

Appendix L: Rebecca Morris expert review comments

From: [Rebecca Morris](#)
To: [Shannon Watson](#)
Subject: RE: Eastern Bays Shared Path piling and excavation and potential effects on Waiwhetu aquifer
Date: Wednesday, 7 October 2020 2:03:37 PM
Attachments: [image010.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)

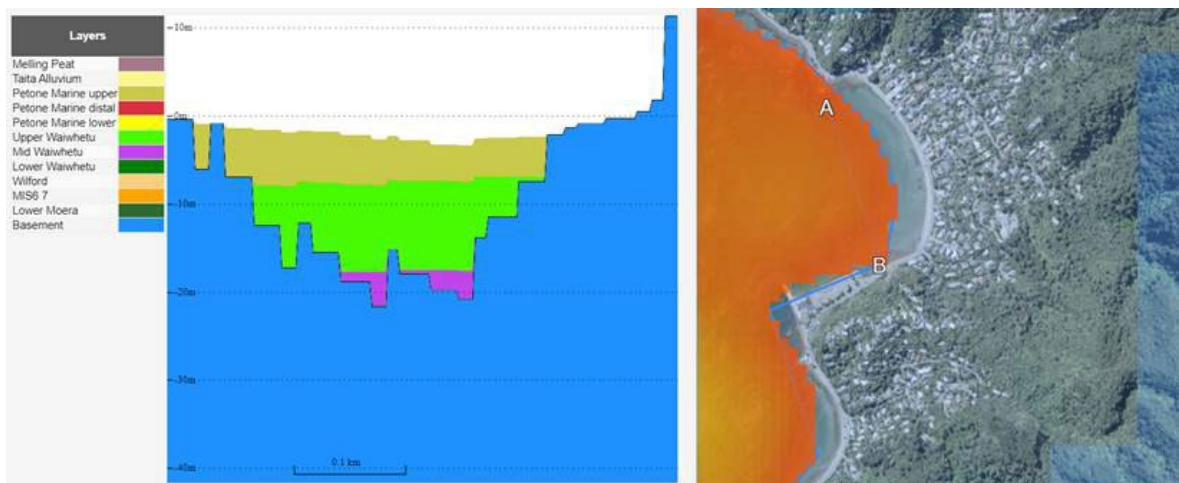
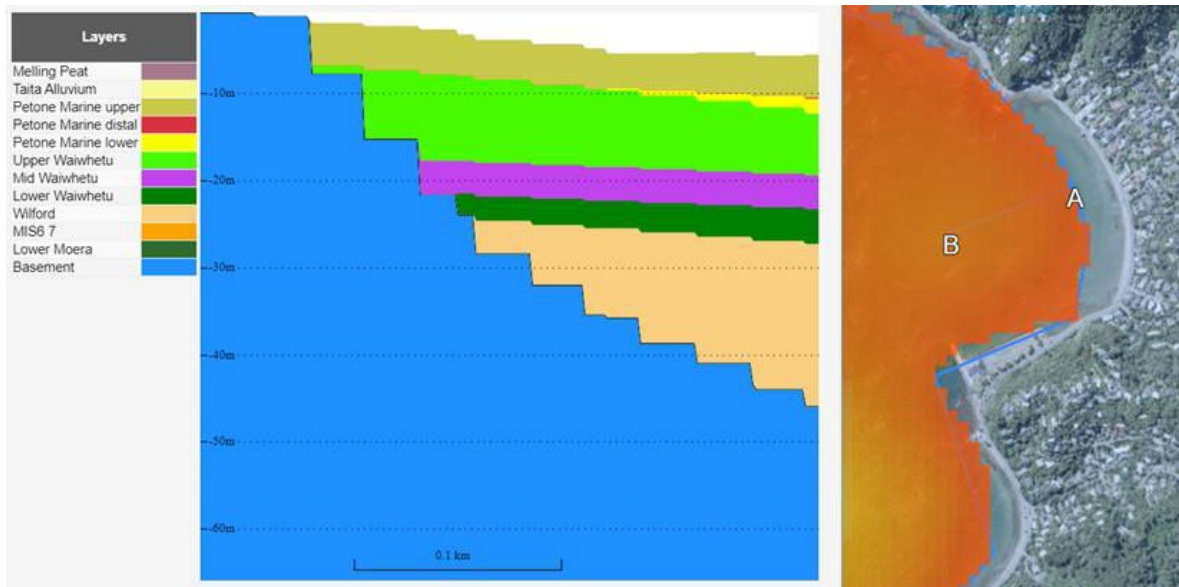
Hi Shannon,

I had a look at the 3D geological model at the bays mentioned below. Of the four bays mentioned, Lowry Bay is the only one that jumps out that may be an issue. I've attached the screenshot of the cross sections below. I'm unsure if the model is slightly offset from the aerial photograph, as it does not appear to go right up to the road.

