

Assessment Report

Environmental Protection Act 1994

Assessment of a site specific application

PROJECT NAME: Carmichael Coal Mine	
PRINCIPAL APPLICANT: Adani Mining Pty Ltd	
JOINT APPLICANTS: N/A	
AGENT/ SERVICE ADDRESS: Level 25, 10 Eagle Street, Brisbane Qld 4000	
ERA DESCRIPTION: Schedule 2A, Environmental Protection Regulation 2008 <ul style="list-style-type: none"> Mining black coal Schedule 2, Environmental Protection Regulation 2008 <ul style="list-style-type: none"> ERA 8 Chemical storage (<i>Threshold 4</i>): Storing 200t or more of chemicals that are solids or gases, in containers of at least 10m³, other than chemicals mentioned in items 1 to 3. ERA 8 Chemical storage (<i>Threshold 5</i>): Storing 200m³ or more of chemicals that are liquids, in containers of at least 10m³, other than chemicals mentioned in items 1 to 3. ERA 16 Extractive and Screening Activities (<i>Threshold 2(c)</i>): Extracting, other than by dredging, more than 1,000,000t, in a year, from an area. ERA 31 Mineral Processing (<i>Threshold 2(b)</i>): Mineral processing consists of processing, in a year, more than 100,000t of mineral products. ERA 56 Regulated waste storage: receiving and storing regulated waste. Operating a facility for receiving and storing regulated waste for more than 24 hours. ERA 63 Sewage Treatment (<i>Threshold 1(d)</i>): Operating 1 or more sewage treatment works at a site that have a total daily peak design capacity of more than 4000 but not more than 10,000EP. 	
LOCATION DESCRIPTION: The project is located in the Galilee Basin, approximately 160 km north-west of Clermont in Central Queensland.	
TENURE DESCRIPTION: Mining Lease (application) 70441, 70505, 70506. The mine is proposed to be developed from two Exploration Permits for Coal (EPC)—EPC 1690 over mining lease application (MLA) 70441, and EPC 1080 over MLA70505 (eastern portion) and MLA 70506.	
ECOTRACK PROJECT NO: 333466	ENVIRONMENTAL AUTHORITY NO: EPML01470513
	FILE NO: EMD2917

1) Brief summary of operation

The Carmichael Coal Mine and Rail project includes a 60 million tonnes per annum (mtpa) open-cut and underground greenfield coal mine and a 189 kilometre (km) greenfield rail line connecting the mine to the existing Goonyella and Newlands rail system south of Moranbah. The coal will be transported by rail for export via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point. The project also includes the development of off-lease quarries and mine support infrastructure.

Development on the mine site within the mining lease will include:

- six open-cut pits** with a combined capacity of 40 mtpa product coal, predominantly mined by a truck and shovel/excavator operation, supplemented by draglines and dozers for overburden removal

- **five independent underground longwall mines** with a combined capacity of 20 mtpa of product coal, mining two seams over 45 km north to south with a conceptual longwall panel length of 5000 metres (m), 300 m wide longwall panel and between 3–4.5 m high extraction face
- **five mine infrastructure areas** servicing each of the open-cut and underground mines (UGMs) comprising mine service areas, power supply, fuel supply and storage, water supply and management, mine water management, roads, transport facilities, waste disposal facilities, communications and medical facilities
- a **coal handling and processing plant** designed to process 74.5 mtpa of raw coal
- **out-of-pit waste rock structures** for the storage of the initial volumes of the project's 13.1 billion bank cubic metres (bcm) of over and interburden prior to storage of waste rock in mine voids when available
- coal stockpiles, tailings storage cells, water management structures, a 2.5 km portion of the rail loop and coal-loading facilities adjacent to the rail.

2) Environmental values and associated environmental impacts

Environmental risks, proposed discharges or emissions, environmental values and mitigation measures have been considered as part of the Environmental impact assessment. Refer to the attached Coordinator General's Report.

3) Standard Criteria

Assessing officers **must** consider the standard criteria before making a recommendation.

Have you considered the Standard Criteria? ☒ Yes

Refer to attachment 1 of this report.

