

4.6. Otaika

Maps of predicted inundation depth and maximum water speed for Otaika are presented in Figures 29 - 34. Inundation from the South American tsunami is evident north of Onemama Point and north of Tapu Point. Onerahi is also inundated (Figure 29). Current speeds exceed 1.5 m s^{-1} south of Kaiwaka Point. When sea level rise is included in the scenario there is an increase in the depth of inundation. Inundation extends towards Otaika along the Otaika Creek (Figure 30).

The TKSZ M_w 8.5 scenario results in inundation on the coastlines near Otaika (Figure 31). The current speed near Otaika is in the 0.005 to 0.5 m s^{-1} bracket. Sea level rise causes an increase in depth and extent of the inundation between Onemama point and the Otaika Creek mouth (Figure 32).

The TKSZ M_w 9.0 scenario produces inundation north of Onemama Point and Tapu Point (Figure 33). Current speeds reach between 0.6 and 1.5 m s^{-1} north of Tapu Point. Depth of inundation increases when sea level rise is included in the scenario and inundation extends up Otaika Creek (Figure 34).

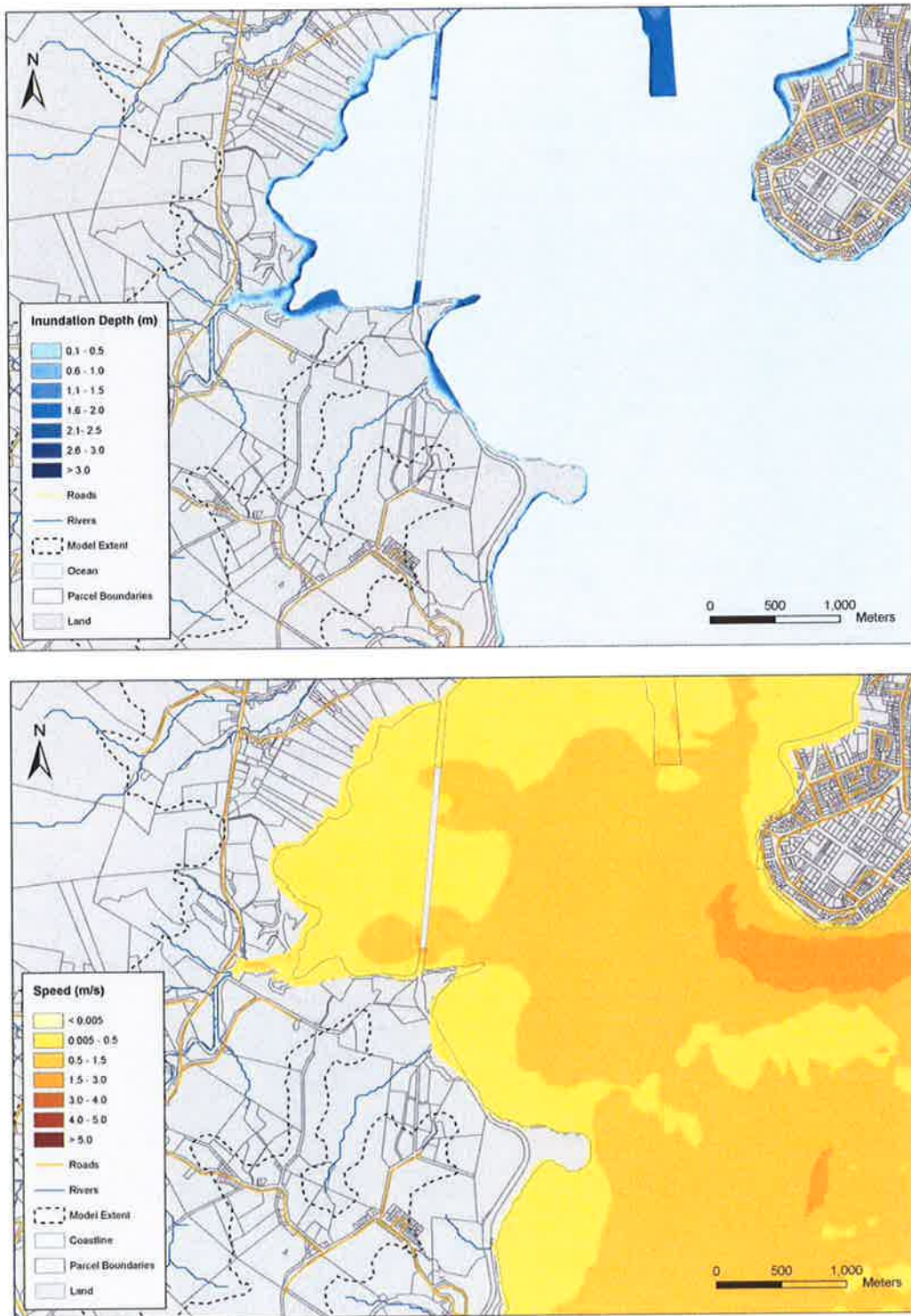


Figure 29: Otaika: Maximum inundation depth (upper) and speed (lower) plots for the South American tsunami scenario at MHWS (to extent of LIDAR) in Whangarei Harbour.

