4.16. Omapere

Maps of predicted inundation for Omapere are presented in Figures 88-93. It is predicted that there will be no inundation from the South American tsunami, even with sea level rise included.

The TKSZ M_w8.5 event sees slight inundation of the beach at Omapere, especially near Omapere Stream, and at the mouth of the Waiarohia Stream, to depths of 1m. Water speeds average 1-2.5 m s^{-1}, with higher speeds off the coast of North Head and Opononi. Sea level rise sees relatively little increase in the extent of the flooding. The TKSZ M_w9.0 event shows increased inundation, including flooding at the beach at Omapere and the mouth of the Waiarohia Stream with water depths up to 3 m. Maximum current speeds are 2.5-5 m s^{-1}, and over 5 m s^{-1} off the coast of North Head and Opononi. Sea level rise has marginal impact on the extent of the flooding.

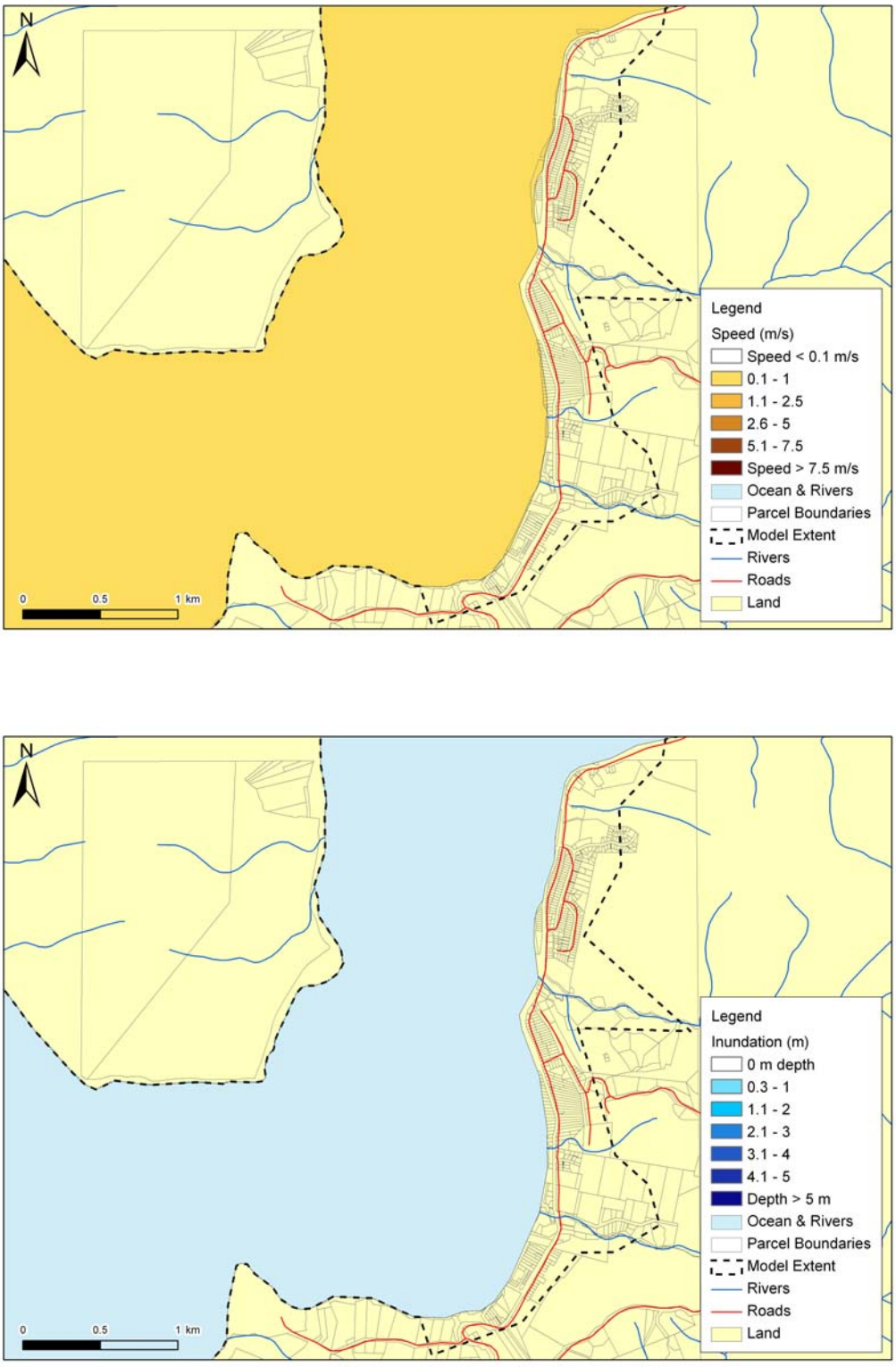


Figure 88: Omapere: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS (to extent of LiDAR).

