



Carmichael Coal Project— Frequently Asked Questions

What actions are being taken to protect the ornamental snake and the yakka skink?

There are a number of measures and approval conditions in place to protect the ornamental snake and yakka skink. The measures will include limiting disturbance to identified tracks and the rehabilitation of impacted areas. In addition, at least 135 hectares of ornamental snake habitat and at least 5600 hectares of yakka skink habitat must be protected and managed by the proponent.

What about other threatened species including the black-throated finch (southern)?

Impacts from the project on threatened species have been reduced and avoided through:

- The use of fauna spotters prior to and during all vegetation clearing activities to ensure no animals are harmed during clearing.
- Adani identifying and implementing measures to avoid impacts to threatened species and their habitat outside of the areas subject to clearing or underground mining, such as locating infrastructure on already disturbed areas.
- Rehabilitation of all areas of black-throated finch habitat after mining is finished.
- Adani identifying and implementing measures to manage subsidence and groundwater impacts on the habitat of threatened species and ecological communities, in the event that cracking or ponding occurs.

Where impacts could not be avoided, offsets are required to compensate. Importantly, a detailed Biodiversity Offset Strategy is required of the proponent for approval by the Minister for the Environment before mining can commence. At a minimum the offsets must include:

- Protection and improvement of 31,000 hectares of southern black-throated finch habitat.

In addition, Adani is required to spend \$1 million on research projects to improve the conservation of threatened species in the Galilee Basin.

How will the Doongmabulla Springs be protected?

The approval conditions include strict conditions to limit the reduction in groundwater level at the springs to 20 centimetres. This will protect the springs and the unique species found there.

The Groundwater Monitoring and Management Plan, to be approved by the Minister for the Environment, must also include details of a monitoring system to ensure that there is early warning if the modelled impacts are likely to be exceeded. If those early warning triggers are reached, the proponent must identify and implement corrective measures to ensure that the approved limits of impact are not exceeded.

Research will also be undertaken to help us better understand the geology of the region and the interaction of groundwater in the Great Artesian Basin. This research will provide additional certainty regarding groundwater impacts on the springs and the broader Great Artesian Basin.

How will water resources be protected?

Protecting precious water resources from the impacts of large coal mines is a priority of the Australian Government. The information used to assess the project's impacts on water was provided by the public, environmental groups and the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC). All advice of the Committee has been addressed in making this decision.

Comprehensive groundwater management plans and strategies must be prepared and approved by the Minister for the Environment before mining can commence. They must include:

- Measures to 'return' at least 730 mega-litres of water per year for five years to the Great Artesian Basin.
- Details of a monitoring program to detect any changes in groundwater early, including defining early warning triggers to identify any unforeseen impacts.

Groundwater modelling predicts that the project may affect 11 groundwater bores during operation and 15 bores over time. Regular reviews of the groundwater model will be undertaken to ensure that it reflects the best available science and environmental information.

How have cumulative impacts from other mines been considered?

The environmental impact assessment considered cumulative impacts from other mines in the region on water and threatened species.

The conditions of approval require regular review of water monitoring information from surrounding projects. This information will also inform the Bioregional Assessment of the region being undertaken by CSIRO, Geoscience Australia and the Department of the Environment.

Importantly, the conditions require the way this project is managed to adapt to any new information to ensure impacts are no greater than those approved.

How do you know the modelling is right?

There have been five expert review processes for the groundwater modelling, giving confidence that predictions of likely impacts are accurate and that conditioning for these potential impacts is appropriate.

The Independent Expert Scientific Committee raised a number of technical concerns on the groundwater modelling. Those concerns relate to the groundwater flow and model assumptions. Adani has already undertaken a revision of the parameters of the model, and has subsequently submitted further information confirming the expected impacts of the re-run model.

Research is also required to be undertaken on how groundwater flows in relation to the Rewan Formation. As new information becomes available, the modelling will be revised and Adani will be required to adaptively manage the impacts.

Will the mine impact on the Great Artesian Basin?

Approximately six per cent of the water needed to operate the mine will come from the Great Artesian Basin. This usage is offset by the requirement that at least 730 mega-litres must be 'repaid' to the Great Artesian Basin each year for five years.

Revised conditions better protect the Great Artesian Basin-fed Doongmabulla Springs Complex. The groundwater level may not be lowered more than 20 centimetres and this, combined with an early warning system and triggers for preventative action, will ensure the mine operator avoids any serious impacts.

In addition, research plans will be undertaken on the Rewan Formation and the Springs. The Rewan Formation is a geological formation that separates the Galilee Basin and the Great Artesian Basin and restricts water from flowing between the two underground aquifers. The research will help us better understand the role of the Rewan Formation in limiting impacts from mining to the groundwater of the Great Artesian Basin.

This research will provide additional certainty that potential impacts from the mine on the Doongmabulla Springs, and the Great Artesian Basin more broadly, are understood and properly managed. The peer reviewed results will inform future modelling required under the Groundwater Management and Monitoring Plan.

What measures are being taken to protect Indigenous heritage?

Under Queensland law, Adani is required to prepare a Cultural Heritage Management Plan with the Wangan and Jagalingou People, the Traditional Owner groups in the region. This, which will help to ensure that the area is better managed in accordance with traditional owner expectations.

Throughout the assessment, extensive consultation has been undertaken with Indigenous groups, government agencies, landholders, environmental groups and the community. Public comment was sought during the environment impact assessment and this feedback has informed the assessment process and approval conditions.

Representations on Indigenous cultural heritage issues were made on behalf of the Wangan and Jagalingou People during the public comment period for the environmental impact statement. The issues raised have been considered in both the Queensland and Australian Government assessments of the project.

How will the project impact on greenhouse gas emissions?

Strong conditions to limit greenhouse gas emissions have been put in place by the Queensland Government—including control strategies for the mine, its surroundings and the rail components of the project. In addition, the mine operator has committed to implement a range of measures relating to energy efficiency and consumption, to minimise greenhouse gas emissions.

More broadly, the Australian Government is committed to caring for Australia's unique environment through direct and practical policy measures under the four pillars of clean air, clean land, clean water and heritage protection. As part of the clean air pillar, the Government will implement its Direct Action Plan on climate change to achieve the recently announced 2030 emissions reduction target of 26-28 per cent below 2005 levels. With regard to the impacts of the emissions caused by the use of the coal from the mine, recipient nations will need to meet their obligations under the United Nations Convention on Climate Change.

Will the project impact on the Great Barrier Reef?

The project is over 300 kilometres inland from the Queensland coast in a dry and dusty region of outback Queensland. Mining will not have any direct impacts on the Great Barrier Reef.

To ensure there are no impacts from water leaving the mine, the Queensland Government has required measures to manage water quality and control sediment including diversion drains, sediment fences, mine affected water storage dams, sediment ponds and sewage treatment. These measures will ensure that the mine will not impact on the water quality of the reef.

How will we know conditions are being met?

Compliance and enforcement officers from the Australian Government Department of the Environment will closely monitor operation of the mine to ensure the conditions of approval are met.

The Australian Government takes its role of monitoring these approvals very seriously. Breaches of conditions can result in serious penalties.

What are the next steps?

Further steps are required before mining can start. The Queensland Government must issue a mining lease under the *Mineral Resources Act 1989* and an Environmental Authority under the *Environmental Protection Act 1994* that contains all the operating conditions Adani Mining must abide by when carrying out the project.

The Commonwealth Environment Minister must also first approve the following plans:

- the Groundwater Management and Monitoring Program
- Matters of National Environmental Significance Management Plan/s
- the Biodiversity Offset Strategy and Great Artesian Basin Offset Strategy
- the 3D Seismic Survey Management Program
- Groundwater Flow Model Review, including a peer review report
- the Great Artesian Basin Springs Research Plan
- the Rewan Formation Connectivity Research Plan.

What role does the Australian Government play in approving the project?

Different levels of government play different roles in making decisions about projects.

All decisions related to allocation of land for mining purposes and issuing mining tenements were made by the Queensland Government.

Primary decision making in relation to environmental matters also rests with the Queensland Government, as state governments have a broader role on a wider range of environmental and land use planning issues.

In May 2014, the Queensland Coordinator General recommended that the Carmichael Mine and Rail project be approved and proposed conditions for a broad range of environmental matters including air, waste, groundwater, noise, surface water, sewerage treatment, land rehabilitation, offsets, biodiversity, subsidence, dams, mining voids and levees.

Before the Carmichael Mine can proceed, the Queensland Government must issue a mining lease under *the Mineral Resources Act 1989* and an Environmental Authority under the *Environmental Protection Act 1994* that contains all the operating conditions Adani Mining must abide by when carrying out the project.

In August 2014 the Queensland Coordinator General recommended that the mining lease and Environmental Authority be granted, and invited the submission of objections to the Land Court of Queensland. Objections were lodged with the Court, arguments have been heard, and the Court's recommendations are expected in the near future.

If an Environmental Authority and mining lease are granted by the Queensland Government for the Carmichael Coal Mine and Rail project, Queensland and Commonwealth compliance officers will work together to ensure that the strict conditions that have been put in place at both the state and federal level are implemented.

The role of the Australian Government is to make decisions on nationally protected matters, such as threatened species. The Australian Government does not choose which projects are referred for consideration. Each proposal that is referred is considered on its merits, under the strict requirements of national environment law.

How has this project been assessed?

There is a long series of approval processes required under various Queensland Government laws. In addition, this project has been subject to a rigorous assessment process under national environmental law—the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

While most considerations with respect to mining approvals rest with the Queensland Government, the Australian Government is required by law to consider projects for their potential impacts to matters of national environmental significance.

This assessment was based on the best available scientific information, including advice from the IESC, ensuring that potential impacts on water resources were completely understood. Importantly, the assessment has responded to all of the IESC's advice with further and strengthened approval conditions.

What about the proponent's environmental record

There was unprecedented scrutiny under national environment law of the environmental record of Adani Mining Pty Ltd, its executive officers and its parent bodies and executive officers of those bodies in assessing this project. The Department requested, and received, extensive information on this issue. This included information on another subsidiary of the Adani Group operating a port at Mundra—Adani Ports & Special Economic Zone Pty Ltd. The Department found no basis in the proponent's past history to refuse the approval under the EPBC Act.

In addition, the EPBC Act provides a robust legal framework to ensure the proponent will comply with conditions of approval; including provisions to suspend and revoke approvals. The Compliance and Enforcement Branch of the Department of the Environment has systems in place to actively monitor compliance with conditions of approval. After careful consideration, and taking all these issues into account, it was decided that the proponent is suitable to be granted an approval.

How has the community been engaged during the assessment?

Extensive community feedback—including from government agencies, Indigenous groups, landholders, environmental groups and private citizens—has informed the assessment and approval conditions for the project.

Public comment was sought during the environment impact assessment with the key issues raised including greenhouse gas emissions, impacts on endangered species and impacts on local farmland. Additionally, the Commonwealth Environment Minister visited the project area in June 2014 with then Chair of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development and listened to the community's views.

© Commonwealth of Australia, 2015.



This fact sheet is licensed by Commonwealth of Australia under a Creative Commons Attribution 4.0 Australia licence.

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of the Australian Government or the Minister for the Environment.