

17 June 2026

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Ms Kylie Fitzpatrick
Environmental Assessment Unit
Department of Lands, Planning and Environment
GPO Box 3675
DARWIN NT 0801

T 08 8999 4446

Our Ref: DLPE2026/0193

Dear Ms Fitzpatrick

Re: Invitation to comment on draft terms of reference for 3 linked INPEX carbon capture and storage proposals

The draft Terms of Reference (ToR) submitted for the above projects have been assessed by the relevant divisions within the department and the following comments are provided:

Flora and Fauna Division

The Flora and Fauna Division have reviewed the draft ToR's and provides comment in **Attachment 1**.

Comments previously provided by the Flora and Fauna Division on the referrals raised concerns in relation to the proposed timing of dredging campaigns and recommended that more data should be provided to inform an assessment of the risk to marine and terrestrial environments. Specific information that was necessary to inform the assessment included:

- hydrodynamic and sediment transport modelling to evaluate the extent, severity, and duration of plumes and deposition;
- quantification of a Zone of Influence for both dredging operations and the Dredge Spoil Disposal Ground;
- updated benthic habitat mapping to confirm the current distribution of seagrass and other sensitive receptors;
- modelling of credible Carbon Dioxide (CO₂) leak scenarios to evaluate the fate and effect of plumes, specifically regarding seawater acidification, hypoxia, and benthic toxicity; and
- underwater noise modelling within the nearshore PDA.

The Flora and Fauna Division consider many of these concerns have been appropriately incorporated in the draft ToR, with the exception of modelling credible CO₂ leak scenarios and assessment of underwater noise impacts.

Lands and Planning Division

Crown Land Estate

Crown Land Estate has reviewed the draft ToR and provides comment in **Attachment 2**.

Environment and Heritage Division

Heritage Branch

The Heritage Branch has reviewed the draft ToR's and provides comment in **Attachment 3**.

Environmental Regulation Division

The proponent should note that all persons are required to comply at all times with the General Environmental Duty under section 12 of the *Waste Management and Pollution Control Act 1998* (WMPC Act). To help satisfy the General Environmental Duty, the proponent is advised to take notice of the list of environmental considerations below. The list is not exhaustive, and the proponent is responsible for ensuring their activities do not result in non-compliance with Northern Territory (NT) laws.

A non-exhaustive list of environmental issues that should be considered to meet requirements under NT law are listed below:

1. **Dust:** The proposed activities have the potential to generate dust, particularly during the dry season. The proponent must ensure that nuisance dust and/or nuisance airborne particles are not discharged or emitted beyond the boundaries of the premises.
2. **Noise:** The proponent is to ensure that the noise levels from the proposed premises comply with the latest version of the NT EPA Northern Territory Noise Management Framework Guideline available online¹.
3. **Erosion and Sediment Control (ESC):** The proponent must ensure that pollution and/or environment harm do not result from soil erosion.

ESC measures should be employed prior to and throughout the construction stage of the development. Larger projects should plan, install and maintain ESC measures in accordance with the current International Erosion and Sediment Control Association (IECA) Australia guidelines and specifications.

Where sediment basins are required by the development, the NT EPA recommends the use of at least Type B basins, unless prevented by site specific topography or other physical constraints.

Basic advice for small development projects is provided by the NT EPA document: Guidelines to Prevent Pollution from Building Sites².

4. **Storage:** If an Environment Protection Approval or Environment Protection Licence is not required, the proponent should store liquids only in secure bunded areas in accordance with VIC EPA Publication 1698: Liquid storage and handling guidelines³. Where these guidelines are not relevant, the storage should be at least 110% of the total capacity of the largest vessel in the area.

¹ https://ntepa.nt.gov.au/_data/assets/pdf_file/0004/566356/noise_management_framework_guideline.pdf

² https://ntepa.nt.gov.au/_data/assets/pdf_file/0010/284680/guideline_prevent_pollution_building_sites.pdf

³ <https://www.epa.vic.gov.au/sites/default/files/2025-05/Liquid-storage-and-handling-guide.pdf>

Where an Environment Protection Approval or Environment Protection Licence is required, the proponent must only accept, handle or store at the premises listed waste, including asbestos, as defined by the WMPC Act, in accordance with that authorisation.