4) Other assessment considerations

Native Title Notification given (PaLM process)	☐ Yes – comments received or period expired. ☐ Not applicable Assessing officer contacted PALM who noted that they do not provide native title notification. No standard checklist for native title notification on the PALM checklist. Native Title has been considered during the EIS process.
Strategic Cropping Land Application approved	☐ Yes ☐ No – EA cannot be granted ☒ Not applicable
EIS process and public notification requirements compliant (If applicable)?	☒ Yes ☐ No – EA cannot be granted ☐ Not applicable
Public Notification requirements in Division 2 complied with? Or substantially complied with?	☒ Yes ☐ No – EA cannot be granted ☐ Not applicable
Copy of approval has been sent to: psd.help@qld.gov.au <If this decision includes a monitoring program for a new discharge to waters OR to an amendment of an existing monitoring program of a release to waters, the administrators of the WaTERS database must be notified>	☐ Yes ☐ Not applicable

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Site-specific application

Applicant is a registered suitable operator?	☒ Yes ☐ No – EA must be refused
The administering authority requests that an associated development approval be refused	☐ Yes– EA must be refused ☒ Not applicable
The applicant relates to a significant project and Coordinator-general conditions have been imposed on the EA?	☒ Yes ☐ Not applicable
Referral to Land Court– please provide any details which affect the EA in Section 8.	☐ Yes – process complete ☒ Not applicable

5) Consultations

EHP officers (Sam Tarlinton (Manager Mining), Louise Pinn (Principal Environmental Officer) and Tristan Roberts (Principal Environmental Officer) met with Adani on 20 June 2014 to discuss the current EA process and expected timeframes for EHP making a decision on the application.

6) Conditioning

Refer to attachment 1 of this report.

All conditions placed on the EA are necessary or desirable ☒ Yes

7) Further relevant information

N/A

8) Recommendation

It is recommended that the application be:

☒ **Approved**

☐ **Refused** – provide statement of reasons

Assessing Officer: Tristan Roberts

Position: Principal Environmental Officer

Signed sch4p4(6) Personal information

Date: 28-8-14

4) Review and endorsement

Insert any comments relevant for the delegates consideration:		
Louise Pinn	sch4p4(6) Personal inf	28/8/14.
Principal Environmental Officer	Signed	Date

Approval

I approve the recommendation based on the reasons stated in this report.		
SAMUEL TARLINTON	sch4p4(6) Personal information	- 28/08/2014
Delegate	Signed	Date

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Appendix 1: Assessment of the application against regulatory requirements under the EP Act and EP Regulations

<p>176 Criteria for decision—variation or site-specific application</p> <p>(1) This section applies for a variation or site-specific application.</p> <p>(2) In deciding the application, the administering authority must—</p> <p>(a) comply with any relevant regulatory requirement; and</p> <p>(b) subject to paragraph (a), have regard to each of the following—</p> <p>(i) the application;</p> <p>(ii) any standard conditions for the relevant activity or authority;</p> <p>(iii) any response given for an information request;</p> <p>(iv) the standard criteria.</p> <p>(3) Despite subsection (2)(b), if the application is a variation application, the matters mentioned in subsection (2)(b) may only be considered to the extent they relate to the subject of the condition to be changed.</p>	<p>This proposal has been assessed through a Coordinator-General's (C-G's) EIS process under the <i>State Development and Public Works Organisation Act 1971</i> (Qld) (SDPWO Act). All information provided as part of the EA application under the EP Act (except for the 2 submissions received under Chapter 5 Part 4 of the EP Act) has been assessed through SDPWO Act EIS process. EHP has provided input throughout this process to ensure that all relevant regulatory requirements under the EP Act have been met. The assessing officer is satisfied that the proposal meets the regulatory requirements under the EP Act and that the conditions within the C-G's report meet the regulatory requirements under the EP Act.</p>
<p>205 Conditions that must be imposed for site-specific applications</p> <p>(1) This section applies for a site-specific application if—</p> <p>(a) the administering authority decides to approve the application subject to conditions; and</p> <p>(b) the application relates to a coordinated project.</p> <p>(2) The administering authority must impose on the environmental authority or draft environmental authority any conditions for the authority stated in the Coordinator-General's report for the relevant activity (Coordinator-General's conditions).</p> <p>(3) Any other condition imposed on the authority cannot be inconsistent with a Coordinator-General's condition.</p>	<p>The C-G's conditions are stated in Appendix 1 of the attached C-G's Report. The assessing officer is satisfied that these conditions adequately manage all environmental risks associated with the project. No further conditions are recommended.</p> <p>Minor amendments have been made to the stated conditions in the C-G's report. These include:</p> <ul style="list-style-type: none"> • Format and grammar changes; • Removal of a paragraph in Appendix 3 which refers to out of date information regarding the governance of subsidence; • Removal of 'levee' domain from table A3: Mining Domains. The disturbance area for levees has been already accounted for in the 'Carmichael River corridor and levees' domain; and • Inclusion of ERA thresholds on Page 2 of the EA. <p>These changes have not altered the intent of the conditions. The Office of the Coordinator General (OC-G) sent the assessing officer an email on 27/8/2014 stating that minor editorial amendment could be made on the basis that the intent of the conditions were not amended.</p>

