval holders** in funding and administrative arrangements. The review must be provided to the department 6 months after the five year period.

3D Seismic Survey Management Program

19. The **approval holder** must submit a 3D Seismic Survey Management Program to the **Minister** for approval within one month of the date of this approval. The Seismic Survey Management Program must include:
- a) a description of **seismic survey activities**
 - b) a description of **impacts** of seismic survey activities on **Matters of National Environmental Significance**
 - c) mitigation measures for **seismic survey activities**
 - d) identification of offsets for residual **impacts** to at least 115 ha (in addition to the requirements of Table 1) of **black throated finch** habitat, to be secured within 12 months of **commencement** of **seismic survey activities** and managed in accordance with the BOS

Note: if and where the impact area for 3D Seismic Survey overlaps with the impact area for underground mining, the offset requirement does not have to be duplicated

20. **Seismic survey activities** must not **commence** until the 3D Seismic Survey Management Program has been approved by the **Minister** in writing. The approved 3D Seismic Survey Management Program must be implemented by the **approval holder**.

Groundwater Flow Model Review

21. The **approval holder** must undertake a peer review of the adequacy of the current groundwater flow model to characterise groundwater impacts. This review must consider the parameters used into the groundwater flow model, the required additional modelling information and the model re-runs outlined in condition 22. The peer review must be undertaken by a **suitably qualified independent expert**, approved by the **Minister** in writing. The peer review report must be submitted to the **Minister** within 4 months of this approval and should identify any additional information requirements
22. The **approval holder** must re-run the groundwater flow model. These model revisions and re-runs must incorporate the following parameters in the scenarios and address the following additional information requirements:
 - a) define the General Head Boundary (GHB), as agreed by the **Department** in writing
 - b) remove the GHB from its current location in all layers to the western edge of the model domain
 - c) move the eastern GHB, for the Clematis Sandstone layer, and other layers as appropriate, to the eastern (outcrop) edge of the formation/s:
 - (i) review and justify the conductance values used in the model to reflect the differences between aquifers and aquitards and also between aquifers (e.g. Clematis and Colinlea Sandstones), and modify if required;
 - (ii) review and justify the recharge parameters of the eastern GHB for the Clematis Sandstone to represent the flux into the recharge beds of the Great Artesian Basin, and modify if required;
 - (iii) run two models with alternative GHB boundary conditions to test boundary condition sensitivity, based on input from the peer review process, and agreed by the **Department** in writing; and
 - (iv) report on the impacts on groundwater levels and net flows between the model domain and the GHB boundaries for the two cases and compare with previous modelling results.
 - d) only use the measurements from bore DH02 and other additional bores, as agreed by the Department in writing, in the model re-runs, and use the approval holder's best available information for the elevation of subcrop of the Clematis Sandstone
 - e) have an appropriate model construct that implements the **Doongmabulla Springs Complex** as an outflow from the Clematis Sandstone
 - f) document and incorporate other known groundwater extractions
 - g) any changes made as part of the model re-runs that are not outlined above must be documented and justified as part of this
 - h) provide an assessment of the quality of, and risks and uncertainty inherent in, the data used in the background data and modelling, particularly with respect to predicted potential scenarios

- i) Provide a scientific justification for topographically driven flow from south to north (and west to east) including how such topographically driven flow penetrates through heterogeneous layers
23. The outcomes of the model re-runs are to be reviewed in order to inform the development of the Groundwater Management and Monitoring Program (GMMP); the Rewan Formation Connectivity Research Plan; and the **Matters of National Environmental Significance** management plan/s prior to submitting to the **Minister** for approval. The outcomes of the model re-runs are to be submitted to the **Minister** with or prior to the submission of the peer review report required under condition 21.

Research and management requirements

Great Artesian Basin (GAB) springs research plan

24. The **approval holder** must submit for the approval of the **Minister** a Great Artesian Basin Springs Research Plan (GAB Springs Research Plan) that investigates, identifies and evaluates methods to prevent, mitigate and remediate ecological **impacts** on the EPBC listed **community of native species dependent on natural discharge of groundwater from the Great Artesian Basin**, including the **Doongmabulla Spring Complex**, in the Galilee Basin at least three months prior to the **commencement** of the project. The GAB Springs Research Plan must include but is not limited to the following:
- a) research aims and rationale with reference to existing scientific research on GAB spring hydrogeology and ecology
 - b) identify priority actions for potential offsets to protect and manage the GAB springs
 - c) personnel responsible for conducting research and their qualifications
 - d) timeframes for research and reporting
 - e) methods, including but not limited to, conceptualisation of the hydrogeology of the springs, ecological surveys to determine the composition of the GAB spring community, an assessment of transferability of approaches to prevent and mitigate hydrological **impacts** on springs in the Surat Basin, determination of water requirements (including ecological response thresholds) of the GAB spring community, and development and evaluation of methods to prevent, remediate and mitigate ecological **impacts**
 - f) an analysis of potential mitigation activities, such as but not limited to, re-injection to the groundwater source aquifer to maintain pressure head, flows and ecological habitat at the **Doongmabulla Springs Complex**
 - g) an explanation of how research outcomes will directly inform the monitoring, management, prevention, mitigation and remediation of **impacts** to the **Doongmabulla Springs Complex**
 - h) a peer review of the draft GAB Springs Research Plan, by a **suitably qualified independent expert/s**, approved by the **Minister** in writing, and a table of changes made in response to the peer review
 - i) The GAB Springs Research Plan must be published on the proponent's website for the life of the project, submitted to the Minister within 10 business days of completion, and be made available for the **Bioregional Assessment of the Galilee Basin sub-region**

and the Lake Eyre Basin, or any other relevant research required by the Office of Water Science research programme

25. The **approval holder** must not **commence** the project until the GAB Springs Research Plan has been approved by the **Minister** in writing. The approved GAB Springs Research Plan must be implemented by the **approval holder**.

Rewan Formation Connectivity Research Plan

26. The **approval holder** must submit for the approval of the **Minister** a Rewan Formation Connectivity Research Plan ('Rewan Research Plan') that characterises the Rewan Formation within the area **impacted** by the mine. The Research Plan must include but is not limited to the following:

- a) research aims
- b) personnel responsible for conducting research and their qualifications
- c) timeframes for research and reporting
- d) methods, including seismic surveys to determine the type, extent and location of faulting and fracturing and an examination of the hydraulic properties (including but not limited to petrophysical analysis and facies mapping) of the Rewan Formation, to better characterise the Rewan Formation and the contribution of fractures and faults to connectivity, including a description of how research will be undertaken in a manner that does not cause **impacts** to **Matters of National Environmental Significance**
- e) an explanation of how research will inform the GMMP, any Regional Groundwater and Surface Water Monitoring and Assessment Program, or **Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin**, or any other relevant research required by the Office of Water Science research programme
- f) a peer review of the Rewan Research Plan, by a **suitably qualified independent expert/s**, approved by the **Minister** in writing, and a table of changes made in response to the peer review

27. The **approval holder** must not **commence** the project until the Rewan Research Plan has been approved by the **Minister** in writing. The approved Rewan Formation Connectivity Research Plan must be implemented by the **approval holder**.

Standard conditions

28. Within 30 days of the **commencement** of the action, the person taking the action must advise the **Department** in writing of the actual date of **commencement**.
29. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and programs required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
30. Within three months of every 12 month anniversary of the **commencement** of the action, the person taking the action must publish a report on their website addressing

compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **Department** at the same time as the compliance report is published.

31. Upon the direction of the **Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the **commencement** of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.
32. If the person taking the action wishes to carry out any activity otherwise than in accordance with the management plans, reports, and programs as specified in the conditions, the person taking the action must submit to the **Department** for the **Minister's** written approval a revised version of that management plans, reports, and programs. The varied activity shall not **commence** until the **Minister** has approved the varied management plans, reports, and programs in writing. The **Minister** will not approve a varied management plans, reports, and programs unless the revised management plans, reports, and programs would result in an equivalent or improved environmental outcome over time. If the **Minister** approves the revised management plans, reports, and programs, that management plans, reports, and programs must be implemented in place of the management plans, reports, and programs originally approved.
33. If the **Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, Wetlands of international importance, listed threatened species and communities, listed migratory species, the Great Barrier Reef Marine Park or a water resource, in relation to coal seam gas development and large coal mining development to do so, the **Minister** may request that the person taking the action make specified revisions to the management plans, reports, and programs specified in the conditions and submit the revised management plans, reports, and programs for the **Minister's** written approval. The person taking the action must comply with any such request. The revised approved management plans, reports, and programs must be implemented. Unless the **Minister** has approved the revised management plans, reports, and programs, then the person taking the action must continue to implement the management plans, reports, and programs originally approved, as specified in the conditions.
34. If, at any time after 10 years from the date of this approval, the person taking the action has not substantially **commenced** the action, then the person taking the action must not substantially **commence** the action without the written agreement of the **Minister**.
35. Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish all management plans, reports, and programs referred to in these conditions of approval on their website. Each management plan, report, and program must be published on the website within one month of being approved.

Definitions

Approval holder: The person to whom the approval is granted

Bioregional Assessment for the Galilee Basin sub-region and the Lake Eyre Basin: will be conducted in conjunction with relevant state and territory government agencies and natural resource management bodies and entails a scientific analysis of the ecology, hydrology and geology for the purpose of assessing the potential risks to water resources in the area as a result of the direct and indirect impacts of coal seam gas development and large coal mining development.

Black throated finch: means the black-throated finch (southern; *Poephila cincta cincta*) listed as a threatened species under the EPBC Act

Brigalow (*Acacia harpophylla* dominant and co-dominant): means the Brigalow (*Acacia harpophylla* dominant and co-dominant) listed as a threatened ecological community under the EPBC Act.

Carmichael River: the Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River

Commence/Commencement/Commencing: means any physical disturbance including clearing of vegetation that is an EPBC listed species or community or that is habitat for a EPBC Act listed species or community or new road works, new rail works, new camps, development of mining associated infrastructure and mining operations. Commencement does not include:

- a) minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- b) activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse impact on MNES, and only if the approval holder has notified the Department in writing before an activity is undertaken.

Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin: means the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin listed as a threatened ecological community under the EPBC Act

Coordinator-General's Assessment Report: The Queensland Coordinator-General (2014) *Carmichael Coal Mine and Rail Project: Coordinator-General's evaluation report on the environmental impact statement May 2014*. Department of State Development, Infrastructure and Planning, Brisbane, Queensland

Department: The Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*

Doongmabulla Springs Complex: the groundwater-fed springs located approximately eight kilometres from the western edge of the mining lease boundary and consisting of Moses spring, Little Moses spiring and Joshua spring (refer pp. 106-108 of the Coordinator-General's Assessment Report).

Environmental values: includes but is not limited to habitat for EPBC Act listed threatened species and communities and hydrology of identified water resources

EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed threatened species and/or community/ies: means a threatened species or community, or a migratory species listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Groundwater conceptual model: the conceptual groundwater model developed for the project as described in the Adani Mining Pty Ltd (2013) *Carmichael Coal Mine and Rail Project Supplementary Environmental Impact Statement* at Appendix K6

Impact/s/ed: as defined in section 527E of the EPBC Act.

Matters of National Environmental Significance: in the context of this approval includes the following

<i>Listed Threatened Species and Communities</i>
Black-throated finch (southern; <i>Poephila cincta cincta</i>)
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)
Ornamental snake (<i>Denisonia maculate</i>)
Squatter pigeon (southern)
Waxy cabbage palm (<i>Livistona lanuginosa</i>)
Yakka skink (<i>Egernia rugosa</i>)
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex)
<i>Water Resources</i>
Carmichael River (Carmichael River and its riparian zone between the Doongmabulla Springs and the Belyando River)
Mellaluka Springs Complex
Community of native species dependent on discharge from the Great Artesian Basin (Doongmabulla Springs Complex)
Waxy cabbage palm (<i>Livistona lanuginosa</i>)

Mellaluka Springs Complex: the groundwater-fed springs located to the south-eastern section of the mine area and consisting of Mellaluka Spring, Stories Spring and Lignum Spring (refer pp. 168-169 of the Coordinator-General's Assessment Report).

Minister. The Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

Numerical groundwater model: means any computational method that represents an approximation of an underground water system that simulates hydraulic heads (and watertable

elevations in the case of unconfined aquifers) and groundwater flow rates within and across the boundaries of the system under consideration.

Ornamental Snake: means the Ornamental Snake (*Denisonia maculata*), listed as a threatened species under the EPBC Act.

Project Area: all disturbance areas as defined in the maps at Appendix A. It is noted that minor alterations may be made in order to avoid Matters of National Environmental Significance or State Significant Biodiversity Values found during pre-clearance surveys. These are permitted only where they will result in a lower level of impact to these matters.

Region: the Galilee Basin / Desert Uplands Bioregion / Brigalow Belt Bioregion

Seismic survey activities: includes any activity involving ground disturbance associated with 3D seismic survey over an area of 2304 ha within mining lease EPC 1690.

Squatter Pigeon: means the Squatter Pigeon (Southern) (*Geophaps scripta scripta*), listed as a threatened species under the EPBC Act.

Subsidence: means the totality of subsidence effects and subsidence impacts. Where 'subsidence effects': means deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature; and 'subsidence impacts': means physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs.

Suitably qualified independent ecologist: means a person who has professional qualifications, training, skills or experience related to ecology and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relative protocols, standards, methods or literature

Suitably qualified independent expert/s: means a person who has professional qualifications, training, skills or experiences related to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relative protocols, standards, methods or literature

Survey Guidelines:

Matters of National Environmental Significance, Significant Impact Guidelines 1.1, *Environment Protection and Biodiversity Conservation Act 1999*:

<http://www.environment.gov.au/epbc/publications/nes-guidelines.html>

Survey Guidelines for Australia's Threatened Frogs, Threatened Mammals, Threatened Reptiles and Threatened Bats: <http://www.environment.gov.au/epbc/guidelines-policies.html>

Survey Guidelines for Australia's Threatened Birds:

<http://www.environment.gov.au/resource/survey-guidelines-australias-threatened-birds-guidelines-detecting-birds-listed-threatened>

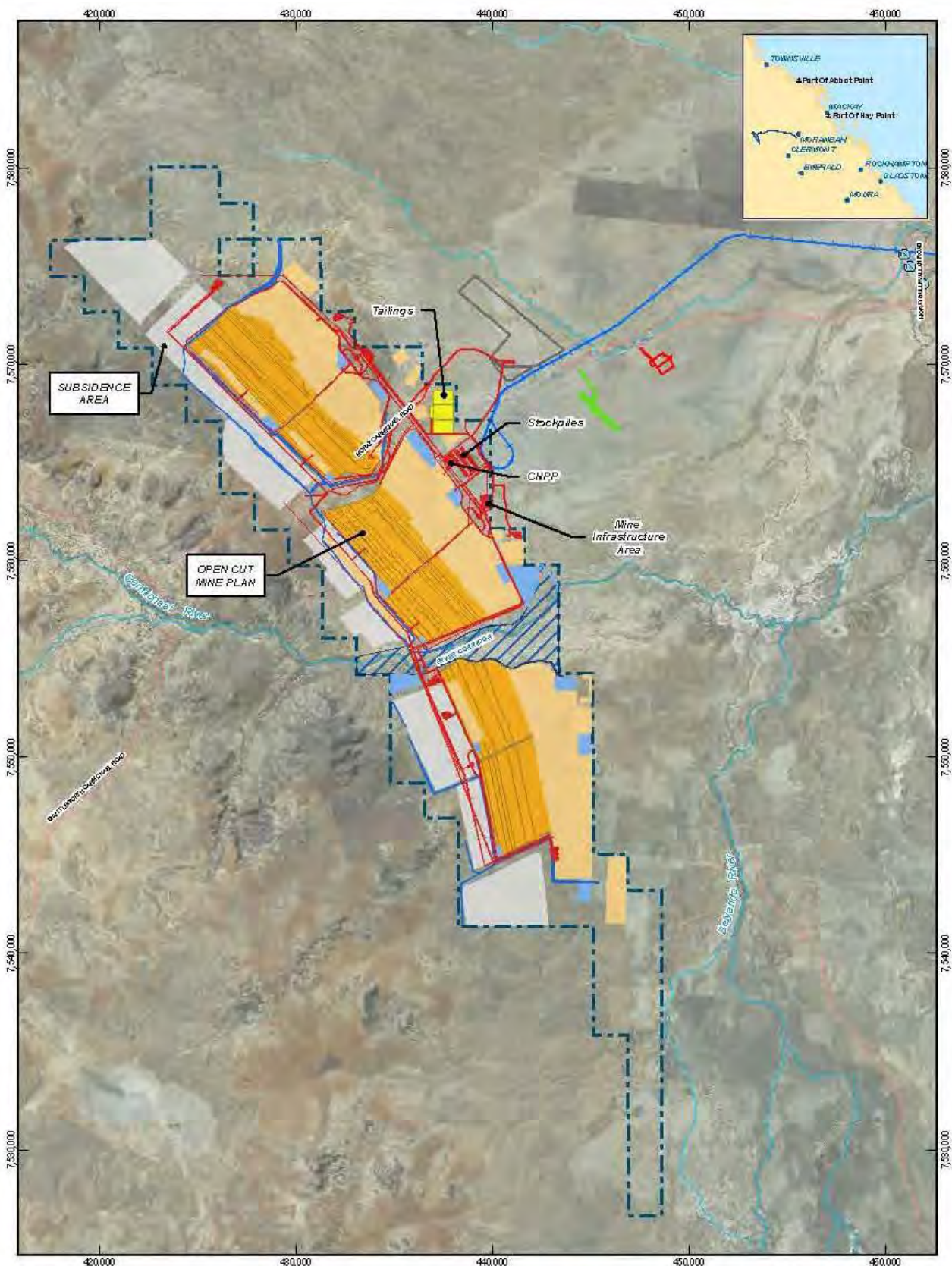
Underground mining stage 1: means years 1- 10 of underground mining including all associated activities including box cut excavation, portal construction, long wall construction and longwall panel mining. Multi seam mining within the first underground mine will occur during this time period. This definition and timing provides certainty and confidence in regards to the assessment of actual subsidence related impacts versus predicted subsidence related impacts that is required to be undertaken at the conclusion of underground mining stage 1

Waxy Cabbage Palm: means the waxy cabbage palm (*Livistona lanuginosa*) listed as a threatened species under the EPBC Act

Yakka Skink: means the Yakka Skink (*Egernia rugosa*), listed as a threatened species under the EPBC Act

DRAFT

Appendix A



LEGEND	
	Local road
	Watercourse
	Mine (Onsite)
	Project (Rail)
	Mine Domain
	Mine infrastructure
	Tailing's drying cells
	Water storage areas
	Stream diversions
	Open-cut voids and slopes
	Out-of-pit spoil dumps
	Carmichael River corridor
	Underground mining areas
	Mine (Offsite)
	Pump Station
	Storage Facility (Offstream)
	Airport
	Industrial Area
	Accommodation Village

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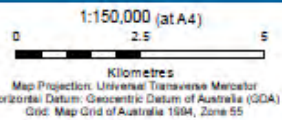
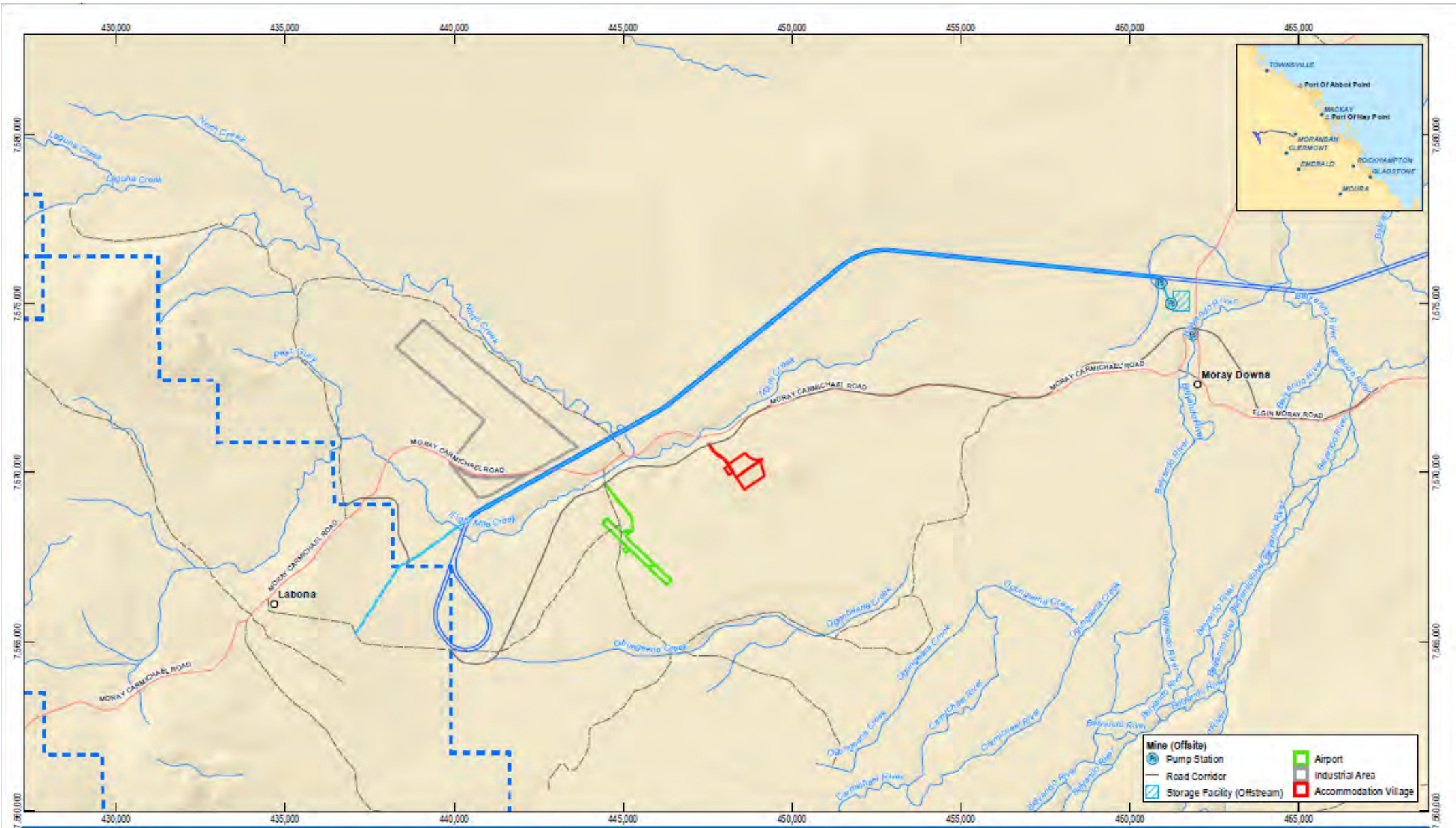


Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Jc b Number 41-26422
Revision A
Date 10-02-2014

Disturbance Area - Mine Domains

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Data Source: GA: Road, Rail / Watercourse (2007); DME: EPC169D (2010), EPC108D (2011); Adani: Alignment, Onsite (2013); Mine Domains (2014); Digital Globe: Satellite (2009). Created by: MS



LEGEND	
○ Homestead	— Watercourse
— Local Road	— Rail Corridor
— Track	— Water Supply Pipeline
■ Mine (Onsite)	



Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Job Number | 41-26422
Revision | B
Date | 10-02-2014

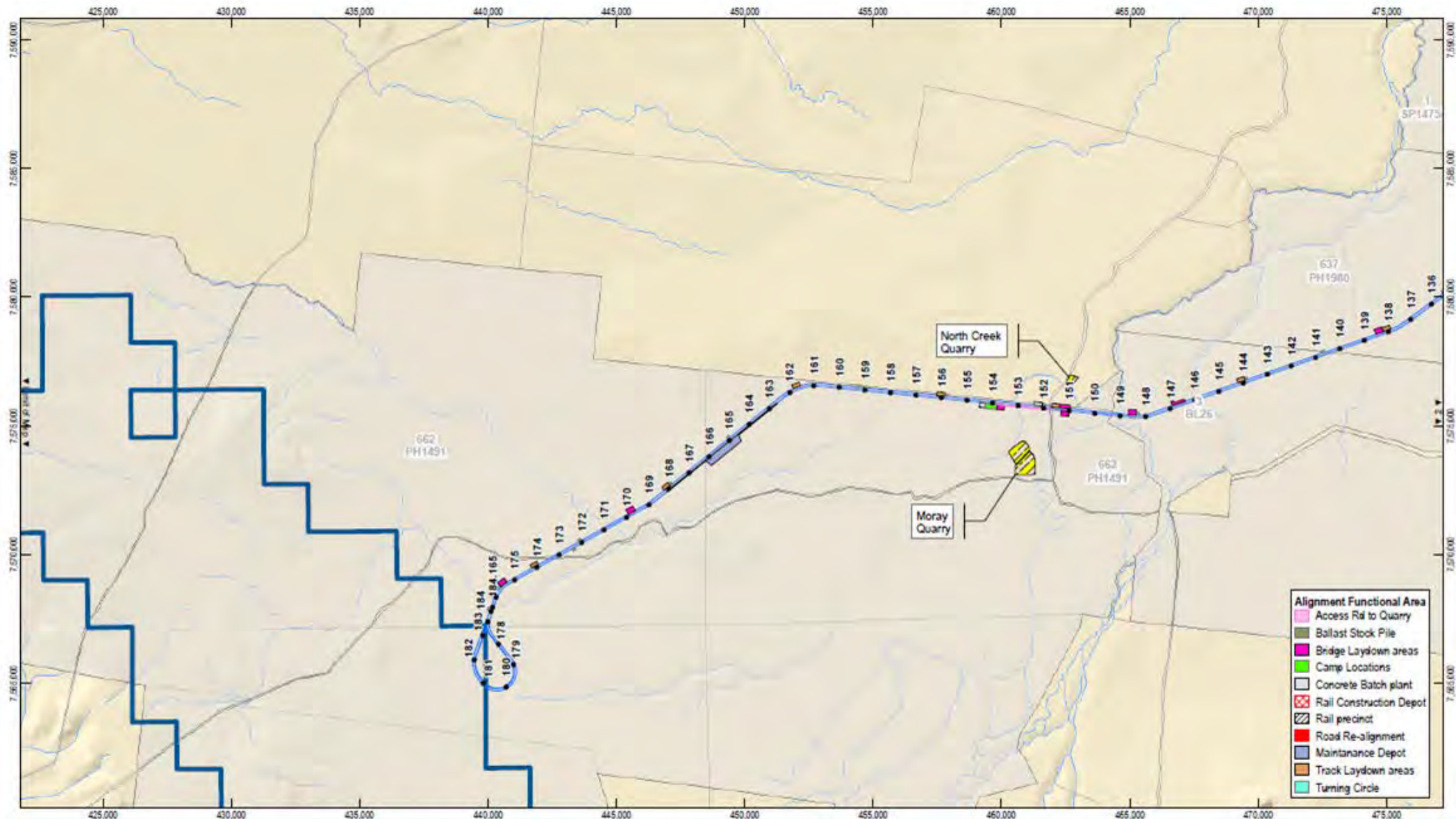
Disturbance Area - Offsite Infrastructure

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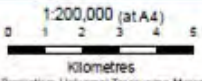
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Data source: DME: EPC1990 (2010); EPC1080 (2011); DNRM: Stregion Boundary (2011); © Commonwealth of Australia (Geoscience Australia); Watercourse, Tracks (2007); Adani: Alignment Opt11 Rev 2 (BP1 and 2)(2013); Offsite Infrastructure (2013); Created by: AJ

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- Alignment Functional Area**
- Access Rail to Quarry
 - Ballast Stock Pile
 - Bridge Laydown areas
 - Camp Locations
 - Concrete Batch plant
 - Rail Construction Depot
 - Rail precinct
 - Road Re-alignment
 - Maintenance Depot
 - Track Laydown areas
 - Turning Circle



