4.7. Tutukaka

Maps of predicted inundation depth and maximum current speed for Tutukaka are presented in Figures 34-39. For the South American tsunami, little inundation is evident, and maximum current velocities are relatively weak. With sea level rise included, there is some inundation up the creek that flows into the head of Tutukaka Harbour.

Predicted inundation from the TKSZ M_w8.5 event is also relatively insignificant with relatively low current speeds inside the harbour area. Again, there is evidence of some inundation along the creek when sea level rise is included. The situation is substantially worse for the TKSZ M_w9.0 event, when inundation extends from bays in the north-west and south-west of the harbour. Maximum current speeds in the harbour are also much stronger for this event.

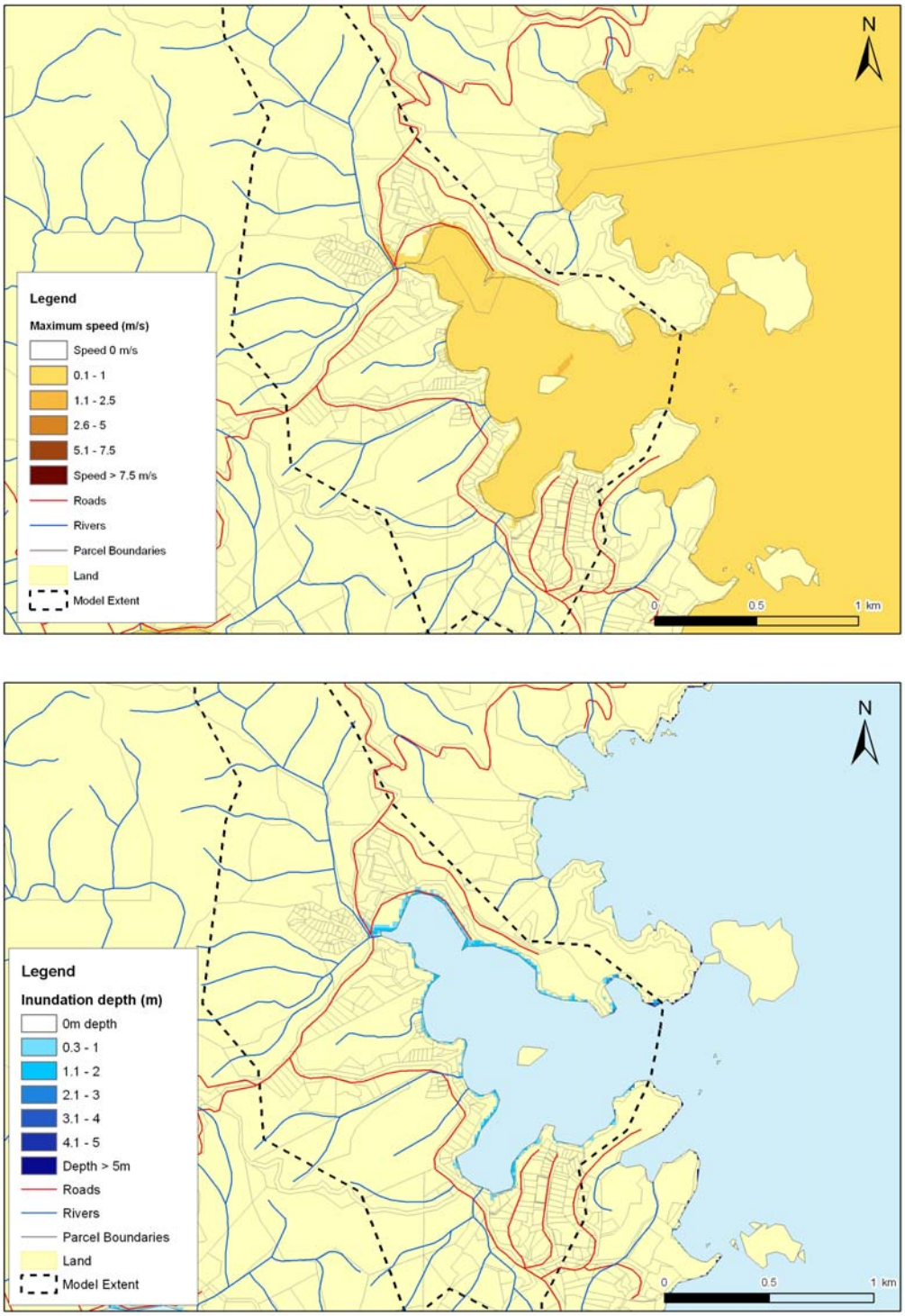

Figure 34: Tutukaka: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS (to extent of LIDAR).