standard criteria means—

(a) the following principles of environmental policy as set out in the Intergovernmental Agreement on the Environment—	
<p>(i) the precautionary principle;</p> <p>3.5.1 precautionary principle -</p> <p>Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:</p> <ol style="list-style-type: none"> careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and an assessment of the risk-weighted consequences of various options. 	<p>The precautionary principle has been applied during the assessment of the SDPWO Act EIS. The conditions in Appendix 1 of the C-G's report will ensure that the risk of environmental harm to the receiving environment is minimised.</p>
<p>(ii) intergenerational equity;</p> <p>3.5.2 intergenerational equity -</p> <p>the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.</p>	<p>Intergenerational equity has been considered throughout the SDPWO Act EIS. In particular, the conditions in Appendix 1 include:</p> <ul style="list-style-type: none"> Rehabilitation requirements to ensure that the land meets post mining objectives and that rehabilitated areas will be consistent with the surrounding native ecosystem. Contaminant release limits for Air, Noise, Water and Groundwater to ensure the risk of the mine degrading the receiving environment is minimised. Environmental offset requirements to ensure that State Significant Biodiversity Values impacted during the project will be offset. Numerous plans and programs to ensure that the proponent continues to conduct research and continually refine mitigation measures to minimise the impact of the mining activity on the receiving environment.
<p>(iii) conservation of biological diversity and ecological integrity; and</p>	<p>The conditions contained in Appendix 1 of the C-G's report ensure that the impacts to biological diversity and ecological integrity are minimised. Where impacts cannot be avoided conditions have been imposed that require environmental offsets. Numerous plans and programs have been conditioned to ensure that the proponent continues to conduct research and continually refines mitigation measures to reduce the impact on the receiving environment.</p>
<p>(b) any Commonwealth or State government plans, standards, agreements or requirements about environmental protection or ecologically sustainable development; and</p>	<p>Considered. The Department of Environment approved the project under section 130 and 133 of the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (EPBC) on 24 July 2014. The Coordinator General has ensured that the conditions within the EPBC approval have been aligned with the stated conditions for the draft Environmental Authority. Refer to the attached C-G's report for further information.</p>

(c) any relevant wild river declaration; and	N/A
(d) any relevant environmental impact study, assessment or report; and	Considered. The attached C-G's report forms the basis of this assessment under the EP Act.
(e) the character, resilience and values of the receiving environment; and	Considered. Refer to section 5, 6 and 8 of the C-G's report.
(f) all submissions made by the applicant and submitters; And	Two submissions have been received as part of the EA application process under Chapter 5 Part 4 of the EP Act. These submissions have been considered as part of the assessment process. Refer to attachment 2 of this report for consideration of the submissions.
(g) the best practice environmental management for activities under any relevant instrument, or proposed instrument, as follows— (i) an environmental authority; (ii) a transitional environmental program; (iii) an environmental protection order; (iv) a disposal permit; (v) a development approval; and	Best Practice Environmental Management was considered during the development of the EA conditions in Appendix 1 of the C-G's report.
(h) the financial implications of the requirements under an instrument, or proposed instrument, mentioned in paragraph (g) as they would relate to the type of activity or industry carried out, or proposed to be carried out, under the instrument;	N/A. The conditions contained in Appendix 1 of the C-G's report meets the regulatory requirements under the EP Act. It is recommended that no further conditions are imposed.
(i) the public interest; and	Considered. Refer to Section 5.5 of the C-G's report.
(j) any relevant site management plan; and	Considered. Refer to section 8 and Appendix 1 of the C-G's report.
(k) any relevant integrated environmental management system or proposed integrated environmental management system; and	Considered. Refer to section 8 and Appendix 1 of the C-G's report.
(l) any other matter prescribed under a regulation.	Sections 51 to 53 of the EP Regulations have been considered below.