- LEGEND**
- Project (Rail) Chainage
 - Town
 - Road
 - Rail (West)
 - Rail (East)
 - Project (Mine)
 - Other Railway
 - Watercourse
 - Quarry
 - Property Boundary
 - Impacted Property



Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

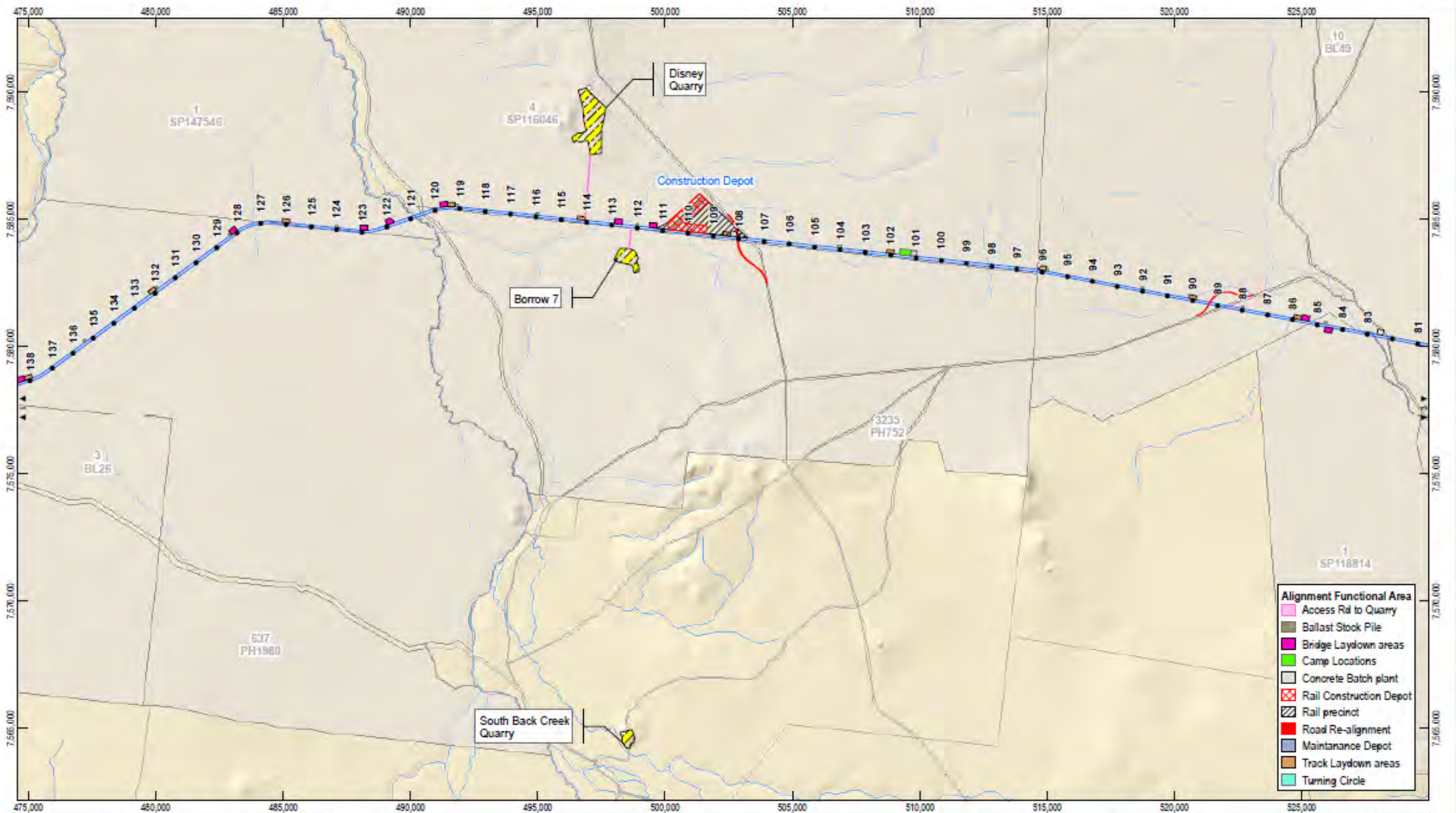
Job Number 41-26422
Revision C
Date 10-02-2014

Disturbance Area - Project (Rail)

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Data source: DNRM: DEM (2008), DCDB (2013), © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads, Watercourse (2007); Adani: Project changes, Functional Areas, Alignment SP1 Opt11 Rev2, SP2 Opt 8 Rev 3 (2013); DME: EPC1860 (2010) / EPC1860 (2011). Created by: MS

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- Alignment Functional Area**
- Access Rd to Quarry
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 - Maintenance Depot
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- LEGEND**
- Project (Rail) Chainage
 - Town
 - Road
 - Other Railway
 - Watercourse
 - Rail (West)
 - Rail (East)
 - Project (Mine)
 - Quarry
 - Property Boundary
 - Impacted Property

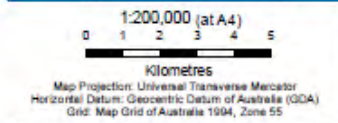
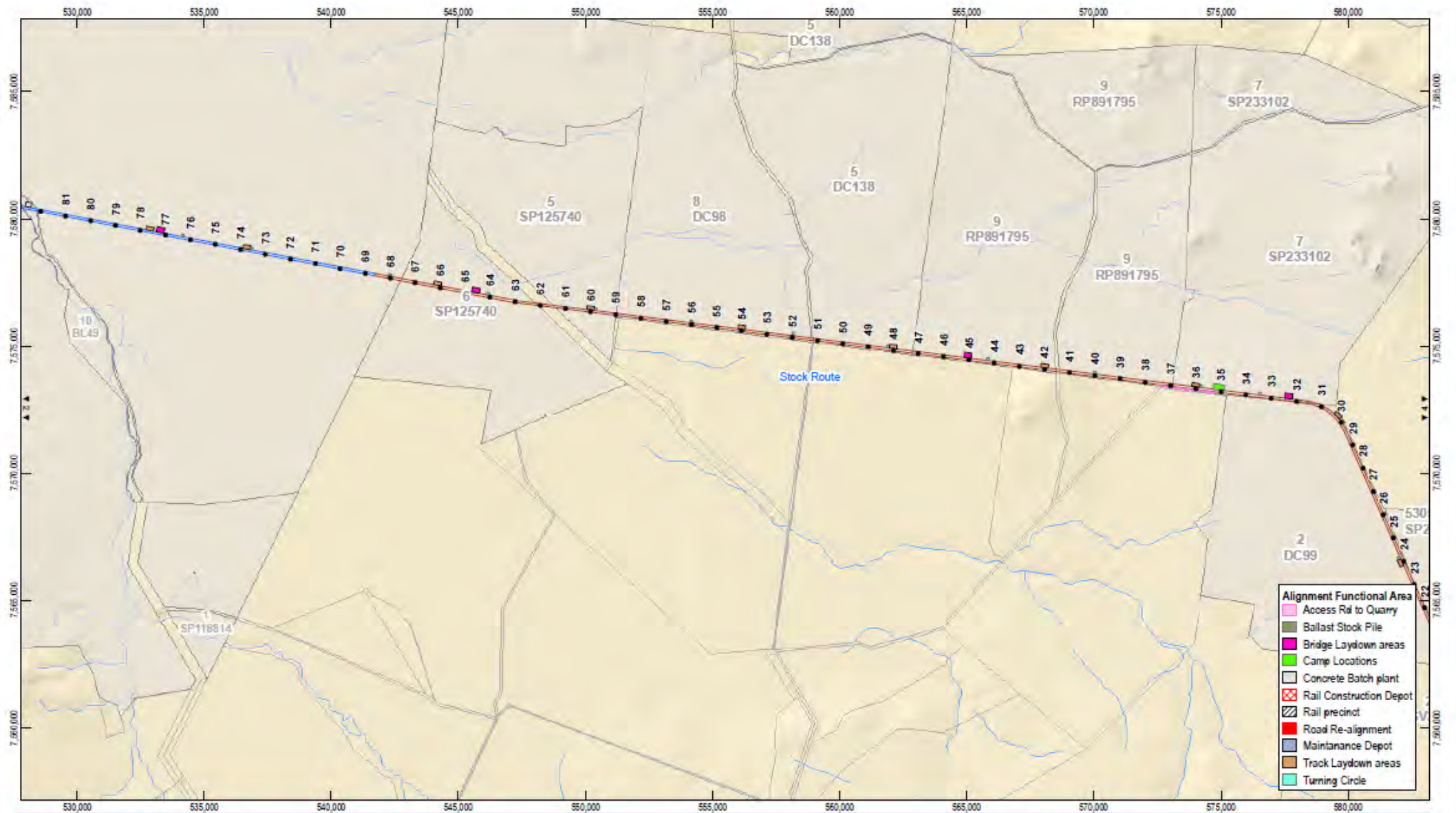


Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Job Number | 41-26422
Revision | C
Date | 10-02-2014

Disturbance Area - Project (Rail)

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LEGEND	
● Project (Rail) Chainage	— Road
○ Town	□ Rail (West)
	□ Rail (East)
	□ Project (Mine)
	— Other Railway
	— Watercourse
	▨ Quarry
	□ Property Boundary
	□ Impacted Property



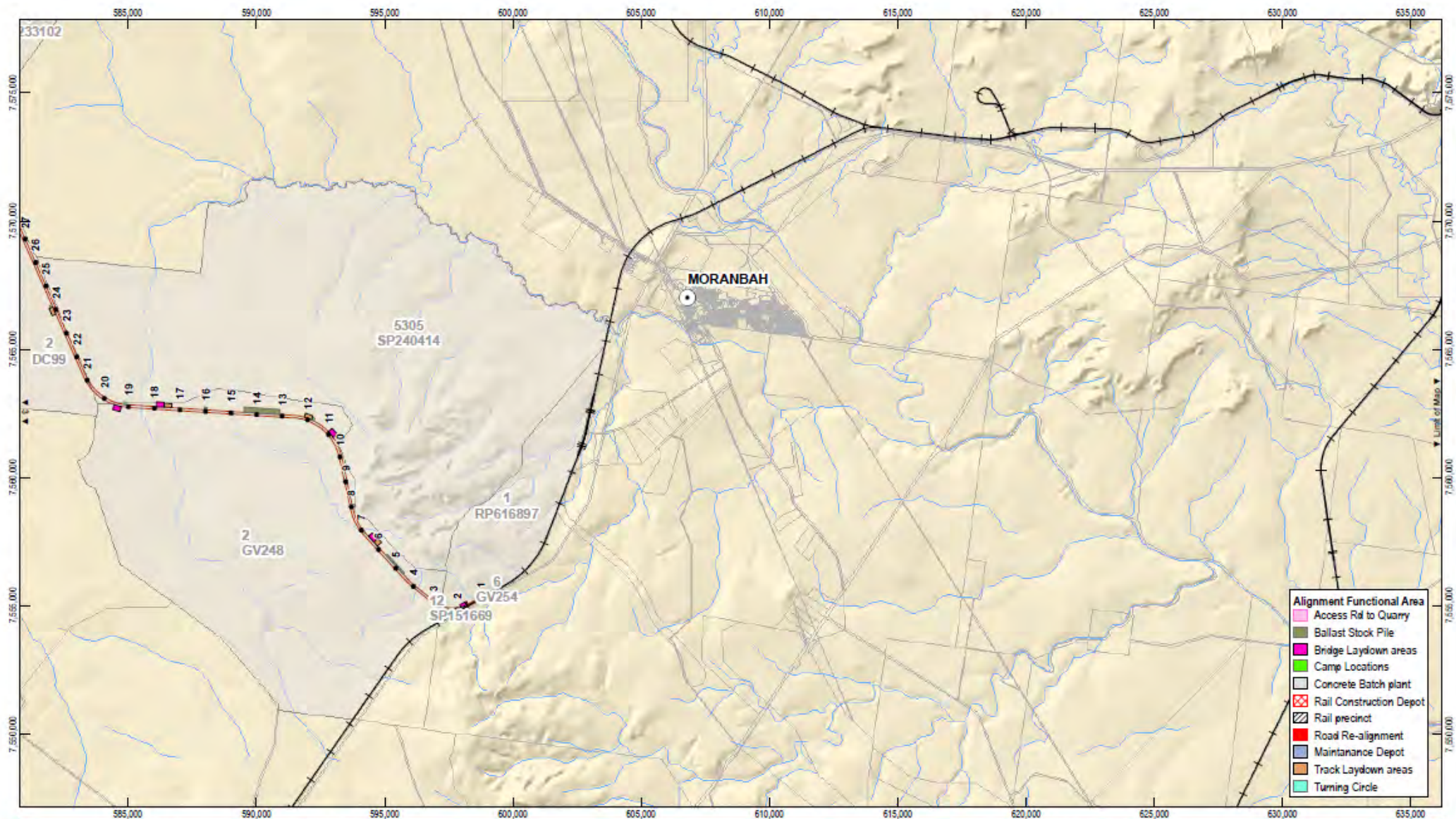
Adani Mining Pty Ltd
Carmichael Coal Mine and Rail Project

Job Number | 41-26422
Revision | C
Date | 10-02-2014

Disturbance Area - Project (Rail)

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Data source: DNRM: DEM (2008), DCDG (2013), © Commonwealth of Australia (Geoscience Australia): Localities, Railways, Roads, Watercourse (2007); Adani: Project changes, Functional Areas, Alignment SP1 Opt11 Rev2, SP2 Opt 9 Rev 3 (2013); DME: EPC1890 (2010) / EPC1980 (2011). Created by: MS

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- Alignment Functional Area**
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 - Turning Circle

1:200,000 (at A4)
 0 1 2 3 4 5
 Kilometres
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia (GDA)
 Grid: Map Grid of Australia 1994, Zone 55



- LEGEND**
- Project (Rail) Chainage
 - Road
 - Other Railway
 - Watercourse
 - Rail (West)
 - Rail (East)
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 - Town



Adani Mining Pty Ltd
 Carmichael Coal Mine and Rail Project

Job Number 41-26422
 Revision C
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Disturbance Area - Project (Rail)

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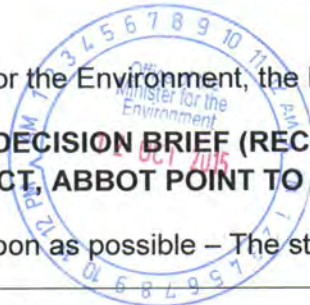
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To: Minister for the Environment, the Hon Greg Hunt MP (For Decision)

APPROVAL DECISION BRIEF (RECOMMENDATION REPORT) – NORTH GALILEE BASIN RAIL PROJECT, ABBOT POINT TO GALILEE BASIN, QUEENSLAND (EPBC 2013/6885)

Timing: As soon as possible – The statutory timeframe for this decision has passed.



Recommendations:


1. Consider the information provided in this brief, the proposed decision brief at **Attachment A** (and the information at Attachments A, B, E to G, I and K of that brief), and the addendum brief at **Attachment B**.
Considered / Please discuss
2. Consider, and have regard to, the approved conservation advices, recovery plans and threat abatement plans relevant to the proposed action at Attachment H of the proposed decision brief (**Attachment A**) and confirm that you have done so.
Confirmed / Please discuss
3. Consider and take into account the legislative provisions at Attachment L of the proposed decision brief (**Attachment A**).
Considered / Please discuss
4. Consider the responses to the invitation for comment on the proposed decision at **Attachment C**.
Considered / Please discuss
5. Agree that you have enough information to make the decision set out in the notice at **Attachment D**.
Agreed / Not agreed
6. Approve the proposed action for each controlling provision set out in the table below.
Approved / Not approved
7. Agree to attach conditions to the approval as set out in **Attachment D**.
Agreed / Not agreed
8. Sign the notice of your decision at **Attachment D**.
Signed / Not signed
9. Sign the letters at **Attachment F** advising the person proposing to take the action and other relevant parties, of your decision.
Signed / Not signed
10. Consider the attached draft statement of reasons at **Attachment G** and make any modification you consider necessary to ensure that the statement reflects your reasoning.
Considered / Please discuss

11. Sign the statement of reasons at **Attachment G**.

Signed / Not signed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to approve
World Heritage properties		
section 12	Approve	
section 15A	Approve	
National Heritage places		
section 15B	Approve	
section 15C	Approve	
Listed threatened species and communities		
section 18	Approve	
section 18A	Approve	
Listed migratory species		
section 20	Approve	
section 20A	Approve	
Commonwealth marine areas		
section 23	Approve	
section 24A	Approve	
Great Barrier Reef Marine Park		
section 24B	Approve	
section 24C	Approve	


Minister for the Environment
The Hon Greg Hunt MP

Date: 14=10=15

Comments:

Key Points:

1. On 21 September 2015, as recommended by the Department in the proposed approval decision brief (MS15-002228 **Attachment A**) and noting the changes to Ministerial arrangements set out in the addendum to the proposed approval decision brief (MS15-002266 **Attachment B**), you proposed to approve Adani Mining Pty Ltd's North Galilee Basin Rail Project, Abbot Point to Galilee Basin, Queensland (EPBC 2013/6885) (proposed action) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).
2. Also on that date, in accordance with sections 131 and 131AA of the EPBC Act, you wrote to the following parties, inviting comments on your proposed approval decision:
 - the proponent (and person proposing to take the action), Adani Mining Pty Ltd;
 - the Minister for Infrastructure and Regional Development, the Hon Warren Truss MP;
 - the Minister for Industry, Innovation and Science, the Hon Christopher Pyne MP;
 - the Minister for Resources, Energy and Northern Australia, the Hon Josh Frydenberg MP; and
 - the Minister for Agriculture and Water Resources, the Hon Barnaby Joyce MP.
3. You are now required under sections 130 and 133 of the EPBC Act to decide whether to approve the proposed action and if you decide to approve, what conditions you will attach to the approval under section 134 of the EPBC Act. The Department considers that you have enough information to make an informed decision on whether to approve the action.

Issues/Sensitivities

4. Except for the issues discussed in this brief, the matters for your consideration and factors to be taken into account in making your decision remain as set out in the proposed approval decision brief (**Attachment A**).
5. On 1 October 2015, your delegate approved new conservation advice for the Masked Owl (northern) (*Tyto novaehollandiae kimberli*). This species was identified, or has habitat, near the rail corridor but is unlikely to incur a significant impact as a result of the proposed action. You may, but are not required to, have regard to the approved conservation advice for this species (**Attachment H**).
6. Responses to your invitation to comment on your proposed approval decision were received from the following parties and have been considered in finalising the Department's recommended decision:
 - a. On 23 September 2015, s22 responded on behalf of Minister Truss. The response stated that Minister Truss would not be providing comment on the proposed action (**Attachment C1**).
 - b. On 25 September 2015, s22 responded on behalf of Minister Joyce. The response noted that the proposed action would impact productive agricultural land, including land identified as 'strategic cropping land' under the *Regional Planning Interests Act 2014* (Qld). The response requested that the proponent be encouraged to actively consult landholders affected by the proposed action and ensure that land

acquisition and compensation agreements take into account short and long term impacts (**Attachment C2**).

- c. On 1 October 2015, **S22** responded on behalf of Minister Pyne and Minister Frydenberg. The response supported the proposed decision, noting the economic benefits of the project (**Attachment C3**).
 - d. On 6 October 2015, Mr Hamish Manzi responded on behalf of the proponent. The response proposed minor wording changes to conditions requiring the details of the qualifications and experience of persons undertaking monitoring, review and implementation of management plans (condition 5j) and the biodiversity offset strategy (condition 12h). Minor changes were also proposed in relation to the timing of submission of offset area management plans (condition 14) and substantial commencement of the action (condition 22) (**Attachment C4**).
7. In response to the comments received on behalf of Minister Joyce, the Department notes that the proponent has committed to undertake consultation with affected landholders regarding property impacts, valuation and compensation arrangements, including consideration of ongoing flood modelling and property-scale mapping. The proposed action was also assessed under Queensland legislation and the Queensland Coordinator-General has required the proponent to fully implement that commitment.
 8. In response to the comments received from the proponent, the Department considers the proposed changes to the conditions are generally appropriate and do not affect the acceptability of the potential impact, or the enforceability of the final conditions.
 9. The Department recommends that you approve the proposed action subject to the conditions at **Attachment D**. Changes made from your proposed approval decision of 21 September 2015 in response to comments received are shown at **Attachment E**.
 10. If you agree, letters advising the proponent and Commonwealth Ministers referred to in paragraph 2 of this brief are at **Attachment F**.
 11. The Department also recommends you write to the Queensland Coordinator-General, Mr Barry Broe, given the proposed action was also assessed under the *State Development and Public Works Organisation Act 1971* (Qld). If you agree, a letter advising Mr Broe of your decision is at **Attachment F**.
 12. Communications material to accompany your decision has been provided to your office separately.

Statement of reasons

13. The Department recommends you review the attached draft statement of reasons (**Attachment G**) and make any modifications you consider necessary to ensure the statement reflects your reasoning.
14. Once you are satisfied the statement accurately reflects your reasoning, the Department recommends you sign the statement (**Attachment G**).

Internal consultation

15. The General Counsel Branch was consulted in the preparation of this brief, the Compliance and Enforcement Branch was consulted on the Department's recommended conditions, and the Protected Species and Communities Branch was consulted to ensure that conservation advices, recovery plans, and threat abatement plans relevant to the proposed action have been considered.

Deb Callister
Assistant Secretary
Assessments and Policy Implementation Branch

s22

09 October 2015

s22

Director

Queensland Major Projects

s22

ATTACHMENTS

- A: Proposed approval decision brief
- B: Addendum to proposed approval decision brief
- C: Responses to invitation to comment
 - C1: Response received on behalf of Minister Truss
 - C2: Response received on behalf of Minister Joyce
 - C3: Response received on behalf of Minister Pyne and Minister Frydenberg
 - C4: Response received from the proponent
- D: Approval decision notice
- E: Approval decision notice showing tracked changes from proposed approval decision of 21 September 2015
- F: Letters advising relevant parties of the decision
- G: Statement of reasons
- H: Approved conservation advice for Masked Owl (northern)



Australian Government
Department of the Environment

Approval

**North Galilee Basin Rail Project, Abbot Point to Galilee Basin, Queensland
(EPBC 2013/6885)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN 145 455 205

proposed action The construction and operation of a rail corridor approximately 310 km in length, including standard gauge rail and associated infrastructure, from approximately 70 km east of the Carmichael Mine, to the Port of Abbot Point, Queensland [see EPBC Act referral 2013/6885 and request to vary proposal dated 16 April 2014].

Approval decision

Controlling Provisions	Decision
World Heritage properties	
Section 12	Approved
Section 15A	Approved
National Heritage places	
Section 15B	Approved
Section 15C	Approved
Listed threatened species and communities	
Section 18	Approved
Section 18A	Approved
Listed migratory species	
Section 20	Approved

Section 20A	Approved
Commonwealth marine areas	
Section 23	Approved
Section 24A	Approved
Great Barrier Reef Marine Park	
Section 24B	Approved
Section 24C	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 September 2104.

Decision-maker

name and position The Hon Greg Hunt MP
Minister for the Environment

signature



date of decision

14 = 10 = 2015

Conditions attached to the approval

1. **The Minister** may determine that a plan, report or strategy approved by the Queensland Government satisfies a plan, report or strategy required under these conditions.

Project area

2. For the purpose of the proposed action, the **approval holder** must not clear vegetation outside the **Project area** shown in Figures 1-2 and 2-2 of Volume 2 Appendix B of the **Final EIS** unless targeted surveys have demonstrated that **Matters of National Environmental Significance** will not be **impacted**.

Disturbance limits

3. The **approval holder** must comply with the disturbance limits for specified **EPBC Act listed species and communities** as specified in Table 1.

Note: The maximum disturbance limits in Table 1 apply to authorised **impacts on EPBC Act listed species and communities** as a result of construction, operation and decommissioning of the rail corridor and associated infrastructure within the **Project area** (i.e. they are 'whole of Project' disturbance limits) for the duration of the Project approval.

Table 1: Maximum disturbance limits for EPBC Act listed species and communities.

Species	Maximum disturbance (i.e. maximum residual impact to habitat)
Listed threatened species – fauna	
Australian Painted Snipe	45.6 hectares
Black-throated Finch	1836.2 hectares
Squatter Pigeon	1361.8 hectares
Ornamental Snake	421.6 hectares
Koala	2047.6 hectares
Listed threatened species – flora	
Black Ironbox	175.4 hectares
King Bluegrass	263.3 hectares
Bluegrass	354.2 hectares
Threatened ecological community	Maximum disturbance (i.e. maximum residual impact to community)
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)	195.2 hectares
Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin	133.2 hectares
Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions	55.7 hectares

Note: Table 1 is derived from information in the Coordinator-General's Assessment Report (August 2014).

Matters of National Environmental Significance management plan/s (MNESMP)

- At least three months prior to commencement, the approval holder must submit to the Minister for approval **Matters of National Environmental Significance** management plan/s for the management of direct and indirect **impacts** of the proposed action on **Matters of National Environmental Significance**, being for the purposes of

the MNESMP: the species and communities listed in Table 1, and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

*Note: If the MNESMP does not address any specific future activities it should be updated in accordance with Condition 20 and submitted to **the Department** prior to these specific future activities being undertaken.*

5. The MNESMP must be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
 - a. a description of **environmental values** for each of the **Matters of National Environmental Significance** addressed in the MNESMP
 - b. details of baseline and **impact** monitoring measures to be implemented for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from the proposed action, to determine appropriate habitat management goals (See Conditions 5e and 5f)
 - c. details of potential **impacts**, including area of **impact**, on each of the **Matters of National Environmental Significance** from the proposed action, including **impacts** from:
 - i. vegetation clearing
 - ii. earthworks
 - iii. construction works
 - iv. noise and vibration
 - v. train strike
 - vi. emissions (including dust)
 - vii. light spill and other visual **impacts**
 - viii. waterway crossings
 - ix. weeds and pests
 - d. measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from the proposed action. These measures must include but not be limited to:
 - i. For **Matters of National Environmental Significance** to which the MNESMP apply (see Conditions 4, 7 and 9), relevant mitigation measures proposed in sections 7.6, 7.8 and 7.9 of Volume 2 Appendix D of the **Final EIS**
 - ii. the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised
 - iii. measures to avoid **impacts** on **Matters of National Environmental Significance** and their habitat located in the **Project area**, but outside

areas to be cleared or constructed upon, including adjacent to cleared areas

- iv. measures to rehabilitate all disturbed areas of habitat for **Matters of National Environmental Significance** addressed in the MNESMP (see Conditions 4, 7 and 9)
 - e. goals for habitat management for each relevant **Matter of National Environmental Significance**
 - f. a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Condition 5b). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes
 - g. an ongoing monitoring program to determine the success of mitigation and management measures against the criteria required in Condition 5f, including monitoring locations, parameters and timing
 - h. details of how non-compliance will be reported
 - i. details of how the MNESMP will be updated to incorporate and address outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 5e and 5f)
 - j. provisions to ensure that suitably qualified and experienced persons are responsible for undertaking monitoring, review, and implementation of the MNESMP.
6. The **approval holder** must not **commence** until all the required MNESMP have been approved by **the Minister** in writing. The approved plan/s must be implemented.
 7. Where pre-clearance surveys, as required under **state approvals**, identify individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to **the Department**, the **approval holder** must notify **the Department** in writing within five business days of finding these individuals or habitat, and within 40 business days of finding these individuals or habitat must submit to **the Department** for **the Minister's** written approval updated MNESMP detailing how **impacts** to the newly identified **EPBC Act listed species or community** will be avoided, mitigated and/or offset. Once approved, the revised MNESMP must be implemented.
 8. The **approval holder** must revise the MNESMP following pre-clearance surveys required under **state approvals**, and resubmit the MNESMP to **the Department** for **the Minister's** written approval within 3 months of pre-clearance surveys being completed. Once approved, the revised MNESMP must be implemented.
 9. If, through pre-clearance surveys as required under **state approvals**, individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to **the Department** are identified, the **approval holder** must not start or, in the case of work already commenced, must immediately cease any part of the proposed

action that may significantly **impact that EPBC Act listed species or community**, until MNESMP addressing these **impacts** have been approved by **the Minister** in writing. Once approved, the revised MNESMP must be implemented.

