

**Submission
No 390**

**INQUIRY INTO IMPACT OF THE WESTERN HARBOUR
TUNNEL AND BEACHES LINK**

Name: Mr Ron McLaren

Date Received: 17 June 2021

I am involved in several community groups that use the Middle Harbour waterways. Through these groups that are most concerned with environmental impacts both long term and the extended construction period for the project I have studied the EIS.

However my concern on this submission is the practicality of using immersed tube sections to effectively construct an under water bridge between Clive Park and Seaforth.

The EIS shows a choice of support methods for the immersed tube sections suggesting that engineering concepts are not finalized.

To avoid cost overruns common on these projects can project details that can then be properly costed be provided.

Concrete Institute of Australia

I am a retired member of the Institute and would appreciate your advice on the following concrete placing proposals.

It concerns the proposed Transport for NSW Beach Link road. The published EIS is causing concern with many community groups but my question is on the proposed method of concrete construction.

The following is from the EIS construction section 6 page 22.

“Installation of immersed tube tunnel units on support piles Immersed tube tunnel units would need to be placed on supporting piles due to the soft marine sediments on the bed of the Middle Harbour. Installation of the piles would be carried out using similar sized equipment to the cofferdam construction. The piles would be tubular steel liners, vibrated through the upper sediments and screwed into the underlying rock. The piles would then be filled with reinforced concrete after reaching their final depth. The piles would be cut off to level and a concrete headstock would be cast below water on top of the piles. Alternatively, a pre-cast concrete headstock may be placed on the installed piles and locked in place.”

While I appreciate that concrete can be readily placed underwater using tremie pipes, forming up, steel fixing and finishing underwater would seem very challenging. Can you advise if this has been achieved in Australia or overseas?

The locating and locking pre-cast sections would also seem a challenge as piles usually have a fair tolerance on east/west and north/south location. Again, your advice on Australian or overseas construction would be appreciated.

If you could help it would be appreciated.

Regards