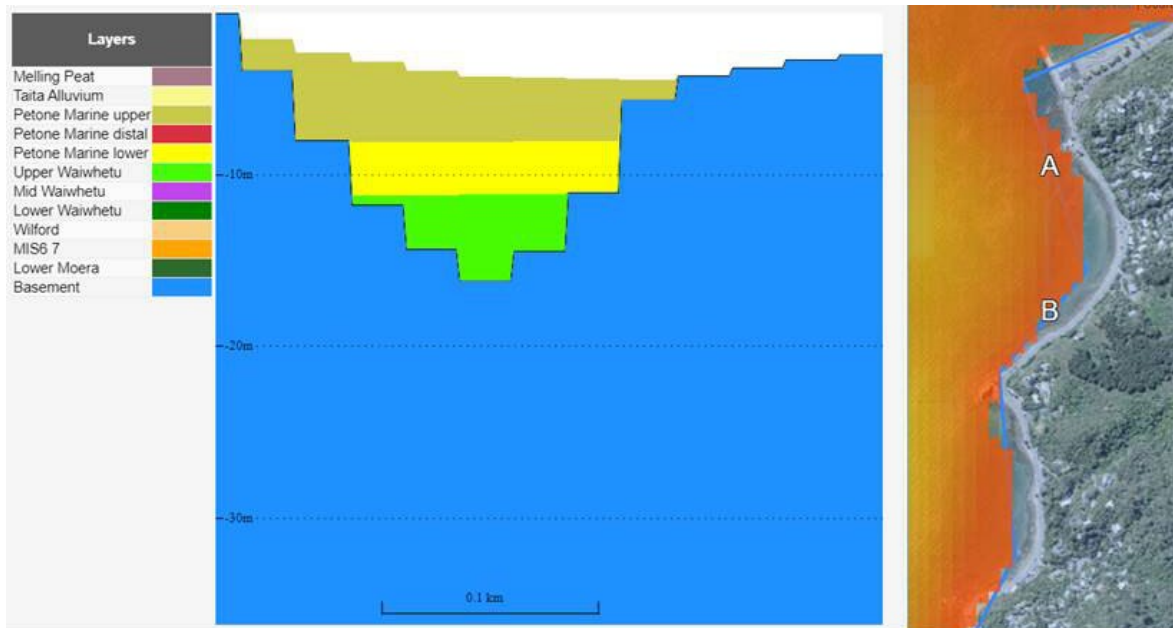
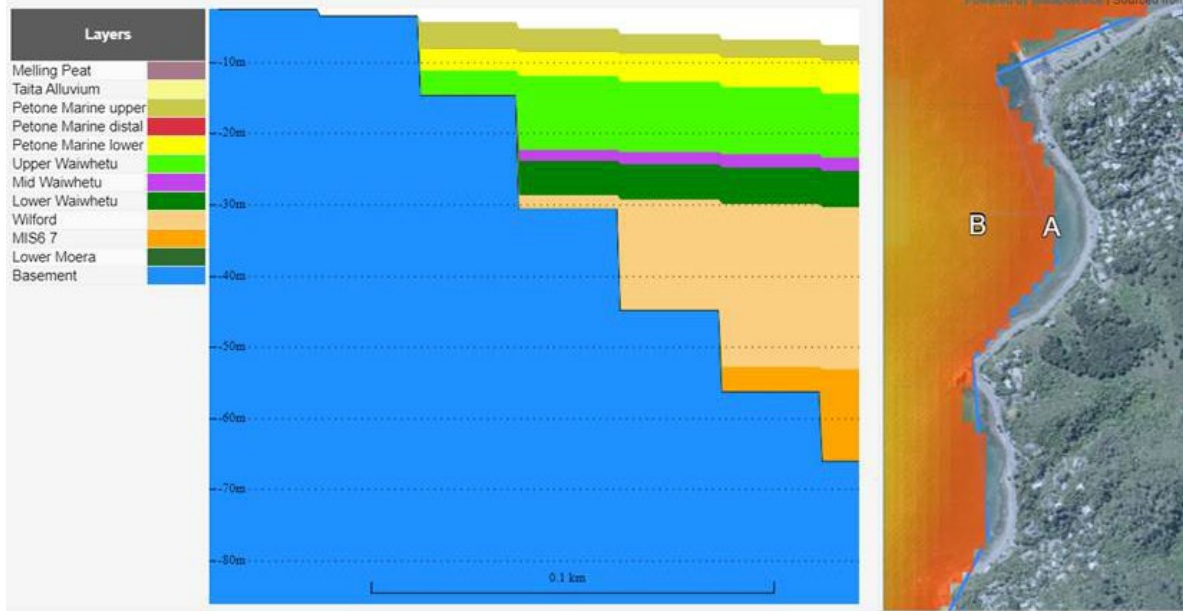
You can see that the Waiwhetu is encountered around the 7 m mark and is overlain by Petone marine sediments. In the CMMP we need to ensure that no leakage occurs in this area. We should include the double casing methodology that we use for drilling/piling in the Hutt Valley in the CMMP. Are you familiar with this?