*Note: Management plans may also be required under associated EPBC approvals (EPBC 2010/5736 and EPBC 2011/6194) and under **state approvals**. Whenever possible a combined document should be prepared to address both state government and **EPBC Act approval conditions**.*

Biodiversity Offset Strategy

10. To compensate for authorised unavoidable **impacts** on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to **the Minister** at least two months prior to **commencement**.
11. Offsets for authorised unavoidable **impacts** (defined as maximum disturbance limits in Table 1, or actual **impacts** as defined after detailed design and pre-clearance surveys required under **state approvals**), must be managed in accordance with the BOS.

General requirements

12. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 5), and must include:
 - a. location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
 - b. details of how offset sites have been or will be **legally secured** within 2 years of **commencement** to ensure their long-term protection
 - c. details of how offset sites adequately compensate for residual significant **impacts to Matters of National Environmental Significance** in accordance with the **EPBC Act Offsets Policy**
 - d. a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
 - e. a description of the potential risks to the successful implementation of the BOS, and details of measures that will be implemented to mitigate these risks
 - f. details of how the BOS will be updated to incorporate outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 5e and 5f).
 - g. an outline of how compliance with the BOS will be reported
 - h. provisions to ensure that suitably qualified and experienced persons are responsible for undertaking monitoring, review, and implementation of the BOS
 - i. detailed processes for any residual **impacts** on **Matters of National Environmental Significance** (see Condition 5f) to be offset in accordance with the **EPBC Act Offsets Policy**, including a process for offset requirements to be

developed in consultation with **the Department** and relevant Queensland Government agencies

- j. a detailed process for any significant residual **impact** on any **EPBC Act listed species or community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (see Condition 7).

13. The **approval holder** must not **commence** unless and until the BOS has been approved by **the Minister** in writing. The approved BOS must be implemented.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A single document may be prepared to address both State Government and EPBC Act approval conditions.

Offset area management plans

14. Within six months of the approval of the BOS in accordance with Conditions 5 or 12, the **approval holder** must submit to **the Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:
 - a. detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed species and community**, connectivity with other habitat areas and biodiversity corridors
 - b. management measures and offset plans for each offset area to improve the habitats of relevant **Matters of National Environmental Significance**
 - c. a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
15. Once approved, offset area management plans must be implemented.

Standard conditions

16. Within 30 days of the **commencement** of the action, the **approval holder** must advise **the Department** in writing of the actual date of **commencement**.
17. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and strategies required by this approval, and make them available upon request to **the Department**. Such records may be subject to audit by **the Department** or an independent auditor in accordance with section 458 of **the EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on **the Department's** website. The results of audits may also be publicised through the general media.
18. Within three months of every 12 month anniversary of the **commencement** of the action, the **approval holder** must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans, reports or strategies as specified in the conditions. The report must remain on the

website for three years. Documentary evidence providing proof of the date of publication must be provided to **the Department** at the same time as the compliance report is published. Likely (as defined by relevant triggers incorporated in the MNESMP as required by Condition 5f) or actual non-compliance with any of the conditions of this approval must be reported to **the Department** in writing within 2 business days of the **approval holder** becoming aware of the likely or actual non-compliance.

19. Upon the direction of **the Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to **the Minister**. The independent auditor and audit criteria must be approved by **the Minister** prior to the commencement of the audit. The audit report must address the criteria to the satisfaction of **the Minister**.
20. The **approval holder** may choose to revise a management plan, report or strategy approved by **the Minister** under condition 4 without submitting it for approval under section 143A of **the EPBC Act**, if the taking of the action in accordance with the revised management plan, report or strategy would not be likely to have a **new or increased impact**. If the **approval holder** makes this choice they must:
 - a. notify **the Department** in writing that the approved management plan, report or strategy has been revised and provide **the Department** with an electronic copy of the revised management plan, report or strategy;
 - b. implement the revised management plan, report or strategy from the date that the management plan, report or strategy is submitted to **the Department**; and
 - c. for the life of this approval, maintain a record of the reasons the **approval holder** considers that taking the action in accordance with the revised management plan, report or strategy would not be likely to have a **new or increased impact**.
- 20A. The **approval holder** may revoke their choice under condition 20 at any time by notice to **the Department**. If the **approval holder** revokes the choice to implement a revised management plan, report or strategy, without approval under section 143A of **the EPBC Act**, the management plan, report or strategy approved by **the Minister** must be implemented.
- 20B. Condition 20 does not apply if the revisions to the approved management plan, report or strategy include changes to environmental offsets provided under the management plan, report or strategy in relation to the matter, unless otherwise agreed in writing by **the Minister**. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised management plan, report or strategy would, or would not, be likely to have **new or increased impacts**.
- 20C. If **the Minister** gives a notice to the **approval holder** that **the Minister** is satisfied that the taking of the action in accordance with the revised management plan, report or strategy would be likely to have a **new or increased impact**, then:
 - a. condition 20 does not apply, or ceases to apply, in relation to the revised management plan, report or strategy; and
 - b. the **approval holder** must implement the management plan, report or strategy approved by **the Minister**.

To avoid any doubt, this condition does not affect any operation of conditions 20, 20A and 20B in the period before the day the notice is given.

At the time of giving the notice **the Minister** may also notify that for a specified period of time that condition 20 does not apply for one or more specified management plans, reports or strategies required under the approval.

- 20D. Conditions 20, 20A, 20B and 20C are not intended to limit the operation of section 143A of **the EPBC Act** which allows the **approval holder** to submit a revised management plan, report or strategy to **the Minister** for approval.
21. If **the Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, listed threatened species and communities, listed migratory species, the Great Barrier Reef Marine Park or Commonwealth marine areas to do so, **the Minister** may request that the **approval holder** make specified revisions to the management plans, reports, and strategies specified in the conditions and submit the revised management plans, reports, and strategies for **the Minister's** written approval. The **approval holder** must comply with any such request. The revised approved management plans, reports, and strategies must be implemented. Unless **the Minister** has approved the revised management plans, reports, and strategies, then the **approval holder** must continue to implement the management plans, reports, and strategies originally approved, as specified in the conditions.
22. If, at any time after ten years from the date of this approval, **approval holder** has not **substantially commenced** the action, then the **approval holder** must not **substantially commence** the action without the written agreement of **the Minister**.
23. Unless otherwise agreed to in writing by **the Minister**, the **approval holder** must publish all management plans, reports, and strategies referred to in these conditions of approval on its website. Each management plan, report, and strategy must be published on the website within one month of being approved and remain on the website for not less than ten years, or a longer period if specified in writing by **the Minister**, and be otherwise made available to any party upon written request for the duration of the approval. The **approval holder** must provide the requested management plan/s, report/s and/or strategy/ies to the requesting party within 10 business days of receiving the request.

Definitions:

Approval holder: The person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of **the EPBC Act**.

Australian Painted Snipe: means the Australian Painted Snipe (*Rostratula australis*) listed as a threatened species under **the EPBC Act**.

Black-throated Finch: means the Black-throated Finch (Southern) (*Poephila cincta cincta*) listed as a threatened species under **the EPBC Act**.

Black Ironbox: means the Black Ironbox (*Eucalyptus raveretiana*) listed as a threatened species under **the EPBC Act**.

Bluegrass: means the Bluegrass (*Dichanthium setosum*) listed as a threatened species under **the EPBC Act**.

Brigalow (*Acacia harpophylla* dominant and co-dominant): means the community of the same name listed as a threatened ecological community under **the EPBC Act**.

Commence/Commenced/Commencement/Commencing: means any physical disturbance including clearing of vegetation that is an **EPBC listed species or community** or that is habitat

for an **EPBC listed species or community** for the purposes of the proposed action.
Commencement does not include:

- a. minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- b. activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse **impact on Matters of National Environmental Significance**, and only if the **approval holder** has notified **the Department** in writing before an activity is undertaken.

The/ Department: means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Environmental values: includes but is not limited to habitat for **EPBC Act listed species and communities** and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

The/ EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed species and/or community/ies: means a threatened species or community, or a migratory species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Final EIS: means the North Galilee Basin Rail Project Additional Information to the Environmental Impact Statement as provided to **the Department** on 15 April 2014.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Impact/s/ed: has the definition assigned to it in section 527E of **the EPBC Act**.

King Bluegrass: means the King Bluegrass (*Dichanthium queenslandicum*) listed as a threatened species under **the EPBC Act**.

Koala: means the Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)) listed as a threatened species under **the EPBC Act**.

Legally secure/d: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matter/s of National Environmental Significance/ MNES: means matters of national environmental significance, being the relevant matters protected under Part 3 of **the EPBC Act**.

Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin: means the community of the same name listed as a threatened ecological community under **the EPBC Act**.

New or increased impact: a new or increased **impact** on any matter protected by the controlling provisions for the action, when compared to the management plan, report or strategy that has been approved by **the Minister**.

Ornamental Snake: means the Ornamental Snake (*Denisonia maculata*), listed as a threatened species under the EPBC Act.

Project area: means the identified *key features of the NGBR Project* in Figure 1-2 in Volume 2 Appendix B of the Final EIS and *Potential quarry and borrow locations* shown in Figure 2-2 in Volume 2 Appendix B of the Final EIS.

Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions: means the community of the same name listed as a threatened ecological community under the EPBC Act.

Squatter Pigeon: means the Squatter Pigeon (Southern) (*Geophaps scripta scripta*), listed as a threatened species under the EPBC Act.

State approvals: means any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Substantially commenced: means the same as commenced.

The Minister: means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

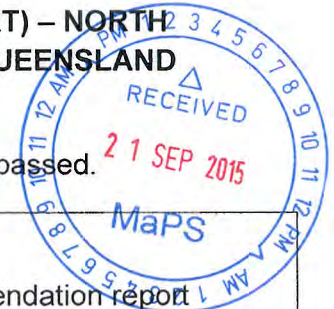
DEPARTMENT OF THE ENVIRONMENT

PDR: MS15-002228

To: Minister (For Decision)

PROPOSED APPROVAL DECISION BRIEF (RECOMMENDATION REPORT) – NORTH GALILEE BASIN RAIL PROJECT, ABBOT POINT TO GALILEE BASIN, QUEENSLAND (EPBC 2013/6885)

Timing: As soon as possible – The statutory timeframe for this decision has passed.



Recommendations:

1. That you consider the information in this brief, the Department's recommendation report (**Attachment A**), the additional information to the recommendation report (**Attachment B**), the environmental impact statement (**Attachment E1**) and the additional information to the environmental impact statement (**Attachment E2**).
Considered / Please discuss
2. That you have regard to the recovery plans, threat abatement plans and approved conservation advices, relevant to the proposed action at (**Attachments H1, H2, H3 and H4**) and confirm that you have done so.
Noted / Please discuss
3. That you consider and take into account the legislative provisions at **Attachment L** in making your decision.
Considered / Please discuss
4. That you agree with the Department's recommendation that you have enough information to make the proposed decision summarised in the table below.
Agreed / Not agreed
5. That you agree that the recommended decision at **Attachment C1**, and summarised in the table below, reflects your proposed decision.
Agreed / Not agreed
6. That you agree to the proposed conditions of approval as set out in **Attachment C1**.
Agreed / Not agreed
7. That you agree with the Department's advice in paragraph 49, regarding consultation with Commonwealth Ministers under section 131 of the EPBC Act.
Agreed / Not agreed
8. If you agree with recommendations 4, 5, 6 and 7, that you sign the letters at **Attachment D** to consult with the proponent and relevant Commonwealth Ministers of your proposed decision.
Signed / Not signed
9. That you agree to not publish the proposed decision (**Attachment C1**) on the internet for public comment.
Agreed / Not agreed

Agreed / Not agreed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World Heritage properties		
Section 12	Approve	
Section 15A	Approve	
National Heritage places		
Section 15B	Approve	
Section 15C	Approve	
Listed threatened species and communities		
Section 18	Approve	
Section 18A	Approve	
Listed migratory species		
Section 20	Approve	
Section 20A	Approve	
Commonwealth marine areas		
Section 23	Approve	
Section 24A	Approve	
Great Barrier Reef Marine Park		
Section 24B	Approve	
Section 24C	Approve	

The Hon Greg Hunt MP

Minister for the Environment:

Comments:

Date: 21:9:2015

1:05 PM

21:9:2015

Key points

1. This brief seeks your consideration of the proposed decision on whether or not to approve the North Galilee Basin Rail Project, Abbot Point to Galilee Basin, Queensland (EPBC 2013/6885) (proposed action) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).
2. A decision to approve the proposed action under the EPBC Act was previously made by your delegate on 23 September 2014. The Department recommends that you agree to treat the decision as being, in law, no decision at all, and proceed to make a new proposed decision, because:
 - a. the delegate did not have regard to the approved conservation advice for the Ornamental Snake, as required by section 139(2) of the EPBC Act, which would mean that the approval decision is affected by a jurisdictional error;
 - b. a court would be likely to grant relief on this basis were the matter to come before it for adjudication; and
 - c. this project is directly and closely linked to the Carmichael Coal Mine and Rail Project (EPBC 2010/5736) and reconsidering the North Galilee Basin Rail Project will avoid uncertainty and potential delay.
3. Adani Mining Pty Ltd (the proponent) is proposing to construct and operate a rail corridor approximately 310 kilometres (km) in length, including standard gauge rail and associated infrastructure, from approximately 70 km east of the Carmichael Mine to the Port of Abbot Point, Queensland.
4. The proposed action will service the Carmichael Mine (refer to EPBC 2010/5736) and third-party users (potentially including other Galilee Basin coal mines) up to an operational capacity of 100 million tonnes per annum. The proposed action is also related to the Abbot Point Coal Terminal 0 Project (EPBC 2011/6194—approved 10 December 2013) and the Abbot Point Growth Gateway Project (EPBC 2015/7467—currently under assessment).
5. A detailed description of the proposed action is included at Volume 2, Appendix B, of the additional information to the environmental impact statement (**Attachment E2**).
6. On 27 June 2013, the proposed action was determined to be a controlled action for likely significant impacts on: World Heritage properties (section 12 and section 15A), National Heritage places (section 15B and section 15C), listed threatened species and communities (section 18 and section 18A), listed migratory species (section 20 and section 20A), Commonwealth marine areas (section 23 and section 24A), and the Great Barrier Reef Marine Park (section 24B and section 24C).
7. The proposed action was assessed and approved by the Queensland Government under the *State Development and Public Works Organisation Act 1971* (Qld). A copy of the Queensland Coordinator-General's assessment report is at **Attachment F**. The proposed action triggered controlling provisions that were beyond the scope of the Bilateral Agreement at the time, so the project was assessed in parallel with the Queensland

Government. Assessment under the EPBC Act was by environmental impact statement. A timeline of the assessment process is at **Attachment J**.

8. The Department prepared a recommendation report (**Attachment A**) in September 2014 which included recommendations on whether the proposed action should be approved and what conditions should be attached. Since that time further information relevant to the proposed action has become available and the Department has prepared additional information to the recommendation report to address this (**Attachment B**).
9. Changes have been made to the proposed conditions (**Attachment C1**) from those attached to the previous approval decision of 23 September 2014. The definition of the Australian Painted Snipe has been updated to reflect its removal from the list of migratory species; the new standard condition relating to management plans, reports and strategies has been inserted and minor editorial / formatting changes have also been made to improve consistency of the references to the definitions. A document showing the changes made is at **Attachment C2**.

Issues / sensitivities / handling

10. Coal mining and associated export through the Great Barrier Reef World Heritage Area is contentious. If approved, the proposed action will transport extracted coal from the Carmichael Mine (and potentially other Galilee Basin coal mines) to the Port of Abbot Point for export.
11. If approved the project will clear potential habitat for a number of listed threatened species and communities including the Black-throated Finch (southern) (up to 1836.2 hectares); the Koala (up to 2047.6 hectares); and the Ornamental Snake (up to 421.6 hectares).
12. Direct and indirect impacts to listed migratory species, the Great Barrier Reef World Heritage Area and National Heritage place, the Commonwealth marine area and the Great Barrier Reef Marine Park may also occur.
13. If you agree to approve the project, notification will occur through an update to the Department's EPBC Act referrals and public notices website, at the time of your final approval decision.
14. Re-making this decision could attract criticism from environmental and industry groups and may call into contention the process to re-make the decision and the administration of the EPBC Act more broadly.

Mandatory considerations

15. In making the proposed decision on whether or not to approve the proposed action, and what conditions to attach, you are required to consider:
 - a. matters relevant to matters protected by the controlling provisions for the proposed action; and
 - b. economic and social matters.
16. In considering those matters, you are required to take into account, have regard to, or not act inconsistently with the matters set out in section 136(2) 137, 137A, 139, 140 and 391 of the EPBC Act (**Attachment L**).
17. Further, in deciding whether to attach a condition to an approval of the proposed action, you are required to consider:

- a. any relevant conditions that have been imposed, or you consider likely to be imposed, under a law of a State or self-governing Territory or another law of the Commonwealth on the taking of the action; and
 - b. information provided by the person proposing to take the action or by the proponent of the action; and
 - c. the desirability of ensuring, as far as practicable, that the condition is a cost-effective means for the Commonwealth and a person taking the action to achieve the object of the condition.
18. An analysis of your legal considerations is set out in the recommendation report (**Attachment A**) and in the additional information to the recommendation report (**Attachment B**). In considering that material, you are also required to consider, or have regard to, the material in **Attachments E to I, and K**.

Additional information relevant to the proposed action since the previous approval decision

19. The proponent has submitted draft Species Management Plans and a draft Biodiversity Offset Strategy (**Attachment K2**) for the proposed action. These documents expand on the mitigation, management and offset measures proposed in the environmental impact statement and additional information to the environmental impact statement (**Attachments E1 and E2**).
20. The proponent is also the proponent for the Carmichael Coal Mine and Rail Project (EPBC 2010/5736). The proponent and a number of environmental groups including the Mackay Conservation Group, Birdlife Australia, the Black-throated Finch Recovery Team and the Australian Conservation Foundation have provided information they believe is relevant for the re-making of the approval decision for the related Carmichael Coal Mine and Rail Project.
21. The Department considers some of this information is relevant to your decision for the proposed action (**Attachment K1**), in particular:

- potential impacts to the Black-throated Finch (southern) and the proposed offsets
- information regarding climate change impacts on the Great Barrier Reef; and
- the environmental history of the proponent.

22. The submitted information has been considered by the Department in its preparation of this briefing package for your proposed decision and is discussed below and at **Attachment B**.

Impacts to listed threatened species and communities

23. Direct impacts to listed threatened species and communities will primarily occur through the clearing of habitat. A range of indirect impacts such as habitat degradation from weed incursion and changes to hydrology, as well as from noise, vibration and air pollution—amongst others—may also occur. Further information is at **Attachments E, F and K**.
24. The Department considers that potential impacts can be addressed through the proposed conditions (**Attachment C1**). These require the proponent to develop management plans and offsets for the listed threatened species and communities that will or are likely to incur a significant impact as a result of the proposed action.

25. Under section 139(1) of the EPBC Act, in deciding whether or not to approve for the purposes of a subsection of section 18 or section 18A the taking of an action, and what conditions to attach to such an approval, you must not act inconsistently with a recovery plan or threat abatement plan. Recovery plans and threat abatement plans relevant for the listed threatened species and communities that will or are likely to incur a significant impact as a result of the proposed action and for those listed threatened species that have been identified, or have habitat, near the rail corridor but are unlikely to incur a significant impact as a result of the proposed action are at **Attachments H1 and H2**.
26. Under section 139(2) of the EPBC Act, you are required to have regard to any approved conservation advice for the listed threatened species or communities that will or are likely to incur a significant impact as a result of the proposed action. The relevant approved conservation advices are at **Attachment H3**. The currency of this list has been confirmed by the relevant area of the Wildlife, Heritage and Marine Division.
27. A number of other listed threatened species have been identified, or have habitat, near the rail corridor but are unlikely to incur a significant impact as a result of the proposed action. You may, but are not required to, have regard to the approved conservation advices for those species. Those advices are at **Attachment H4**.

Impacts to listed migratory species

28. Direct impacts, including at the Caley Valley Wetland in the vicinity of the Port of Abbot Point, will occur primarily as a result of habitat clearing. Indirect impacts including habitat degradation from weed incursion and changes to hydrology, noise, vibration and air pollution may also occur. Further information is at **Attachments E, F and K**.
29. The Department considers that the proponent's avoidance, mitigation and management measures are adequate to manage potential impacts and no conditions of approval are proposed.

Impacts to the Great Barrier Reef World Heritage Area and National Heritage place, Commonwealth marine areas and the Great Barrier Reef Marine Park

30. The proposed action will potentially indirectly impact the Great Barrier Reef World Heritage Area and National Heritage place, Commonwealth marine areas and the Great Barrier Reef Marine Park, primarily by influencing the quality of water entering the marine environment. Further information is at **Attachments E, F and K**.
31. Heritage advice from the Department's Wildlife, Heritage and Marine Division was provided in relation to the additional information to the environmental impact statement in August 2014, and was taken into consideration in assessing the proposal and recommending conditions. The advice is at **Attachment I**.
32. The environmental impact statement and additional information to the environmental impact statement (**Attachments E1 and E2**) outline a range of mitigation measures and commitments to address potential impacts.

33. The Department considers that the proponent's avoidance, mitigation and management measures outlined in the environmental impact statement (**Attachment E1**) and additional information to the environmental impact statement (**Attachment E2**) and the proposed conditions (**Attachment C1**), which require the proponent to develop management plans to assist in protecting the Outstanding Universal Value of the Great Barrier Reef World Heritage Area, are adequate to manage the potential impacts. A copy of the Statement of Outstanding Universal Value for the Great Barrier Reef World Heritage Area is at **Attachment H5**.

Social and economic matters

34. The proponent conducted a social impact assessment that considered community and stakeholder engagement, workforce management, housing and accommodation, local business and industry content and community health and wellbeing.
35. The proponent has proposed a range of measures to manage social impacts of the proposed action, and the Queensland Coordinator-General has imposed conditions (**Attachment F**) that the proponent must report on community engagement during and immediately after construction.
36. Economic assessments undertaken by the proponent estimate that at a regional level, the proposed action is expected to generate a significant and positive economic impact in the Mackay, Isaac and Whitsunday region and Queensland.
37. The proposed action will involve a capital investment of approximately \$2.2 billion which includes capital expenditure on earthworks, drainage, bridges, road works, rail track and signalling, communications and construction management costs.
38. The additional information to the recommendation report (**Attachment B**) contains additional data and discusses how emissions from the burning of coal overseas, which have been transported by the North Galilee Basin Rail Project, will be managed through international climate change mitigation/reduction frameworks.
39. The Queensland Coordinator-General's Assessment Report (**Attachment F**) and the recommendation report (**Attachment A**) and additional information to the recommendation report (**Attachment B**) include further information about social and economic matters.

Environmental history

40. Section 136(4) of the EPBC Act provides that, in deciding whether or not to approve the taking of an action by a person, and what conditions to attach to an approval, you may consider whether the person is a suitable person to be granted an approval, having regard to:
- a. the person's history in relation to environmental matters;
 - b. if the person is a body corporate—the history of its executive officers in relation to environmental matters; and

- c. if the person is a body corporate that is a subsidiary of another body or company (the parent body)—the history in relation to environmental matters of the parent body and its executive officers.
41. The proponent has provided information regarding its history in relation to environmental matters and that of its executive officers, its parent bodies and the executive officers of its parent bodies (**Attachment K1**). A number of environmental groups have also provided the Department with information regarding the environmental history of companies in the Adani Group (**Attachment K1**).
42. The Department's analysis of the relevant environmental history is detailed in the recommendation report and additional information to the recommendation report (**Attachments A and B**). Having regard to the information provided to the Department, the Department considers that it is open to you to conclude that the proponent is a suitable person to be granted an approval.

Department's analysis and recommended decision

43. The Department considers, and recommends that you agree, that you have enough information to make an informed decision on whether or not to make a proposed decision to approve the taking of the action for the purposes of each of the controlling provisions.
44. The Department recommends that your proposed decision should be to approve the proposed action subject to the proposed conditions of approval at **Attachment C1**. The Department reached this conclusion having regard to the likely impacts of the proposed action for the purpose of each controlling provision, and social and economic matters. The Department has also had regard to the relevant approved conservation advices for listed threatened species and communities.
45. Further, the Department advises that approval would not be inconsistent with relevant recovery plans and threat abatement plans, international conventions and agreements, or the Australian World Heritage management principles or the National Heritage management principles.
46. Under the EPBC Act, you are required to make a decision on whether or not to approve the proposed action for the purposes of each controlling provision for the proposed action. Prior to that, you are required to consult with the person proposing to take the action and relevant Commonwealth Ministers for up to 10 business days on the decision you propose to make.

Consultation on proposed approval

47. Before you make your decision on whether or not to approve the proposed action, and what conditions (if any) to attach to an approval, you are required to:
 - a. inform the proponent and any other Commonwealth Minister(s) whom you believe has administrative responsibilities relating to the proposed action, of the decision which you propose to make; and
 - b. invite the proponent and the Commonwealth Minister(s) to comment on your proposed decision within 10 business days (sections 131(1) and 131AA(1) of the EPBC Act).
48. A letter inviting comment from the proponent is at **Attachment D**.

49. The Department recommends that you inform and invite comments from the Minister for Infrastructure and Regional Development, The Hon Warren Truss MP; the Minister for Industry and Science, the Hon Ian Macfarlane MP; and the Minister for Agriculture, the Hon Barnaby Joyce MP, on your proposed decision and proposed conditions of approval. Draft letters are at **Attachment D**.

Inviting comments from the public on your proposed decision

50. Under section 131A of the EPBC Act, you may invite public comment on your proposed decision and any conditions that you are proposing to attach to the approval.

51. 46 submissions, including 22 state agency submissions, were received during the public consultation period on the environmental impact statement. A copy of the environmental impact statement is at **Attachment E1**. Copies of the submissions received are at **Attachment G**. The additional information to the environmental impact statement (**Attachment E2**) addresses the submissions received.

52. The Department considers that adequate consultation has occurred for this proposed action. As such, it is the Department's recommendation that publishing your proposed decision and any conditions that you are proposing to attach to the approval, for a further public comment period is unlikely to elicit views or information that have not already been considered in relation to the proposed action.

Internal consultation

53. This brief, the briefing material and the proposed conditions were developed in consultation with the Department's General Counsel Branch; the Protected Species and Communities and Heritage Branches from the Wildlife, Heritage, and Marine Division; and the Compliance and Enforcement Branch.

Deb Callister
Assistant Secretary
Assessments and Policy Implementation Branch

s22

18 September 2015

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Director
Queensland Major Projects

s22

ATTACHMENTS

- A: Recommendation report (September 2014)
- B: Additional information to the recommendation report
- C: Proposed approval decision
 - C1: Proposed approval decision notice
 - C2: Proposed approval decision notice showing tracked changes from previous approval decision (of 23 September 2014)
- D: Letters to the proponent and relevant Commonwealth Ministers
- E: Proponent's assessment documentation and additional information
 - E1: Environmental impact statement
 - E2: Additional information to the environmental impact statement
- F: Queensland Coordinator-General's Assessment Report
- G: Submissions on the environmental impact statement
- H: Relevant recovery plans, threat abatement plans, approved conservation advices and Statement of Outstanding Universal Value for the Great Barrier Reef World Heritage Area
 - H1: Recovery plans
 - H2: Threat abatement plans
 - H3: Approved conservation advices
 - H4: Additional approved conservation advices
 - H5: Statement of Outstanding Universal Value for the Great Barrier Reef World Heritage Area
- I: Line area advice – heritage advice from the Wildlife, Heritage and Marine Division
- J: Timeline of the assessment process
- K: Additional information received since previous approval
 - K1: Additional information from the proponent and environmental groups in relation to the Carmichael Coal Mine and Rail Project (EPBC 2010/5736)
 - K2: Plans provided to the Department to comply with previous approval
 - Draft Biodiversity Offset Strategy (dated 9 February 2015)
 - Draft Species Management Plan Carmichael Rail Network – NGBR (dated 29 May 2015)
- L: Legislative provisions



Proposed Approval

**North Galilee Basin Rail Project, Abbot Point to Galilee Basin, Queensland
(EPBC 2013/6885)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN 145 455 205

proposed action The construction and operation of a rail corridor approximately 310 km in length, including standard gauge rail and associated infrastructure, from approximately 70 km east of the Carmichael Mine, to the Port of Abbot Point, Queensland [see EPBC Act referral 2013/6885 and request to vary proposal dated 16 April 2014].