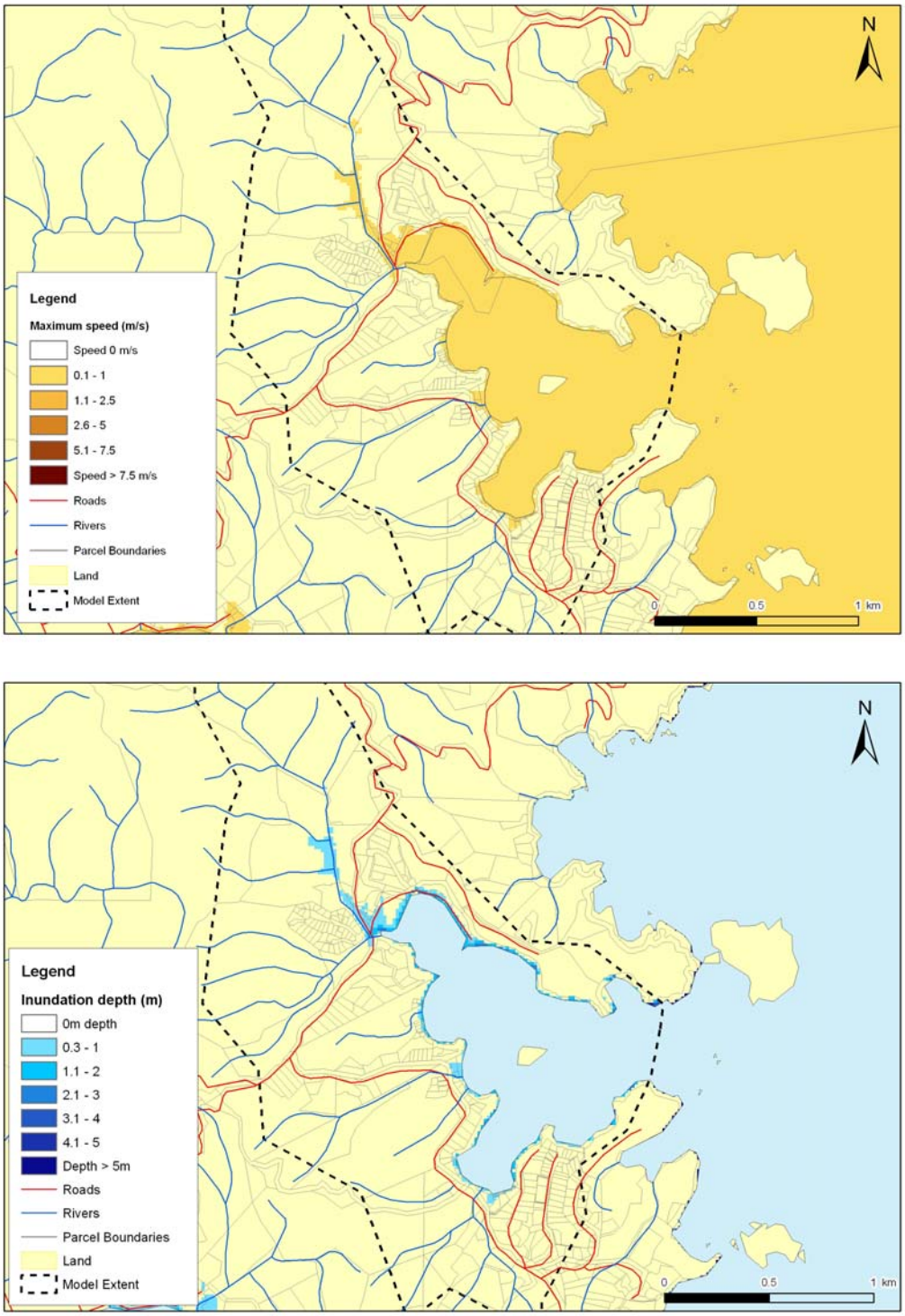

Figure 35: Tutukaka: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS + 50cm (to extent of LIDAR).