The further south we go, the Waiwhetu unit is deeper so should not be an issue.

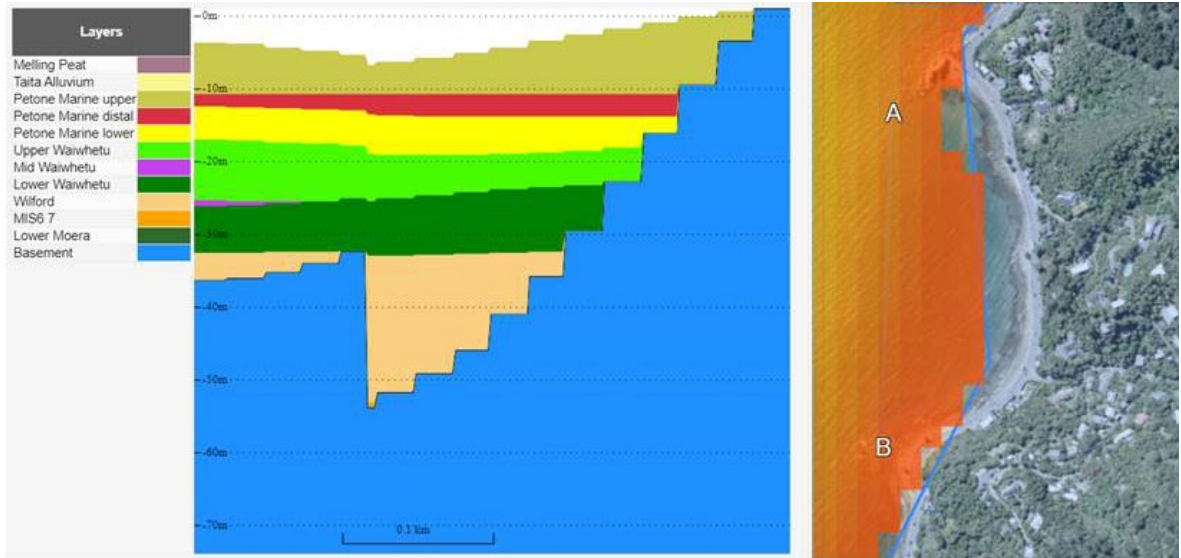
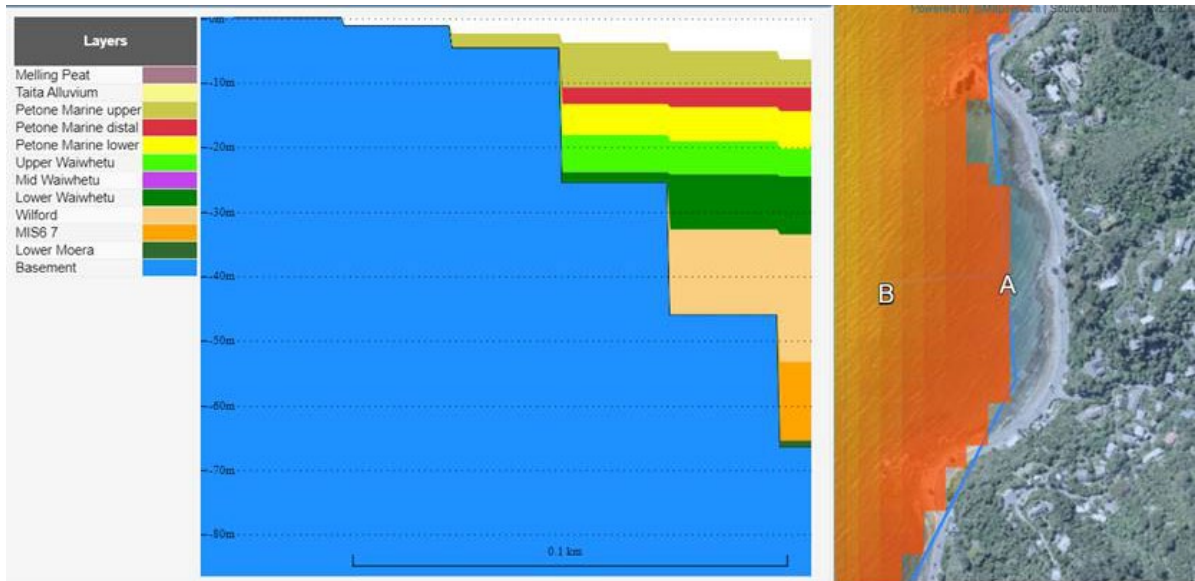
Lowry Bay