Proposed approval decision

Controlling Provisions	Decision
World Heritage properties	
Section 12	Approved
Section 15A	Approved
National Heritage places	
Section 15B	Approved
Section 15C	Approved
Listed threatened species and communities	
Section 18	Approved
Section 18A	Approved
Listed migratory species	
Section 20	Approved
Section 20A	Approved

Commonwealth marine areas	
Section 23	Approved
Section 24A	Approved
Great Barrier Reef Marine Park	
Section 24B	Approved
Section 24C	Approved

proposed conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 September 2104.

Decision-maker

name and position The Hon Greg Hunt MP
Minister for the Environment

signature [DONOT SIGN—PROPOSED DECISION ONLY]

date of decision [DONOT DATE—PROPOSED DECISION ONLY]

Conditions attached to the approval

1. **The Minister** may determine that a plan, report or strategy approved by the Queensland Government satisfies a plan, report or strategy required under these conditions.

Project area

2. For the purpose of the proposed action, the **approval holder** must not clear vegetation outside the **Project area** shown in Figures 1-2 and 2-2 of Volume 2 Appendix B of the **Final EIS** unless targeted surveys have demonstrated that **Matters of National Environmental Significance** will not be **impacted**.

Disturbance limits

3. The **approval holder** must comply with the disturbance limits for specified **EPBC Act listed species and communities** as specified in Table 1.

*Note: The maximum disturbance limits in Table 1 apply to authorised **impacts** on **EPBC Act listed species and communities** as a result of construction, operation and decommissioning of the rail corridor and associated infrastructure within the **Project area** (i.e. they are ‘whole of Project’ disturbance limits) for the duration of the Project approval.*

Table 1: Maximum disturbance limits for EPBC Act listed species and communities.

Species	Maximum disturbance (i.e. maximum residual impact to habitat)
Listed threatened species – fauna	
Australian Painted Snipe	45.6 hectares
Black-throated Finch	1836.2 hectares
Squatter Pigeon	1361.8 hectares
Ornamental Snake	421.6 hectares
Koala	2047.6 hectares
Listed threatened species – flora	
Black Ironbox	175.4 hectares
King Bluegrass	263.3 hectares
Bluegrass	354.2 hectares
Threatened ecological community	Maximum disturbance (i.e. maximum residual impact to community)
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)	195.2 hectares
Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin	133.2 hectares
Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions	55.7 hectares

Note: Table 1 is derived from information in the Coordinator-General's Assessment Report (August 2014).

Matters of National Environmental Significance management plan/s (MNESMP)

- At least three months prior to **commencement**, the **approval holder** must submit to **the Minister** for approval **Matters of National Environmental Significance** management plan/s for the management of direct and indirect **impacts** of the proposed action on **Matters of National Environmental Significance**, being for the purposes of the MNESMP: the species and communities listed in Table 1, and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

*Note: If the MNESMP does not address any specific future activities it should be updated in accordance with Condition 20 and submitted to **the Department** prior to these specific future activities being undertaken.*

5. The MNESMP must be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
- a. a description of **environmental values** for each of the **Matters of National Environmental Significance** addressed in the MNESMP
 - b. details of baseline and **impact** monitoring measures to be implemented for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from the proposed action, to determine appropriate habitat management goals (See Conditions 5e and 5f)
 - c. details of potential **impacts**, including area of **impact**, on each of the **Matters of National Environmental Significance** from the proposed action, including **impacts** from:
 - i. vegetation clearing
 - ii. earthworks
 - iii. construction works
 - iv. noise and vibration
 - v. train strike
 - vi. emissions (including dust)
 - vii. light spill and other visual **impacts**
 - viii. waterway crossings
 - ix. weeds and pests
 - d. measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from the proposed action. These measures must include but not be limited to:
 - i. For **Matters of National Environmental Significance** to which the MNESMP apply (see Conditions 4, 7 and 9), relevant mitigation measures proposed in sections 7.6, 7.8 and 7.9 of Volume 2 Appendix D of the **Final EIS**
 - ii. the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised
 - iii. measures to avoid **impacts** on **Matters of National Environmental Significance** and their habitat located in the **Project area**, but outside areas to be cleared or constructed upon, including adjacent to cleared areas
 - iv. measures to rehabilitate all disturbed areas of habitat for **Matters of National Environmental Significance** addressed in the MNESMP (see Conditions 4, 7 and 9)

- e. goals for habitat management for each relevant **Matter of National Environmental Significance**
 - f. a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Condition 5b). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes
 - g. an ongoing monitoring program to determine the success of mitigation and management measures against the criteria required in Condition 5f, including monitoring locations, parameters and timing
 - h. details of how non-compliance will be reported
 - i. details of how the MNESMP will be updated to incorporate and address outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 5e and 5f)
 - j. details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the MNESMP.
6. The **approval holder** must not **commence** until all the required MNESMP have been approved by **the Minister** in writing. The approved plan/s must be implemented.
 7. Where pre-clearance surveys, as required under **state approvals**, identify individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to **the Department**, the **approval holder** must notify **the Department** in writing within five business days of finding these individuals or habitat, and within 40 business days of finding these individuals or habitat must submit to **the Department for the Minister's** written approval updated MNESMP detailing how **impacts** to the newly identified **EPBC Act listed species or community** will be avoided, mitigated and/or offset. Once approved, the revised MNESMP must be implemented.
 8. The **approval holder** must revise the MNESMP following pre-clearance surveys required under **state approvals**, and resubmit the MNESMP to **the Department for the Minister's** written approval within 3 months of pre-clearance surveys being completed. Once approved, the revised MNESMP must be implemented.
 9. If, through pre-clearance surveys as required under **state approvals**, individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to **the Department** are identified, the **approval holder** must not start or, in the case of work already commenced, must immediately cease any part of the proposed action that may significantly **impact** that **EPBC Act listed species or community**, until MNESMP addressing these **impacts** have been approved by **the Minister** in writing. Once approved, the revised MNESMP must be implemented.

*Note: Management plans may also be required under associated EPBC approvals (EPBC 2010/5736 and EPBC 2011/6194) and under **state approvals**. Whenever possible a combined document should be prepared to address both state government and **EPBC Act approval conditions**.*

Biodiversity Offset Strategy

10. To compensate for authorised unavoidable **impacts** on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to **the Minister** at least two months prior to **commencement**.
11. Offsets for authorised unavoidable **impacts** (defined as maximum disturbance limits in Table 1, or actual **impacts** as defined after detailed design and pre-clearance surveys required under **state approvals**), must be managed in accordance with the BOS.

General requirements

12. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 5), and must include:
 - a. location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
 - b. details of how offset sites have been or will be **legally secured** within 2 years of **commencement** to ensure their long-term protection
 - c. details of how offset sites adequately compensate for residual significant **impacts** to **Matters of National Environmental Significance** in accordance with the **EPBC Act Offsets Policy**
 - d. a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
 - e. a description of the potential risks to the successful implementation of the BOS, and details of measures that will be implemented to mitigate these risks
 - f. details of how the BOS will be updated to incorporate outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 5e and 5f).
 - g. an outline of how compliance with the BOS will be reported
 - h. details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the BOS
 - i. detailed processes for any residual **impacts** on **Matters of National Environmental Significance** (see Condition 5f) to be offset in accordance with the **EPBC Act Offsets Policy**, including a process for offset requirements to be developed in consultation with **the Department** and relevant Queensland Government agencies
 - j. a detailed process for any significant residual **impact** on any **EPBC Act listed species or community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (see Condition 7).
13. The **approval holder** must not **commence** unless and until the BOS has been approved by **the Minister** in writing. The approved BOS must be implemented.

*Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A single document may be prepared to address both State Government and **EPBC Act** approval conditions.*

Offset area management plans

14. Within six months of identifying any offset area in accordance with Conditions 5 or 12, the **approval holder** must submit to **the Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:
 - a. detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed species and community**, connectivity with other habitat areas and biodiversity corridors
 - b. management measures and offset plans for each offset area to improve the habitats of relevant **Matters of National Environmental Significance**
 - c. a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
15. Once approved, offset area management plans must be implemented.

Standard conditions

16. Within 30 days of the **commencement** of the action, the **approval holder** must advise **the Department** in writing of the actual date of **commencement**.
17. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and strategies required by this approval, and make them available upon request to **the Department**. Such records may be subject to audit by **the Department** or an independent auditor in accordance with section 458 of **the EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on **the Department's** website. The results of audits may also be publicised through the general media.
18. Within three months of every 12 month anniversary of the **commencement** of the action, the **approval holder** must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans, reports or strategies as specified in the conditions. The report must remain on the website for three years. Documentary evidence providing proof of the date of publication must be provided to **the Department** at the same time as the compliance report is published. Likely (as defined by relevant triggers incorporated in the MNESMP as required by Condition 5f) or actual non-compliance with any of the conditions of this approval must be reported to **the Department** in writing within 2 business days of the **approval holder** becoming aware of the likely or actual non-compliance.
19. Upon the direction of **the Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to **the Minister**. The independent auditor and audit criteria must be approved by

the Minister prior to the commencement of the audit. The audit report must address the criteria to the satisfaction of **the Minister**.

20. The **approval holder** may choose to revise a management plan, report or strategy approved by **the Minister** under condition 4 without submitting it for approval under section 143A of **the EPBC Act**, if the taking of the action in accordance with the revised management plan, report or strategy would not be likely to have a **new or increased impact**. If the **approval holder** makes this choice they must:
- a. notify **the Department** in writing that the approved management plan, report or strategy has been revised and provide **the Department** with an electronic copy of the revised management plan, report or strategy;
 - b. implement the revised management plan, report or strategy from the date that the management plan, report or strategy is submitted to **the Department**; and
 - c. for the life of this approval, maintain a record of the reasons the **approval holder** considers that taking the action in accordance with the revised management plan, report or strategy would not be likely to have a **new or increased impact**.
- 20A. The **approval holder** may revoke their choice under condition 20 at any time by notice to **the Department**. If the **approval holder** revokes the choice to implement a revised management plan, report or strategy, without approval under section 143A of **the EPBC Act**, the management plan, report or strategy approved by **the Minister** must be implemented.
- 20B. Condition 20 does not apply if the revisions to the approved management plan, report or strategy include changes to environmental offsets provided under the management plan, report or strategy in relation to the matter, unless otherwise agreed in writing by **the Minister**. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised management plan, report or strategy would, or would not, be likely to have **new or increased impacts**.
- 20C. If **the Minister** gives a notice to the **approval holder** that **the Minister** is satisfied that the taking of the action in accordance with the revised management plan, report or strategy would be likely to have a **new or increased impact**, then:
- a. condition 20 does not apply, or ceases to apply, in relation to the revised management plan, report or strategy; and
 - b. the **approval holder** must implement the management plan, report or strategy approved by **the Minister**.

To avoid any doubt, this condition does not affect any operation of conditions 20, 20A and 20B in the period before the day the notice is given.

At the time of giving the notice **the Minister** may also notify that for a specified period of time that condition 20 does not apply for one or more specified management plans, reports or strategies required under the approval.

- 20D. Conditions 20, 20A, 20B and 20C are not intended to limit the operation of section 143A of **the EPBC Act** which allows the **approval holder** to submit a revised management plan, report or strategy to **the Minister** for approval.
21. If **the Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, listed threatened species and communities,

listed migratory species, the Great Barrier Reef Marine Park or Commonwealth marine areas to do so, **the Minister** may request that the **approval holder** make specified revisions to the management plans, reports, and strategies specified in the conditions and submit the revised management plans, reports, and strategies for **the Minister's** written approval. The **approval holder** must comply with any such request. The revised approved management plans, reports, and strategies must be implemented. Unless **the Minister** has approved the revised management plans, reports, and strategies, then the **approval holder** must continue to implement the management plans, reports, and strategies originally approved, as specified in the conditions.

22. If, at any time after five years from the date of this approval, **approval holder** has not **substantially commenced** the action, then the **approval holder** must not **substantially commence** the action without the written agreement of **the Minister**.
23. Unless otherwise agreed to in writing by **the Minister**, the **approval holder** must publish all management plans, reports, and strategies referred to in these conditions of approval on its website. Each management plan, report, and strategy must be published on the website within one month of being approved and remain on the website for not less than ten years, or a longer period if specified in writing by **the Minister**, and be otherwise made available to any party upon written request for the duration of the approval. The **approval holder** must provide the requested management plan/s, report/s and/or strategy/ies to the requesting party within 10 business days of receiving the request.

Definitions:

Approval holder: The person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of **the EPBC Act**.

Australian Painted Snipe: means the Australian Painted Snipe (*Rostratula australis*) listed as a threatened species under **the EPBC Act**.

Black-throated Finch: means the Black-throated Finch (Southern) (*Poephila cincta cincta*) listed as a threatened species under **the EPBC Act**.

Black Ironbox: means the Black Ironbox (*Eucalyptus raveretiana*) listed as a threatened species under **the EPBC Act**.

Bluegrass: means the Bluegrass (*Dichanthium setosum*) listed as a threatened species under **the EPBC Act**.

Brigalow (*Acacia harpophylla* dominant and co-dominant): means the community of the same name listed as a threatened ecological community under **the EPBC Act**.

Commence/Commenced/Commencement/Commencing: means any physical disturbance including clearing of vegetation that is an **EPBC listed species or community** or that is habitat for an **EPBC listed species or community** for the purposes of the proposed action.

Commencement does not include:

- a. minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- b. activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse **impact** on **Matters of National Environmental Significance**, and only if the

approval holder has notified **the Department** in writing before an activity is undertaken.

The/ Department: means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Environmental values: includes but is not limited to habitat for **EPBC Act listed species and communities** and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

The/ EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed species and/or community/ies: means a threatened species or community, or a migratory species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Final EIS: means the North Galilee Basin Rail Project Additional Information to the Environmental Impact Statement as provided to **the Department** on 15 April 2014.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Impact/s/ed: has the definition assigned to it in section 527E of **the EPBC Act**.

King Bluegrass: means the King Bluegrass (*Dichanthium queenslandicum*) listed as a threatened species under **the EPBC Act**.

Koala: means the Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)) listed as a threatened species under **the EPBC Act**.

Legally secure/d: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matter/s of National Environmental Significance/ MNES: means matters of national environmental significance, being the relevant matters protected under Part 3 of **the EPBC Act**.

Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin: means the community of the same name listed as a threatened ecological community under **the EPBC Act**.

New or increased impact: a new or increased **impact** on any matter protected by the controlling provisions for the action, when compared to the management plan, report or strategy that has been approved by **the Minister**.

Ornamental Snake: means the Ornamental Snake (*Denisonia maculata*), listed as a threatened species under **the EPBC Act**.

Project area: means the identified *key features of the NGBR Project* in Figure 1-2 in Volume 2 Appendix B of the **Final EIS** and *Potential quarry and borrow locations* shown in Figure 2-2 in Volume 2 Appendix B of the **Final EIS**.

Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions: means the community of the same name listed as a threatened ecological community under **the EPBC Act**.

Squatter Pigeon: means the Squatter Pigeon (Southern) (*Geophaps scripta scripta*), listed as a threatened species under **the EPBC Act**.

State approvals: means any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Substantially commenced: means the same as **commenced**.

The Minister: means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

To: Deb Callister, Assistant Secretary, Queensland and Sea Dumping Assessment Branch
(for decision)

**Approval Decision Brief (recommendation report) – North Galilee Basin Rail Project,
Galilee Basin to Port of Abbot Point, Queensland (EPBC 2013/6885)**

Timing: 30 September 2014 - Statutory timeframe

Recommendations:

1. Consider the Recommendation Report at Attachment A.
Considered / please discuss
2. Consider the responses to the invitation for comment on the proposed decision at Attachment B1 to B5.
Considered / please discuss
3. Approve for each controlling provision, the action as summarised in the table below.
Approved / Not approved
4. Agree to attach the conditions of approval as set out in Attachment C1.
Agreed / Not agreed
5. If you agree to 3 and 4, accept the reasoning in the departmental briefing package as the reasons for your decision.
Accepted / Not accepted
6. Sign the notice of your decision at Attachment C1.
Signed / Not signed
7. Sign the letters at Attachment D advising the person proposing to take the action, and other relevant parties, of your decision.
Signed / Not signed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World heritage properties (ss 12, 15A)	Approve ✓	
National heritage places (ss 15B, 15C)	Approve ✓	
Listed threatened species and communities (ss 18, 18A)	Approve ✓	
Listed migratory species (ss 20, 20A)	Approve ✓	
Commonwealth marine area (ss 23, 24A)	Approve ✓	
Great Barrier Reef Marine Park (ss 24B, 24C)	Approve ✓	

**Deb Callister, Assistant Secretary,
Queensland and Sea Dumping Assessment Branch:**

Date: 23/9/14

Comments:

Key Points:

1. On 10 September 2014, as recommended by the Department in our proposed approval decision brief (**Attachment E**), you proposed to approve a proposal by Adani Mining Pty Ltd to develop and operate the North Galilee Basin Rail Project, under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act).
2. Also on that date, in accordance with sections 131 and 131AA of the EPBC Act, you wrote to the following parties (or their nominated representatives), inviting comments on your proposed approval decision:
 - the proponent (and person proposing to take the action), Adani Mining Pty Ltd
 - the Minister for Industry, the Hon Ian Macfarlane MP
 - the Minister for Agriculture, the Hon Barnaby Joyce MP
 - the Minister for Infrastructure and Regional Development, the Hon Warren Truss MP

Although not required under the EPBC Act, you also wrote to the Queensland Coordinator-General, Mr Barry Broe.

3. Responses to your invitation to comment on your proposed approval decision were received from the following parties and have been considered in finalising the Department's recommended decision:
 - Mr Hamish Manzi and S22 responded on behalf of Adani Mining Pty Ltd on 16 and 19 September 2014 respectively (**Attachment B1**). The responses included:
 - questioning the inclusion of conditions relating to the Great Barrier Reef World Heritage Area;
 - requesting clarification around timing for submission of offset plans; and
 - requesting clarification around commencement of the action and publication of plans on the approval holder's website.

The Department has made minor changes to conditions in response to Adani Mining Pty Ltd comments (See **Attachment C2**).

- S22 responded on behalf of Minister Macfarlane on 12 September 2014 (**Attachment B2**). The response was generally supportive of the proposed decision, noting the economic importance of the project. Mr Bewley also noted economic benefits of the associated Carmichael Coal Mine.
- S22 responded on behalf of Minister Joyce on 19 September 2014 (**Attachment B3**). The response noted that the proposed action would impact productive agricultural land, including land identified as 'strategic cropping land' under the *Regional Planning Interests Act 2014* (Qld). The Department of Agriculture requested the proponent be encouraged to actively consult with landholders to ensure fair and equitable land acquisition and compensation agreements. This Department notes that the proponent has actively consulted affected landholders throughout the assessment process.
- S22 responded on behalf of Minister Truss on 22 September 2014 (**Attachment B4**) advising there were no comments on the proposed approval decision.

- **s22** – Queensland Assistant Coordinator-General, responded on 19 September 2014 (**Attachment B5**). Mr Mill noted that the proposed conditions generally complemented conditions imposed by the Queensland Government.
4. You are now required under sections 130(1) and 133 of the EPBC Act to decide whether to approve the action.
 5. Key recommended changes from your proposed decision are shown in track-changes at **Attachment C2**. They are as follows:
 - clarification of Condition 5d to confirm that MNES Management Plans must only address species identified as likely to be impacted by the proposed action;
 - the time for the submission of a Biodiversity Offset was reduced to ensure requirements align with state conditions (Condition 10);
 - increased time to develop offset area management plans to allow baseline surveys to be undertaken (Condition 14);
 - clarification of Condition 18 to identify likely non-compliances;
 - changes to requirements for publication of documents referred to in conditions on the approval holder's website from the duration of the approval to 10 years, and a requirement to provide copies to any party that requests the documents otherwise. This is due to the large quantity of documents to be published; and
 - minor grammatical and referencing corrections.
 6. Except for issues discussed in this brief, the matters for your consideration and factors to be taken into account in making your decision remain as set out in our proposed approval decision brief (**Attachment E**).
 7. The Department's Engagement and Evaluation Branch is developing talking points. These will be provided to you separately.

s22

s22
 Director
 Queensland Assessment Section

s22
 Queensland Assessment Section
s22

s22
 23 September 2014

ATTACHMENTS

- A: Recommendation Report
- B1: Response to invitation for comment - Adani Mining Pty Ltd
- B2: Response to invitation for comment – Department of Industry
- B3: Response to invitation for comment – Department of Agriculture
- B4: Response to invitation for comment – Department of Infrastructure and Regional Development
- B5: Response to invitation for comment – Queensland Coordinator-General
- C1: Approval decision notice – FOR SIGNATURE
- C2: Approval decision notice (track-changes version)
- D: Correspondence advising of your decision – FOR SIGNATURE
- E: Proposed approval decision brief



Approval

**North Galilee Basin Rail Project, Abbot Point to Galilee Basin, Queensland
(EPBC 2013/6885)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN 145 455 205

proposed action The construction and operation of a rail corridor approximately 310 km in length, including standard gauge rail and associated infrastructure, from approximately 70 km east of the Carmichael Mine, to the Port of Abbot Point, Queensland [see EPBC Act referral 2013/6885 and request to vary proposal dated 16 April 2014].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Commonwealth marine areas (sections 23 & 24A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 September 2104

Decision-maker

name and position Deb Callister
Assistant Secretary
Queensland and Sea Dumping Assessment Branch

signature

date of decision 23 September 2014

Conditions attached to the approval

1. The Minister may determine that a plan, report or strategy approved by the Queensland Government satisfies a plan, report or strategy required under these conditions.

Project area

2. For the purpose of the proposed action, the **approval holder** must not clear vegetation outside the **Project area** shown in Figures 1-2 and 2-2 of Volume 2 Appendix B of the **Final EIS** unless targeted surveys have demonstrated that **Matters of National Environmental Significance** will not be impacted.

Disturbance limits

3. The **approval holder** must comply with the disturbance limits for specified **EPBC Act listed threatened species and ecological communities** as specified in Table 1.

Note: The maximum disturbance limits in Table 1 apply to authorised impacts on EPBC listed threatened species and communities as a result of construction, operation and decommissioning of the rail corridor and associated infrastructure within the Project area (i.e. they are 'whole of Project' disturbance limits) for the duration of the Project approval.

Table 1: Maximum disturbance limits for EPBC listed threatened species and communities.

Species	Maximum disturbance (i.e. maximum residual impact to habitat)
Listed threatened species – fauna	
Australian Painted Snipe	45.6 hectares
Black-throated Finch	1836.2 hectares
Squatter Pigeon	1361.8 hectares
Ornamental Snake	421.6 hectares
Koala	2047.6 hectares

Listed threatened species – flora	
Black Ironbox	175.4 hectares
King Bluegrass	263.3 hectares
Bluegrass	354.2 hectares
Threatened ecological community	Maximum disturbance (i.e. maximum residual impact to community)
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)	195.2 hectares
Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin	133.2 hectares
Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions	55.7 hectares

Note: Table 1 is derived from information in the Coordinator-General's Assessment Report (August 2014).

Matters of National Environmental Significance management plan/s (MNESMP)

4. At least three months prior to commencement, the approval holder must submit to the Minister for approval Matters of National Environmental Significance management plan/s for the management of direct and indirect impacts of the proposed action on Matters of National Environmental Significance, being for the purposes of the MNESMP: the species and communities listed in Table 1, and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

Note: If the MNESMP does not address any specific future activities it should be updated in accordance with Condition 20 and submitted to the Department prior to these specific future activities being undertaken.

5. The MNESMP must be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
 - a. a description of environmental values for each of the Matters of National Environmental Significance addressed in the MNESMP
 - b. details of baseline and impact monitoring measures to be implemented for each of the Matters of National Environmental Significance including control and impact sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely impacts resulting from the proposed action, to determine appropriate habitat management goals (See Conditions 5e and 5f)
 - c. details of potential impacts, including area of impact, on each of the Matters of National Environmental Significance from the proposed action, including impacts from:

- i. vegetation clearing
 - ii. earthworks
 - iii. construction works
 - iv. noise and vibration
 - v. train strike
 - vi. emissions (including dust)
 - vii. light spill and other visual impacts
 - viii. waterway crossings
 - ix. weeds and pests
- d. measures that will be undertaken to mitigate and manage **impacts on Matters of National Environmental Significance** resulting from the proposed action. These measures must include but not be limited to:
- i. For **Matters of National Environmental Significance** to which the MNESMP apply (see Conditions 4, 7 and 9), relevant mitigation measures proposed in sections 7.6, 7.8 and 7.9 of Volume 2 Appendix D of the **Final EIS**
 - ii. the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts on Matters of National Environmental Significance** are minimised
 - iii. measures to avoid **impacts on Matters of National Environmental Significance** and their habitat located in the **Project Area**, but outside areas to be cleared or constructed upon, including adjacent to cleared areas
 - iv. measures to rehabilitate all disturbed areas of habitat for **Matters of National Environmental Significance** addressed in the MNESMP (see Conditions 4, 7 and 9)
- e. goals for habitat management for each relevant **Matter of National Environmental Significance**
- f. a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Condition 5b). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes
- g. an ongoing monitoring program to determine the success of mitigation and management measures against the criteria required in Condition 5f, including monitoring locations, parameters and timing
- h. details of how non-compliance will be reported

- i. details of how the MNESMP will be updated to incorporate and address outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 5e and 5f)
 - j. details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the MNESMP
6. The **approval holder** must not commence until all the required MNESMP have been approved by the **Minister** in writing. The approved plan/s must be implemented.
 7. Where pre-clearance surveys, as required under **state approvals**, identify individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to the **Department**, the **approval holder** must notify the **Department** in writing within five business days of finding these individuals or habitat, and within 40 business days of finding these individuals or habitat must submit to the **Department** for the **Minister's** written approval updated MNESMP detailing how impacts to the newly identified **EPBC Act listed species or community** will be avoided, mitigated and/or offset. Once approved, the revised MNESMP must be implemented.
 8. The **approval holder** must revise the MNESMP following pre-clearance surveys required under **state approvals**, and resubmit the MNESMP to the **Department** for the **Minister's** written approval within 3 months of pre-clearance surveys being completed. Once approved, the revised MNESMP must be implemented.
 9. If, through pre-clearance surveys as required under **state approvals**, individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to the **Department** are identified, the **approval holder** must not start or, in the case of work already commenced, must immediately cease any part of the proposed action that may significantly impact that **EPBC Act listed species or community**, until MNESMP addressing these impacts have been approved by the **Minister** in writing. Once approved, the revised MNESMP must be implemented.

*Note: Management plans may also be required under associated EPBC approvals (EPBC 2010/5736 and EPBC 2011/6194) and under **state approvals**. Whenever possible a combined document should be prepared to address both state government and EPBC Act approval conditions.*

Biodiversity Offset Strategy

10. To compensate for authorised unavoidable impacts on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to the **Minister** at least two months prior to commencement.
11. Offsets for authorised unavoidable impacts (defined as maximum disturbance limits in Table 1, or actual impacts as defined after detailed design and pre-clearance surveys required under **state approvals**), must be managed in accordance with the BOS.