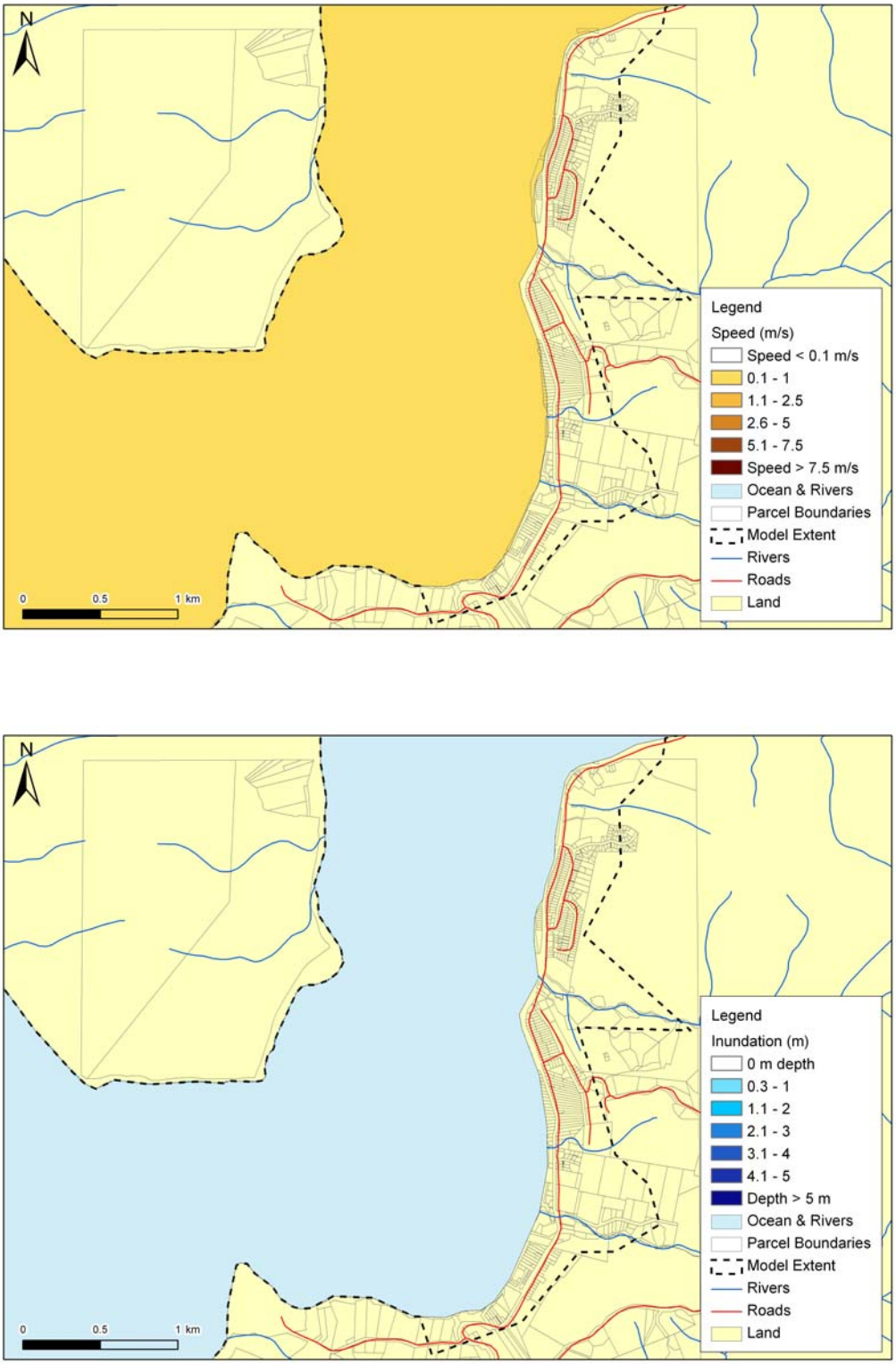


Figure 89: Omapere: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS + 50cm (to extent of LiDAR).