	Chapter 4 Regulatory requirements	
51	Matters to be complied with for environmental management decisions	
	The administering authority must, for making an environmental management decision relating to an environmentally relevant activity, other than a prescribed ERA—	
(a)	carry out an environmental objective assessment against the environmental objective and performance outcomes mentioned in schedule 5, part 3, tables 1 and 2; and	Schedule 5, part 3, tables 1 and 2 are considered below.
(b)	consider the environmental values declared under this regulation; and	Considered. Refer to section 5, 6 and 8 of the C-G's report.
(c)	consider each of the following under any relevant environmental protection policies— (i) the management hierarchy; (ii) environmental values; (iii) quality objectives; (iv) the management intent; and	The environmental protection policies have been incorporated into the conditions in Appendix 1 of the C-G's report.
(d)	consider the matters of national environmental significance.	The project was declared by the Commonwealth Minister for the Environment to be a 'controlled action' pursuant to section 75 of the EPBC Act on 6 January 2011. Refer to section 4.2 of the C-G's report.
52	Conditions to be considered for environmental management decisions	N/A. The conditions contained in Appendix 1 of the C-G's report meet the regulatory requirements under the EP Act. It is recommended that no further conditions are imposed.
53	Matters to be considered for decisions imposing monitoring conditions	N/A. The conditions contained in Appendix 1 of the C-G's report meet the regulatory requirements under the EP Act. It is recommended that no further conditions are imposed.

53A	Prescribed standard criteria for environmental management decisions	
	For schedule 4 of the Act, definition <i>standard criteria</i> , paragraph (l), an environmental objective assessment relating to an environmental management decision is prescribed.	The standard criteria have been considered.

	Additional regulatory requirements for particular	
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	environmental management decisions	
58	Release of water or waste to wetlands for treatment	N/A. The activity will not release water or waste to wetlands for treatment
63	Activity involving direct release of waste to groundwater	
1	This section applies to the administering authority for making an environmental management decision relating to an activity that involves, or may involve, the release of waste directly to groundwater (the <i>receiving groundwater</i>).	The proponent has not proposed any direct release of waste to groundwater. .
2	The administering authority must refuse to grant the application if the authority considers—	
(a)	for an application other than an application relating to an environmental authority for a petroleum activity—the waste is not being, or may not be, released entirely within a confined aquifer; or	The risk of impact to groundwater is discussed in section 6 of the C-G's report. This risk has been managed through conditions in Schedule E: Groundwater and Schedule F: Surface water of Appendix 1 of the C-G's report.
(b)	the release of the waste is affecting adversely, or may affect adversely, a surface ecological system; or	Considered and conditioned accordingly. The C-G's report contains surface water conditions which have been developed in accordance with the Fitzroy model water condition methodology. Refer to Schedule F: Surface water of Appendix 1 of the C-G's report
(c)	the waste is likely to result in a deterioration in the environmental values of the receiving groundwater.	The risk of impact to groundwater is discussed in section 6 of the C-G's report. This risk has been managed through conditions in Schedule E: Groundwater and Schedule F: Surface water of Appendix 1 of the C-G's report.
Part 3	Environmental objectives and performance outcomes	
	Table 1 Operational assessment	Considered during the assessment of the SDPWOA EIS. Refer to section 6 and Appendix 1 of the C-G's report.
	Table 2 Land use assessment	Considered during the assessment of the SDPWOA EIS. Refer to section 6 and Appendix 1 of the C-G's report.