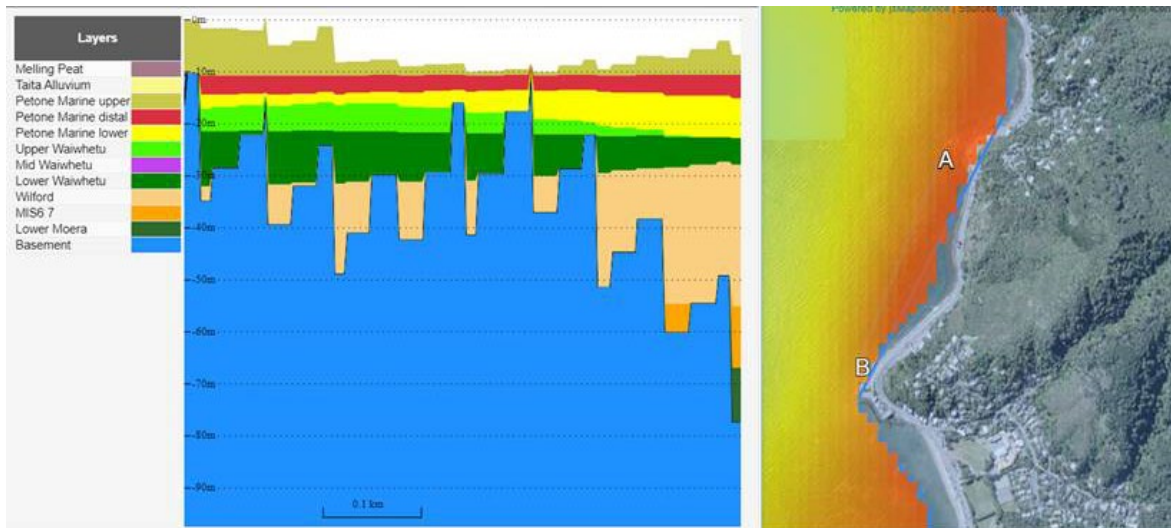
York Bay

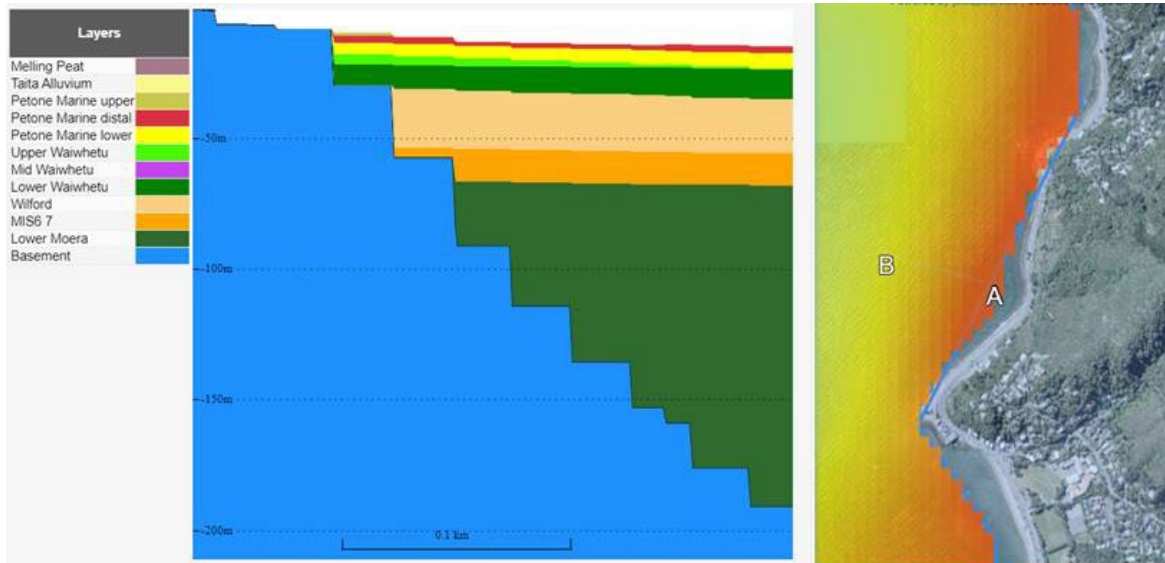


Mahina Bay



Sunshine Bay





Kind Regards,
Rebecca



Rebecca Morris

Senior Groundwater Scientist | **Kaimatai Putaiao Matua**

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From: Shannon Watson <Shannon.Watson@ghd.com>

Sent: Tuesday, 6 October 2020 1:25 PM

To: Rebecca Morris <Rebecca.Morris@gw.govt.nz>

Subject: RE: Eastern Bays Shared Path piling and excavation and potential effects on Waiwhetu aquifer

Hi Rebecca

Thanks for coming back to me. I am not sure precisely where, the information I have indicates Lowry Bay (for approx. 585m), York Bay (for approx. 450m), Mahina Bay (for approx. 220m), Sunshine Bay (for approx. 250m).

The preliminary design plans and typical sections for each bay can be found in the links below:

<http://www.gw.govt.nz/assets/Resource-Consents/Eastern-Bays-Shared-Path/App-N-Preliminary-Design-Plans-REV-J-Lodgement-part-1.pdf>

<http://www.gw.govt.nz/assets/Resource-Consents/Eastern-Bays-Shared-Path/App-N-Preliminary-Design-Plans-REV-J-Lodgement-part-2.pdf>

Hope this helps

Shannon

From: Rebecca Morris <Rebecca.Morris@gw.govt.nz>
Sent: Tuesday, 6 October 2020 1:04 PM
To: Shannon Watson <Shannon.Watson@ghd.com>
Subject: RE: Eastern Bays Shared Path piling and excavation and potential effects on Waiwhetu aquifer

Hi Shannon,

Thanks for the communication. Would you be able to send me a plan of where the deeper (potential) excavations are planned ?

Thanks so much,
Rebecca



Rebecca Morris

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From: Shannon Watson [<mailto:Shannon.Watson@ghd.com>]
Sent: Tuesday, 6 October 2020 12:41 p.m.
To: Rebecca Morris
Subject: Eastern Bays Shared Path piling and excavation and potential effects on Waiwhetu aquifer

Hi Rebecca

I am currently contracted back to GWRC on a secondment basis as the lead processing officer for the Eastern Bays Shared Path consent application. This is a publicly notified consent related to the construction and upgrade of seawalls and rock revetment structures along the existing coastal edge between Eastbourne and Point Howard.