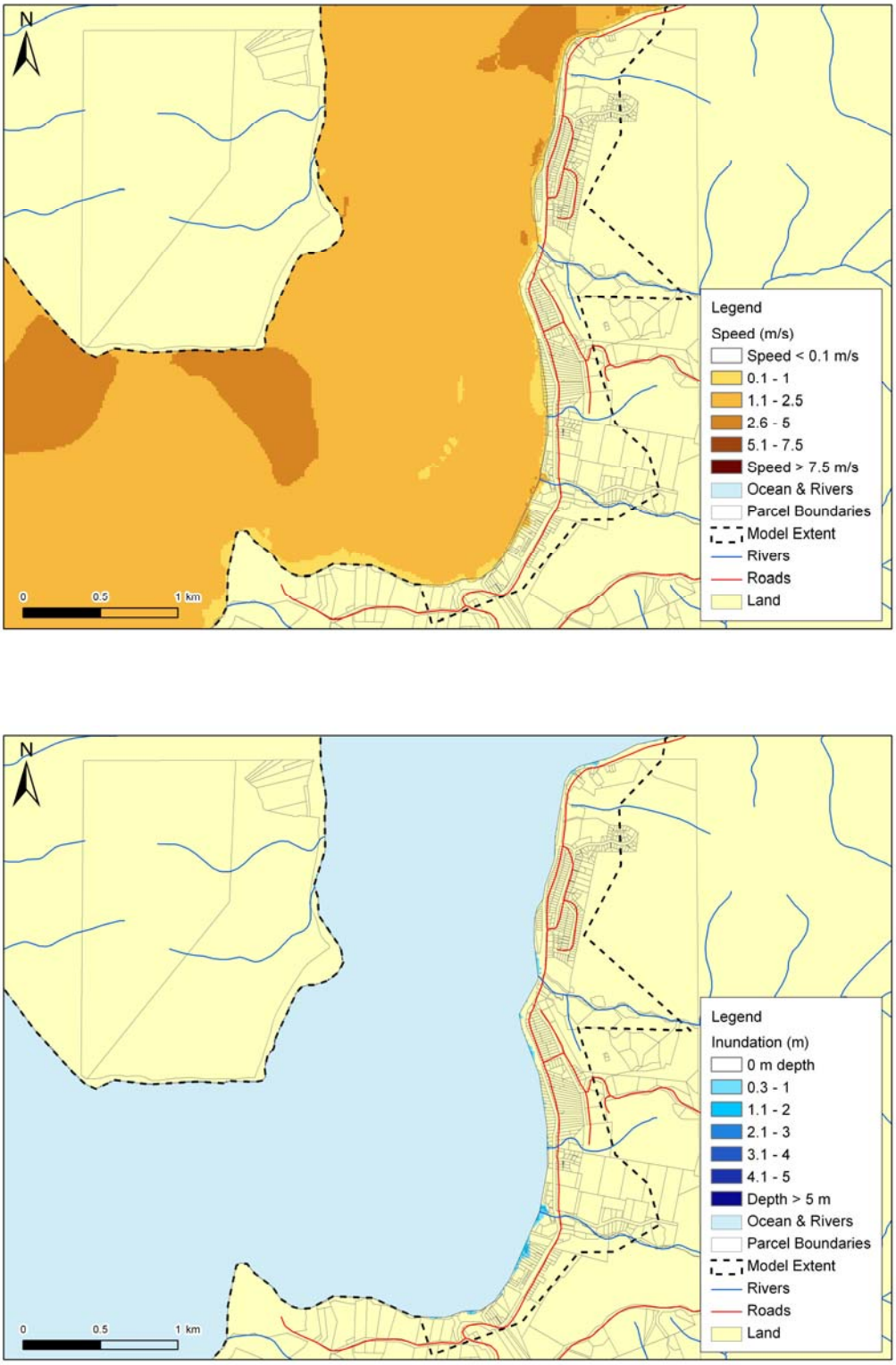
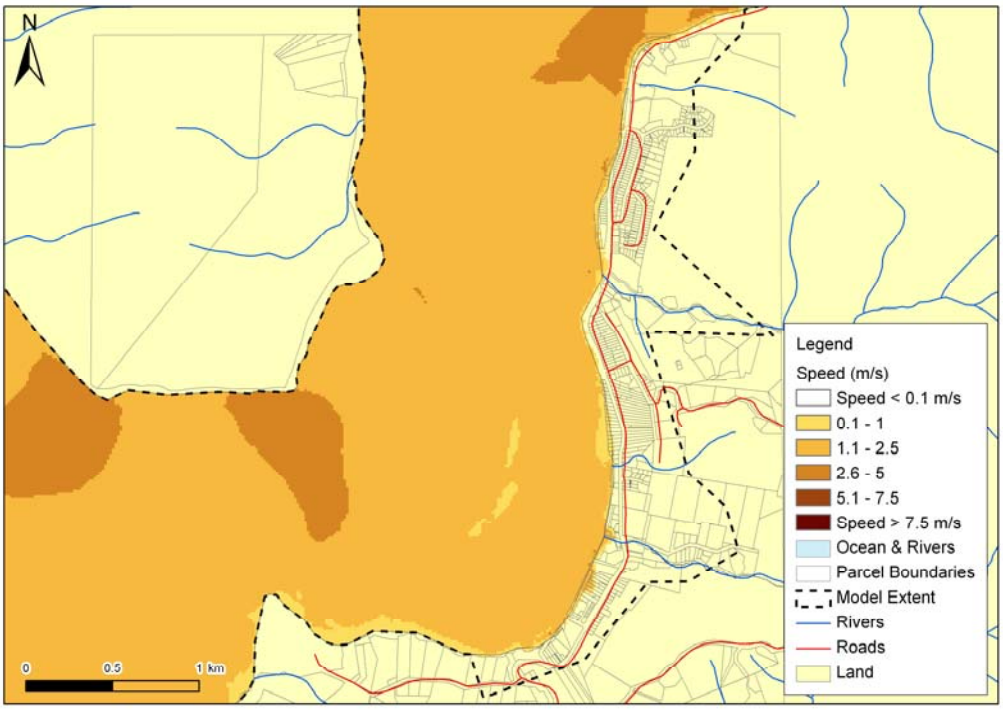


