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Comment on EPBC Act referral 2014/7410 - Construction and operation of assets for Northern Water Infrastructure Systems

Thank you for seeking comment on the referral for the Northern Water Infrastructure Systems proposed by Galilee Water Pty Ltd. The referral has significant deficiencies and inadequate information given the potential scale and severity of the proposed impacts. The Australian Conservation Foundation (ACF) has serious concerns regarding the sustainability of the project including the direct, facilitated and cumulative impacts the project will have on a number of matters of national environmental significance, including the Great Barrier Reef (GBR), threatened and migratory species as well as the sustainable and equitable use of water in the Burdekin Catchment.

Specific concerns ACF has in relation to the project are discussed further below.

The referral fails to address downstream, facilitated and cumulative impacts on the values of the Great Barrier Reef World Heritage Area and Marine Park.

The proposed action seeks to extract significant volumes from the Cape (37.7% of flows) and Campaspe (39.8% of flows) Rivers, with little or no discussion of downstream impacts. Both rivers are tributaries of the Burdekin River, which discharges into the GBR Marine Park and surrounding environments. The proposed storage amount of the project, between 600 – 700 GL, accounts for approximately one third the volume of Lake Dalrymple that is stored by Burdekin Falls Dam (1,860 GL) and represents a volume of water larger that Sydney Harbour. Lake Dalrymple is the largest dam in Queensland and the proponent acknowledges that *"the lake has a substantial impact on flows entering the marine environment"* (page 27 of referral). Despite this the proponent has asserted in the referral that the project should not be assessed for controlling provisions listed under sections 12, 15A (World Heritage properties), 15B, 15C (National Heritage places), 24B and 24C (GBR Marine Park) of the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) respectively.

The significant reductions in water flows associated with the project will likely have impacts on in-flows and the availability of water in Lake Dalrymple, aquatic and riparian species, water dependent ecosystems, water quality, sediment loading and flushing in downstream environments and hydrological connectivity within the inshore areas of the GBR.

It is important to note that estuarine environments of the lower Burdekin floodplain are an important fish spawning ground. Significant reductions of flows and introductions of barriers in the Burdekin River have contributed to the loss of connectivity for fish spawning, with estimates citing a reduction of 80% of fish occupancy within the catchments and river reaches compared to pre-development levels.[1] Further reductions in flow rates will diminish estuarine connectivity, inhibiting access to suitable habitat and suppressing fish spawning activity for important freshwater and saltwater reef species.

Critically, the volume of water proposed to be taken is not accounted for within the existing Water Resource Plan for the Burdekin Basin catchment.[2] With such a large volume of water to be extracted from the system, existing flow regimes above and below the Burdekin Dam will be significantly altered. This will have implications for downstream consumptive users, such as irrigators and regional centres that require potable water, as well as environmental allocations, which play an important role in supporting river and estuary function and hydrological connectivity in the inshore areas of the GBR.

The project will also facilitate the construction of new mines and further intensification of agricultural land use within and outside of the Burdekin catchment, a region which is already one of the largest contributors of sediment and nutrient throughput to the GBR. These facilitated impacts are foreshadowed in the proponent's referral and are reasonably foreseeable as a result of the proposed action.

Such future development within the GBR catchment will further diminish the overall integrity and intactness of the world heritage property and enhance the threats that it faces. In particular the project and associated facilitated development will result in severe and irreversible threats on the outstanding universal values listed under Criterion (ix) and Criterion (x) of the GBR world heritage listing. The proposed action and associated facilitated impacts will result in the loss of necessary elements that are essential for the long-term conservation of the area's ecosystems and biodiversity, including hydrological connectivity in downstream environments and heighten nutrient loading from substantial increases in development and agricultural intensification in the GBR catchment. This is supported by the 2014 outlook report for the GBR which highlighted barriers to flow and increased nutrient and pesticide run off as representing high to very high risk factors for the GBR's heritage values, and that these risks are increasing.[3]

The project as proposed meets the Government's guidelines for a high risk of significant impacts on the outstanding universal value of the GBR, meeting a number of development classes, including:

- *Mining operations, dams and/or other infrastructure that may have downstream impacts on the Great Barrier Reef World Heritage Area.*