General requirements

12. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 5), and must include:

- a. location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
- b. details of how offset sites have been or will be **legally secured** within 2 years of commencement to ensure their long-term protection
- c. details of how offset sites adequately compensate for residual significant impacts to **Matters of National Environmental Significance** in accordance with the **EPBC Act Offsets Policy**
- d. a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
- e. a description of the potential risks to the successful implementation of the BOS, and details of measures that will be implemented to mitigate these risks
- f. details of how the BOS will be updated to incorporate outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 5e and 5f).
- g. an outline of how compliance with the BOS will be reported
- h. details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the BOS
- i. detailed processes for any residual **impacts on Matters of National Environmental Significance**, (see Condition 5f) to be offset in accordance with the **EPBC Act Offsets Policy** including a process for offset requirements to be developed in consultation with the **Department** and relevant Queensland Government agencies
- j. a detailed process for any significant residual **impact on any EPBC listed threatened species or ecological community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (see Condition 7)

13. The **approval holder** must not **commence** unless and until the BOS has been approved by the **Minister** in writing. The approved BOS must be implemented.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A single document may be prepared to address both State Government and EPBC Act approval conditions.

Offset area management plans

14. Within six months of identifying any offset area in accordance with Conditions 5 or 12, the **approval holder** must submit to the **Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:

- a. detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed species and community**, connectivity with other habitat areas and biodiversity corridors

- b. management measures and offset plans for each offset area to improve the habitats of relevant **Matters of National Environmental Significance**
 - c. a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
15. Once approved, offset area management plans must be implemented.

Standard conditions

16. Within 30 days of the **commencement** of the action, the **approval holder** must advise the **Department** in writing of the actual date of **commencement**.
17. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and strategies required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
18. Within three months of every 12 month anniversary of the **commencement** of the action, the **approval holder** must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. The report must remain on the website for three years. Documentary evidence providing proof of the date of publication must be provided to the **Department** at the same time as the compliance report is published. Likely (as defined by relevant triggers incorporated in the MNESMP as required by Condition 5f) or actual non-compliance with any of the conditions of this approval must be reported to the Department in writing within 2 business days of the approval holder becoming aware of the likely or actual non-compliance.
19. Upon the direction of the **Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor and audit criteria must be approved by the **Minister** prior to the **commencement** of the audit. The audit report must address the criteria to the satisfaction of the **Minister**.
20. If the **approval holder** wishes to carry out any activity otherwise than in accordance with the management plans, reports, and strategies as specified in the conditions, the **approval holder** must submit to the **Department** for the **Minister's** written approval a revised version of those management plans, reports, and strategies. The varied activity shall not **commence** until the **Minister** has approved the varied management plans, reports, and strategies in writing. The **Minister** will not approve varied management plans, reports, and strategies unless the revised management plans, reports, and strategies would result in an equivalent or improved environmental outcome over time. If approved by the **Minister**, the revised management plans, reports, and strategies, must be implemented in place of the management plans, reports, and strategies originally approved.

21. If the **Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, listed threatened species and communities, listed migratory species, the Great Barrier Reef Marine Park or Commonwealth marine areas to do so, the **Minister** may request that the **approval holder** make specified revisions to the management plans, reports, and strategies specified in the conditions and submit the revised management plans, reports, and strategies for the **Minister's** written approval. The **approval holder** must comply with any such request. The revised approved management plans, reports, and strategies must be implemented. Unless the **Minister** has approved the revised management plans, reports, and strategies, then the **approval holder** must continue to implement the management plans, reports, and strategies originally approved, as specified in the conditions.
22. If, at any time after five years from the date of this approval, **approval holder** has not **substantially commenced** the action, then the **approval holder** must not **substantially commence** the action without the written agreement of the **Minister**.
23. Unless otherwise agreed to in writing by the **Minister**, the **approval holder** must publish all management plans, reports, and strategies referred to in these conditions of approval on its website. Each management plan, report, and strategy must be published on the website within one month of being approved and remain on the website for not less than ten years, or a longer period if specified in writing by the **Minister**, and be otherwise made available to any party upon written request for the duration of the approval. The **approval holder** must provide the requested management plan/s, report/s and/or strategy/ies to the requesting party within 10 business days of receiving the request.

Definitions:

Approval holder: The person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of the EPBC Act.

Australian Painted Snipe: means the Australian Painted Snipe (*Rostratula australis*) listed as a threatened and migratory species under the EPBC Act.

Black-throated Finch: means the Black-throated Finch (Southern) (*Poephila cincta cincta*) listed as a threatened species under the EPBC Act.

Black Ironbox: means the Black Ironbox (*Eucalyptus raveretiana*) listed as a threatened species under the EPBC Act.

Bluegrass: means the Bluegrass (*Dichanthium setosum*) listed as a threatened species under the EPBC Act.

Brigalow (*Acacia harpophylla* dominant and co-dominant): means the community of the same name listed as a threatened ecological community under the EPBC Act.

Commence/Commenced/Commencement/Commencing: means any physical disturbance including clearing of vegetation that is an **EPBC listed species or community** or that is habitat for an **EPBC listed species or community** for the purposes of the proposed action.

Commencement does not include:

- a. minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or

- b. activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse impact on **Matters of National Environmental Significance**, and only if the **approval holder** has notified the **Department** in writing before an activity is undertaken.

The/ Department: means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Environmental values: includes but is not limited to habitat for **EPBC Act listed species and communities** and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

The/ EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed species or community/ies: means a threatened species or community, or a migratory species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Final EIS: means the North Galilee Basin Rail Project Additional Information to the Environmental Impact Statement as provided to the **Department** on 15 April 2014.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Impact/s/ed: has the definition assigned to it in section 527E of the EPBC Act.

King Bluegrass: means the King Bluegrass (*Dichanthium queenslandicum*) listed as a threatened species under the EPBC Act.

Koala: means the Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)) listed as a threatened species under the EPBC Act.

Legally secure/d: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matters of National Environmental Significance/ MNES: means matters of national environmental significance, being the relevant matters protected under Part 3 of the EPBC Act.

Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin: means the community of the same name listed as a threatened ecological community under the EPBC Act.

Ornamental Snake: means the Ornamental Snake (*Denisonia maculata*), listed as a threatened species under the EPBC Act.

Project area: means the identified *key features of the NGBR Project* in Figure 1-2 in Volume 2 Appendix B of the **Final EIS** and *Potential quarry and borrow locations* shown in Figure 2-2 in Volume 2 Appendix B of the **Final EIS**.

Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions: means the community of the same name listed as a threatened ecological community under the EPBC Act.

Squatter Pigeon: means the Squatter Pigeon (Southern) (*Geophaps scripta scripta*), listed as a threatened species under the EPBC Act.

State approvals: means any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Substantially commenced: means the same as **commenced**.

The Minister: means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

DEPARTMENT OF THE ENVIRONMENT

To: Deb Callister, Assistant Secretary, Queensland and Sea Dumping Assessment Branch
(for decision)

Proposed Approval Decision Brief (recommendation report) – North Galilee Basin Rail Project, Galilee Basin to Port of Abbot Point, Queensland (EPBC 2013/6885)

Timing: As soon as possible to allow for consultation on the proposed decision – statutory date timeframe for the final approval decision is due 20 September 2014

Recommendations:

1. Consider the recommendation report at Attachment A.
Considered / please discuss
2. Consider the finalised EIS at Attachment C.
Considered / please discuss
3. Agree that the recommended decision on page 1 of the recommendation report (Attachment A) and summarised in the table below, reflects your proposed decision.
Agreed / Not agreed
4. Sign the letters at Attachment H to consult the proponent, the person proposing to take the action, the Queensland Coordinator-General, and relevant Commonwealth ministers on your proposed decision.
Signed/ please discuss
5. Agree to not publish the proposed decision at Attachment E on the internet for public comment.
Agreed / Not agreed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World heritage properties (ss 12, 15A)	Approve	
National heritage places (ss 15B, 15C)	Approve	
Listed threatened species and communities (ss 18, 18A)	Approve	
Listed migratory species (ss 20, 20A)	Approve	
Commonwealth marine area (ss 23, 24A)	Approve	
Great Barrier Reef Marine Park (ss 24B, 24C)	Approve	



Deb Callister, Assistant Secretary,
Queensland and Sea Dumping Assessment Branch:

Date: 19/9/14

Comments:

Key Points

1. This brief seeks your consideration of a proposed approval decision on Adani Mining Pty Ltd's, ACN 145 455 205, (Adani) proposal to develop and operate the North Galilee Basin Rail Project (the NGBR project) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Further detail of the proposal and the Department's assessment is set out at **Attachment A**.
2. Under the EPBC Act, you are required to make a proposed decision on the NGBR project and consult with the proponent and relevant Commonwealth ministers for up to 10 business days prior to making a final decision. The statutory timeline for a final decision is 20 September 2014.
3. The NGBR project is a rail corridor and associated infrastructure to transport coal from a point approximately 70 km east of Adani's Carmichael Coal Mine (assessed and approved under the EPBC Act – EPBC 2010/5736) to Adani's proposed Terminal 0 at the Port of Abbot Point (assessed and approved under the EPBC Act – EPBC 2011/6194).
4. The NGBR project involves the construction and operation of approximately 310 km of standard gauge rail track across greenfield sites, with associated passing loops, bridges, maintenance facilities, construction depots and accommodation camps and borrow areas/quarries.
5. The NGBR project was referred for consideration under the EPBC Act on 29 May 2013. On 27 June 2013, you determined the NGBR project was a controlled action to be assessed by environmental impact statement (EIS), due to likely significant impacts on: World Heritage properties (s12 & s15A); National Heritage places (s15B & s15C); Listed Migratory Species (s20 & s20A); Listed Threatened Species and Communities (s18 & s18A); Commonwealth Marine areas (s23 & s24A); and, the Great Barrier Reef Marine Park (s24B & s24C).
6. A draft EIS for the NGBR project was released for public comment from 16 December 2013 to 11 February 2014. There were 46 submissions, including 22 state agency submissions, received during the public consultation period on the draft EIS. Further detail is provided at **Attachment A** and the submissions are included at **Attachment B**.
7. The final EIS (**Attachment C**), including Adani's responses to comments and updated information, was submitted to the Department on 15 April 2014.
8. The NGBR Project was assessed and approved by the Queensland Government as a coordinated project under the *State Development and Public Works Organisation Act 1971* (Qld) (State assessment report at **Attachment D**). As the EPBC assessment included controlling provisions beyond the scope of a bilateral agreement or accredited assessment process at the time, these assessment processes were not invoked.
9. If approved, the NGBR project will impact on matters of national environmental significance, both during construction and its ongoing operations. The Department's analysis of these issues is detailed in the Recommendation Report at **Attachment A**. The principal impacts identified are removal of habitat for listed threatened and migratory species, removal of threatened ecological communities, and potential downstream impacts to the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.
10. The Department has assessed the impacts of the NGBR project. The Department's assessment has taken into account Adani's proposed avoidance, mitigation and management measures. The Department considers that impacts to matters of national environmental significance will not

be unacceptable provided the action is undertaken in accordance with the recommended approval conditions at **Attachment E** and summarised below:

- Limit clearing of threatened and migratory species habitat to that described in the Final EIS; and
- develop and implement Matters of National Environmental Significance Management Plan/s, that incorporate/s management measures described in the Final EIS to limit impacts to the relevant protected matters.

11. The Department considers that there would be significant residual impacts to a number of listed threatened and migratory species, threatened ecological communities and the Great Barrier Reef World Heritage Area, from the construction and operation of the NGBR project and recommends that offsets be provided by Adani, through an offset strategy and associated offset plan/s.
12. Coal mining and associated export through the Great Barrier Reef World Heritage Area is contentious. Projects associated with the NGBR Project include the Abbot Point Terminal 0 project (EPBC 2011/6194), Abbot Point Terminal 0, 2 and 3 Capital Dredging project (EPBC 2011/6213), and the Carmichael Mine and Rail project (EPBC 2010/5736). These associated projects have been approved under the EPBC Act. Due to their interconnected nature, you may wish to consider the approvals for these other projects (**Attachment F**).
13. Management of the Great Barrier Reef World Heritage Area is under close scrutiny by the World Heritage Committee. The Committee has made a number of recommendations on measures to limit the impacts of port development on the Reef including a request that development is not permitted if it would impact individually or cumulatively on the outstanding universal value of the property. The Department considers that the proposed decision and recommended conditions for this project are not inconsistent with the Committee's position. Nevertheless, approval of this project may raise World Heritage Committee concerns. Heritage advice from the Department's Wildlife, Heritage and Marine Division was provided in relation to the final EIS, and was taken into consideration in assessing the proposal and recommending conditions. The Heritage advice is at **Attachment G**.
14. The recently endorsed strategic assessment of the Great Barrier Reef World Heritage Area and adjacent coastal zone has been taken into consideration in the assessment of the NGBR project.

15. In making the proposed decision on whether or not to approve the proposal, and what conditions to attach, you are required to consider a range of mandatory considerations under the EPBC Act. Those considerations are outlined in the recommendation report (**Attachment A**).

s22

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Director
Queensland Assessment Section
Queensland & Sea Dumping Assessment Branch
s22

5 September 2014

s22

Queensland Assessment Section
s22

ATTACHMENTS

- A:** Secretary's Recommendation report
- Attachment A:** All relevant Recovery Plans, Threat Abatement Plans and Approved Recovery Advices
- Attachment B:** Statement of Outstanding Universal Value for the Great Barrier Reef World Heritage Area
- B:** Copies of submissions received on the final EIS
- C:** Final Environmental Impact Statement (April 2014)
- D:** State Assessment Report
- E:** Proposed approval decision – NOT FOR SIGNATURE
- F:** Decision notices for Abbot Point Terminal 0 project (EPBC 2011/6194), Abbot Point Terminal 0, 2 and 3 Capital Dredging project (EPBC 2011/6213), and the Carmichael Mine and Rail project (EPBC 2010/5736)
- G:** Heritage advice on the final EIS
- H:** Letters to proponent, Queensland Coordinator-General and Commonwealth Ministers - FOR SIGNATURE



Proposed Approval

**North Galilee Basin Rail Project, Abbot Point to Galilee Basin, Queensland
(EPBC 2013/6885)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Mining Pty Ltd

proponent's ACN 145 455 205

proposed action The construction and operation of a rail corridor approximately 310 km in length, including standard gauge rail and associated infrastructure, from approximately 70 km east of the Carmichael Mine, to the Port of Abbot Point, Queensland [see EPBC Act referral 2013/6885 and request to vary proposal dated 16 April 2014].

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approved
National Heritage places (sections 15B & 15C)	Approved
Listed threatened species and communities (sections 18 & 18A)	Approved
Listed migratory species (sections 20 & 20A)	Approved
Commonwealth marine areas (sections 23 & 24A)	Approved
Great Barrier Reef Marine Park (sections 24B & 24C)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 20 September 2104

Decision-maker

name and position Deb Callister
Assistant Secretary
Queensland and Sea Dumping Assessment Branch

signature **NOT FOR SIGNATURE**

date of decision **N/A**

Conditions attached to the approval

1. **The Minister** may determine that a plan, strategy or program approved by the Queensland Government satisfies a plan, strategy or program required under these conditions.

Project area

2. For the purpose of the proposed action, the **approval holder** must not clear vegetation outside the **Project area** shown in Figures 1-2 and 2-2 of Volume 2 Appendix B of the **Final EIS** unless targeted surveys have demonstrated that **Matters of National Environmental Significance** will not be impacted.

Disturbance limits

3. The **approval holder** must comply with the disturbance limits for specified **EPBC Act listed threatened species and ecological communities** as specified in Table 1.

Note: The maximum disturbance limits in Table 1 apply to authorised impacts on EPBC listed threatened species and communities as a result of construction, operation and decommissioning of the rail corridor and associated infrastructure within the Project area (i.e. they are 'whole of Project' disturbance limits) for the duration of the Project approval.

Table 1: Maximum disturbance limits for EPBC listed threatened species and communities.

Species	Maximum disturbance (i.e. maximum residual impact to habitat)
Listed threatened species – fauna	
Australian Painted Snipe	45.6 hectares
Black-throated Finch	1836.2 hectares
Squatter Pigeon	1361.8 hectares
Ornamental Snake	421.6 hectares
Koala	2047.6 hectares

Listed threatened species – flora	
Black Ironbox	175.4 hectares
King Bluegrass	263.3 hectares
Bluegrass	354.2 hectares
Threatened ecological community	Maximum disturbance (i.e. maximum residual impact to community)
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)	195.2 hectares
Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin	133.2 hectares
Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions	55.7 hectares

Note: Table 1 is derived from information in the Coordinator-General's assessment Report (August 2014).

Matters of National Environmental Significance management plan/s (MNESMP)

4. At least three months prior to commencement, the approval holder must submit to the Minister for approval **Matters of National Environmental Significance** management plan/s for the management of direct and indirect impacts of the proposed action on **Matters of National Environmental Significance**, being for the purposes of the MNESMP: the species and communities listed in Table 1, and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

Note: If the MNESMP does not address any specific future activities it should be updated in accordance with Condition 17 and submitted to the Department prior to these specific future activities being undertaken.

5. The MNESMP must be consistent with relevant recovery plans, threat abatement plans and approved conservation advices and must include:
 - a. a description of **environmental values** for each of the **Matters of National Environmental Significance** addressed in the MNESMP
 - b. details of baseline and **impact** monitoring measures to be implemented for each of the **Matters of National Environmental Significance** including control and **impact** sites to be monitored throughout the life of the project. The monitoring must provide sufficient data to quantify likely **impacts** resulting from the proposed action, to determine appropriate habitat management goals (See Conditions 5e and 5f)
 - c. details of potential **impacts**, including area of **impact**, on each of the **Matters of National Environmental Significance** from the proposed action, including **impacts** from:

- i. vegetation clearing
 - ii. earthworks
 - iii. construction works
 - iv. noise and vibration
 - v. train strike
 - vi. emissions (including dust)
 - vii. light spill and other visual **impacts**
 - viii. waterway crossings
 - ix. weeds and pests
- d. measures that will be undertaken to mitigate and manage **impacts** on **Matters of National Environmental Significance** resulting from the proposed action. These measures must include but not be limited to:
- i. measures proposed for the management and protection of **Matters of National Environmental Significance** addressed in the MNESMP in sections 7.6, 7.8 and 7.9 in Volume 2 Appendix D of the **Final EIS**
 - ii. the use of fauna spotters prior to and during all vegetation clearing activities to ensure **impacts** on **Matters of National Environmental Significance** are minimised
 - iii. measures to avoid **impacts** on **Matters of National Environmental Significance** and their habitat located in the **Project Area**, but outside areas to be cleared or constructed upon, including adjacent to cleared areas
 - iv. measures to rehabilitate all areas of **Matters of National Environmental Significance** habitat
- e. goals for habitat management for each relevant **Matter of National Environmental Significance**
- f. a table of specific criteria for assessing the success of management measures against goals, and triggers for implementing corrective measures if criteria are not met within specified timeframes. Goals and triggers must be based on the baseline condition of the relevant **Matters of National Environmental Significance** as determined through baseline monitoring (see Condition 5b). Corrective measures must include provision of offsets where it is determined that corrective management measures have not achieved goals within specified timeframes
- g. an ongoing monitoring program to determine the success of mitigation and management measures against the stated criteria in Condition 5f, including monitoring locations, parameters and timing
- h. details of how non-compliance will be reported

- i. details of how the MNESMP will be updated to incorporate and address outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as required under Conditions 5e and 5f)
 - j. details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the MNESMP
6. The **approval holder** must not **commence** until all the required MNESMP have been approved by **the Minister** in writing. The approved plan/s must be implemented.
 7. Where pre-clearance surveys, as required under **state approvals**, identify individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to **the Department**, the **approval holder** must notify **the Department** in writing within five business days of finding these individuals or habitat, and within 40 business days of finding these individuals or habitat must submit to the **Department** for the **Minister's** written approval updated MNESMP detailing how impacts to the newly identified **EPBC Act listed species or community** will be avoided, mitigated and/or offset. Once approved, the revised MNESMP must be implemented.
 8. The **approval holder** must revise the MNESMP following pre-clearance surveys required under **state approvals**, and resubmit the MNESMP to the **Department** for the **Minister's** written approval within 3 months of pre-clearance surveys being completed. Once approved, the revised MNESMP must be implemented.
 9. If, through pre-clearance surveys as required under **state approvals**, individuals of, or habitat for, an **EPBC Act listed species or community** not previously identified and reported to **the Department** are identified, the **approval holder** must not start or, in the case of work already commenced, must immediately cease any part of the proposed action that may significantly impact that **EPBC Act listed species or community**, until MNESMP addressing these impacts have been approved by the **Minister** in writing. Once approved, the revised MNESMP must be implemented.

Note: Management plans may also be required under associated EPBC approvals (EPBC 2010/5736 and EPBC 2011/6194) and under state approvals. Whenever possible a combined document should be prepared to address both state government and EPBC Act approval conditions.

Biodiversity Offset Strategy

10. To compensate for authorised unavoidable **impacts** on **Matters of National Environmental Significance**, the **approval holder** must submit a Biodiversity Offset Strategy (BOS) to **the Minister** at least three months prior to **commencement**.
11. Offsets for authorised unavoidable **impacts** (defined as maximum disturbance limits in Table 1, or actual impacts as defined after detailed design and pre-clearance surveys required under **state approvals**), must be managed in accordance with the BOS.

General requirements

12. The BOS must be consistent with the **Galilee Basin Strategic Offset Strategy**, relevant recovery plans, threat abatement plans, conservation advices and MNESMP (see Condition 5), and must include:

- a. location of species and communities habitat offset areas including maps in electronic Geographic Information System (GIS) format
- b. details of how offset sites have been or will be **legally secured** within 2 years of **commencement** to ensure their long-term protection
- c. details of how offset sites adequately compensate for residual significant impacts to **Matters of National Environmental Significance** in accordance with the **EPBC Act Offsets Policy**
- d. a monitoring program for the offset site/s suitable to measure the success of the management measures against stated performance criteria including monitoring locations, parameters and timing
- e. a description of the potential risks to the successful implementation of the BOS, and details of measures that will be implemented to mitigate these risks
- f. details of how the BOS will be updated to incorporate outcomes from surveys undertaken for **Matters of National Environmental Significance** under this and any **state approvals**, including updating of goals, criteria and triggers (as outlined at Conditions 5e and 5f).
- g. an outline of how compliance with the BOS will be reported
- h. details of qualifications and experience of persons responsible for undertaking monitoring, review, and implementation of the BOS
- i. detailed processes for any residual **impacts** on **Matters of National Environmental Significance**, (see Condition 5f) to be offset in accordance with the **EPBC Act Offsets Policy** including a process for offset requirements to be developed in consultation with **the Department** and relevant Queensland Government agencies
- j. a detailed process for any significant residual **impact** on any **EPBC listed threatened species or ecological community** not identified in Table 1 to be offset in accordance with the **EPBC Act Offsets Policy** (see Condition 7)

13. The **approval holder** must not **commence** unless and until the BOS has been approved by **the Minister** in writing. The approved BOS must be implemented.

Note: A Biodiversity Offset Strategy is also required under the State Government approval for the project. A single document may be prepared to address both State Government and EPBC Act approval conditions.

Offset area management plans

14. Within three months of identifying any offset area in accordance with **Conditions 5 or 12**, the **approval holder** must submit to **the Minister** for approval a management plan for that offset area. Each offset area management plan must address the relevant requirements of the BOS, and contain:
- a. detailed baseline description of offset areas, including surveys undertaken, condition of existing **Matters of National Environmental Significance** and their habitats, relevant **environmental values**, area of primary habitat for each **EPBC Act listed species and community**, connectivity with other habitat areas and biodiversity corridors

- b. management measures and offset plans for each offset area to improve the habitats of relevant **Matters of National Environmental Significance**
 - c. a table of specific goals and associated timeframes for habitat management measures for each offset area with criteria for assessing the success of habitat management measures and corrective measures to be implemented if criteria are not met
15. Once approved, offset area management plans must be implemented.

Standard conditions

16. Within 30 days of the **commencement** of the action, the **approval holder** must advise **the Department** in writing of the actual date of **commencement**.
17. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, reports, and strategies required by this approval, and make them available upon request to **the Department**. Such records may be subject to audit by **the Department** or an independent auditor in accordance with section 458 of **the EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on **the Department's** website. The results of audits may also be publicised through the general media.
18. Within three months of every 12 month anniversary of the **commencement** of the action, the **approval holder** must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. The report must remain on the website for three years. Documentary evidence providing proof of the date of publication must be provided to **the Department** at the same time as the compliance report is published. Likely or actual non-compliance with any of the conditions of this approval must be reported to the Department in writing within 2 business days of the approval holder becoming aware of the likely or actual non-compliance.
19. Upon the direction of **the Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to **the Minister**. The independent auditor and audit criteria must be approved by **the Minister** prior to the **commencement** of the audit. The audit report must address the criteria to the satisfaction of **the Minister**.
20. If the **approval holder** wishes to carry out any activity otherwise than in accordance with the management plans, reports, and strategies as specified in the conditions, the **approval holder** must submit to **the Department** for **the Minister's** written approval a revised version of that management plans, reports, and strategies. The varied activity shall not **commence** until **the Minister** has approved the varied management plans, reports, and strategies in writing. **The Minister** will not approve varied management plans, reports, and strategies unless the revised management plans, reports, and strategies would result in an equivalent or improved environmental outcome over time. If approved by **the Minister**, the revised management plans, reports, and strategies, must be implemented in place of the management plans, reports, and strategies originally approved.
21. If **the Minister** believes that it is necessary or convenient for the better protection of World Heritage properties, National Heritage places, listed threatened species and

communities, listed migratory species, the Great Barrier Reef Marine Park or Commonwealth marine areas to do so, **the Minister** may request that the **approval holder** make specified revisions to the management plans, reports, and strategies specified in the conditions and submit the revised management plans, reports, and strategies for **the Minister's** written approval. The **approval holder** must comply with any such request. The revised approved management plans, reports, and strategies must be implemented. Unless **the Minister** has approved the revised management plans, reports, and strategies, then the person taking the action must continue to implement the management plans, reports, and strategies originally approved, as specified in the conditions.

22. If, at any time after five years from the date of this approval, **approval holder** has not **substantially commenced** the action, then the person taking the action must not **substantially commence** the action without the written agreement of **the Minister**.
23. Unless otherwise agreed to in writing by **the Minister**, the **approval holder** must publish all management plans, reports, and strategies referred to in these conditions of approval on its website. Each management plan, report, and program must be published on the website within one month of being approved and remain on the website for the life of the approval.

Definitions:

Approval holder: The person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of the EPBC Act.

Australian Painted Snipe: means the Australian Painted Snipe (*Rostratula australis*) listed as a threatened and migratory species under the EPBC Act.

Black-throated Finch: means the Black-throated Finch (Southern) (*Poephila cincta cincta*) listed as a threatened species under the EPBC Act.

Black Ironbox: means the Black Ironbox (*Eucalyptus raveretiana*) listed as a threatened species under the EPBC Act.

Bluegrass: means the Bluegrass (*Dichanthium setosum*) listed as a threatened species under the EPBC Act.

Brigalow (*Acacia harpophylla* dominant and co-dominant): means the community of the same name listed as a threatened ecological community under the EPBC Act.

Commence/Commenced/Commencement/Commencing: means any physical disturbance including clearing of vegetation that is an **EPBC listed species or community** or that is habitat for an **EPBC listed species or community** for the purposes of the proposed action.

Commencement does not include:

- a. minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs or associated with the mobilisation of the plant, equipment, materials, machinery and personnel prior to the start of railway and road development or construction; or
- b. activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of railway or road development or construction only if such activities will have no adverse impact on **Matters of National Environmental Significance**, and only if the **approval holder** has notified the Department in writing before an activity is undertaken.

