



Wide Bay Burnett Environment Council
PO Box 97, Maryborough, Queensland, 4650
3 November 2023

Senate Environment & Communications Reference Committee Inquiry:

Middle Arm Industrial Precinct

Dear Committee Secretariat,

On behalf of the Wide Bay Burnett Environment Council Inc (WBBEC), thank you for the opportunity to make a submission to the Inquiry into the Middle Arm Industrial Precinct (the 'Precinct').

WBBEC is an apolitical not-for-profit member-based environmental advocacy organisation in the Wide Bay Burnett region of Queensland. Further information about WBBEC and its activities can be found at <https://wbbec.wordpress.com/>.

Our submission is as follows.

Summary

If the world is to avoid exceeding 1.5°C by mid-century (the “aspirational” goal of the 2015 Paris Agreement), then according to the International Energy Agency there must be no new fossil fuel developments. This includes gas production in the Beetaloo Basin, for which free, informed and prior consent has not been obtained from Traditional Owners.

That the fracking essential to winning gas from shale beds such as those of the Beetaloo Basin contributes to groundwater pollution is well demonstrated, and yet there seems no arrangement to establish water purification facilities for Indigenous communities. With access to clean and safe drinking water recognised as a human right, the absence of such arrangement is concerning (and yet unsurprising).

To the extent that the existence of the Middle Arm Industrial Precinct facilitates development of as-yet unexploited fossil fuel deposits (such as methane gas that may be trapped in the shale beds of the Beetaloo Basin), WBBEC consider the Middle Arm Industrial Precinct to be a poor use of investment funds.



WBBEC sees no evidence in the proposal that more than lip service has been accorded to recognition that carbon capture and storage ('CCS') is critical to the project.

Given the unavoidable sea level rise that will inundate the location of the proposed Middle Arm Industrial Precinct over the next few centuries, WBBEC proposes that all facilities other than shipping terminals be located inland on higher ground that might be secure against future inundation as sea levels rise.

Recommendations

WBBEC recommends that government support for the proposed Middle Arm Industrial Precinct be suspended until the proposal undergoes major reconfiguration.

All facilities other than those directly associated with servicing of marine transport should be located on more elevated land, further inland.

Submission in Detail

Discussion of issues that WBBEC considers germane precedes WBBEC's responses to the Inquiry Terms of Reference.

Middle Arm Industrial Precinct project depends on Beetaloo Basin gas extraction, without which the Precinct project may not be viable

Much of the industrial development (hydrogen, methanol, ammonia and urea) of the proposed Middle Arm Industrial Precinct assumes and depends upon the availability of natural gas as source of energy and hydrogen, of which the major new source will be the shale beds of the Beetaloo Basin.

This source of gas is yet to be developed, with contention around whether Traditional Owners have granted approval for gas mining on their lands (to minimise reputational damage, for example, Origin Energy sold their share of Beetaloo Basin development to other developers in 2022¹), whether carbon emissions from Beetaloo Basin gas production will be as low as claimed by CSIRO².

¹ "Origin is walking away from the Beetaloo Basin. But the fight against fracking is far from over", Lily O'Neill and Ben Neville, The Conversation, 20 September 2022. Downloaded from <https://theconversation.com/in-a-win-for-traditional-owners-origin-is-walking-away-from-the-beetaloo-basin-but-the-fight-against-fracking-is-not-over-190906> on 3 November 2023.

² "Climate Analytics claims CSIRO underestimated Beetaloo Basin greenhouse gas emissions", Daniel Fitzgerald, ABC Rural, 31 October 2023. Downloaded from <https://www.abc.net.au/news/2023-10-31/climate-analytics-claims-csiro-report-beetaloo-gas-emissions/103041554> on 3 November 2023.



Furthermore, it has been found that the hydraulic fracturing (“fracking”) required for gas production from shale beds such as those compose the Beetaloo Basin results in chemical contamination of groundwater resources such as those on which Indigenous communities depend for their drinking water³.

This will only exacerbate the failure of Australian governments to satisfy the human right of remote communities to safe drinking water⁴ in this remote Northern Territory region.

Looking beyond the plight of Traditional Owners of the lands of the Beetaloo Basin to the plight of future generations of all of humanity (our “heirs and successors”), If the world is to avoid exceeding 1.5°C by mid-century (the “aspirational” goal of the 2015 Paris Agreement), then according to the International Energy Agency there must be no new fossil fuel developments. This includes gas production in the Beetaloo Basin.

It is WBBEC’s expectation that, despite little progress in decreasing fossil fuel consumption in the decades since James Hansen first testified before Congress about the looming crisis that humanity faces, in the face of unprecedented climate disruption and consequent death, disease, destruction and degradation, that this situation will change sooner rather than later.

Accordingly, it is not appropriate that taxpayer funds be invested in continued fossil fuel use; this would surely be a losing bet for which decision-makers could be held to account by taxpayers.