[1]Freshwater Wetlands and Fish Importance of Freshwater Wetlands to Marine Fisheries Resources in the Great Barrier Reef: p 67 - http://www.gbrmpa.gov.au/__data/assets/pdf_file/0018/3384/Wetlands_Part_05.pdf
[2] Water Resource (Burdekin Basin) Plan 2007 https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/W/WaterReBuBP07.pdf
[3] Great Barrier Reef Outlook Report 2014: p251-257 http://elibrary.gbrmpa.gov.au/jspui/handle/11017/2855

• *Substantive land use change in the catchments of the Great Barrier Reef World Heritage Area.*
• *Development in largely or relatively undeveloped areas, especially where other associated infrastructure will be needed e.g. roads, sewerage, power and water.*
• *Construction of new or large-scale renewal of existing infrastructure, e.g. roads, rail, power and water that can affect the hydrological process in and adjacent to the Great Barrier Reef World Heritage Area.*[4]

Based on the immense scale of the project, the volume of water proposed to be extracted and potential impacts on the listed world heritage values and environment of the GBR, the project should be determined clearly unacceptable under section 74(B) of the EPBC Act.

Insufficient analysis of matters of national environmental significance

The potential impacts arising from the project are immense, however, as noted above, there is no discussion of downstream impacts within the referral, including on the Great Barrier Reef or on aquatic, migratory and riparian species. This includes impacts on the EPBC listed *Livistona lanuginose,* which is known to inhabit riparian habitat throughout the region. Given the volume of water to be diverted out of Lake Dalrymple (a wetland of national importance), and other wetlands in the Cape and Campaspe catchment, an assessment also needs to be made of the impacts the project will have on migratory and threatened species that occur in the lake and supporting wetlands.

The referral also proposes to create earth banks and inundate an area of 5,516 ha, with a total clearing footprint of 7,173 ha, including channel construction and pipelines. Despite the significant amount of land to be cleared or inundated as part of the project, there has been insufficient effort in undertaking any preliminary flora or fauna surveys to assess the environmental values of these areas, which are generally considered poorly understood. Cryptic and hard to find species, such as Brigalow Belt reptiles, including the Yakka Skink, Ornamental Snake and Mt Cooper Striped Lerista, as well as nomadic species, such as the Black Throated Finch or Squatter Pigeon, all potentially occur throughout the region and may have important habitat cleared or inundated as a result of the project. Similarly iconic threatened species, such as the Koala, may have large tracts of habitat destroyed as part of the development.

Significant gaps in the referral information

The information in the referral is wholly inadequate given the size and scale of the proposed project. In addition to points discussed above:

- There is a lack of consideration of suitable alternatives under section 1.9.
- There are no efforts to avoid impacts or implement mitigation measures that reduce the severity or duration of impacts.

[4] EPBC Act referral guidelines for the Outstanding Universal Value of the Great Barrier Reef World Heritage Area – p 19
http://www.environment.gov.au/epbc/publications/epbc-act-referral-guidelines-outstanding-universal-value-great-barrier-reef-world-heritage

- The time frames proposed for the completion of the project at section 1.8 are unrealistic and unachievable. Detailed surveys over an expansive area and in downstream environments are required. There have been no surveys conducted to date for the project that are presented in the referral. As such, a substantial amount of time and effort will be required before any environmental impact assessment documentation is fit for public display and comment.
- There is inadequate information on hydrological impacts and hydrological connectivity, including impacts and connectivity of surface and groundwater bodies.
- There is no discussion of impacts on the GBR and marine environment (discussed above)
- There is insufficient discussion of how the project will fit within the Queensland water planning framework.

Recommendation

The proposal is highly contentious, has very limited information and will likely have significant and unacceptable impacts on multiple matters of national environmental significance, including the values and environment of the GBR World Heritage Area and Marine Park. Given the immense scale and severity of the potential direct and facilitated impacts associated with diverting two rivers, creating a 5,516 ha water storage within a major catchment of the GBR as well as undertaking thousands of hectares of clearing and land modification, the project should be determined clearly unacceptable under s74(B) of the EPBC Act.

If a controlled action decision is made, the project must be assessed for impacts on matters protected under sections 12, 15A (World Heritage properties), 15B, 15C (National Heritage places), 24B and 24C (GBR Marine Park) of the EPBC Act respectively, in addition to those already acknowledged in the referral. Any assessment approach decision needs to account for the scale and severity of the impacts associated with the project, the sheer volume of data and information required and public interest in the development. As such the project should be assessed under an Environmental Impact Statement under the EPBC Act or an equivalent process under the assessment bilateral agreement with Queensland.

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