The/ Department: means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Environmental values: includes but is not limited to habitat for **EPBC Act listed species and communities** and the Outstanding Universal Value of the Great Barrier Reef World Heritage Area.

EPBC/ EPBC Act: means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012).

EPBC Act listed species or community/ies: means a threatened species or community, or a migratory species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Final EIS: means the North Galilee Basin Rail Project Additional Information to the Environmental Impact Statement as provided to the **Department** on 15 April 2014.

Galilee Basin Strategic Offset Strategy: is the Queensland Government Department's Galilee Basin Strategic Offset Strategy (2013) or any future updated version.

Impact/s/ed: has the definition assigned to it in section 527E of the EPBC Act.

King Bluegrass: means the King Bluegrass (*Dichanthium queenslandicum*) listed as a threatened species under the EPBC Act.

Koala: means the Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)) listed as a threatened species under the EPBC Act.

Legally secure/d: means to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against developments incompatible with conservation.

Matters of National Environmental Significance/ MNES: means matters of national environmental significance, being the relevant matters protected under Part 3 of the EPBC Act.

Natural grasslands of the Queensland central highlands and the northern Fitzroy Basin: means the community of the same name listed as a threatened ecological community under the EPBC Act.

Ornamental Snake: means the Ornamental Snake (*Denisonia maculata*), listed as a threatened species under the EPBC Act.

Project area: means the identified *key features of the NGBR Project* in Figure 1-2 in Volume 2 Appendix B of the **Final EIS** and *Potential quarry and borrow locations* shown in Figure 2-2 in Volume 2 Appendix B of the **Final EIS**.

Semi-evergreen vine thickets of the Brigalow Belt (north and south) and Nandewar regions: means the community of the same name listed as a threatened ecological community under the EPBC Act.

Squatter Pigeon: means the Squatter Pigeon (Southern) (*Geophaps scripta scripta*), listed as a threatened species under the EPBC Act.

State approvals: means any permits, licences or other authorisations, including any associated conditions, issued in relation to the action by any Queensland Government agency.

Substantially commenced: means the same as **commenced**.

The Minister: means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

DEPARTMENT OF THE ENVIRONMENT



FOI 190426
Document 9

PDR: MS13-001024

To: Minister (for decision)

APPROVAL DECISION BRIEF (RECOMMENDATION REPORT) – ABBOT POINT COAL TERMINAL 0, PORT OF ABBOT POINT, QUEENSLAND (EPBC 2011/6194)

Timing: 13 December 2013 - Statutory timeframe.

Recommendations:

1. Consider the Secretary's Recommendation Report (Attachment B to MS13-000810 at Attachment A). Considered / please discuss
2. Consider the responses to the invitation for comment on the proposed decision at Attachment B. Considered / please discuss
3. Approve, for each controlling provision, the action as summarised in the table below. Approved / Not approved
4. Agree to attach the conditions of approval as set out in Attachment E. Agreed / Not agreed
5. Sign the notice of your decision at Attachment E. Signed / Not signed
6. If you agree to 3 and 4, accept the reasoning in the departmental briefing package as the reasons for your decision. Accepted / Please discuss
7. Sign the letters at Attachment F advising the person proposing to take the action, and other relevant parties, of your decision. Signed / Not signed
8. Agree to publish the Secretary's Recommendation Report on the internet (Attachment B to MS13-000810 at Attachment A). Agreed / Not agreed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World heritage properties (ss 12, 15A)	Approve	
National heritage places (ss 15B, 15C)	Approve	
Listed threatened species and communities (ss 18, 18A)	Approve	
Listed migratory species (ss 20, 20A)	Approve	
Commonwealth marine area (ss 23, 24A)	Approve	
Great Barrier Reef Marine Park (ss 24B, 24C)	Approve	

Minister:  Date: 10:12:2013

Comments:

Key Points:

1. This brief seeks your consideration of the approval of Adani Abbot Point Terminal Pty Ltd's (Adani's) proposal to construct and operate the Abbot Point Coal Terminal 0 (T0), including onshore and offshore infrastructure, at the Port of Abbot Point, Queensland, under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
2. On 8 November 2013, as recommended in the proposed approval decision brief - MS13-000810 (**Attachment A**), you made a proposed approval decision and wrote inviting comment from the proponent, the Minister for Industry, the Minister for Infrastructure and Regional Development, and the Chairman and Chief Executive of the Great Barrier Reef Marine Park Authority. Under the EPBC Act, you must consider relevant comments that have been given to you in response to your invitations to comment on the proposed approval (see responses at **Attachment B**).
3. A summary of the comments on your proposed decision is given below.
4. The Department discussed the proposed approval conditions with Adani on several occasions, resulting in some proposed amendments to the condition set.
5. The proponent's comments and the Department's recommended amendments to the conditions of approval are at **Attachment C**. A 'tracked changes version' of the proposed decision notice, highlighting recommended changes, is at **Attachment D**.
6. The matters for consideration and factors to be taken into account for your approval decision remain as set out in the proposed approval decision brief - MS13-000810 (**Attachment A**).
7. Following your decision on this project, the Department will advise the UNESCO World Heritage Centre, who have asked to be kept informed of approvals of major projects in the Great Barrier Reef World Heritage Area.
8. Letters notifying the proponent, relevant Commonwealth ministers and the Great Barrier Reef Marine Park Authority of your decision are at **Attachment F** for your signature.
9. Given the public interest in this proposal, the Department also recommends you publish the Secretary's recommendation report on the Department's website.

Consultation:

10. The Great Barrier Reef Marine Park Authority, the Approvals Monitoring North Section and Public Affairs have been consulted. Public Affairs will provide media material separately.
11. The outcome of your formal consultation is as follows (full responses to your proposed decision are at **Attachment B**).

	Comment
Minister for Industry	Agreed.
Minister for Infrastructure and Regional Development	Agreed. Suggested the insertion of "...shipping activities undertaken are in accordance with applicable international safety and environmental regulations and the most..." into condition 12(c). This has been included.
Great Barrier Reef Marine Park Authority	No comment.

Designated Proponent	<p>Agreed. Provided a number of comments as outlined in Attachments B & C, including concerns over:</p> <ul style="list-style-type: none"> - operational constraints on pile driving and limiting vessel speeds in the port area; - perceived liability for actions undertaken by third parties (in the context of the management plans), - the requirement for an Indigenous Consultation and Heritage Plan; - your capacity to require changes to management plans; - Marine Offset Plan funding requirements. Adani has, however, formally consented to providing a contribution of \$450,000 per annum (GST exclusive, and CPI adjusted).
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Deb Callister
Assistant Secretary
Queensland and Sea Dumping Assessment Branch
Environment Assessment and Compliance Division

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29 November 2013

ATTACHMENTS

- A: Proposed approval decision brief (MS13-000056) including the Secretary's Recommendation Report – table and documents provided on USB drive
- B: Responses to invitation for comment on proposed decision – provided on USB drive
- C: Summary table of proponent's responses
- D: Tracked changes version of proposed decision
- E: Notice of decision - FOR SIGNATURE
- F: Letters to the proponent, GBRMPA and Commonwealth Ministers - FOR SIGNATURE



Approval

**ABBOT POINT COAL TERMINAL 0, PORT OF ABBOT POINT, QUEENSLAND
 (EPBC 2011/6194)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Abbot Point Terminal Pty Ltd

proponent's ACN ACN: 149 298 206

proposed action To construct and operate the Abbot Point Coal Terminal 0 (T0), including onshore and offshore infrastructure, at the Port of Abbot Point, Queensland (See EPBC Act referral 2011/6194).

Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approve
National Heritage places (sections 15B & 15C)	Approve
Listed threatened species and communities (sections 18 & 18A)	Approve
Listed migratory species (sections 20 & 20A)	Approve
Commonwealth marine areas (sections 23 & 24A)	Approve
Great Barrier Reef Marine Park (sections 24B & 24C)	Approve

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until **30 November 2053**

Decision-maker

name and position The Hon. Greg Hunt MP, Minister for the Environment

Signature



date of decision

10:12:2013

Conditions attached to the approval

1. The approved action must be undertaken in the project area depicted in Figures 2-4a and 2-4b at Annexure A.
2. The approval holder must not cut down, clear or remove any of the listed endangered ecological community *Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions* as shown in the dark blue shaded area in Figure 3-76 of the **Final Environmental Impact Statement**, reproduced at Annexure B.

Pile Driving Operations

3. The approval holder must implement conditions 4 to 10, inclusive, related to any pile driving operations to minimise the **impacts** of underwater noise and disturbance on the following identified **protected matters**:
 - i. **Listed turtle species**;
 - ii. **Listed dolphin species**;
 - iii. Dugong (*Dugong dugong*); and,
 - iv. Humpback Whale (*Megaptera novaeangliae*).
4. Visual observations for the **protected matters** at condition 3 must be undertaken across the entire **observation zone**. The visual observations must be undertaken by a suitably qualified marine observer for at least 30 minutes immediately preceding the commencement of **piling activities**, and during pile driving operations. The criteria for a suitably qualified marine observer must be submitted to the **Minister** for approval and records must be kept of marine observers subsequently engaged. Pile driving activities must not commence until the criteria has been approved in writing by the **Minister**.
5. The approval holder must develop **exclusion zones** to ensure that each of the **protected matters** at condition 3 are not exposed to sound exposure levels of greater than or equal to 183 dB re 1µ Pa².s from **piling activities**. The **exclusion zones** must be informed by noise modelling based at the site of the **piling activities**. **Piling activities** must not commence until the **exclusion zones** have been approved in writing by the **Minister**.
6. If Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** are sighted within the relevant **exclusion zone**, the approval holder must commence action to cease all **piling activities** within two minutes of the sighting or as soon as possible if it is unsafe to cease piling operations within two minutes. Every 30 days during periods when pile driving operations are occurring, the approval holder must report the number of incidents where the action to cease marine **piling activities** did not commence within two minutes.

7. **Piling activities** must not commence again until Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** are observed to move outside the **exclusion zone** or 30 minutes have passed since the last sighting of the Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** within the **exclusion zone**.
8. **Piling activities** must be initiated at the soft start level and then built up to full operating impact force. The **soft start procedures** can only commence if no Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** have been sighted in the **exclusion zone** during the pre-start-up visual observations.
9. Marine **piling activities** must not occur between the hours of sunset and sunrise as follows:
 - a) during the peak southern migration of Humpback Whale (*Megaptera novaeangliae*), defined as 1 September to 30 November in any year unless it is to ensure that the pile being installed, having commenced no less than one hour prior to sunset, has reached a level of installation for **safe termination of works** for the day; and,
 - b) during the nesting season for the Green Turtle (*Chelonia mydas*) and Flatback Turtle (*Natator depressus*), defined as 1 November to 30 April in any year only marine **piling activities** which commenced no less than one hour prior to sunset or prior to a **period of low visibility** may continue between the hours of sunset and sunrise, but the activities must cease once the pile being installed has reached a level of installation for **safe termination of works** for the day.
10. Any injury to, or mortality of, a **protected matter** at condition 3 from **piling activities** must be reported to the **Minister** within one business day of the incident occurring.

Marine and Shipping Management Plan

11. The approval holder must develop a Marine and Shipping Management Plan, covering all **construction** and **operation** activities in the marine environment for the project, to ensure the protection of the following **protected matters**:
 - i. the world heritage values of the Great Barrier Reef World Heritage Area;
 - ii. the National Heritage values of the Great Barrier Reef National Heritage place;
 - iii. the environment in the Great Barrier Reef Marine Park;
 - iv. the environment of the Commonwealth marine area;
 - v. **Listed turtle species**;
 - vi. **Listed dolphin species**;
 - vii. Dugong (*Dugong dugong*); and,
 - viii. Humpback Whale (*Megaptera novaeangliae*).
12. The Marine and Shipping Management Plan must include effective adaptive management strategies to avoid, minimise and mitigate each potential **impact** for each of the **matters protected** at condition 11.

13. The Marine and Shipping Management Plan must include: desired outcomes; benchmarks; readily measureable performance indicators and goals; timeframes for reporting and implementation; corrective actions; contingency measures; and, specify the persons/roles with responsibility for implementing actions including, but not limited to:

- a. **impacts** to the marine environment that provides traversing, foraging and/or breeding habitat for the **protected matters** at condition 11, including seagrass, and **listed turtle species'** nesting and/or foraging habitat;
- b. artificial light spill related **impacts** on **listed turtle species'** (including hatchlings) nesting beaches and adjacent marine environment including, but not limited to, lighting from **construction** and **operation**, shipping and/or barge activity, and anchored/moored vessels. The measures implemented must consider lighting sources, lighting intensity, directionality and shrouding;
- c. identify measures to ensure shipping activities are undertaken in accordance with applicable international safety and environmental regulations and the most current version of plans that manage shipping activities through the Great Barrier Reef (including, but not limited to, *Great Barrier Reef Marine Park Zoning Plan (2003)*);
- d. mechanisms to implement best practice mitigation and management measures for the design, **construction** and **operation** activities associated with ship loading and unloading, and all other aspects of shipping activities, to minimise **impacts** on the marine environment (including from waste, coal dust deposition and/or other contaminant spills into the marine environment);
- e. measures to minimise **impacts** from vessel strike to **listed turtle species, listed dolphin species, Dugongs and Humpback Whales** including, but not limited to, through restricting **planing-hull vessel** speed to 10 knots within the operational limits of the Port of Abbot Point, as depicted by the blue 'GBRMP boundary' depicted in Figure 2-2 at Annexure C;
- f. **impacts** from underwater noise including, but not limited to anchoring, seismic and/or bathymetric surveying, pile driving activities at conditions 3 to 10 (inclusive), and shipping;
- g. measures to minimise the risk of introduced marine pest species over the life of the project including measures to manage ballast water. The marine pest monitoring program must be consistent with the Australian Government Department of Agriculture, Fisheries and Forestry's *Australian Marine Pest Monitoring Manual* (version 2.0), or its most current version;
- h. measures to restrict people and/or vehicle access, as it relates to the Terminal 0 project, on Abbot Beach (refer 'Category B' and 'Category C' Turtle Nesting Suitability in Figure 3-64 at Annexure D) during the nesting season for the Green Turtle (*Chelonia mydas*) and Flatback Turtle (*Natator depressus*) defined as 1 November to 30 April in any year. This does not apply to those activities related to **construction** or **operation** occurring between the hours of sunrise and sunset; and,
- i. measures to avoid injury to, or mortality of, **listed turtle species, listed dolphin species, Dugong or Humpback whales** from marine and shipping activities.

14. The Marine and Shipping Management Plan at condition 11 must be informed by the most current relevant information available (including, but not limited to, *National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)*).

15. The Marine and Shipping Management Plan at condition 11 may be submitted to the **Minister** in the following stages, and the respective stages must not commence until the **Minister** has approved each respective plan in writing:
 - a. a construction plan related to **impacts** associated with marine related **construction** activities, including pile driving operations at conditions 3 to 10 (inclusive); and,
 - b. an operational plan to reflect **impacts** associated with **operation** of the terminal.
16. The Marine and Shipping Management Plan at condition 11 for activities related to **operations** must be developed in consultation with relevant Commonwealth agencies, including the Australian Maritime Safety Authority and the Great Barrier Reef Marine Park Authority; state agencies including Maritime Safety Queensland, and with the North Queensland Bulk Ports Corporation.
17. The Marine Management and Shipping Management Plan at condition 11 must be reviewed, revised and submitted to the **Minister** for written approval within 18 months of commencement of **operation**, and then every five (5) years for the first ten (10) years, and then every ten (10) years thereafter for the life of the approval.
18. The approved Marine and Shipping Management Plans must be implemented.

Terrestrial Management Plan

19. The approval holder must submit a Terrestrial Management Plan for impacts associated with the land based **construction** and **operation** activities of the project to effectively define, avoid, adaptively manage and mitigate **impacts** to the following **protected matters**:
 - i. Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions;
 - ii. Squatter Pigeon (*Geophaps scripta scripta*);
 - iii. Australian Painted Snipe (*Rostratula australis*); and,
 - iv. **Listed migratory bird species.**
20. The Terrestrial Management Plan at condition 19 must include effective adaptive management strategies to mitigate each potential **impact** for the **protected matters** at condition 19.
21. The Terrestrial Management Plan at condition 19 must include; desired outcomes; benchmarks; readily measureable performance indicators and goals; timeframes for reporting and implementation; contingency measures; corrective action; and, specify the persons/roles with responsibility for implementing actions, including but not limited to:
 - a. water related **impacts** including, but not limited to:
 - i. the downstream impacts to the Caley Valley Wetland;
 - ii. erosion;
 - iii. acid sulphate soils;
 - iv. **construction** and **operation** of the sediment ponds;
 - v. stormwater runoff;
 - vi. flood events;
 - vii. controlled and non-controlled discharge events;

viii. pollutants (including hydrocarbon spills, chemicals and waste);

ix. runoff from coal stockpiles; and,

x. those impacting on marine habitat for **protected matters** at condition 11;

b. **impacts** on the listed endangered ecological community Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions including, but not limited to, downstream water impacts, coal dust, sedimentation, erosion, and pest and weed incursion; and,

c. **impacts** from artificial light associated with **construction** and **operation** including, but not limited to the :

i. Caley Valley Wetland; and,

ii. marine environment (including nesting beaches) for **listed turtle species**.

d. pests and weed management, dust management (including coal dust deposition in the marine environment for **protected matters** at condition 11), lighting, noise and vibration, and fire management.

22. The Terrestrial Management Plan must be informed by the most current relevant information available (including, but not limited to *National Water Quality Management Strategy* or *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)*) to avoid, manage and mitigate **impacts** associated with the project.

23. The Terrestrial Management Plan at condition 19 may be submitted to the **Minister** in the following stages, and the respective stages must not commence until the **Minister** has approved each respective plan in writing:

a) a construction plan related to **impacts** associated with **construction**; and,

b) an operational plan to reflect **impacts** associated with **operation**.

24. Within 18 months of commencement of **construction**, a revised Terrestrial Management Plan at condition 19 must be submitted to the **Minister** for written approval. The Terrestrial Management Plan must be reviewed, revised and submitted to the **Minister** for written approval every three (3) years thereafter for the first nine (9) years (unless otherwise agreed by the **Minister** in writing) and thereafter every ten (10) years for the life of the approval.

25. The approved Terrestrial Management Plans must be implemented.

Indigenous Consultation and Heritage

26. The approval holder must provide an outline of measures the approval holder will implement to:

a) effectively define, avoid, mitigate and adaptively manage impacts on Indigenous heritage values (including middens and grave sites) as these contribute to the outstanding universal value of the Great Barrier Reef World Heritage Area;

b) consult effectively, on an ongoing basis, with Indigenous people with rights, claims or interests in the area;

c) identify employment arrangements (e.g. under an Indigenous Land and Sea Program) for Indigenous people in relation to conditions specified in this approval, where appropriate; and,

d) report the number of local indigenous people actually employed in the implementation of any of the conditions specified in this approval.

27. Where material required under condition 26 is culturally sensitive and cannot be disclosed with the explicit and written consent of the relevant Indigenous people with rights, claims or interests in the area, the approval holder must advise the **department** of the extent to which it cannot comply with condition 26 for that reason.
28. **Construction** must not commence until the **Minister** advises, in writing, s/he is satisfied with the information provided under condition 26. The approval holder must provide updates on the implementation of the measures outlined at condition 26 to the Minister every five (5) years for the first ten (10) years from approval, then every ten (10) years thereafter for the life of the approval.

Note: An approved Indigenous Land Use Agreement (ILUA) may inform the Indigenous Consultation and Heritage information requirements.

Marine Offset Strategy

29. To compensate for residual impacts from this action on the listed Green Turtle and Flatback Turtle, and to achieve a net benefit to the outstanding universal value of the Great Barrier Reef World Heritage Area, the approval holder must implement a Marine Offset Strategy for the period of this approval. This Strategy must include a:
- a) Turtle Plan – an annual program to reduce the level of feral pig, dog and fox predation on Green Turtle and Flatback Turtle species nests; and, enhance the marine habitat (including seagrass and corals) for those species within the North Queensland Dry Topics and/or Reef Catchment natural resource management regions (refer Annexure E); and,
 - b) Marine Plan - to reflect the most appropriate natural resource management priorities (which may include research) relating to the impacts of this action on the outstanding universal value of the Great Barrier Reef World Heritage Area.
30. The Marine Offset Strategy at condition 29 must be developed in consultation with the **department**, the Great Barrier Reef Marine Park Authority and relevant Natural Resource Management bodies to ensure activities (including research which, unless otherwise agreed by the **Minister** in writing, must not account for greater than 10% of funding at condition 34) funded through this Strategy reflect the most appropriate management priorities relating to the residual impacts of this action to **matters protected**.
31. Mechanisms for review of the Marine Offset Strategy, at least every three years, must also be identified in consultation with relevant agencies identified at condition 30.
32. The Marine Offset Strategy at condition 29 must specify targeted outcomes; benchmarks; readily measureable performance indicators and goals; timeframes for reporting and implementation; timeframes to demonstrate when the net benefit to outstanding universal values of the Great Barrier Reef World Heritage Area will be achieved; contingency measures; corrective actions; and, the person or organisation responsible for implementing actions identified in the Marine Offset Strategy.
33. The Marine Offset Strategy at condition 29 must be consistent with the **department's Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (October 2012)**.
34. The approval holder must provide a contribution of \$450,000 per annum (GST exclusive, and CPI adjusted annually) to fund the implementation of the Marine Offset Strategy. The first contribution falls due within one month of the **Minister's** approval of the Marine Offset Strategy and payments must continue annually for the remaining life of the approval.

Consideration must be given to how these funds will contribute to programs or incentives and align with the broader strategies and programs for the Great Barrier Reef including **Reef Trust 2050**.

35. The administrative arrangements for this funding must be approved by the **Minister**.
36. Where relevant, the findings from the Marine Offset Strategy must be used to inform the respective management plans required under this approval on an ongoing basis.
37. **Construction** must not commence until the Marine Offset Strategy has been approved by the **Minister** in writing. The approved Marine Offset Strategy must be implemented.

Independent Review Requirements

38. Unless otherwise agreed in writing by the **Minister**, each plan or strategy specified in the conditions must be **independently peer reviewed** prior to submission to the **Minister** for approval. The approval holder must nominate an **Independent Peer Reviewer** to the **Minister**. The **Independent Peer Reviewer** must be approved by the **Minister**, prior to the commencement of the review. The **independent peer review** criteria must be agreed to by the **Minister** and any reviews undertaken must address the criteria to the satisfaction of the **Minister**.
39. An **independent peer review** undertaken for the purposes of condition 38 must include an analysis of the effectiveness of the avoidance and mitigation measures in meeting the outcomes, targets or management measures identified in the plan/s or strategies being reviewed.
40. Unless otherwise specified in these conditions or notified in writing by the **Minister**, the approval holder must provide to the **Minister** a copy of all advice and recommendations made by the **Independent Peer Reviewer** with the plan or strategy, and an explanation of how the advice and recommendations will be implemented, or an explanation of why the approval holder does not propose to implement certain recommendations.

Plan or Strategy

41. If the **Minister** is not satisfied that a plan or strategy specified in this approval adequately addresses the conditions specified in the approval, the approval holder will be notified in writing by the **Minister** that they must update a plan or strategy to meet the conditions that have not been adequately addressed.
42. To avoid duplication, the approval holder may provide the **Minister** with any plan or strategy prepared for the State provided the plans or strategy meets the conditions specified in this approval. The plans or strategy must include a cross reference table that clearly identifies:
 - a. the condition specified in this approval for which the plan and strategy is being provided; and
 - b. the relevant folder, chapter, section number and page number in the plan or strategy where the condition has been addressed.

Publication Requirements

43. All survey data and methodology collected for the project must be recorded in accordance with the applicable approved management plan or strategy. When requested by the **department**, the approval holder must provide to the **department** survey data and information related to **protected matters**. This information must be provided within 30 business days of the request, or in a timeframe agreed to by the **department** in writing. The **department** may use the survey data for other purposes. Notification of the availability of the survey data and methodology must be provided on the approval holder's website for the duration of this approval. Every six (6) months from the date of this approval, the approval holder must **publish** survey reports, data and methodology related to **protected matters** on the approval holder's website for the remaining duration of the approval.
44. The **Final Environmental Impact Statement** must remain on the approval holder's website for the duration of this approval.
45. Unless otherwise agreed to in writing by the **Minister**, the approval holder must **publish** on their website, for the life of the project including decommissioning, all current approved strategies, plans, or reviews (including the **Independent Peer Reviews**) referred to in these conditions of approval. Each approved plan, review or strategy (including revised versions) must be **published** on the approval holder's website within one (1) month of approval.

General

46. Within ten (10) days after the **commencement of the action**, the approval holder must advise the **Minister** in writing of the actual date of commencement.
47. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement a plan or strategy as specified in these conditions and make them available upon request to the **department**. Such records may be subject to audit by the **department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **department's** website. The results of audits may also be published through the general media.
48. Within three (3) months of every 12 month anniversary of **commencement of the action**, the approval holder must **publish** a report on their website, for the duration of this approval, addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any plan or strategy as specified in the conditions.
49. The approval holder must notify the **department** in writing of any non-compliance with any condition of this approval as soon as practicable and, in any event, no later than five (5) business days after becoming aware of the non-compliance. The notice provided to the **department** must specify:
 - a. the condition which the approval holder has breached;
 - b. the nature of the non-compliance;
 - c. how the non-compliance will affect the approved action;
 - d. how the non-compliance will affect the impacts of the approved action, in particular how the non-compliance will impact on any **protected matter** by this approval;

- e. the measures the approval holder will take to address the impacts of the non-compliance on the **protected matter** and rectify the non-compliance; and,
- f. the time by when the approval holder will rectify the non-compliance.

50. Every three (3) years from the **commencement of the action** for the first 15 years, and then every five (5) years thereafter, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

51. The approval holder must, in respect of each plan or strategy it is required to submit to the **Minister** for approval under these conditions (including revised plans, or strategies), maintain a register recording:

- a. the date on which each plan, or strategy was approved by the **Minister**;
- b. if a plan, or strategy has not been approved the date on which it was, or is expected to be, submitted to the **Minister**;
- c. the dates on which revised reports or reviews have been approved by the **Minister**, and,
- d. the **dates** on which the subsequent reviews are due.

The register must be submitted to the **department**, at the time the compliance report is provided, but does not form part of the report.

52. If the approval holder wishes to carry out any activity otherwise than in accordance with an approved plan or strategy as specified in the conditions, the approval holder must submit to the **department** for the **Minister's** written approval a revised version of that plan or strategy. The varied activity must not commence until the **Minister** has approved the varied plan or strategy in writing. The **Minister** will not approve a varied plan or strategy unless the revised plan or strategy would result in an equivalent or improved environmental outcome. If the **Minister** approves the revised plan or strategy they must be implemented in place of the plan or strategy originally approved.

53. If, at any time after the first five (5) year anniversary of the date of this approval, the approval holder has not **commenced the action**, then the approval holder must not **commence the action** without the written agreement of the **Minister**.

54. If the **Minister** believes that it is necessary or convenient for the better protection of a World Heritage property (sections 12 & 15A), a National Heritage place (section 15B & 15C), listed threatened species and communities (sections 18 & 18A), listed migratory species (section 20 & 20A), a Commonwealth marine area (sections 23 & 24a) and/or the Great Barrier Reef Marine Park (sections 24B and 24C) to do so, the **Minister** may request that the approval holder make specified revisions to the plan or strategy specified in the conditions and submit the revised plan or strategy for the **Minister's** written approval. The approval holder must comply with any such request. If the **Minister** approves the revised plan or strategy, the revised plan or strategy must be implemented. Unless the **Minister** has approved the revised plan or strategy then the approval holder must continue to implement the plan or strategy originally approved, as specified in the conditions.

Definitions

Commencement of the action: Any works that are required to be undertaken for **construction**.