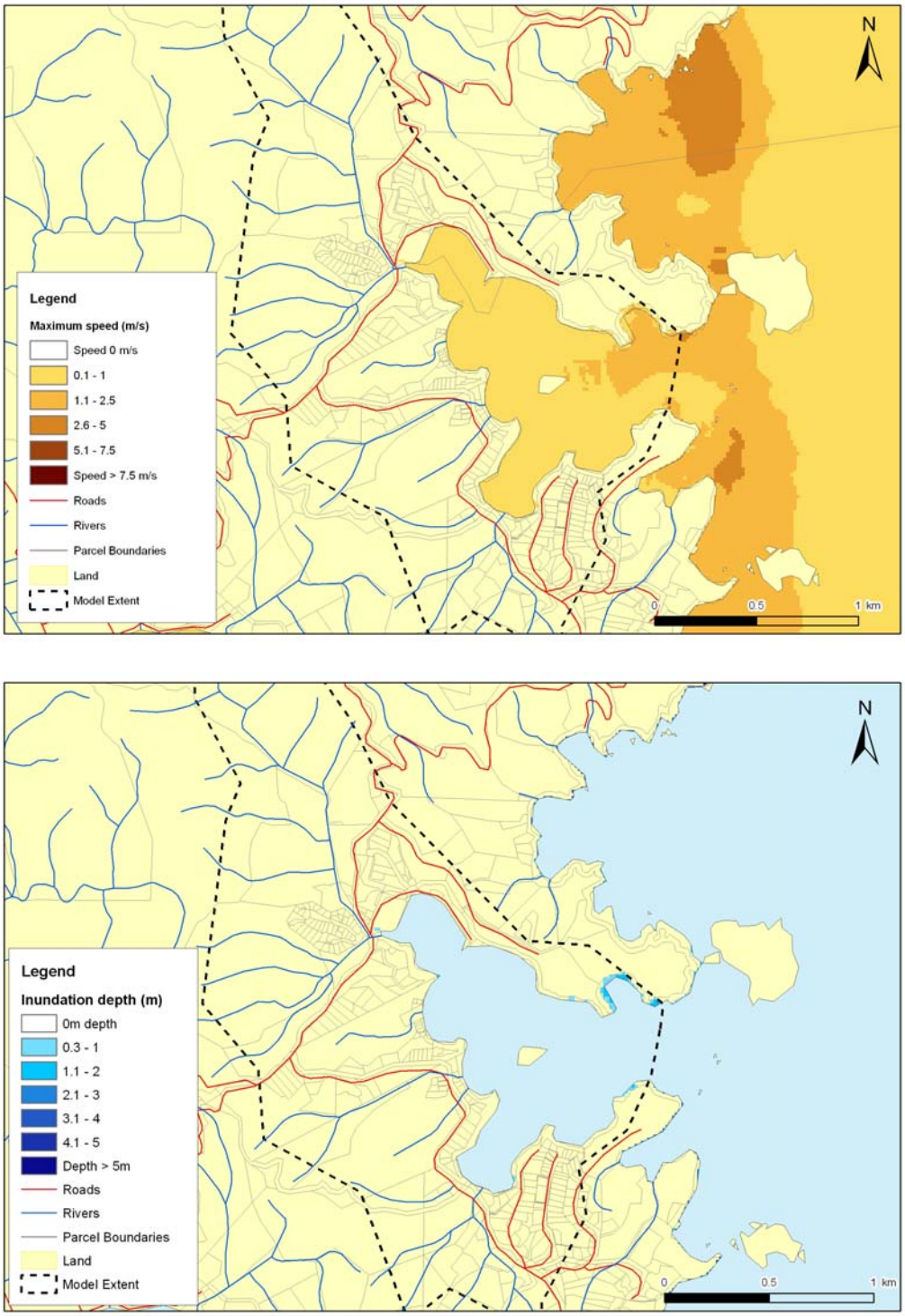

Figure 36: Tutukaka: Maximum inundation speed (upper) and depth (lower) plots for the M_w8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR).