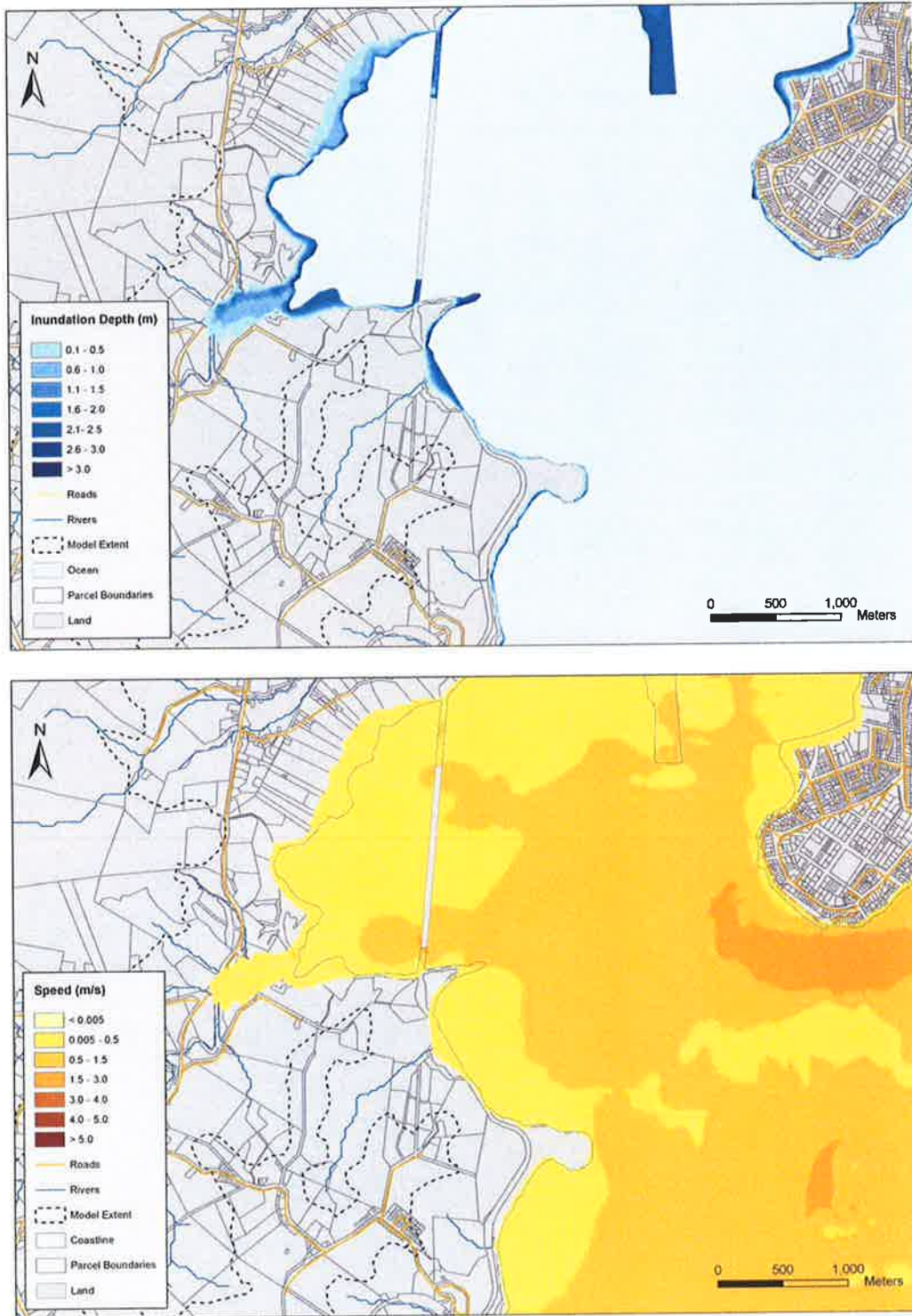


Figure 30: Otaika: Maximum inundation depth (upper) and speed (lower) plots for the South American tsunami scenario at MHWS + 50cm (to extent of LIDAR) in Whangarei Harbour.

