



**GAS IMPORT JETTY AND PIPELINE PROJECT
ENVIRONMENT EFFECTS STATEMENT
INQUIRY AND ADVISORY COMMITTEE**

TECHNICAL NOTE

TECHNICAL NOTE NUMBER: TN 022

DATE: 13 October 2020

LOCATION: Crib Point Jetty Works and Pipeline Works

EES/MAP BOOK REFERENCE: Chapter 8 – Surface Water section 8.8-1, Mitigation Measure MM-SW11, Executive Summary, Technical Report C –Section 5.2

SUBJECT: Response to IAC RFIs 048, 049, 050 and 051 - Section 4.2 Coastal inundation

SUMMARY Responses relate to subsection: Coastal inundation

REQUEST: This technical note has been prepared in response to the Request for Further Information 48, 49, 50 and 51 provided to the proponents by the Crib Point Inquiry and Advisory Committee dated 16 September 2020.

NOTE:

[48] Explain how existing overland flow paths and localised flooding would be considered in the design of the Crib Point receiving Facility (CPRF).

1. Appropriate stormwater design and drainage provisions will be made to maintain existing overland flow paths and avoid the risk of localised flooding at the Crib Point Receiving Facility site. Most of the existing flow is via overland sheet flow generated by local rainfall on the site that runs off into Western Port. Flows from the culvert under The Esplanade are also accounted for. The site is not subject to inundation from any waterways. The stormwater design will capture and convey the water for the recommended rainfall rate (local 1% Annual Exceedance Probability flood event) to make sure the construction of the site does not result in changes to the floodplain extent or in the peak flood water levels in the catchment upstream of the site.
2. Dr Andrew McCowan’s witness statement (document 97) includes a detailed review of catchments that may contribute to the surface water flows to the site (section 4.2.3) and an assessment of flooding risk, discussed below.
3. EES Technical Report C: *Surface water impact assessment* identifies the following mitigation measure to address hydrology changes at the facilities during operation:

MM-SW11 Facilities design

Permanent surface structures, including the Pakenham Delivery Facility and Crib Point Receiving Facility will be designed to maintain existing overland flow paths and not result in increased flood levels upstream of the sites.
4. Dr McCowan considers this mitigation measure appropriate.

[49] Explain how coastal inundation, including that influenced by sea level rise risks, would be incorporated into the design of the CPRF.

5. The design of the Crib Point Receiving Facility considers sea level rise as a result of climate change projections (0.61 to 1.1 metres in 2090). Considering the 20-year project life, the year 2040 flood level for the site (including storm surge) is expected to be at 2.6 metres Australian Height Datum (**mAHD**) (Melbourne Water Planning for Sea Level Rise Guidelines, 2017). Under these conditions, a narrow area along the eastern boundary of the site would be expected to be affected by storm tide inundation over the life of the facility. This is the area shown in the Mornington Peninsula Land Subject to Inundation Overlay (**LSIO**) in Appendix A of EES Technical Report C: *Surface water impact assessment*.
6. At year 2100 the flood level for the site (including storm surge) is expected to be at 3.2 mAHD. This would present flooding risks to equipment foundations but not to equipment (the lowest equipment item is the base of the nitrogen tank currently set at 3.3 mAHD).
7. As identified in the witness statement prepared by Dr McCowan (section 4.2.4.2), additional considerations during detailed design could include: modifying the layout of the facility to only take up land outside the Land Subject to Inundation Overlay; filling the eastern part of the site to an appropriate level; or monitoring sea level rise and protecting the site by a sea wall, if and when it became necessary.

[50] Explain how policies relating to sea level rise contained in the Victorian Coastal Strategy 2014, Marine and Coastal Policy 2020, Clause 13.01-2S relating to 'Coastal inundation and erosion' of the Mornington Peninsula Planning Scheme (MPPS) and the Melbourne Water Planning for Sea Level Rise Guidelines 2017 have been taken into account with the CPRF location and design.

8. Predicted sea level rise information contained in the Victorian Coastal Strategy 2014, Marine and Coastal Policy 2020, Clause 13.01-2S of the Mornington Peninsula Planning Scheme and the Melbourne Water Planning for Sea Level Rise Guidelines 2017 was used to recommend minimum floor levels for buildings and critical infrastructure at the Crib Point Receiving Facility. This includes planning for sea level rise of not less than 0.8 metres by 2100 and an increase of 0.2 metres by 2040.
9. Clause 13.03 (Floodplains) of the Mornington Peninsula Planning Scheme has also been considered in the draft Planning Scheme Amendment C272Morn (draft PSA) for the Crib Point Receiving Facility (see Section 3.3 of the draft PSA), and MM-SW11 is proposed to manage potential impacts.

[51] Advise whether local coastal flooding analysis undertaken by Mornington Peninsula Shire Council has informed the content of the EES.

10. Flood data provided by Mornington Peninsula Shire Council in the form of flood maps and GIS overlays were used to inform flood extents for the 1% AEP for coastal flooding. This was particularly relevant to the Crib Point Receiving Facility, which is predicted to be partially impacted by coastal flooding on the eastern boundary and the LSIO, as discussed above.

CORRESPONDENCE: N/A

ATTACHMENTS: N/A