The above issues are among the reasons that WBBEC remains opposed to gas production in the Beetaloo Basin, without which the Middle Arm Precinct would be unlikely to proceed.

Failure to fully mitigate likely fossil carbon emissions

WBBEC notes with some bemusement that project documentation refers to “carbon-neutrality” through the implementation of some carbon capture and storage (‘CCS’) process – yet nowhere in the world has any such carbon capture and storage process been implemented at more than miniscule scale of the targeted emissions,

³ “Study Links Fracking, Drinking Water Pollution and Infant Health”, University of Rochester Medical Center, 11 April 2022. Downloaded from <https://www.urmc.rochester.edu/news/story/study-links-fracking-drinking-water-pollution-and-infant-health> on 3 November 2023.

⁴ “Almost 200,000 Australians don’t have safe drinking water, new report finds”, Stephen Schubert and Hugo Rikard-Bell, ABC News, downloaded from <https://www.abc.net.au/news/2022-08-11/remote-water-quality-doesnt-meet-health-guidelines-indigenous/101318826> on 3 November 2023.



and nowhere in the world has any such process been demonstrated to be commercially viable.

WBEC also notes that no site for any such CCS facility is identified in project documentation (<https://middlearmprecinct.nt.gov.au>) – yet the unavoidable truth (the word unavoidable is used elsewhere in this submission) is that without CCS there is no credible path for continued fossil carbon emissions under the 2015 Paris Agreement, to which Australia is signatory.

WBEC is concerned that given the non-existence of any credible and economically viable Carbon Capture and Storage ('CCS') process, that the proposed development of gas-dependent and carbon-emitting industries is premature. Specifically, the industries proposed for the Precinct should not be allowed to proceed until and unless the proposed CCS process is implemented at adequate scale for 100% of proposed Precinct emissions.

Susceptibility of Middle Arm Industrial Precinct to unavoidable sea level rise

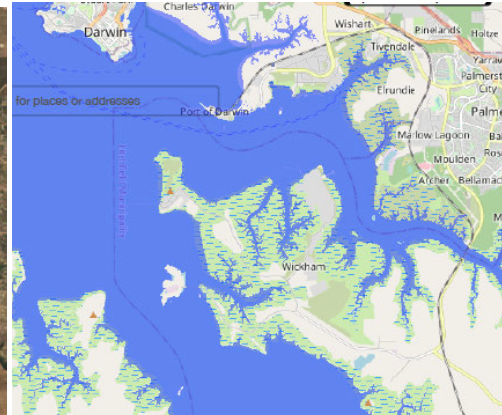
With multi-metre sea level rise due to loss of West Antarctic ice mass now unavoidable over the next several centuries⁵, the Middle Arm Industrial Precinct is already susceptible to episodic inundation during storm surges, and the concrete footings underpinning built structures are highly likely to be exposed to saline exposure due to seawater intrusion. While the full extent of anthropogenic sea level rise remains dependent upon the rate at which humanity – including Australia – chooses to decarbonise, that at least some of the proposed Middle Arm Industrial Precinct will be permanently inundated under rising sea levels is indisputable.

As an illustration of the susceptibility of the Precinct to (unavoidable) sea level rise, maps showing (a) the presently proposed Precinct, including location of major facilities (the absence of a location for a plant for carbon capture and storage is a notable omission), and projected inundation in the cases of 1, 3 and 5 metre sea level rise respectively; these images are generated on 3 November using the mapping tool at <https://www.floodmap.net/?gi=2158626>).

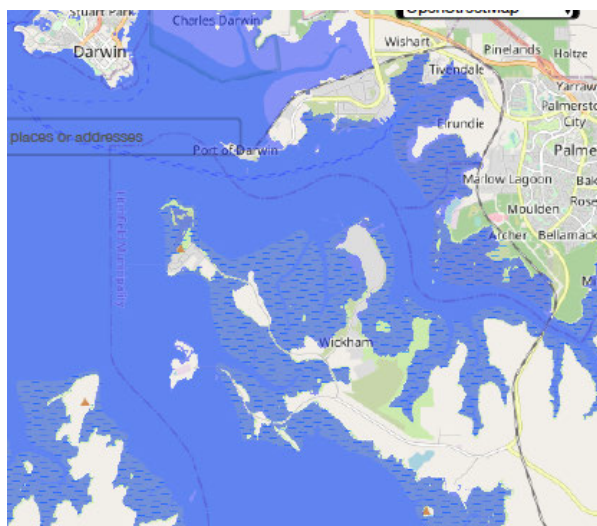
⁵ Naughten, K.A., Holland, P.R. & De Rydt, J. "Unavoidable future increase in West Antarctic ice-shelf melting over the twenty-first century". *Nat. Clim. Chang.* (2023). Downloaded (Open Access) from <https://doi.org/10.1038/s41558-023-01818-x> on 3 November 2023