Construction: Includes site preparation and clearing of vegetation, seismic and/or bathymetric surveying; earthworks, civil works, associated infrastructure (such as workshop, administration facilities, sewerage treatment plant or amenities facilities) and marine works. Construction does not include:

- a. minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs; or
- b. activities that are critical to project activities that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of port or road development or construction only if such activities will have no adverse impact on a **protected matter**, and only if the approval holder has notified the **department** in writing before an activity is undertaken.

Department: The Australian Government department administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Exclusion zone: A radius, from the centre of the pile to be driven, around pile driving operations for Humpback Whales, **listed dolphin species**, **listed turtle species** and Dugongs, which must be visually observed at all times during **piling activities**, and where **piling activities** must cease if Humpback Whales, **listed dolphin species**, **listed turtle species** and Dugongs are observed within the relevant radius.

Final Environmental Impact Statement: Comprises the Abbot Point Coal Terminal 0 Project, Final Environmental Impact Statement (June 2013).

Impacts: Has the same meaning as in section 527E of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Indigenous heritage values: Has the same meaning as in section 528 of the *Environment Protection and Biodiversity Conservation Act (1999)*.

Independent peer review / independently peer reviewed: Assessment of the assumptions, calculations, extrapolations, alternate interpretations, methodologies, performance goals and performance criteria, and conclusions pertaining to the plan, strategy and/or program specified in these conditions by an **independent peer reviewer**.

Independent Peer Reviewer: A person/organisation/technical committee, independent of the approval holder and/or employed in any subsidiary company of the approval holder. This person/organisation/technical committee must have demonstrated expertise in the **protected matter** being reviewed and be approved by the **Minister** prior to commencement of the review.

Listed dolphin species: Australian Snubfin Dolphin (*Orcaella heinsohni*) and Indo-Pacific Humpback Dolphin (*Sousa chinensis*).

Listed migratory bird species: Listed migratory species under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) as identified in Annexure F.

Listed turtle species: Green Turtle (*Chelonia mydas*), Hawksbill Turtle (*Eretmochelys imbricate*); Flatback Turtle (*Natator depressus*); Loggerhead Turtle (*Caretta caretta*); Olive Ridley Turtle (*Lepidochelys olivacea*); and Leatherback Turtle (*Dermochelys coriacea*).

Minister: The Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and includes a delegate of the Minister.

Observation zone: A horizontal radius from the pile hammer for Humpback Whales, **listed dolphin species**, Dugongs, **listed turtle species** that must be at least 300 metres greater than the approved **exclusion zone** for the Humpback Whales, **listed dolphin species**, Dugongs, **listed turtle species**.

Operation/s: Refers to activities associated with the transport of coal, from the unloading of coal trains through to shipping of the coal through the Great Barrier Reef World Heritage Area. This does not include activities associated with **construction**.

Period of low visibility: Where continuous visual observations throughout the observation zone is not possible for more than one (1) hour.

Piling activity / Piling activities: Driving one and/or multiple structural supports into the ground below the waterline.

Planing vessels: Those vessels capable of speeds greater than 10 knots, and are not operating in displacement or semi-displacement mode. Planing is defined by operation of a waterborne craft in which its weight is predominantly supported by hydrodynamic lift, rather than hydrostatic lift (buoyancy). Typically a planing vessel is identifiable when it travels "on top" of the water (planing mode) instead of "in" the water (displacement modes). Example vessels capable of planing may include, but not limited to, a speed boat, personal water craft (PWC), aluminum dinghy with outboard, and other high speed craft.

Protected matters: Means a 'matter protected' as that term is defined in section 34 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) by a provision of Part 3 of the EPBC Act for which this approval has effect.

Publish/ed: a plan, program, strategy, **independent peer review** or other documentation as it relates to this approval that is made available on the approval holder's website for the duration of the action (including decommissioning).

Reef Trust 2050: Means the Reef Trust created under the Reef 2050 plan.

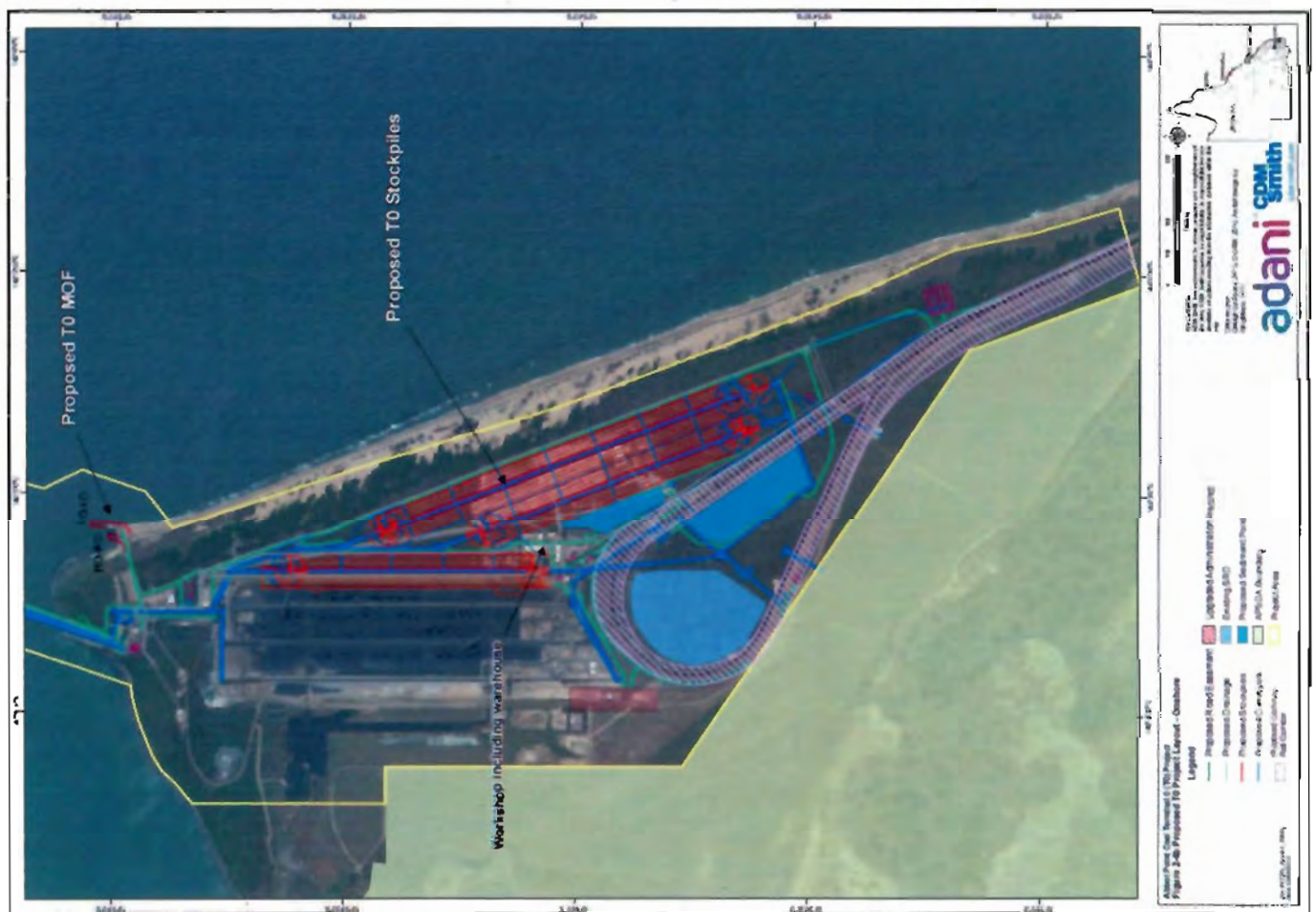
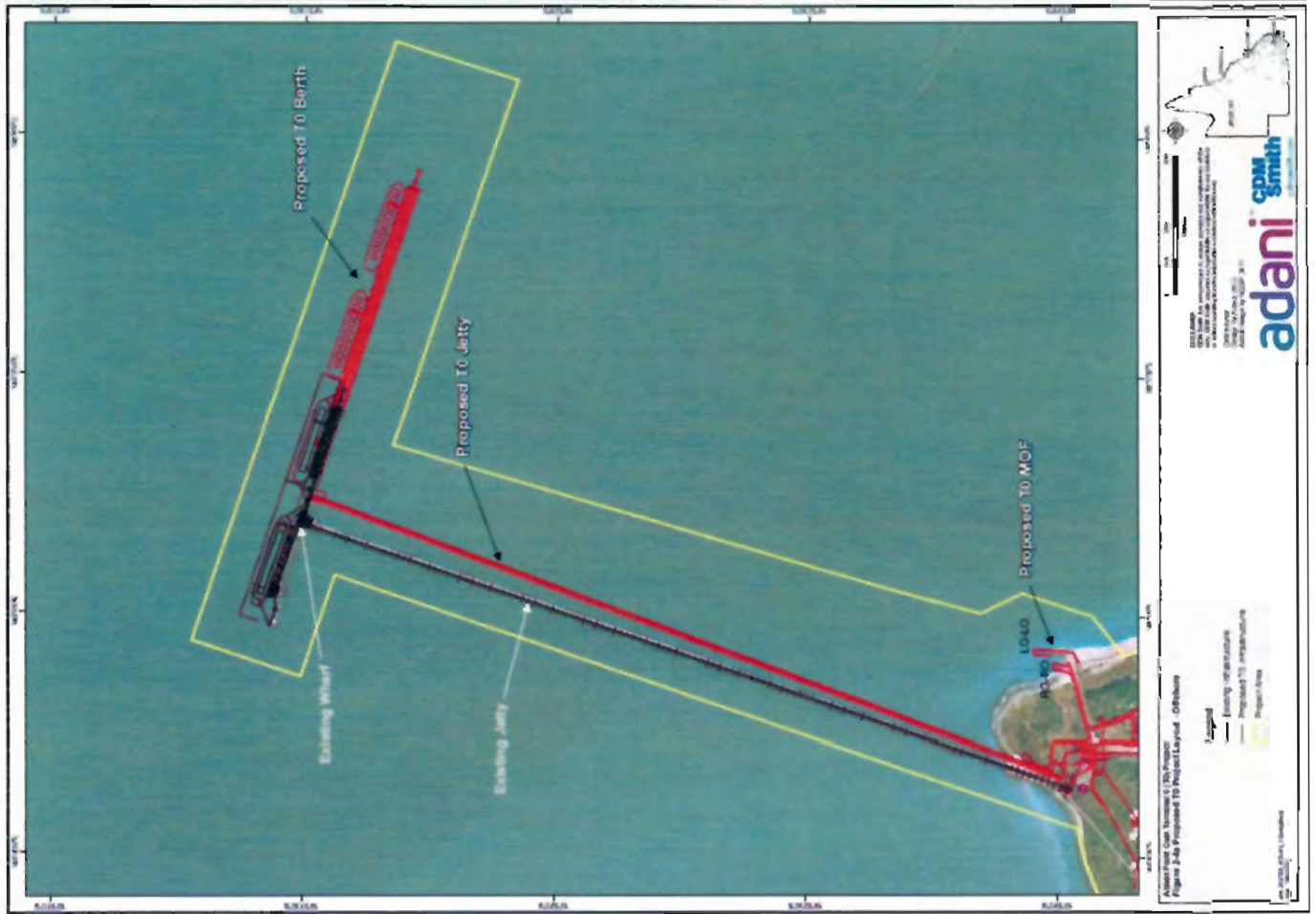
Safe termination of works: Completion of construction works to a safe and secure level as directed by the site engineer.

Soft start procedures: Initiated at the commencement of all marine **piling activities** by piling at low energy levels and then build up to full impact force. The first five impacts from the **piling activity** must be at no more than 50% of full hammer weight (e.g. a hammer with an adjustable stroke height of 0.6 metres at least 5 times during a 'soft start procedure'), to encourage animals to move away from subsequent blows.

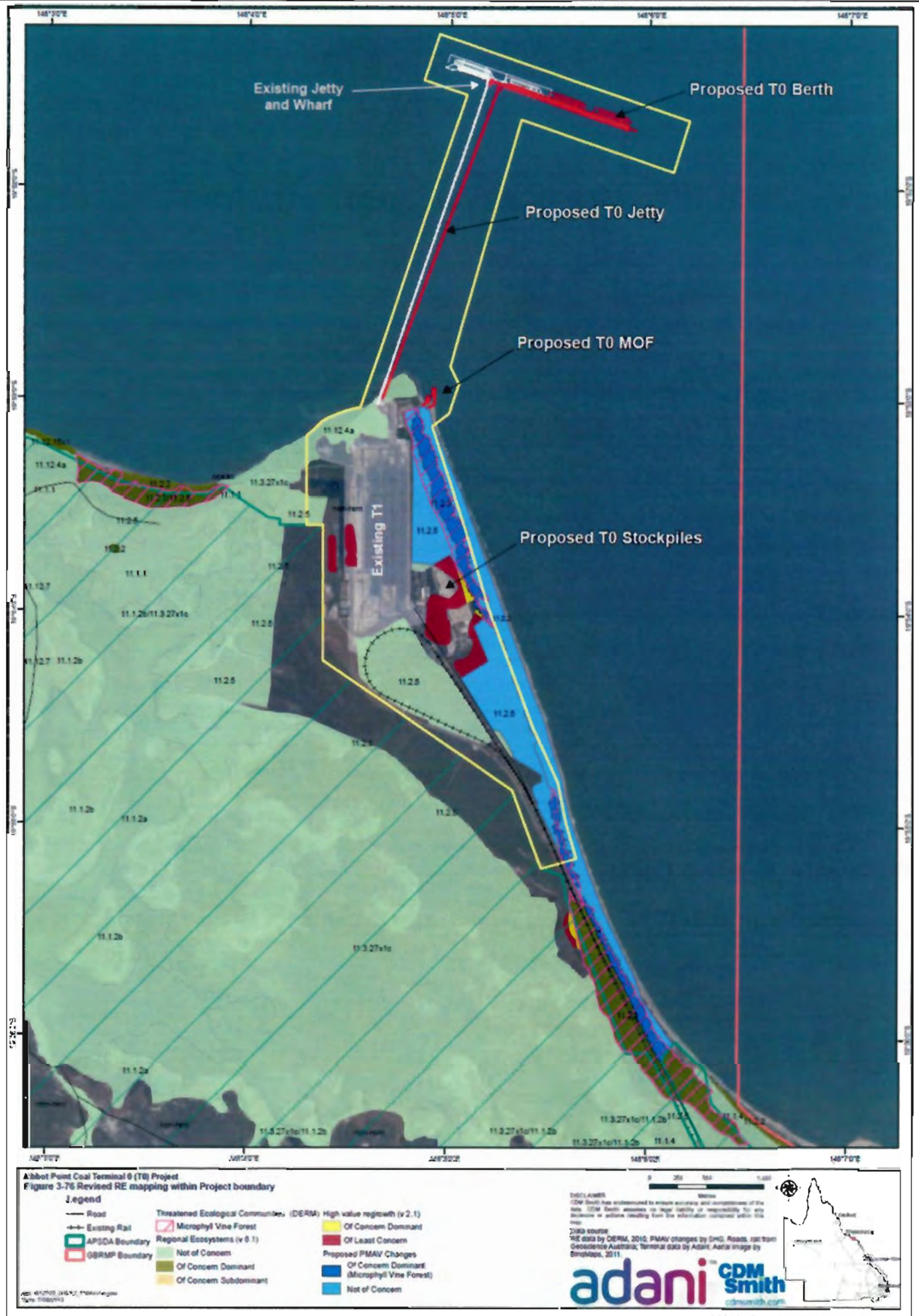
ANNEXURES

- A Project area (Figures 2-4a and 2-4b)
- B Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions (Figure 3-76)
- C Port operation limits (Figure 2-2)
- D Abbot Beach turtle nesting area (Figure 3-64)
- E Natural Resource Management (NRM) regions
- F Listed Migratory Bird Species

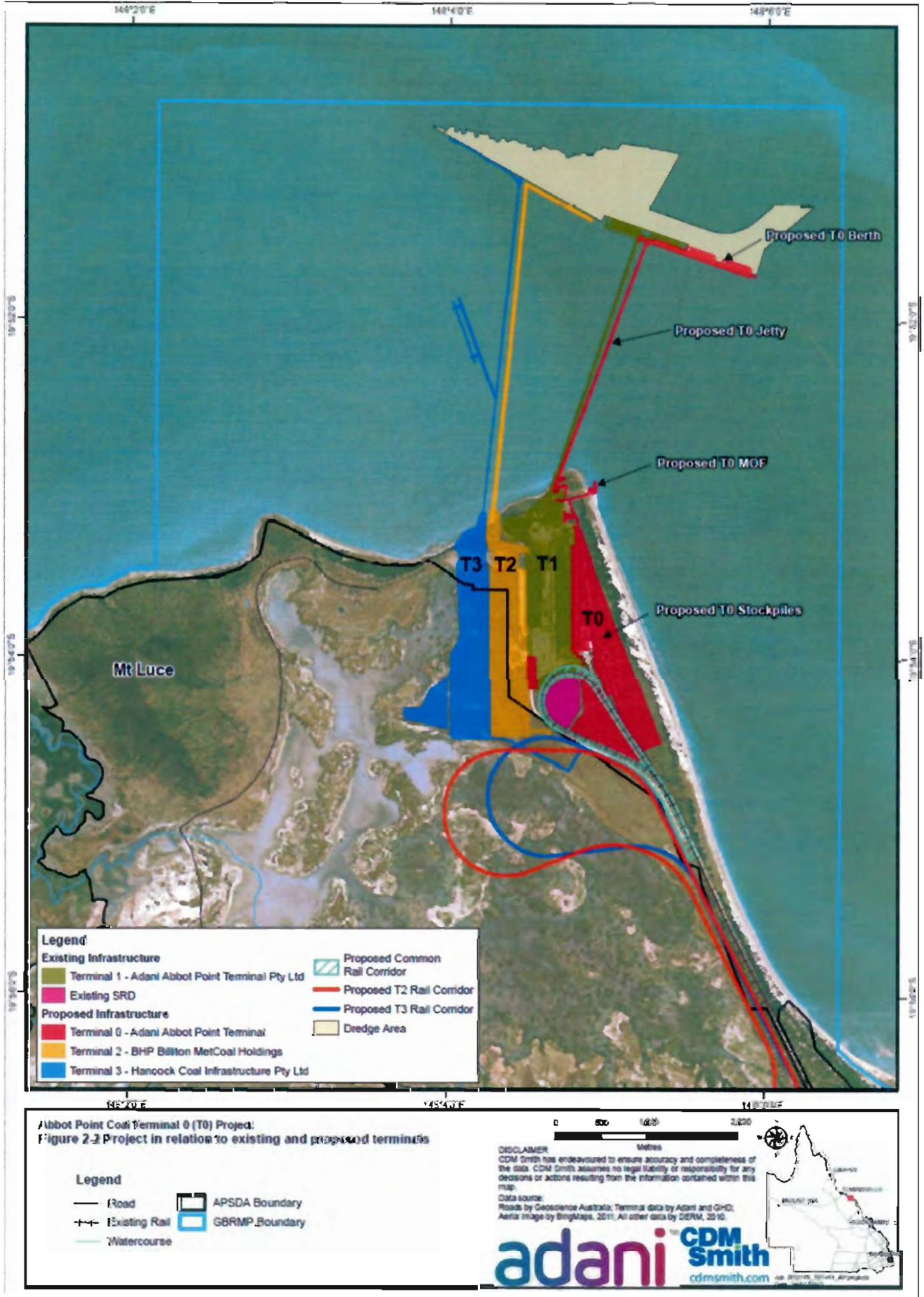
ANNEXURE A: Project area (Figures 2-4a and 2-4b)



ANNEXURE B: Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions (Figure 3-76)



ANNEXURE C: Port operation limits (Figure 2-2)



ANNEXURE D: Abbot Beach turtle nesting area (Figure 3-64)



ANNEXURE F: Listed Migratory Bird Species

LISTED MIGRATORY BIRD SPECIES
Greater Sandplover (<i>Charadrius leschenaultia</i>)
Black-tailed Godwit (<i>Limosa limosa</i>)
Whimbrel (<i>Numenius phaeopus</i>)
Pacific Golden Plover (<i>Puvialis fulva</i>)
Sharp-tailed Sandpiper (<i>Calidris acuminata</i>)
Red-necked Stint (<i>Calidris ruficollis</i>)
Common Greenshank (<i>Tringa nebularia</i>)
Marsh Sandpiper (<i>Tringa stagnatilis</i>)
Wandering Tattler (<i>Tringa incana</i>)
Little Curlew (<i>Numenius minutus</i>)
Latham's Snipe (<i>Gallinago hardwickii</i>)
Eastern Curlew (<i>Numenius madagascariensis</i>)
Common Sandpiper (<i>Acititis hypoleucos</i>)
Red Knot (<i>Calidris canutus</i>)
Curlew Sandpiper (<i>Calidris ferruginea</i>)
Great Knot (<i>Calidris tenuirostris</i>)
Lesser Sand Plover (<i>Charadrius mongolus</i>)
Broad-billed Sandpiper (<i>Limicola falcinellus</i>)
Bar-tailed Godwit (<i>Limosa lapponica</i>)
Grey Plover (<i>Pluvialis squatarola</i>)
Grey-tailed Tattler (<i>Tringa brevipes</i>)
Terek Sandpiper (<i>Xenus cinereus</i>)
Sanderling (<i>Calidris alba</i>)
Pectoral Sandpiper (<i>Calidris melanotos</i>)
Wood Sandpiper (<i>Tringa glareola</i>)
Ruddy Turnstone (<i>Arenaria interpres</i>)
Eastern Great Egret (<i>Ardea modesta</i>)
Caspian Tern (<i>Sterna caspia</i>)
Oriental Plover (<i>Charadrius veredus</i>)

DEPARTMENT OF THE ENVIRONMENT

FOI 190426
Document 10



PDR: MS13/000810

07 NOV 2013

To: Minister (for decision)

**Proposed Approval Decision Brief (recommendation report) –
Abbot Point Coal Terminal 0, Port of Abbot Point, Queensland (EPBC 2011/6194)**

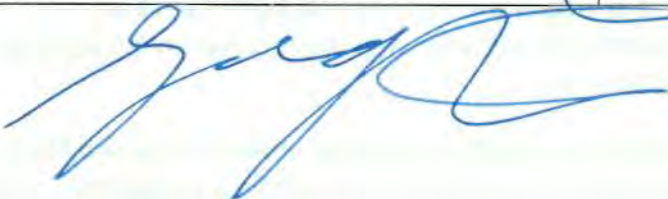
Timing: As soon as possible to allow for consultation on the proposed decision – statutory date timeframe for the final approval decision is due 13 December 2013

Recommendations:

1. Consider the information in this brief and **Attachments A1 to K** in accordance with your obligations under the *Environment Protection and Biodiversity Conservation Act 1999*.
Considered / please discuss
2. Consider the mandatory legislative considerations at **Attachment E**.
Considered / please discuss
3. Agree that the recommended decision on page 1 of the Secretary's recommendation report (**Attachment B**) and summarised in the table below, reflects your proposed decision.
Agreed / Not agreed
4. Agree to the proposed conditions of approval as set out in **Attachment C**.
Agreed / Not agreed
5. Sign the letters at **Attachment F** to consult the proponent, relevant Commonwealth ministers and the Great Barrier Reef Marine Park Authority on your proposed decision.
Signed/ please discuss
6. Agree to not publish the proposed decision at **Attachment C** on the internet for public comment.
Agreed / Not agreed

Summary of recommendations on each controlling provision:

Controlling Provisions for the action	Recommendation	
	Approve	Refuse to Approve
World heritage properties (ss 12, 15A)	Approve	
National heritage places (ss 15B, 15C)	Approve	
Listed threatened species and communities (ss 18, 18A)	Approve	
Listed migratory species (ss 20, 20A)	Approve	
Commonwealth marine area (ss 23, 24A)	Approve	
Great Barrier Reef Marine Park (ss 24B, 24C)	Approve	

Minister:  **Date:** 8/11/2013


Comments:

Key Points

1. This brief seeks your consideration of a proposed decision on Adani Abbot Point Terminal Pty Ltd's, ACN 149 298 206, (Adani) proposal to develop the Terminal 0 at Abbot Point (the T0 project) under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Further detail of the proposal and the department's assessment is set out at **Attachments A1 and A2**.
2. Under the EPBC Act, you are required to make a proposed decision on the T0 project and consult with the proponent and relevant Commonwealth ministers for up to 10 business days prior to making a final decision. The statutory timeline for a final decision is 13 December 2013.
3. The T0 project is a coal export facility at the Port of Abbot Point, proposed to be located adjacent to the existing Terminal 1 (T1). The capacity of T0 will be initially 35 million tonnes per annum (Mtpa), increasing to 70 Mtpa under a second phase. Adani estimates that 560 coal ships per annum will use the T0 terminal at its maximum export capacity.
4. The T0 project involves the construction and operation of onshore and offshore infrastructure associated with the coal terminal, including: rail in-loading and out-loading facilities; coal handling facilities and coal stockpiles; a 2.75 km out-loading trestle jetty and conveyor (adjacent to the existing T1 facilities); new wharves; ship loaders; and berths for two Cape Size vessels (adjacent to the two existing T1 berths).
5. The T0 project was referred for consideration under the EPBC Act on 15 November 2011. On 13 December 2011, a delegate of the then Minister determined the T0 project was a controlled action to be assessed by environmental impact statement (EIS), due to likely significant impacts on: World Heritage properties (s12 & s15A); National Heritage places (s15B & s15C); Listed Migratory Species (s20 & s20A); Listed Threatened Species and Communities (s18 & s18A); Commonwealth Marine areas (s23 & s24A); and, the Great Barrier Reef Marine Park (s24B & s24C).
6. A draft EIS for the T0 project was released for public comment from 18 February 2013 to 3 April 2013. The final EIS (**Attachment A2**), including Adani's responses to comments and updated information, was submitted to the department on 21 June 2013.
7. The proposal did not trigger the need for an EIS under Queensland legislation but associated approvals will be sought prior to the action commencing.
8. If approved, the T0 project will impact on matters of national environmental significance, and the terrestrial and marine environments that support them, both during construction and its ongoing operations. The department's analysis of these issues is discussed at **Attachment A1** and detailed in the Secretary's Recommendation Report at **Attachment B**. The principal impacts identified are: lighting and predation on listed marine turtles and their nesting habitat; increased noise and risk of boat strike on listed marine fauna; increased shipping through the Great Barrier Reef World Heritage Area; degradation of important listed migratory bird habitat and the endangered ecological community Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar; removal and/or degradation of seagrass habitat for listed species; and, degradation of the outstanding universal value of the Great Barrier Reef World Heritage Area.
9. The department has assessed the impacts of the T0 project. The department's assessment has taken into account the proponent's proposed avoidance, mitigation and management measures. The department considers that impacts to matters of national environmental significance will not be unacceptable provided the action is undertaken in accordance with the recommended approval conditions at **Attachment C** and summarised below:
 - o maintain best practice in all aspects of shipping activities as demonstrated through a Marine and Shipping Management Plan, to be developed in consultation with maritime regulatory bodies and reporting to you on its implementation;

- o not clear or remove the Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar EPBC-listed threatened ecological community;
 - o develop and implement a Terrestrial Management Plan, that incorporates management measures for dust; feral animals; weeds; water; acid sulphate soil and land and waste;
 - o develop and implement a Marine and Shipping Management Plan that addresses pile driving measures, shipping noise and vessel speed limit restrictions within port limits.
10. The department considers that there would be significant residual impacts to the Great Barrier Reef World Heritage Area, and listed turtles' habitat, from the construction and operation of the terminal and recommends that offsets be provided by Adani, through a Turtle Plan to reduce feral animal predation on turtle nests and a Marine Plan that targets natural resource management priorities (developed in consultation with relevant natural resource management bodies, the department and GBRMPA) to improve the integrity and resilience of the World Heritage Area. Funding contributed by Adani towards implementation of the Marine Plan, in particular, may be able to be managed through the proposed Reef 2050 Trust arrangements. Further discussion of offsets is at **Attachment A1**.
11. Port expansion projects in the Great Barrier Reef World Heritage Area are contentious. At Abbot Point, most public debate has been around the related Abbot Point Terminal 0, 2 and 3 Capital Dredging project, for which approval is also being sought through brief MS13/000056. Due to their interconnected nature, you may wish to consider the two briefs in parallel.
12. Management of the Great Barrier Reef World Heritage Area is under close scrutiny by the World Heritage Committee. The Committee has made a number of recommendations on measures to limit the impacts of port development on the Reef including a request that development is not permitted if it would impact individually or cumulatively on the outstanding universal value of the property. The department considers that the proposed decision and recommended conditions for this project are not inconsistent with the Committee's position. Nevertheless, approval of this project is likely to raise World Heritage Committee concerns and result in strong lobbying by environmental groups to have the Reef included on the List of World Heritage in Danger. Further discussion on sensitivities is at **Attachment A1** and **Attachment B**.
13. There were 26,353 submissions (26,336 in petition format, 17 actual submissions) received during the public consultation period on the draft EIS, which ran from 18 February to 3 April 2013. Only 2 submissions supported the proposal. Further detail is provided at **Attachment A1**.
14. The recently released draft strategic assessment of the Great Barrier Reef World Heritage Area and adjacent coastal zone has been taken into consideration in the assessment of the T0 project. The department's analysis of aspects of the assessment relevant to this proposal is at **Attachment D1**.
15. In making the proposed decision on whether or not to approve the proposal, and what conditions to attach, you are required to consider a range of mandatory considerations under the EPBC Act (**Attachment E**). Those considerations are outlined in the recommendation report (**Attachment B**).