Land use assessment under Table 2, Schedule 5 of the EP Reg

	Environmental Objective	Performance outcome	How the proposal meets the Environmental Objective and performance outcome **
Site Suitability	Minimise serious environmental harm on adjacent areas of high conservation value/special significance/sensitive land	Identify and evaluate areas of high conservation value/special significance and minimise impacts	The proposal will have adverse impacts to conservation value/special significance/sensitive land beyond the mining lease. Refer to section 5 and 6 of the C-G's report for a list of the values associated with the project. Conditions have been imposed by the Coordinator General in Appendix 1 Section 1 of the C-G's report to ensure that impacts to the surrounding high conservation value/special significance/sensitive land are minimised. Where impacts cannot be avoided the C-G's has imposed conditions requiring offsets.
		No adverse effects beyond the site.	
		Critical design requirements will prevent emissions having an irreversible or widespread impact on adjacent sites.	
Location on site	Location on site protects EVs on adjacent land	Activity located to prevent impacts on surrounding land	Appropriate conditions have been imposed by the Coordinator General in Appendix 1 Section 1 of the C-G's report to ensure that mitigation measures are implemented to minimise impact to EVs.
		Storage of hazardous materials protected from flooding	
Critical Design	Designed for Best Practice Environmental Management	No storage, production, treatment or release of hazardous contaminants	Considered. Refer to section 6 of the C-G's report.
		Storage and management of hazardous materials prevents adverse environmental impacts	
		Regulated structures comply with the 'Manual for Assessing Hazard Categories and Hydraulic Performance of Dams',	Yes. The proponent commissioned an RPEQ to assess the proposed water storages against the department's 'Manual for Assessing Hazard Categories and Hydraulic Performance of Dams'. The model regulated structures conditions are included at Appendix 1 Section 1 of the C-G's report.
		Hazardous material stored to prevent movement offsite during a flood.	Yes. Appropriate conditions have been imposed by the Coordinator General in Appendix 1 of the C-G's report to ensure that waste on site is managed appropriately.
		The design of the facility prevents or minimises the production of hazardous contaminants and waste.	
		The design contains and treats hazardous contaminants instead of releasing it.	

** The assessing officer must determine the extent to which the application achieves the environmental objective. The applicant can do this by achieving the performance outcomes stated in Schedule 5 of the EP Reg or by proposing appropriate alternative measures.

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Appendix 2: Submissions to the EA application

Adani Mining Pty Ltd	Submission	Name
ML70441	1	Land Services of Coast & Country Inc
	1	sch4p4(6) Person- Conservation Action Trust
ML70505	1	Land Services of Coast & Country Inc
	1	sch4p4(6) Person- Conservation Action Trust
ML70506	1	Land Services of Coast & Country Inc
	1	sch4p4(6) Person- Conservation Action Trust

Assessment of the submissions

Submission 1: sch4p4(6) Persor Conservation Action Trust

The submission does not relate to environmental impacts within the State of Queensland therefore is outside of the scope of the assessment process under the EP Act.

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Submission 2: Land services of Coast and country

1. Approval of the mine is contrary to the object of the EPA stated in s 3 because approval and construction of the mine will not protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development).	Refer to the standard criteria section in this report.
2. Approval of the mine would be contrary to the requirement in s 5 of the EPA for the administering authority and the Land Court to perform a function or exercise its power under the Act in the way that best achieves the object of the Act.	EHP is satisfied it has exercised its power appropriately to achieve ecologically sustainable development.
3. Approval and construction of the mine would be contrary to the precautionary principle, which is a principle of environmental policy as set out in the <i>Intergovernmental Agreement on the Environment</i> and, therefore, part of the standard criteria for the decision.	This issue has been considered in Appendix 1 of this assessment report
4. Approval and construction of the mine would be contrary to intergenerational equity, which is a principle of environmental policy as set out in the <i>Intergovernmental Agreement on the Environment</i> and, therefore, part of the standard criteria for the decision.	This issue has been considered in Appendix 1 of this assessment report
5. Approval and construction of the mine would be contrary to the conservation of biological diversity and ecological integrity, which is a principle of environmental policy as set out in the <i>Intergovernmental Agreement on the Environment</i> and, therefore, part of the standard criteria for the decision.	
6. Approval and construction of the mine will cause environmental harm to the character, resilience and value of the receiving environment.	This issue has been considered in Appendix 1 of this assessment report
7. Approval and construction of the mine would be contrary to the public interest.	This issue has been considered in Appendix 1 of this assessment report
8. Approval and construction of the mine will cause material and serious environmental harm.	This issue has been considered in Appendix 1 of this assessment report
9. In the alternative to grounds 1-8 above, if the application is not refused, conditions should be imposed to address the matters raised in grounds 1-8 above.	Conditions have been imposed in Appendix 1 of the C-G's report to manage the risk of environmental harm
11. If the mine proceeds, it will cause serious and material environmental harm to groundwater and dependent users, species and ecosystems.	The environmental risk associated with the project has been considered. Conditions have been applied to manage that risk. Refer the C-G's report for further information.

