

Report and Advice on Environmental Incident - a partial non conformance with Project Delivery Standard No. 24 in South Channel on 19 April 2009

Background

The Environmental Management Plan (EMP) contains 58 Project Delivery Standards (PDS), which are rules about where, when and how the Channel Deepening Project (the Project) must be delivered.

The Office of the Environmental Monitor's (the Office) terms of reference outlines the arrangements to be adopted in the event of an incident. They include:

- In the event of non-conformance with the Plan, the Monitor will seek access to the Port of Melbourne Corporation's (PoMC) remedy plan as soon as practicable;
- The Monitor will scrutinise implementation of PoMC's remedy plan to see that it meets the Plan requirements. When necessary, the Monitor can also provide appropriate advice to the Minister for Environment and Climate Change, or his delegate, for consideration; and
- In the first instance, it will be the Secretary of the Department of Sustainability and Environment who will, if required, provide direction to PoMC to amend the Plan or take action in relation to Plan.

Incident

On the afternoon (approximately 4.30 pm) of Sunday 19 April 2009, the *Queen of the Netherlands* was dredging northwards towards the northern edge of the bell mouth prior to sailing to the South East Dredge Material Ground. On 7 May 2009, validation of the draghead tracks showed that the *Queen* dredged outside the areas set by the EMP.

The EMP (Table 6) requires the Office to be notified in the event of such an incidence. The Office was notified on Friday 8 May 2009.

Sequence of events

- 8 May 2009, PoMC notified the Office of the incident and released a Media Notification that referred to the incident.
- 8 May 2009, the Office sought information from PoMC on:
 - The details and cause of the non conformance;
 - The actions that would be taken to address the circumstances that led to the non conformance;
 - The impact and potential environmental consequences of the non conformance; and
 - The time line of events between the 19 April and 8 May 2009 with regard to the non conformance and subsequent notification of the Office and regulators.
- 22 May 2009, PoMC provided an incident report.

Office findings

Managing risk

The Project environmental risk framework assesses the probability that an event or incident may occur, and if it were to occur, the resulting impact of the incident. This assessment has been used to set the Project Delivery Standards, or rules, contained in the EMP to control where, when and how dredging is to occur.

It has at its core the principle of 'designing out' risk. This is a preventative approach that seeks to avoid and limit the probability of unacceptable impacts and risks. Channel design decisions were the first step in implementing this principle. The design criteria 'channel width' is a critical factor in limiting the Project footprint and mitigating unacceptable impacts and risks.

Probability of the incident

The EMP (Project Delivery Standard No. 24) controls the Project footprint by specifying a construction zone for all areas to be dredged as well as areas where the dredged material is to be placed.

No dredging is to occur outside the construction zone.

Also, all dredging is to occur within an offset-distance from the outer edge of the construction zone. At the northern end of the bell mouth the offset distance is 65 metres (see EMP Drawing 35334).

Dredging activities are to be confirmed through draghead tracking (in dredging mode only) and validated by bathymetric survey (where draghead tracking indicates that dredging has potentially occurred outside the proscribed area).

The Office notes that non conformance arose with respect to Project Delivery Standard No. 24 of the EMP. First, when dredging occurred within the 65 metre distance from the outside edge of the construction zone (the offset distance). Second, when the dredging occurred for ~25 metres beyond the construction zone.

At the northern end of the bell mouth:

- Dredging may and has occurred at right angles to the channel toeline.
- The dredged-seafloor is deeper than the fairway immediately north of bell mouth.

The Office is satisfied that these operational features were material to the non conformance. The Office is satisfied that these features are unique to the northern end of the bell mouth and therefore has not considered it necessary to assess the implications of this non conformance for the Project more broadly.

Impact of the incident

The impact occurred within the existing shipping channel. It arose from dredging that removed 300 m³ of sandy seafloor material over a ~90 second period. The impact was highly localised, affecting an area of the bay seafloor covering 900 m².

The Office is satisfied that no consequences have arisen from the incident in relation to features specifically protected under the Fisheries Act 1996, Flora and Fauna Guarantee Act 1988, Heritage Act 1995, Wildlife Act 1975 or the Environment Protection and Biodiversity Conservation Act 1999.

Reporting

The non conformance was reported on 8 May 2009. The Office is satisfied that, with respect to the EMP requirements, PoMC reported the incident as required, including the provision of an incident report.

Opportunities for improvement

A foundation of the EMP, and PoMC's implementation of it as part of its Environmental Management System, is the concept of continuous improvement. The EMP makes it explicit that opportunities for improvement will be identified, see sections 4.1 (CDP management review meetings) and 4.2 (Management review for environmental monitoring) of the EMP for example.

PoMC's incident report identified four corrective actions that were implemented between 11 and 14 May 2009. These corrective actions aim to improve ship-based and office-based assessment of the tracking data. Importantly the ship-based actions establish real-time confirmatory-response to verbal ship board communications between the first mate and pipe operator and refine navigation displays on board the *Queen* to give prominence to the most relevant information.

The Office notes that the informal adoption of the batched-processing of tracking data, an issue in the delay in identifying the non conformance and the implementation of corrective action, has ceased.

Conclusion

The Office is satisfied that while the non conformance arose with the EMP's rules designed to proscribe environmental risk, key operational features at the bell mouth are unique and therefore the Office does not consider that broader project-wide implications arise from the incident.

The Office is also satisfied that the environmental impacts of the non conformance were inconsequential.

The Office considers that adoption of the above mentioned corrective actions will support the continued level of environmental performance expected of the Project.