5. **Site Contamination:** If the proposal relates to a change of land use or if the site is contaminated, including as a result from historical activities such as cyclones, a contaminated land assessment maybe required in accordance with the National Environment Protection (Assessment for Site Contamination) Measure (ASC NEPM). The proponent is encouraged to refer to the information provided on the NT EPA website⁴ and the NT Contaminated Land Guidelines⁵.
6. **Waste Management - Import and Export of Fill:** The proposed activities have the potential to generate fill and/or involve the importation of fill for use on-site. Untested fill material may already be present on the site. All fill imported or generated and exported as part of the activity must either be certified virgin excavated natural material (VENM) or be sampled and tested in line with the NSW EPA Guidelines⁶.

All imported fill material must be accompanied by details of its nature, origin, volume, testing and transportation details. All records must be retained and made available to authorised officers, upon request. The proponent should also consider the following NT EPA fact sheets: How to avoid the dangers of accepting illegal fill onto your land⁷, and Illegal Dumping - What You Need to Know⁸.

7. **Odour or Smoke:** The proposed activities may have the potential to create odours and/or smoke. The proponent must ensure that nuisance odours or smoke are not emitted beyond the boundaries of the premises.

Land Resources Division

Land Management Unit

The Land Management Unit has reviewed the documentation provided with the draft ToR's.

The Land Management Unit has previously provided comments (DLPE2026/0012 dated 11 February 2026 and DLPE2026/0013 dated 12 February 2026) during the referral process. These comments remain relevant, particularly in relation to the need for data collection, methodology used, and the engagement of an independent auditor. The independent auditor is expected to review and endorse all relevant plans, as well as endorse monitoring data for the duration of the activity.

Water Resources Division

There are no issues of concern requiring comment within the responsibilities of the Water Resources Division associated with the draft ToR's.

⁴ <https://ntepa.nt.gov.au/your-environment/contaminated-land>

⁵ https://ntepa.nt.gov.au/_data/assets/pdf_file/0020/434540/guideline_contaminated_land.pdf

⁶ <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated-natural-material>

⁷ https://ntepa.nt.gov.au/_data/assets/pdf_file/0005/285728/factsheet_avoid_danger_accepting_illegal_fill_to_your_land.pdf

⁸ https://ntepa.nt.gov.au/_data/assets/pdf_file/0008/285740/factsheet_illegal_dumping_what_you_need_to_know.pdf

Should you have any further queries regarding these comments, please contact the Development Coordination Branch by email DevelopmentAssessment.DLPE@nt.gov.au or phone (08) 8999 4446.

Yours sincerely



Maria Wauchope
Executive Director Land Resources

Attachment 1 – Flora and Fauna comment
Attachment 2 – Crown Land Estate comment
Attachment 3 – Heritage Branch comment

Attachment 1

Submission on Draft Terms of Reference

INPEX Operations Australia Pty Ltd – Ichthys LNG AGRU Upgrades and CCS Preparedness, Bonaparte Carbon Capture and Storage and Ichthys Carbon Capture and Storage Project

This submission is made under regulation 103 of the Environment Protection Regulations 2020

NT EPA reference number: EP2025/045, EP2025/048 & EP2025/049

Government authority: Department of Lands, Planning and Environment – Flora and Fauna Division

Section of terms of reference	Theme / issue	Comment
2.6.4. Marine Environment Quality	Potential significant impacts and risks CO ₂ Leak Modelling	This section should stipulate an assessment of marine-related risk factors associated with credible CO ₂ leak scenarios, including the modelled fate and effect of plumes, associated seawater acidification, hypoxia and benthic toxicity.
2.6.5. Marine Ecosystems	Environmental values Underwater Noise impact assessment	The draft ToR identifies noise-induced behavioural changes as a risk, 'baseline ambient noise levels' should also be added to the 'Environmental Values' section and should specify the inclusion of the pipeline development area. Establishing this baseline will allow for a cumulative assessment of noise-generating activities such as sub-bottom profiling, and impacts to cetaceans, reptiles, and sawfish within biologically important areas. This will ensure the assessment accounts for the total acoustic environment rather than isolating project-related behavioural noise responses.
AGRU Upgrade and ICHTHYS CCS ToR Table 4 - Terrestrial Ecosystems	Environmental Values	The draft ToR require the proponent to provide "identification of all migratory species and species of conservation significance, including restricted range and data deficient species in addition to threatened species listed under the <i>Territory Parks and Wildlife Conservation Act 1976</i> (TPWC Act) and EPBC Act, which have the potential to occur. Assess the likelihood of occurrence for all species that are known or likely to occur". It is suggested that this requirement is reworded to for clarity:

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		“identification of all Conservation Significant species including listed threatened and migratory species (TPWC Act and EPBC Act), restricted range and data deficient species. A likelihood assessment should also be provided for all Conservation Significant species that are known or have the potential to occur”.
AGRU Upgrade and ICTHYS CCS ToR 2.6.2 Table 4 - Terrestrial Ecosystems	Environmental Values	The draft ToR require the proponent to provide “a description of the presence of invasive weeds (declared under the <i>Weed Management Act 2001</i>), pests and biosecurity risks observed or considered likely to occur in the proposal area”. A later section requires the proponent to consider the introduction or spread of ‘invasive species’. It is recommended that the dot point is updated to: “a description of the presence of <u>invasive flora and declared weeds (under the <i>Weeds Management Act 2001</i>)</u>, pests and biosecurity risks observed or considered likely to occur in the proposal area.”
AGRU Upgrade and ICTHYS CCS ToR 2.6.2 Table 4 - Terrestrial Ecosystems	Avoidance, mitigation, and management	Previous comments provided by the Flora and Fauna Division noted that Darwin Harbour is an important arrival/departure point for international migratory birds. As such it was recommended that the proponent consider scheduling works during the period when migratory shorebirds are absent from Darwin Harbour (approx. April to August). It is recommended that this is highlighted in the draft ToR by including the following amendment: “Demonstrate that proposed infrastructure has been <u>scheduled</u>, designed and appropriately sited to avoid and mitigate impacts to terrestrial ecosystem values.”
Bonaparte CCS Project AGRU Upgrade and ICTHYS CCS ToRs Page 2 of the ToR		The first table on Page 2 has the Local government area incorrectly spelt as “Lichfield”.

Attachment 2

Submission on Draft Terms of Reference

INPEX Operations Australia Pty Ltd – Ichthys LNG AGRU Upgrades and CCS Preparedness, Bonaparte Carbon Capture and Storage and Ichthys Carbon Capture and Storage Project

This submission is made under regulation 103 of the Environment Protection Regulations 2020

NT EPA reference number: EP 2025/045, EP 2025/048 & EP2025/049 (Relevant to all three)

Government authority: Department of Lands, Planning and Environment – Crown Land Estate

Section of terms of reference	Theme / issue	Comment
General/Proposal Description	Construction, operation and decommissioning	Required information should include the proponent's intended tenure for project components located on Crown Land. The proponent must clearly identify their intention to secure appropriate tenure for all project components located on Crown Land, including coastal waters (up to three nautical miles), in accordance with the <i>Crown Lands Act 1992</i>.

Attachment 3

Submission on Draft Terms of Reference

INPEX Operations Australia Pty Ltd – Ichthys LNG AGRU Upgrades and CCS Preparedness, Bonaparte Carbon Capture and Storage and Ichthys Carbon Capture and Storage Project

This submission is made under regulation 103 of the Environment Protection Regulations 2020

Government authority: Department of Lands, Planning and Environment –Heritage Branch

NT EPA reference number: EP 2025/049

Section of terms of reference	Theme / issue	Comment
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	The Heritage Branch expects an opportunity to review and provide feedback on the draft Cultural Heritage Management Plan (CHMP) when it is prepared but before it is in effect.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	The Heritage Branch recommends the production of a Maritime Archaeological Management Plan separate to the CHMP. Both documents are to be developed by a suitably qualified maritime and terrestrial archaeologist. This will assist the proponent with managing obligations under the <i>Heritage Act 2011</i> and the <i>Underwater Cultural Heritage Act 2018</i> . The Heritage Branch expects an opportunity to review and provide feedback on the draft Maritime Archaeological Management Plan when it is prepared but before it is in effect.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	In regard to underwater cultural heritage, the proponent has an obligation to not impact known, or unknown shipwrecks under Commonwealth legislation. The proponent should also consider and be aware of obligations under these additional acts: • <i>Environment Protection and Biodiversity Conservation Act 1999</i>; and • <i>United States Sunken Military Craft Act of 2004</i>.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	To undertake the necessary archaeological work a suitably qualified archaeologist with skillsets in terrestrial archaeology is expected to be attached to the project. The archaeologist will undertake studies to identify, describe and characterise existing Aboriginal and non-Aboriginal cultural heritage values, and to describe gaps, uncertainties and further work required to improve understanding of cultural heritage values and ensure their protection.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	Upon providing the confirmed or prospective location of onshore developments to the Heritage Branch, the Heritage Branch will then determine if further archaeological surveys are necessary.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	A suitably qualified archaeologist with skillsets in maritime archaeology is expected to be attached to the project. The maritime archaeologist will be expected to access

