

# Technical Assessment

APPLICATION SUMMARY	LODGED
<a href="#">APP-2018201909.00</a>	29 JUN 2018
Eketahuna WWTP Wetland Construction	
APPLICANT	PROJECT CODE
Opus International Consultants Limited	- CN2211

## TECHNICAL ASSESSMENT

This application is for consent for the earthworks that are required to construct a wetland at the Eketāhuna Waste Water treatment Plant (WWTP).

I recommend technical approval of this consent as the potential adverse environmental effects from a river management perspective are less than minor.

## Background

The proposed wetland construction will see a bund constructed to protect the wetland from floodwaters from the Makakahi River. Whilst protecting the new wetland this bund will restrict the flood carrying channel of the Makakahi River. Hence, when looking at the potential adverse effects associated with the construction thought must be given to how this will affect flows in the river. The two main areas to consider are will the works increase flood risk to any other area, and will the works alter flood flows that may lead to erosion or scour problems developing anywhere else.

This assessment does not look at the structural integrity of the proposed bund. This asset will belong to the consent holder and as such it is up to them to consider if it will provide the standard of service that they require.

## Impacts on Flooding

The application includes a report (Appendix IV) on the detailed hydraulic modelling work that was carried out as part of the design. This report compares a 1% AEP (100 year) flood in the Makakahi River in its current condition with that which would be seen if the proposed bund is in place.

The report clearly shows that the proposed bund would lead to higher water levels (up to 0.5m) over a short reach at the upstream end of the bund. However, the report illustrates, that due to the natural topography of the river corridor there will not be a greater area of land inundated during a 1% AEP flood event than would currently be seen.

It can therefore be said that in this regard the impact of the proposed bund will be less than minor.

## Impact on Erosion or Scour Potential

The report demonstrates that “any increase in velocity is restricted to the main channel and predominantly towards the centre of the main channel. The changes are therefore small, and any effect of these changes would be ‘less than minor.’” Having reviewed the report I can concur with this assessment.

## Conclusion

Having reviewed application and the associated Assessment of Environmental Effects, considering the potential impacts on flooding and erosion risk I believe that the effects of the proposed bund will be less than minor. As such I recommend technical approval of this consent.

COMPLETED BY	DATE
Jon Bell	2/8/2018