Deb Callister
Assistant Secretary
Queensland & Sea Dumping Branch
s22
November 2013


Contact Officer: s22
Director – Queensland 1
Queensland & Sea Dumping Branch
s22

ATTACHMENTS

- A1: Background and Key Considerations
- A2: Final Environmental Impact Statement (June 2013)
- B: Secretary's Recommendation report
 - Annexure 1:** Conservation advice, recovery plans and threat abatement plans
- C: Proposed approval decision – NOT FOR SIGNATURE
 - Annexure A:** Figure – Project site
 - Annexure B:** Figure – Threatened Ecological Community
 - Annexure C:** Figure – Abbot Beach turtle nesting area
 - Annexure D:** Figure – NRM Regions
 - Annexure E:** Table – Listed migratory birds
- D1: Summary of key findings relating to the strategic assessment of the Great Barrier Reef
- D2: Great Barrier Reef - Strategic Assessment Reports (Marine and Coastal Zone)
- D3: Independent Review of the Port of Gladstone – report on findings (July 2013) and Supplementary report (October 2013)
- E: Mandatory legislative considerations
- F: Letters to proponent, GBRMPA and Commonwealth Ministers - FOR SIGNATURE
- G: Queensland Ports Strategy
- H: Draft North-East Shipping Management Plan (AMSA)
- I: Cumulative Impact Assessment (February 2013)
- J: UNESCO 2012 GBR World Heritage Report
- K: Copies of public submissions on draft EIS



Proposed Approval

**ABBOT POINT COAL TERMINAL 0, PORT OF ABBOT POINT, QUEENSLAND
 (EPBC 2011/6194)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Adani Abbot Point Terminal Pty Ltd

proponent's ACN ACN: 149 298 206

proposed action To construct and operate the Abbot Point Coal Terminal 0 (T0), including onshore and offshore infrastructure, at the Port of Abbot Point, Queensland (See EPBC Act referral 2011/6194).

Proposed Approval decision

Controlling Provision	Decision
World Heritage properties (sections 12 & 15A)	Approve
National Heritage places (sections 15B & 15C)	Approve
Listed threatened species and communities (sections 18 & 18A)	Approve
Listed migratory species (sections 20 & 20A)	Approve
Commonwealth marine areas (sections 23 & 24A)	Approve
Great Barrier Reef Marine Park (sections 24B & 24C)	Approve

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until **30 November 2053**

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Decision-maker

name and position The Hon. Greg Hunt MP, Minister for the Environment

signature **DO NOT SIGN**

date of decision **DO NOT SIGN**

Proposed conditions attached to the approval

1. The approved action must be undertaken in the project area depicted in Figures 2-4a and 2-4b at Annexure A.
2. The approval holder must not cut down, clear or remove any of the listed endangered ecological community *Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions* as shown in Figure 3-76 at Annexure B.

Pile Driving Operations

3. The approval holder must implement conditions 4 to 10, inclusive, related to any pile driving operations to minimise the **impacts** of underwater noise and disturbance on the following identified **protected matters**:
 - i. **Listed turtle species**;
 - ii. **Listed dolphin species**;
 - iii. Dugong (*Dugong dugong*); and,
 - iv. Humpback Whale (*Megaptera novaeangliae*).
4. Visual observations for the **protected matters** at condition 3 must be undertaken across the entire **observation zone**. The visual observations must be undertaken by a suitably qualified marine observer for at least 30 minutes immediately preceding the commencement of **piling activities**, and during pile driving operations. The criteria for a suitably qualified marine observer must be submitted to the **Minister** for approval and records must be kept of marine observers subsequently engaged. Pile driving activities must not commence until the criteria has been approved in writing by the **Minister**.
5. The approval holder must develop the **exclusion zones** to ensure that each of the **protected matters** at condition 3 are not exposed to sound exposure levels of greater than or equal to 183 dB re 1µ Pa².s from **piling activities**. The **exclusion zones** must be informed by noise modeling based at the site of the **piling activities**. **Piling activities** must not commence until the **exclusion zones** have been approved in writing by the **Minister**.
6. If Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** are sighted within the relevant **exclusion zone**, the approval holder must cease all **piling activities** within the relevant **exclusion zone** within two minutes of the sighting or as soon as possible if it is unsafe to cease piling operations within two minutes. If **piling activities** do not cease within two minutes, the approval holder must report the incident (including remedial actions) to the **Minister** in writing within one business day of the incident occurring.

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7. **Piling activities** must not commence again until Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** are observed to move outside the **exclusion zone** or 30 minutes have passed since the last sighting of the Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** within the **exclusion zone**.
8. **Piling activities** must be initiated at the soft start level and then built up to full operating impact force. The **soft start procedures** can only commence if no Humpback Whales, **listed turtle species**, Dugongs or **listed dolphin species** have been sighted in the **exclusion zone** during the pre-start-up visual observations.
9. Marine **piling activities** must not occur between the hours of sunset and sunrise during:
 - a) the peak southern migration of Humpback Whale (*Megaptera novaeangliae*) defined as 1 September to 30 November in any year; and,
 - b) the nesting season for the Green Turtle (*Chelonia mydas*) and Flatback Turtle (*Natator depressus*) defined as 1 November to 30 April in any year.

Any injury to, or mortality of, a **protected matter** at condition 3 from **piling activities** must be reported to the **Minister** within one business day of the incident occurring.

Marine and Shipping Management Plan

10. The approval holder must develop a Marine and Shipping Management Plan, covering all **construction** and **operation** activities in the marine environment for the project, to ensure the protection of the following **protected matters**:
 - i. the world heritage values of the Great Barrier Reef World Heritage Area;
 - ii. the National Heritage values of the Great Barrier Reef National Heritage place;
 - iii. the environment in the Great Barrier Reef Marine Park;
 - iv. the environment of the Commonwealth marine area;
 - v. **Listed turtle species**;
 - vi. **Listed dolphin species**;
 - vii. Dugong (*Dugong dugong*); and,
 - viii. Humpback Whale (*Megaptera novaeangliae*).
11. The Marine and Shipping Management Plan must include effective adaptive management strategies to avoid, minimise and mitigate each potential **impact** for each of the **matters protected** at condition 10.
12. The Marine and Shipping Management Plan must include; desired outcomes; benchmarks; readily measureable performance indicators and goals; timeframes for reporting and implementation; corrective actions; contingency measure; and, specify the persons/roles with responsibility for implementing actions including, but not limited to:
 - a. **impacts** to the marine environment that provides traversing, foraging and/or breeding habitat for the **protected matters** at condition 10, including seagrass, corals, and **listed turtle species**' nesting and/or foraging habitat;
 - b. artificial light spill related **impacts** on **listed turtle species** (including hatchlings) nesting beaches and adjacent marine environment including, but not limited to, lighting from **construction** and **operation**, shipping and/or barge activity, and

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anchored/moored vessels. The measures implemented must consider lighting sources, lighting intensity, directionality and shrouding;

- c. measures to ensure shipping activities are undertaken in accordance with the most current version of plans that manage shipping activities through the Great Barrier Reef (including, but not limited to, *Great Barrier Reef Marine Park Zoning Plan (2003)*);
 - d. mechanisms to implement best practice mitigation and management measures for ship loading and unloading, and all other aspects of shipping activities to minimise **impacts** on the marine environment (including from waste, coal dust deposition and/or other contaminant spills into the marine environment);
 - e. **impacts** from vessel strike to **listed turtle species, listed dolphin species, Dugongs and Humpback Whales** including, but not limited to, restricting vessel speed limits to 6 knots within the limits of the Port of Abbot Point;
 - f. **impacts** from underwater noise including, but not limited to anchoring, seismic and/or bathymetric surveying, pile driving activities at conditions 3 to 9 (inclusive), and shipping;
 - g. measures that minimise the risk of introduced marine pest species over the life of the project, including ballast water management. The marine pest monitoring program must be consistent with the Australian Government Department of Agriculture, Fisheries and Forestry's *Australian Marine Pest Monitoring Manual (version 2.0)*, or its most current version;
 - h. measures to restrict people and/or vehicle access, as it relates to the Terminal 0 project, on Abbot Beach (refer 'Category B' and 'Category C' Turtle Nesting Suitability in Figure 3-64 at Annexure C) during the nesting season for the Green Turtle (*Chelonia mydas*) and Flatback Turtle (*Natator depressus*) defined as 1 November to 30 April in any year. This does not apply to those activities related to **construction** or **operation** occurring between the hours of sunrise and sunset; and,
 - i. measures to avoid injury to, or mortality of, **listed turtle species, listed dolphin species, Dugong or Humpback whales** from marine and shipping activities.
13. The Marine and Shipping Management Plan at condition 10 must be informed by the most current information available (including, but not limited to, *National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)*).
14. The Marine and Shipping Management Plan at condition 10 may be submitted to the **Minister** in the following stages, and the respective stages must not commence until the **Minister** has approved each respective plan in writing:
- a. a construction plan related to impacts associated with marine related **construction** activities, including pile driving operations at condition 3 to condition 10 (inclusive); and,
 - b. an operational plan to reflect impacts associated with **operation** of the terminal.
15. The Marine and Shipping Management Plan at condition 10 for activities related to **operations** must be developed in consultation with relevant Commonwealth agencies, including the Australian Maritime Safety Authority and the Great Barrier Reef Marine Park

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Authority; state agencies including Maritime Safety Queensland, and with the North Queensland Bulk Ports Corporation.

16. The Marine Management and Shipping Management Plan at condition 10 must be reviewed, revised and submitted to the **Minister** for written approval within 18 months of commencement of **operation**, and then every five (5) years thereafter for the life of the approval.
17. The approved Marine and Shipping Management Plans must be implemented.

Terrestrial Management Plan

18. The approval holder must submit a Terrestrial Management Plan for impacts associated with the land based **construction** and **operation** activities of the project to effectively define, avoid, adaptively manage and mitigate **impacts** to the following **protected matters**:
 - i. Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions;
 - ii. Squatter Pigeon (*Geophaps scripta scripta*);
 - iii. Australian Painted Snipe (*Rostratula australis*); and,
 - iv. **Listed migratory bird species**.
19. The Terrestrial Management Plan at condition 18 must include effective adaptive management strategies to mitigate each potential **impact** for the **matters protected** at condition 18.
20. The Terrestrial Management Plan at condition 18 must include; desired outcomes; benchmarks; readily measureable performance indicators and goals; timeframes for reporting and implementation; contingency measures; corrective action; and, specify the person/s roles with responsibility for implementing actions, including but not limited to:
 - a. water related **impacts** including, but not limited to:
 - i. the downstream impacts to the Caley Valley Wetland;
 - ii. erosion;
 - iii. acid sulphate soils;
 - iv. **construction** and **operation** of the sediment ponds;
 - v. stormwater runoff;
 - vi. flood events;
 - vii. controlled and non-controlled discharge events;
 - viii. pollutants (including hydrocarbon spills, chemicals and waste);
 - ix. runoff from coal stockpiles; and,
 - x. those impacting on marine habitat for **matters protected** at condition 10;
 - b. **impacts** on the listed endangered ecological community Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions including, but not limited to, downstream water impacts, coal dust, sedimentation, erosion, and pest and weed incursion; and,

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- c. **impacts** from artificial light associated with **construction** and **operation** including, but not limited to the :
 - i. Caley Valley Wetland; and,
 - ii. marine environment (including nesting beaches) for **listed turtle species**.
 - d. pests and weed management, dust management (including coal dust deposition in the marine environment for **matters protected** at condition 10), lighting, noise and vibration, and fire management.
21. The Terrestrial Management Plan must be informed by the most current information available (including, but not limited to *National Water Quality Management Strategy or Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)*) to avoid, manage or mitigate **impacts** associated with the project.
22. The Terrestrial Management Plan at condition 18 may be submitted to the **Minister** in the following stages, and the respective stages must not commence until the **Minister** has approved each respective plan in writing:
- a) a construction plan related to **impacts** associated with **construction**; and,
 - b) an operational plan to reflect **impacts** associated with **operation**.
23. Within 18 months of commencement of **construction**, a revised Terrestrial Management Plan at condition 18 must be submitted to the **Minister** for written approval. The Terrestrial Management Plan must be reviewed, revised and submitted to the **Minister** for written approval every three (3) years thereafter for the first nine (9) years (unless otherwise agreed by the **Minister** in writing) and thereafter every ten (10) years for the life of the approval.
24. The approved Terrestrial Management Plans must be implemented.

Indigenous Consultation and Heritage Plan

25. The approval holder must prepare an Indigenous Consultation and Heritage Plan to:
- a) effectively define, avoid, mitigate and adaptively manage impacts on Indigenous heritage values (including middens and grave sites) as these contribute to the outstanding universal value of the Great Barrier Reef World Heritage Area;
 - b) demonstrate effective ongoing consultation with Indigenous people;
 - c) implement employment arrangements (e.g. under an Indigenous Land and Sea Program) for Indigenous persons in relation to conditions specified in this approval, where appropriate; and,
 - d) detail mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of any of the conditions specified in this approval.
26. Where material required for the Indigenous Consultation and Heritage Plan at condition 25 is culturally sensitive and cannot be disclosed with the explicit and written consent of the relevant Indigenous people with rights, claims or interests in the area, the approval holder must advise the **department** of the extent to which it cannot comply with condition 25 for that reason. The **commencement of the action** cannot take place until the **Minister** has provided written notice approving the non-disclosure of any material and/or requesting further documentation required to satisfy condition 25.

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27. Construction must not commence until the Indigenous Consultation and Heritage Plan has been approved by the **Minister** in writing. The Indigenous Consultation and Heritage Plan must be reviewed every five (5) years for the first ten (10) years, then every ten (10) years thereafter for the life of the approval. The approved Indigenous Consultation and Heritage Plans must be implemented.

Marine Offset Strategy

28. To compensate for residual impacts from this action on the listed Green Turtle and Flatback Turtle, and to achieve a net benefit to the outstanding universal value of the Great Barrier Reef World Heritage Area, the approval holder must implement a Marine Offset Strategy for the period of this approval. This Strategy must include a:

- a) Turtle Plan – an annual program to reduce the level of feral pig, dog and fox predation on Green Turtle and Flatback Turtle species nests; and, enhance the marine habitat (including seagrass and corals) for those species within the North Queensland Dry Topics and/or Reef Catchment natural resource management regions (refer Annexure D); and,
- b) Marine Plan - to reflect the most appropriate natural resource management priorities (which may include research) relating to the impacts of this action on the outstanding universal value of the Great Barrier Reef World Heritage Area.

29. The Marine Offset Strategy at condition 28 must be developed in consultation with the **department**, the Great Barrier Reef Marine Park Authority and relevant Natural Resource Management bodies to ensure activities (including research which, unless otherwise agreed by the **Minister** in writing, must not account for greater than 10% of funding at condition 33) funded through this Strategy reflect the most appropriate management priorities relating to the residual impacts of this action to **matters protected**.

30. Mechanisms for review of the Marine Offset Strategy, at least every three years, must also be identified in consultation with relevant agencies at condition 29.

31. The Marine Offset Strategy at condition 28 must specify targeted outcomes; benchmarks; readily measureable performance indicators and goals; timeframes for reporting and implementation; timeframes to demonstrate when the net benefit to outstanding universal values of the Great Barrier Reef World Heritage Area will be achieved; contingency measures; corrective actions; and, the person or organisation responsible for implementing actions identified in the Marine Offset Strategy.

32. The Marine Offset Strategy at condition 28 must be consistent with the **department's** *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (October 2012)*.

33. The approval holder must provide a minimum of \$450,000 per annum (GST exclusive, and CPI adjusted annually) for the period of this approval to fund the implementation of the Marine Offset Strategy. Consideration must be given to how these funds will contribute to programs or incentives and align with the broader strategies and programs for the Great Barrier Reef including **Reef Trust 2050**.

34. The administrative arrangements for this funding must be approved by the **Minister**.

35. Where relevant, the findings from the Marine Offset Strategy must be used to inform the respective management plans required under this approval on an ongoing basis.

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36. Construction must not commence until the Marine Offset Strategy has been approved by the **Minister** in writing. An approved Marine Offset Strategy must be implemented.

Independent Review Requirements

37. Unless otherwise agreed in writing by the **Minister**, each plan or strategy specified in the conditions must be **independently peer reviewed** prior to submission to the **Minister** for approval. The approval holder must nominate an **Independent Peer Reviewer** to the **Minister**. The **Independent Peer reviewer** must be approved by the **Minister**, prior to the commencement of the review. The **independent peer review** criteria must be agreed to by the **Minister** and any reviews undertaken must address the criteria to the satisfaction of the **Minister**.

38. An **Independent Peer Review** undertaken for the purposes of condition 36 must include an analysis of the effectiveness of the avoidance and mitigation measures in meeting the outcomes, targets or management measures identified in the plan/s or strategies being reviewed.

39. Unless otherwise specified in these conditions or notified in writing by the **Minister**, the approval holder must provide to the **Minister** a copy of all advice and recommendations made by the **Independent Peer Reviewer** with the plan or strategy, and an explanation of how the advice and recommendations will be implemented, or an explanation of why the approval holder does not propose to implement certain recommendations.

Plan or Strategy Submission

40. If the **Minister** is not satisfied that a plan or strategy specified in this approval adequately addresses the conditions specified in the approval, the approval holder will be notified in writing by the **Minister** that they must update a plan or strategy to meet the conditions that have not been adequately addressed.

41. To avoid duplication, the approval holder may provide the **Minister** with any plan or strategy prepared for the State provided the plans or strategy meets the conditions specified in this approval. The plans or strategy must include a cross reference table that clearly identifies:

- a. the condition specified in this approval for which the plan and strategy is being provided; and
- b. the relevant folder, chapter, section number and page number in the plan or strategy where the condition has been addressed.

Publication Requirements

42. All survey data and methodology collected for the project must be recorded in accordance with the applicable approved management plan or strategy. When requested by the **department**, the approval holder must provide to the **department** survey data and information related to **protected matter**. This information must be provided within 30 business days of request, or in a timeframe agreed to by the **department** in writing. The **department** may use the survey data for other purposes. The approval holder must also provide the survey data and methodology that is related to a **protected matter**, within

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30 business days, to anyone who requests the survey data and methodology in writing. Notification of the availability of the survey data and methodology must be provided on the approval holder's website for the duration of this approval.

43. Unless otherwise agreed in writing by the **Minister**, the approval holder must, every 12 months after the **commencement of the action**, **publish** on their website for the duration of this approval, all survey methodologies, reports and related analysis of survey data that is related to a **protected matter** and which was undertaken for the purposes of a plan, strategy or other condition specified in this approval. The **department** must be notified within ten (10) business days of publication.
44. The approval holder must **publish** the **Final Environmental Impact Statement** on their website within five (5) business days from this approval. The **Final Environmental Impact Statement** must remain on the approval holder's website for the duration of this approval.
45. Unless otherwise agreed to in writing by the **Minister**, the approval holder must **publish** on their website, for the life of the project including decommissioning, all current approved strategies, plans or reviews (including the **Independent Peer Review**) referred to in these conditions of approval. Each approved plan, review or strategy (including revised versions) must be **published** on the approval holder's website within one (1) month of approval.

General

46. Within ten (10) days after the **commencement of the action**, the approval holder must advise the **Minister** in writing of the actual date of commencement.
47. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement a plan or strategy as specified in these conditions and make them available upon request to the **department**. Such records may be subject to audit by the **department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **department's** website. The results of audits may also be published through the general media.
48. Within three (3) months of every 12 month anniversary of **commencement of the action**, the approval holder must **publish** a report on their website, for the duration of this approval, addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any plan or strategy as specified in the conditions.
49. The approval holder must notify the **Department** in writing of any non-compliance with any condition of this approval as soon as practicable and, in any event, no later than two (2) business days after becoming aware of the non-compliance. The notice provided to the **Department** must specify:
 - a. the condition which the approval holder has breached;
 - b. the nature of the non-compliance;
 - c. how the non-compliance will affect the approved action;
 - d. how the non-compliance will affect the impacts of the approved action, in particular how the non-compliance will impact on any **protected matter** by this approval;

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- e. the measures the approval holder will take to address the impacts of the non-compliance on the **protected matter** and rectify the non-compliance; and,
 - f. the time by when the approval holder will rectify the non-compliance.
- 50.** Every three (3) years from the **commencement of the action**, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.
- 51.** The approval holder must, in respect of each plan or strategy it is required to submit to the **Minister** for approval under these conditions (including revised plans or strategies), maintain a register recording:
- a. the date on which each plan or strategy was approved by the **Minister**;
 - b. if a plan or strategy has not been approved the date on which it was, or is expected to be, submitted to the **Minister**;
 - c. the dates on which revised reports or reviews have been approved by the **Minister**; and,
 - d. the **dates** on which the subsequent reviews are due.

The register must be submitted to the **department**, at the time the annual compliance report is **published**, but does not form part of the report.

- 52.** If the approval holder wishes to carry out any activity otherwise than in accordance with an approved plan or strategy as specified in the conditions, the approval holder must submit to the **department** for the **Minister's** written approval a revised version of that plan or strategy. The varied activity must not commence until the **Minister** has approved the varied plan or strategy in writing. The **Minister** will not approve a varied plan or strategy unless the revised plan or strategy would result in an equivalent or improved environmental outcome over time. If the **Minister** approves the revised plan or strategy they must be implemented in place of the plan or strategy originally approved.
- 53.** If, at any time after the first five (5) year anniversary of the date of this approval, the approval holder has not **commenced the action**, then the approval holder must not **commence the action** without the written agreement of the **Minister**.
- 54.** If the **Minister** believes that it is necessary or convenient for the better protection of a World Heritage property (sections 12 & 15A), a National Heritage place (section 15B & 15C), listed threatened species and communities (sections 18 & 18A), listed migratory species (section 20 & 20A), a Commonwealth marine area (sections 23 & 24a) and/or the Great Barrier Reef Marine Park (sections 24B and 24C) to do so, the **Minister** may request that the approval holder make specified revisions to the plan or strategy specified in the conditions and submit the revised plan or strategy for the **Minister's** written approval. The approval holder must comply with any such request. If the **Minister** approves the revised plan or strategy, the revised plan or strategy must be implemented. Unless the **Minister** has approved the revised plan or strategy then the approval holder must continue to implement the plan or strategy originally approved, as specified in the conditions.

Definitions

Commencement of the action: Any works that are required to be undertaken for **construction**.

Construction: Includes site preparation and clearing of vegetation, seismic and/or bathymetric surveying; earthworks, civil works, associated infrastructure (such as workshop, administration facilities, sewerage treatment plant or amenities facilities) and marine works. Construction does not include:

- a. minor physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs; or
- b. activities that are critical to project activities that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of port or road development or construction only if such activities will have no adverse impact on a **protected matter**, and only if the approval holder has notified the **department** in writing before an activity is undertaken.

Department: The Australian Government department administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Exclusion zone: A radius, from the centre of the pile to be driven, around pile driving operations for Humpback Whales, **listed dolphin species**, **listed turtle species** and Dugongs, which must be visually observed at all times during **piling activities**, and where **piling activities** must cease if Humpback Whales, **listed dolphin species**, **listed turtle species** and Dugongs are observed within the relevant radius.

Final Environmental Impact Statement: Comprises the Abbot Point Coal Terminal 0 Project, Final Environmental Impact Statement (June 2013).

Impacts: Has the same meaning as in section 527E of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Indigenous heritage values: Has the same meaning as in section 528 of the *Environment Protection and Biodiversity Conservation Act (1999)*.

Independent peer review / independently peer reviewed: Assessment of the assumptions, calculations, extrapolations, alternate interpretations, methodologies, performance goals and performance criteria, and conclusions pertaining to the plan, strategy and/or program specified in these conditions by an **independent peer reviewer**.

Independent peer reviewer: A person/organisation/technical committee, independent of the approval holder and/or employed in any subsidiary company of the approval holder. This person/organisation/technical committee must have demonstrated expertise in the **protected matter** being reviewed and be approved by the **Minister** prior to commencement of the review.

Listed dolphin species: Australian Snubfin Dolphin (*Orcaella heinsohni*) and Indo-Pacific Humpback Dolphin (*Sousa chinensis*).

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Listed migratory bird species: Listed migratory species under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) as identified in Annexure E.

Listed turtle species: Green Turtle (*Chelonia mydas*), Hawksbill Turtle (*Eretmochelys imbricate*); Flatback Turtle (*Natator depressus*); Loggerhead Turtle (*Caretta caretta*); Olive Ridley Turtle (*Lepidochelys olivacea*); and Leatherback Turtle (*Dermochelys coriacea*).

Minister: The Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and includes a delegate of the Minister.

Observation zone: A horizontal radius from the pile hammer for Humpback Whales, **listed dolphin species**, Dugongs, **listed turtle species** that must be at least 300 metres greater than the approved **exclusion zone** for the Humpback Whales, **listed dolphin species**, Dugongs, **listed turtle species**.

Operation/s: Refers to activities associated with the transport of coal, from the unloading of coal trains through to shipping of the coal through the Great Barrier Reef World Heritage Area. This does not include activities associated with **construction**.

Period of low visibility: Where continuous visual observations to a distance of two (2) kilometers from the marine **piling activity** are not possible for a time greater than one (1) hour.

Piling activity / Piling activities: Driving one and/or multiple structural supports into the ground below the waterline.

Protected matters: Means a 'matter protected' as that term is defined in section 34 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) by a provision of Part 3 of the EPBC Act for which this approval has effect.

Publish/ed: a plan, program, strategy, **independent peer review** or other documentation as it relates to this approval that is made available on the approval holder's website for the duration of the action (including decommissioning).

Reef Trust 2050: means the Reef Trust created under the Reef 2050 plan.

Soft start procedures: Initiated at the commencement of all marine **piling activities** by piling at low energy levels and then build up to full impact force. The first five impacts from the **piling activity** must be at no more than 50% of full hammer weight (e.g. a hammer with an adjustable stroke height of 0.6 metres at least 5 times during a 'soft start procedure), to encourage animals to move away from subsequent blows.

ANNEXURES

- A** Project area (Figures 2-4a and 2-4b)
- B** Semi-evergreen Vine Thicket of the Brigalow Belt (North and South) and Nandewar Bioregions (Figure 3-76)
- C** Abbot Beach turtle nesting area (Figure 3-64)
- D** Natural Resource Management (NRM) regions
- E** Listed Migratory Bird Species