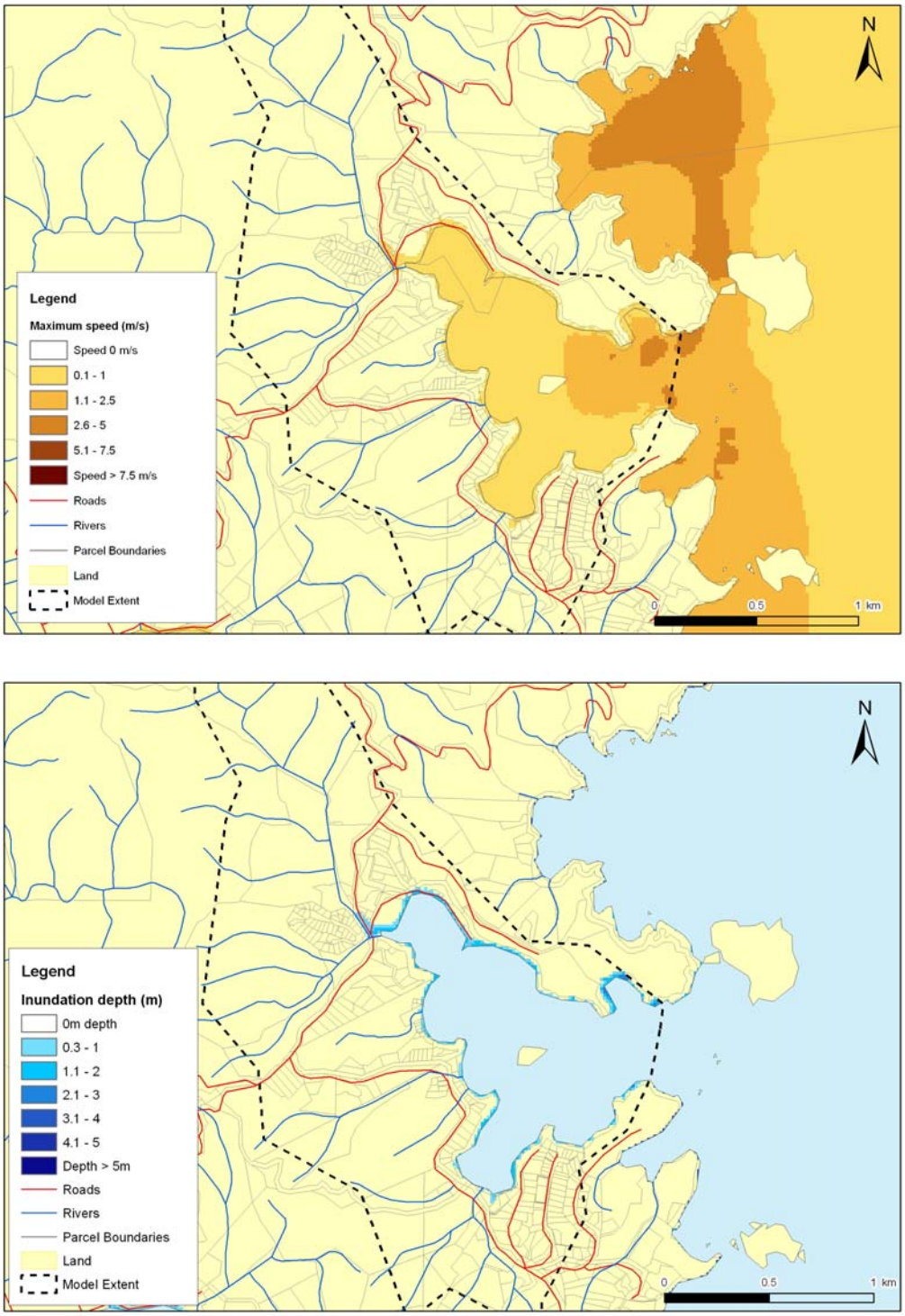

Figure 37: Tutukaka: Maximum inundation speed (upper) and depth (lower) plots for the M_w8.5 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR).