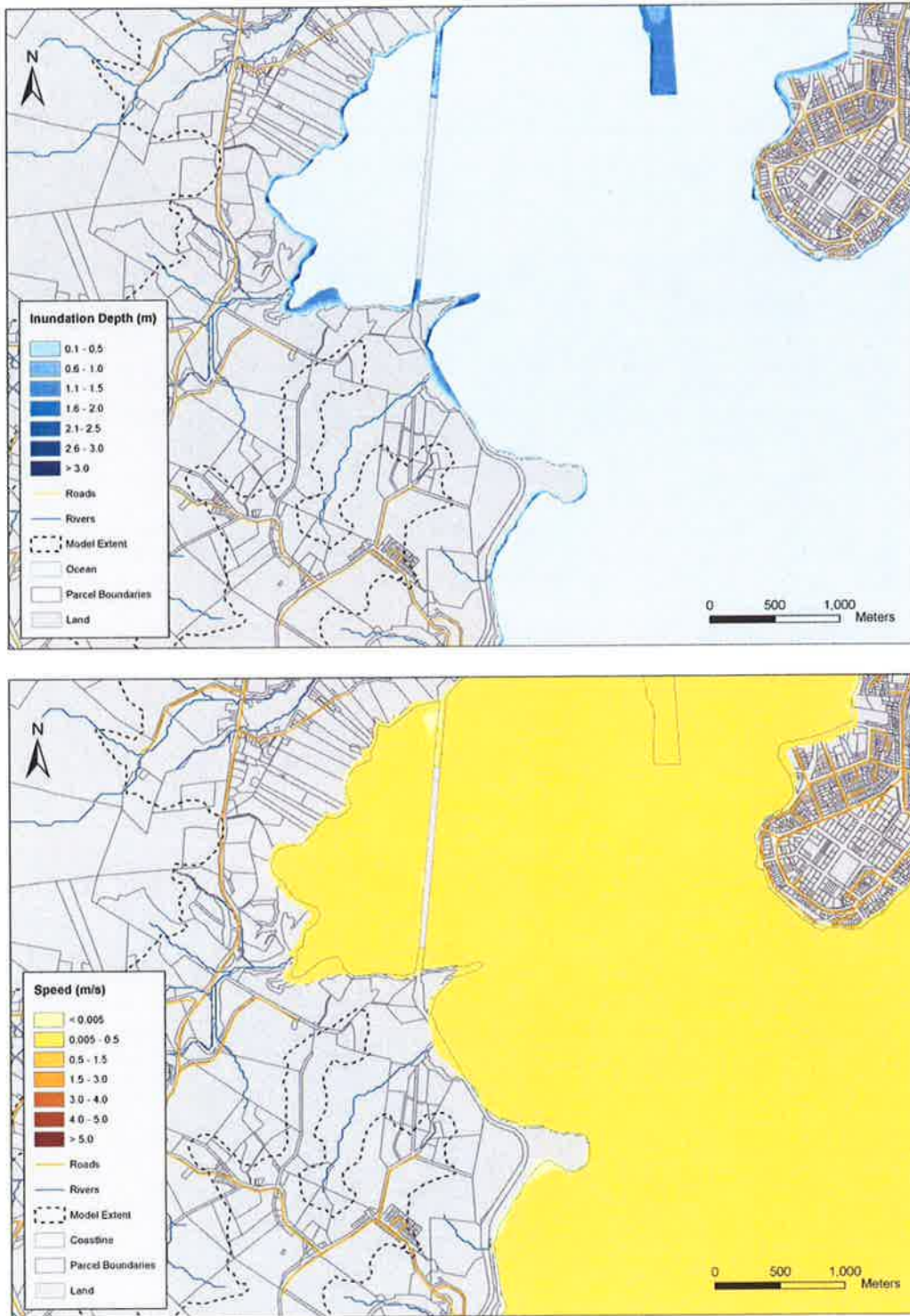


Figure 31: Otaika: Maximum inundation depth (upper) and speed (lower) plots for the M_w 8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR) in Whangarei Harbour.