<p>12. If the mine proceeds, it will impact groundwater dependent springs and systems that are important for human use, agriculture and biodiversity, including but not limited to:</p> <p>(a) the Doongmabulla Springs Complex - including Moses, Little Moses and Joshua; and</p> <p>(b) the Mellaluka Springs Complex - including Mellaluka Spring, Lignum Spring and Stories Spring.</p>	<p>Noted. The environmental risk associated with the project has been considered. The C-G's has imposed conditions requiring offsets to cleared State Significant Biodiversity Values to manage that risk. The approval relating to impacts to Matters of National Environmental Significance under the EPBC Act will impose further requirements</p>
<p>13. The full extent of the environmental harm to groundwater and dependent species and ecosystems cannot be particularised by the objector due to the inadequate information provided by the Applicant in the application, EIS and SEIS.</p>	<p>The impacts to groundwater have been considered as part of this EIS assessment process. Refer to:</p> <ul style="list-style-type: none"> • Appendix 3: The Department of Natural Resources and Mines' (DNRM's) assessment of the groundwater model provided by Adani • Appendix 4: 3rd party independent review of the groundwater model • Appendix 1 (Schedule E): Groundwater conditions requiring the continual review of the groundwater modelling program
<p>14. It has not been adequately demonstrated that the mine will not cause unacceptable environmental harm to groundwater and dependent species and ecosystems. In particular:</p> <p>(a) The impacts on groundwater present a threat of serious and irreversible environmental damage, yet full scientific certainty regarding those impacts is absent due to inadequate provision of scientific information. Given the scale of the mine, the environmental authority application should be refused considering the precautionary principle and other principles of environmental policy set out in the <i>Intergovernmental Agreement on the Environment</i>;</p> <p>(b) It has not been adequately demonstrated that the mine will not cause unacceptable environmental harm to the character, resilience and values of the receiving environment by changes to the quality and quantity of groundwater.</p>	<p>The impacts to groundwater have been considered as part of this EIS assessment. Refer to:</p> <ul style="list-style-type: none"> • Appendix 3: DNRM's assessment of the groundwater model provided by Adani • Appendix 4: 3rd party independent review of the groundwater model • Appendix 1 (Schedule E): Groundwater conditions requiring the continual review of the groundwater modelling program prior to the commencement of mining.
<p>15. If the mine proceeds, it will cause serious and material environmental harm to surface water and dependent users, species and ecosystems on and associated with the area of the mine and downstream.</p>	<p>EHP has worked with Adani and Department of Science, Information, Technology, Innovation and the Arts (DSITIA) to develop a mine water release strategy which ensures that the releases will not cause an adverse impact on the receiving waterways or on the downstream users. The water release conditions have been developed in accordance with the Fitzroy model water condition methodology. Refer to Schedule F:Water in the C-G's report.</p>

<p>16. The full extent of the serious and material environmental harm to surface water and dependent users, species and ecosystems cannot be particularised by the objector due to the inadequate information provided by the Applicant in the application, EIS and SEIS.</p>	<p>EHP is satisfied that sufficient information has been provided as part of the application and that the application meets the regulatory requirements under the EP Act. Refer to Appendix 1 of this assessment report.</p>
<p>19. The species that will be severely impacted by the mine include, but are not limited to, the Black throated finch (<i>Poephila cincta</i>) (BTF).</p> <p>20. A nationally significant population of BTF is located within the mine lease area and will be severely and permanently adversely impacted by the mine through impacts such as the direct clearing of habitat and diminution of surface water and groundwater dependent ecosystems.</p> <p>21. The exact extent of the impacts cannot be known as the application, EIS and SEIS did not adequately assess the presence of BTF or its habitat requirements.</p> <p>22. No confidence can be placed in proposed offsets for the BTF as its requirement are insufficiently known to select any offset areas.</p> <p>23. The full extent of the adverse environmental impacts to biodiversity and ecosystems cannot be particularised by the objector due to the inadequate information provided by the Applicant in the application, EIS and SEIS.</p> <p>24. It has not been adequately demonstrated that the mine will not cause unacceptable serious and material environmental harm on biodiversity, including threatened species, and ecosystems. In particular:</p> <ul style="list-style-type: none"> (a) The environmental authority applied for would authorise environmental harm to biodiversity that would otherwise be unlawful under ss 437, 438 and 493A of the EPA; (b) The proposed mining operations will present a threat of serious and irreversible adverse environmental impacts on biodiversity; and (c) There is inadequate scientific information about potentially severe and long term adverse impacts on biodiversity. 	<p>Section 5 of the C-G's report details the surveys that have been conducted by the proponent.</p> <p>Schedule I: Offsets and Biodiversity includes a Black-throated Finch (BTF) management plan which requires the two years of baseline data to ascertain in detail the feeding, nesting and home range requirements of the population at the mine site.</p> <p>Section 3, C-G's imposed condition 1 – BTF baseline research for Carmichael project</p> <p>C-G imposed condition 4 – Proponent contribution to BTF Bioregional Management Plan</p> <p>The Bioregional Plan to manage the BTF populations in the Desert Uplands bioregion and Galilee Basin are managed with input from the BTF recovery team, Australian ecological expertise, EHP, DoE to ensure the populations are maintained and ecological requirements are improved.</p> <p>C-G imposed condition 5 – Apportionment of pro-rata contributions- BTF Bioregional management plan</p> <p>C-G imposed condition 6 – Offsets</p> <p>The proposed offset properties identified by the proponent have known populations of Black-throated finches.</p> <p>The approval under the EPBC Act will impose further requirements for the impacts to Matters of National Environmental Significance.</p>