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		geophysical and geotechnical survey data of the proposed development footprint or conduct appropriate (i.e. bathymetric) surveys of the proposed footprint to inform their study. The maritime archaeologist will undertake studies to identify, describe and characterise existing Aboriginal and non-Aboriginal cultural heritage values, and to describe gaps, uncertainties and further work required to improve understanding of cultural heritage values and ensure their protection.
2.6.9. Culture and Heritage	Monitoring and reporting	Outline proposed methodology and timeframes for monitoring and reporting against the Maritime Archaeological Management Plan. The methods and frequency of reporting will be dependent on findings of the maritime surveys.
2.6.9. Culture and Heritage	Monitoring and reporting	The methods and frequency of reporting against the CHMP will be dependent on the findings of the archaeological assessment.

NT EPA reference number: EP 2025/048

Section of terms of reference	Theme / issue	Comment
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	The Heritage Branch expects an opportunity to review and provide feedback on the draft CHMP when it is prepared but before it is in effect.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	The Heritage Branch recommends the production of a Maritime Archaeological Management Plan separate to the CHMP. Both documents are to be developed by a suitably qualified maritime and terrestrial archaeologist. This will assist the proponent with managing obligations under the <i>Heritage Act 2011</i> and the <i>Underwater Cultural Heritage Act 2018</i> . The Heritage Branch expects an opportunity to review and provide feedback on the draft <i>Maritime Archaeological Management Plan</i> when it is prepared but before it is in effect.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	In regard to underwater cultural heritage, the proponent has an obligation to not impact known or unknown shipwrecks under Commonwealth legislation. The proponent should also consider and be aware of obligations under these additional acts: • <i>Environment Protection and Biodiversity Conservation Act 1999</i>; and • <i>United States Sunken Military Craft Act of 2004</i>.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	To undertake the necessary archaeological work a suitably qualified archaeologist with skillsets in terrestrial archaeology is expected to be attached to the project. The archaeologist will undertake studies to identify, describe and characterise existing Aboriginal and non-Aboriginal cultural heritage values, and to describe gaps, uncertainties and further work required to improve understanding of cultural heritage values and ensure their protection.

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2.6.9. Culture and Heritage	Avoidance, mitigation, and management	Upon providing the confirmed or prospective location of onshore developments to the Heritage Branch, the Heritage Branch will then determine if further archaeological surveys are necessary.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	A suitably qualified archaeologist with skillsets in maritime archaeology is expected to be attached to the project. The maritime archaeologist will be expected to access geophysical and geotechnical survey data of the proposed development footprint or conduct appropriate (i.e. bathymetric) surveys of the proposed footprint to inform their study. The maritime archaeologist will undertake studies to identify, describe and characterise existing Aboriginal and non-Aboriginal cultural heritage values, and to describe gaps, uncertainties and further work required to improve understanding of cultural heritage values and ensure their protection.
2.6.9. Culture and Heritage	Monitoring and reporting	Outline proposed methodology and timeframes for monitoring and reporting against the <i>Maritime Archaeological Management Plan</i> . The methods and frequency of reporting will be dependent on findings of the maritime surveys.
2.6.9. Culture and Heritage	Monitoring and reporting	The methods and frequency of reporting against the CHMP will be dependent on the findings of the archaeological assessment.

NT EPA reference number: EP 2025/045

Section of terms of reference	Theme / issue	Comment
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	The Heritage Branch expects an opportunity to review and provide feedback on the draft CHMP when it is prepared but before it is in effect.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	To undertake the necessary archaeological work a suitably qualified archaeologist with skillsets in terrestrial archaeology is expected to be attached to the project. The archaeologist will undertake studies to identify, describe and characterise existing Aboriginal and non-Aboriginal cultural heritage values, and to describe gaps, uncertainties and further work required to improve understanding of cultural heritage values and ensure their protection.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	Upon providing the confirmed or prospective location of onshore developments to the Heritage Branch, the Heritage Branch will then determine if further archaeological surveys are necessary.
2.6.9. Culture and Heritage	Avoidance, mitigation, and management	The suitably qualified maritime archaeologist attached to works described in EP2025/049 and EP2025/048 is expected to ensure that maintenance dredging associated with EP2025/045 is done in accordance with underwater cultural heritage legislation.

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		If underwater cultural heritage concerns are raised in relation to the maintenance dredging, engage with the Heritage Branch to determine if further work is necessary.
2.6.9. Culture and Heritage	Monitoring and reporting	The methods and frequency of reporting against the CHMP will be dependent on the findings of the archaeological assessment.