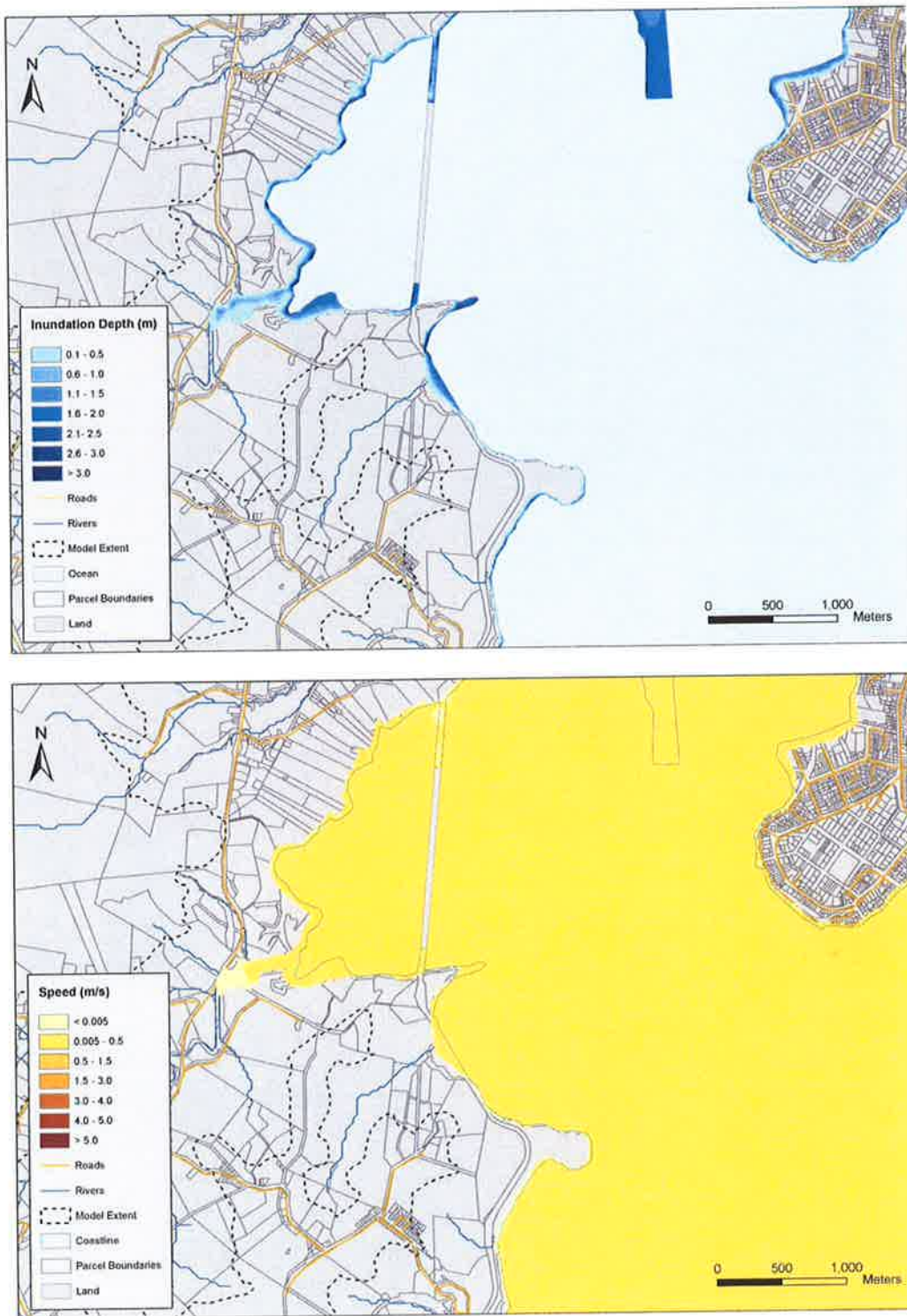


Figure 32: Otaika: Maximum inundation depth (upper) and speed (lower) plots for the M_w 8.5 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR) in Whangarei Harbour.