When the consent application was originally lodged in May 2019 I had a brief discussion with Doug Mzila about whether I needed to request further information around dewatering and construction of structures given works were located within the Wellington Harbour protection zone. As the maximum depth of excavation activities and piling was to be <5m below beach level, Doug stated he wasn't concerned about the construction activities affecting the aquifer and that I did not need to request anything further. In light of recent conversations (Bell Road) and the modelling GWRC has undertaken, and therefore the greater understanding of the location of the aquifer BGL, I am concerned that the position on this may now have changed?

Relevant information from the application regarding the depth of excavations/construction activities is summarised (very briefly) below:

Foundation depths for the proposed seawalls, and investigations carried out to evaluate the likely excavations required for the proposed seawalls to be structurally sound and also to allow for coastal processes to occur without these processes compromising stability and strength. Whilst excavations will generally be shallow (<1 m) for the majority of the Project, in some beach locations seawall foundations may need to extend down up to 5 m below current beach level to reach material of acceptable bearing capacity. However, the application describes design of these foundations will seek to ensure the design is not compromised (undermined) by the long-term effects of coastal erosion or short-term scour during

prolonged storms. The application states these deeper foundations will utilise traditional deep foundation techniques such as reinforced concrete cut-off walls, sheet piling, or bored or driven reinforced concrete piles as required, depending on depth and loading requirements of the foundation.

I do not think I would be able to go back and request any additional information regarding effects on the aquifer at this point in the process but your thoughts on a suitable pre-construction condition of consent (via CEMP or similar) that could be applied to give GWRC comfort that any potential effects on the aquifer (if of concern) can be considered and appropriately managed would be greatly appreciated.

Happy to discuss if you need any further information about the proposal and the relevant activities.

Many thanks

Shannon Watson
Environmental Planner

GHD

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