Climate change

25. If the mine proceeds, it will cause serious and material environmental harm by contributing to climate change and ocean acidification.

26. The full extent of the serious and material environmental harm that the mine will cause by contributing to climate change and ocean acidification cannot be particularised by the objector due to the inadequate information provided by the Applicant in the application, EIS and SEIS.

27. It has not been adequately demonstrated that the mine will not increase the likelihood, severity and longevity of the environmental harm that will result from climate change and ocean acidification. In particular:

(a) The environmental authority applied for would authorise environmental harm that would otherwise be unlawful under ss 437, 438 and 493A of the EPA.

(b) The environmental harm that would be authorised is defined in s 14 of the EPA as:

14 Environmental harm

(1) *Environmental harm* is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

(2) *Environmental harm* may be caused by an activity—

- (a) whether the harm is a direct or indirect result of the activity; or
- (b) whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.

(c) The relevant considerations that the administering authority and the Land Court must consider in assessing the application include the amount of environmental harm that would be authorised by the grant of the environmental authority applied for, including the indirect and direct results of the activity and the combined effects of the activity and other activities or factors.

(d) In respect of the application for the environmental authority this includes:

- (i) the environmental harm from emissions of greenhouse gases from the transport and use of the coal which are a direct or indirect result of the mining activity; and
- (ii) the environmental harm from climate change and ocean acidification resulting from the combined effect of the mining activity and other activities and factors.

(e) The emissions from the mining, transportation and use of the coal will increase the likelihood, severity and longevity of climate change with significant and long term adverse impacts on the environment, which warrant refusal considering the combined effect of ss 3, 14, 171, 191, 437, 438, 493A and Schedule 4 (Dictionary) of the EPA and the subject-matter, scope and purpose of the Act.

Climate change is not part of the regulatory requirements under Chapter 4 of the Environmental Protection Regulation 2008. EHP is therefore not required to consider climate change when making the decision on the application.

Further EHP is satisfied that intergenerational equity has been adequately addressed. That is the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

<p>28. It has not been adequately demonstrated that the mine will not have adverse economic and social impacts. In particular:</p> <p>(a) The mine will have adverse economic impacts and potentially severe adverse economic impacts caused by these proposed mining operations on local, regional, State and global economies and communities.</p> <p>(b) The adverse economic impacts of the mine have not been adequately assessed.</p> <p>(c) A net economic benefit from the mine has not been demonstrated.</p> <p>(d) There is not sufficient economic need for the mine to justify the impacts and risks set out above.</p>	<p>Considered. Refer to Section 5.5 of the C-G's report for further detail on the social and economic impacts of the project.</p>
<p>29. The serious and material environmental harm that the mine will cause to groundwater, surface water, biodiversity, and climate change and ocean acidification, and the economic and social matters described above collectively outweigh the purported benefits of the mine and justify refusal on the basis that it would not be in the public interest.</p>	<p>Considered as outlined in the above considerations.</p>