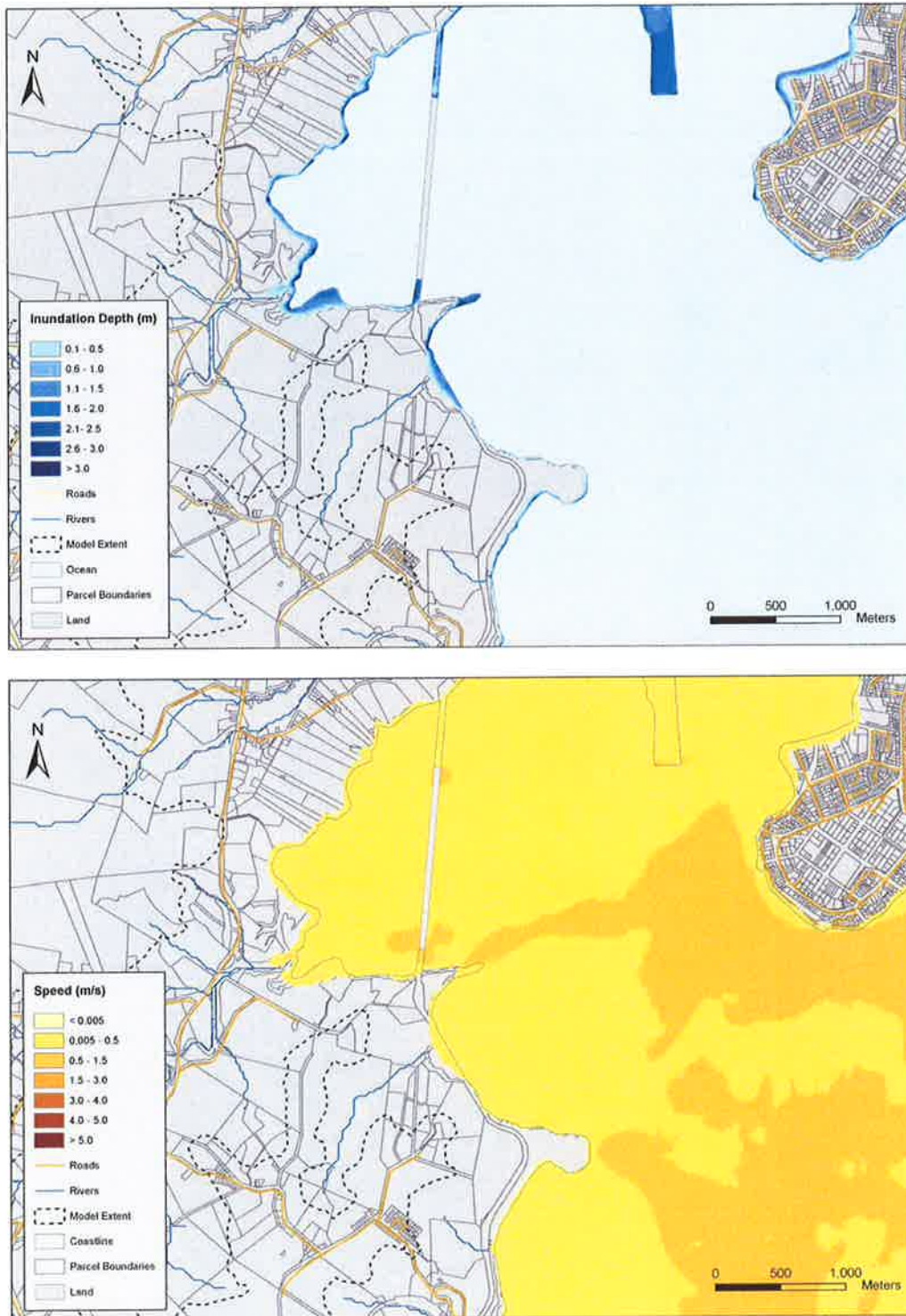


Figure 33: Otaika: Maximum inundation depth (upper) and speed (lower) plots for the Mw9.0 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR) in Whangarei Harbour.