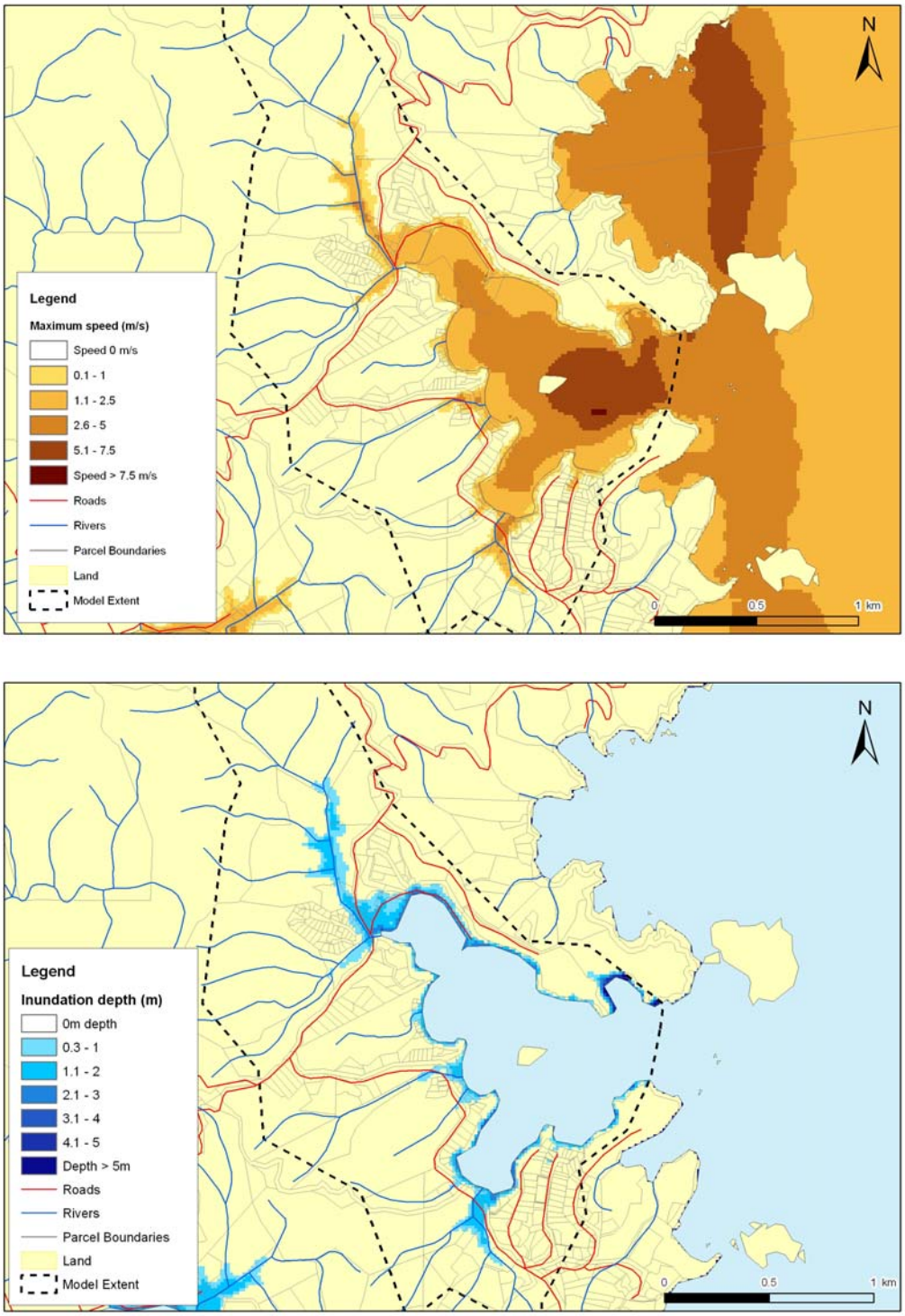

Figure 38: Tutukaka: Maximum inundation speed (upper) and depth (lower) plots for the M_w9.0 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR).