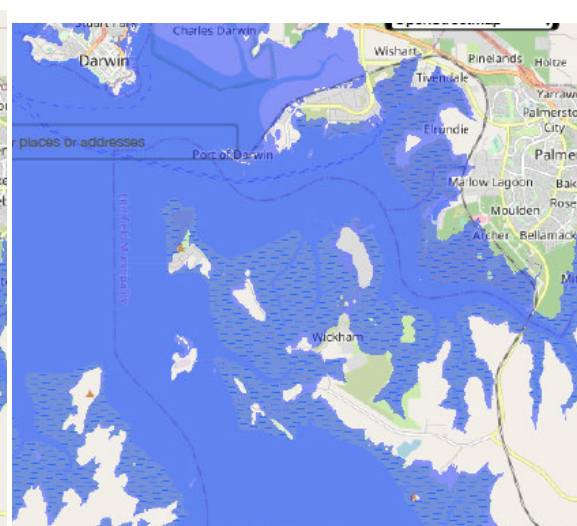
(a) Proposed Middle Arm Industrial Precinct
(downloaded from
<https://middlearmprecinct.nt.gov.au/about-the-precinct>
on 3 November 2023)



(b) Projected inundation in the event of 1 metre sea
level rise (2100 sea levels as previously expected by
IPCC)



(c) Projected inundation in the event of 3 metre sea
level rise (2100 sea levels as expected after Naughten
et al 2023; see footnote 5)



(d) Projected inundation in the event of 5 metre sea
level rise (2200 sea levels as expected after Naughten
et al 2023; see footnote 5)

WBEC considers a proposed project Precinct with ever-higher risk of storm surge inundation and eventual permanent inundation under rising seas to be a poor use of taxpayer funds.



Inquiry Terms of Reference

This submission addresses Terms of Reference as follows.

(a) the development of Darwin's Middle Arm Industrial Precinct, the role and funding intentions of the Northern Territory and Commonwealth governments;

WBSEC is concerned that Northern Territory and Commonwealth governments might neglect the likelihood that present trends in fossil fuel demand may collapse in the face of continued world wide climate deterioration.

(b) the likely and intended future uses of the site as well as the industries and supply chains that would benefit from those plans;

Given what is known of now-unavoidable sea level rise, WBSEC is concerned that the proposed Precinct is located on coastal land at imprudently low elevation.

WBSEC recommends that all plant and facilities that are not directly involved in the docking, loading and unloading of shipping (marine transport) be located on higher-elevated land that would be prudently located further inland to decrease risk of storm surge inundation.

(c) any climate, environmental, health or cultural heritage impacts as a result of developing the harbour and the industries seeking to establish themselves at Middle Arm;

WBSEC is concerned that given the non-existence of any credible and economically viable Carbon Capture and Storage ('CCS') process, that the proposed development of gas-dependent and carbon-emitting industries is premature. Specifically, the industries proposed for the Precinct should not be allowed to proceed until and unless the proposed CCS process is implemented at adequate scale for 100% of proposed Precinct emissions.

(d) the conduct, process and implications of the proposed strategic environmental assessment for Middle Arm;

WBSEC expects that any strategic environmental assessment considers the likelihood of sea level rise through the projected lifetime of the proposed Precinct, and that the assessment specifies that the remainder of the Precinct cannot proceed until and unless the proposed CCS process is implemented at adequate scale for 100% of proposed Precinct emissions.

(e) engagement and advocacy by industries and their representatives throughout the Middle Arm proposal, including with First Nations groups and communities adherence to the principles of free, prior and informed consent;



WBBEC has no comment to make in this regard beyond indicating scepticism that free, prior and informed consent has been sought or obtained.

(f) any other related matters.

WBBEC accepts that if its recommendation is followed then there will be no employment during construction and operation of a trans-continental railway ("Iron boomerang") or blast furnaces in Queensland.

Instead, there will be employment during construction and operation of hydrogen production facilities and hydrogen-based iron smelters in the Pilbara.

Much as Australia cannot have a healthy economy without a healthy environment⁶, the same holds for our trading partners. This means fossil fuel-using equipment and processes must be replaced worldwide, for which substitute equipment and technologies already exist and continue to be improved. Australia's exports of fossil fuels, be they gas or coal, will inevitably diminish and cease – if for no other reason than that the ongoing gradual inundation of importing and exporting ports is now unavoidable.

Instead of investing in extraction of fossil fuels, use of which must cease by 2050, there is therefore an opportunity to invest in value-adding industries that utilise renewable energy and avoid carbon emissions.

Thank you for considering our submission. Should further clarification be required, please contact the writer.

Yours faithfully

David Arthur

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⁶ "A wounded environment leads to an unliveable economy", Ross Gittins, Sydney Morning Herald, 3 August 2022. Downloaded from <https://www.smh.com.au/business/the-economy/a-wounded-environment-leads-to-an-unlivable-economy-20220802-p5b6jn.html> on 3 November 2022.