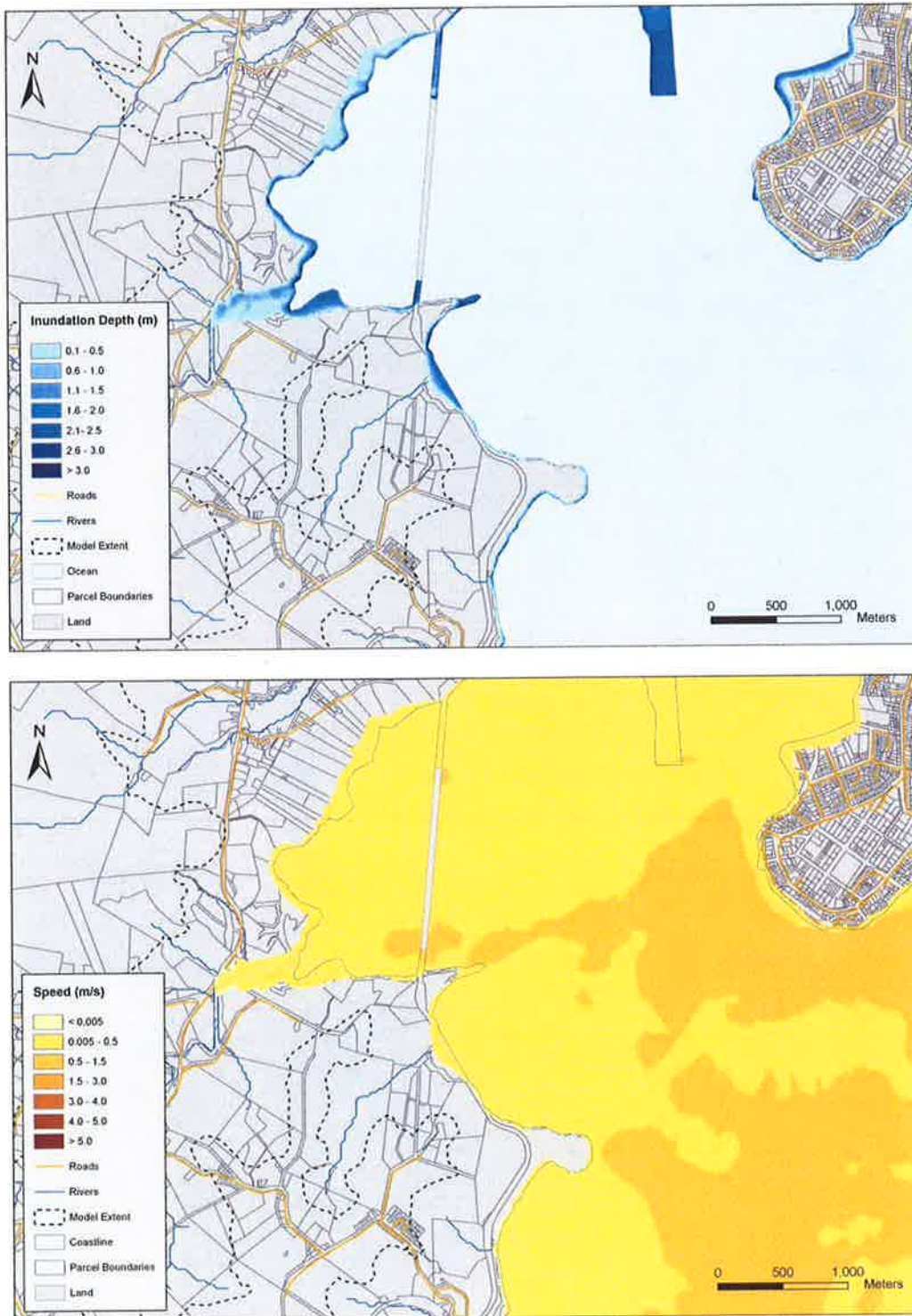


Figure 34: Otaika: Maximum inundation depth (upper) and speed (lower) plots for the M_w 9.0 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR) in Whangarei Harbour.