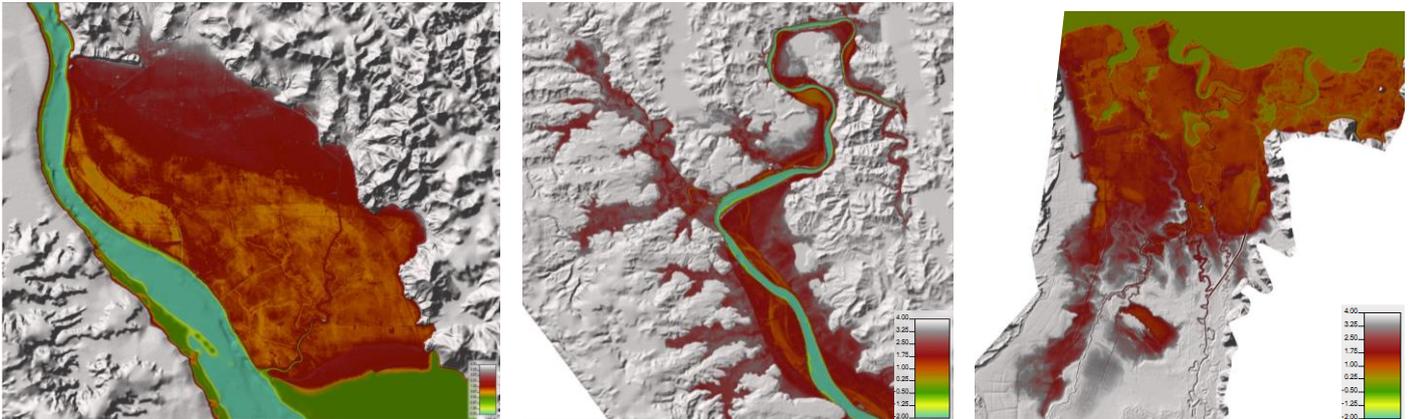


Coastal Flood Modelling of Ruawai, Kaihu-Dargaville and Awanui

NORTHLAND, NEW ZEALAND



Ruawai (left), Kaihu-Dargaville (middle), and Awanui (right) digital terrain models.

INFO:

Location: Northland, New Zealand

Client: Northland Regional Council

Project Date: 2017

SCOPE OF SERVICES:

- HEC-RAS flood model, Digital Terrain Model set up
- Coastal Flood Hazard Modelling
- Comprehensive Reporting

PROJECT DESCRIPTION:

We were commissioned by Northland Regional Council to carry out a series of hydrodynamic flood simulations for Ruawai, Kaihu-Dargaville and Awanui. It was suspected that the previous 'bathtub' derived flood extents for various Coastal Flood Hazard Zone (CFHZ) areas were likely conservative and subsequent desktop analyses found that overtopping volumes could likely exceed bathtub volumes for future extreme events but may be less for current extreme events. Maximum flood extents calculated show less inundation when compared to previous studies. This is mostly due to the implementation of spatially varying roughness in the HEC-RAS model runs.



Comparison between combined Ruawai, Kaihu-Dargaville, and Awanui CFHZ2 flood extents (left side) and previous studies (middle). Location plan of Awanui, Dargaville and Ruawai.