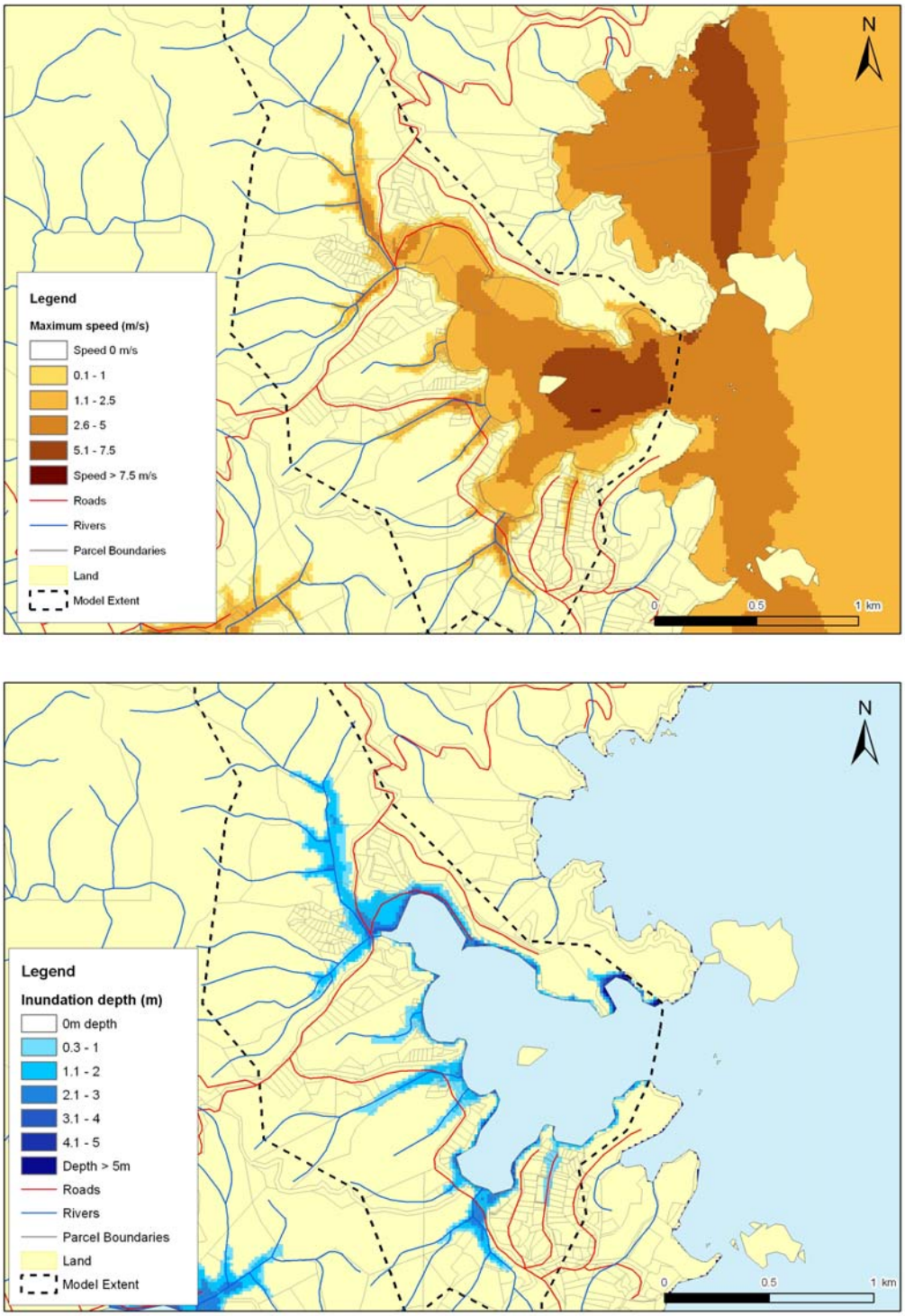

Figure 39: Tutukaka: Maximum inundation speed (upper) and depth (lower) plots for the Mw9.0 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR).