



Australian Government
**Department of Agriculture
and Water Resources**

IR 180714
Document 1

s47F

Queensland North Assessments Section
Assessments & Governance Branch
Department of the Environment and Energy
GPO Box 787
CANBERRA ACT 2601

Dear Mr s47F

I refer to the letter of 8 June 2018 from s47F (Director, Referrals Gateway, Department of the Environment and Energy) to the Hon. David Littleproud MP, Minister for Agriculture and Water Resources, inviting comment on referral EPBC 2018/8191 (North Galilee Water Scheme, 160km northwest of Clermont, Qld), under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Minister for Agriculture and Water Resources has asked me to reply on his behalf.

The department considers the proposed action could have significant impact(s) on a water resource, in relation to coal seam gas development and large coal mining development, protected under the EPBC Act.

Based on the referral, the proposed action by Adani Infrastructure Pty Ltd is to construct and operate a water scheme under a commercial agreement to the operators of the Carmichael Coal Mine and Rail Project (the Project) and potentially for other resource extraction projects in the northern Galilee Basin in the future. The proposed action is located about 160 kilometres (km) northwest of Clermont, central Queensland. The water scheme includes two stages (stage A, stage B). The stage A component includes construction and operation of flood harvesting infrastructure that will pump water from the river into an off-stream storage, and then supply water to the Project via pipeline. The stage B component is a 61 km buried pipeline with a 30 metre construction corridor extending from stage A and, for the most part running adjacent to the Project alignment. The total development footprint is about 1200 hectares. Construction is anticipated to commence in January 2019 and end in March 2020.

According to the referral, the project area lies within leasehold, state and freehold properties. Stage A works will be located within Lot 3 (SP278559) and a stock route (401CHAR), whilst utility infrastructure for stage B will be located mainly over six separate properties. These properties are predominantly used for low intensity cattle grazing. We understand the proponent has secured in principle land use and access agreements with the affected landholders.

The department would encourage the proponent to maintain open communication and consultation lines throughout the lifespan of the proposed action to mitigate sensitivities amongst stakeholders (e.g. Traditional Owners, landholders whose properties overlap exploration permits and mining leases, environment groups). The department notes the proponent has been granted a surface water licence and an associated water licence. The department considers it important to understand which licence will be used once the Project progresses after construction.

Water assessments including the establishment of robust baseline data on surface and groundwater monitoring in the project area should be carried out in accordance with management plans and made publicly accessible. Stakeholders also need to be provided with adequate and relevant information about the proposed action.

If the proposed action is approved, the department also recommends that Department of the Environment and Energy conditions for approval stipulate the proponent should adequately carry out rehabilitation work after mine closure. The proponent should also be audited periodically to ensure that conditions stipulated in the approval are complied with adequately.

Thank you for the opportunity to comment on referral EPBC 2018/8191.

Yours sincerely

s47F

Cassandra Kennedy
Assistant Secretary
Sustainable Agriculture Branch
June 2018

for

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**Mining and Investment
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22 June 2018

Attn: s47F

Re: Invitation to comment on referral – EPBC 2018/8191 – North Galilee Water Scheme, 160 km northwest of Clermont, Qld

I refer to the request for comments dated 8 June 2018 on a referral for the North Galilee Water Scheme (the Project) by Adani Infrastructure Pty Ltd (the Proponent) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Geoscience Australia has reviewed the referral information, particularly as it relates to Sections 24D and 24E (the water trigger) of the EPBC Act, with attention to potential impacts to groundwater resources and other technical geoscience or geotechnical factors.

Summary

The Proponent has self-assessed that the Project does not trigger consideration under Sections 24D and 24E of the EPBC Act, based on the definition of the 'water trigger'.

Geoscience Australia notes that, should the Department of the Environment and Energy assess that the project does fall within the definition of the water trigger, there is potential for the project to directly impact groundwater resources and groundwater dependent ecosystems in localised areas and impact on recharge processes across larger areas. More information on the groundwater resources in the area and specific construction activities, particularly related to the dam enhancement and locations where the pipeline crosses watercourses, would be needed to assess the significance of impacts on groundwater resources.

Geoscience Australia is unaware of any technical geoscience or geotechnical issues that would impact on the project.

Background

The Proponent, a wholly owned subsidiary of Adani Enterprises Ltd, proposes to construct and operate the North Galilee Water Scheme (NGWS) to provide water supply under a commercial agreement to the operators of the Carmichael Coal Project (CCP). The NGWS is located approximately 160 kilometres (km) north-west of Clermont in Central Queensland.

The project will involve construction and operation of flood harvesting infrastructure that will pump water from the river into an off-stream storage, and then supply water to the CCP via a pipeline. The

project will be undertaken as two stages, covering a total area of 1,234 ha. Stage A includes components such as:

- An intake channel from the Suttor River, and an intake pump station.
- Upgrade to the existing Belyando Junction 2.2 GL storage dam to a nominal 10 GL capacity. This requires an estimated footprint area of approximately 170 ha including the dam and associated infrastructure.
- The buried pipeline along a 52 km route that crosses four minor watercourses and one major watercourse. The pipeline is located within a 30 m construction corridor, inside a 75 m easement.

The Stage B includes:

- A buried pipeline with a 30 m construction corridor extending from Stage A and, for the most part running adjacent to the Carmichael Rail Project alignment. The pipeline will be approximately 60 km long and crosses five minor and four major watercourses.
- A series of smaller offtake pipelines (20 m disturbance corridor) that will provide water to associated infrastructure for the CCP including a proposed airport and mine workers accommodation village.
- Laydown areas immediately adjacent to the pipeline corridor within a 75 m pipeline easement.

Comments

The Proponent has self-assessed that the Project does not trigger consideration under Sections 24D and 24E of the EPBC Act (the 'water trigger'). Geoscience Australia notes that the Commonwealth of Australia (2013)¹, section 3.4, states:

"Extraction of CSG or coal must form part of the activity and not merely be associated with it. Where referred along with new or modified extraction of CSG or coal, the following activities will form part of the extractive process:

- *water supply for use in the extraction of CSG or coal ..."*

If DoEE determines that the project should be assessed against the water trigger, the following points should be considered.

Based on the expected shallow depth of excavation and the relatively small disturbance footprint, Geoscience Australia considers that the pipeline is unlikely to have a significant impact on groundwater resources for the majority of its extent. The points at which the pipeline crosses minor and major watercourses warrant an assessment on a case by case basis to ensure surface and groundwater resources are not significantly impacted by the proposed works.

The enlargement of Belyando Junction Dam has the potential to have an impact on the groundwater resources in the local area.

¹ Commonwealth of Australia, 2013, *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments—impacts on water resources*, <http://www.environment.gov.au/system/files/resources/d078caf3-3923-4416-a743-0988ac3f1ee1/files/sig-water-resources.pdf>.

Impacts to the EPBC listed ecological community '*the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*' are considered and no springs are identified in the project area.

Mapping from the Bureau of Meteorology of Groundwater Dependent Ecosystems (GDEs) shows that ecosystems reliant on groundwater are present throughout large parts of the project disturbance area, however it appears that impacts on GDEs are not considered in the referral.

If you have any queries on this, please contact me on s47F or s47F @ga.gov.au.

Kind regards,

s47F

A/g Director, Groundwater Advice and Data Section
Groundwater Branch,
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Geoscience Australia