Figure 90: **Omapere: Maximum inundation speed (upper) and depth (lower) plots for the M_w8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LiDAR).**



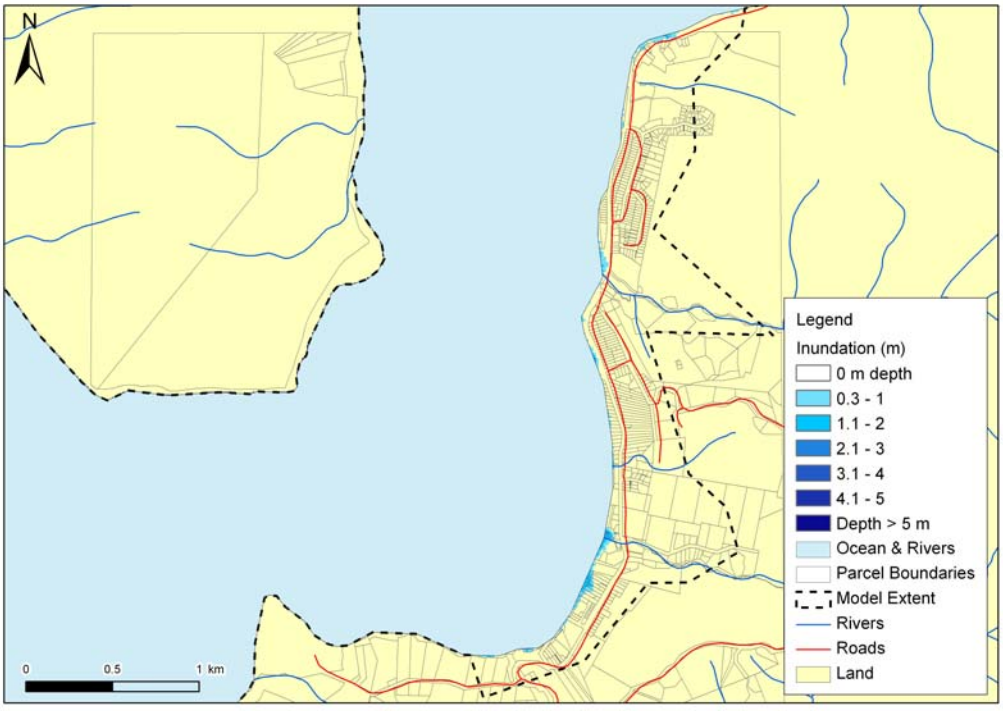


Figure 91: **Omapere: Maximum inundation speed (upper) and depth (lower) plots for the Mw8.5 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LiDAR).**

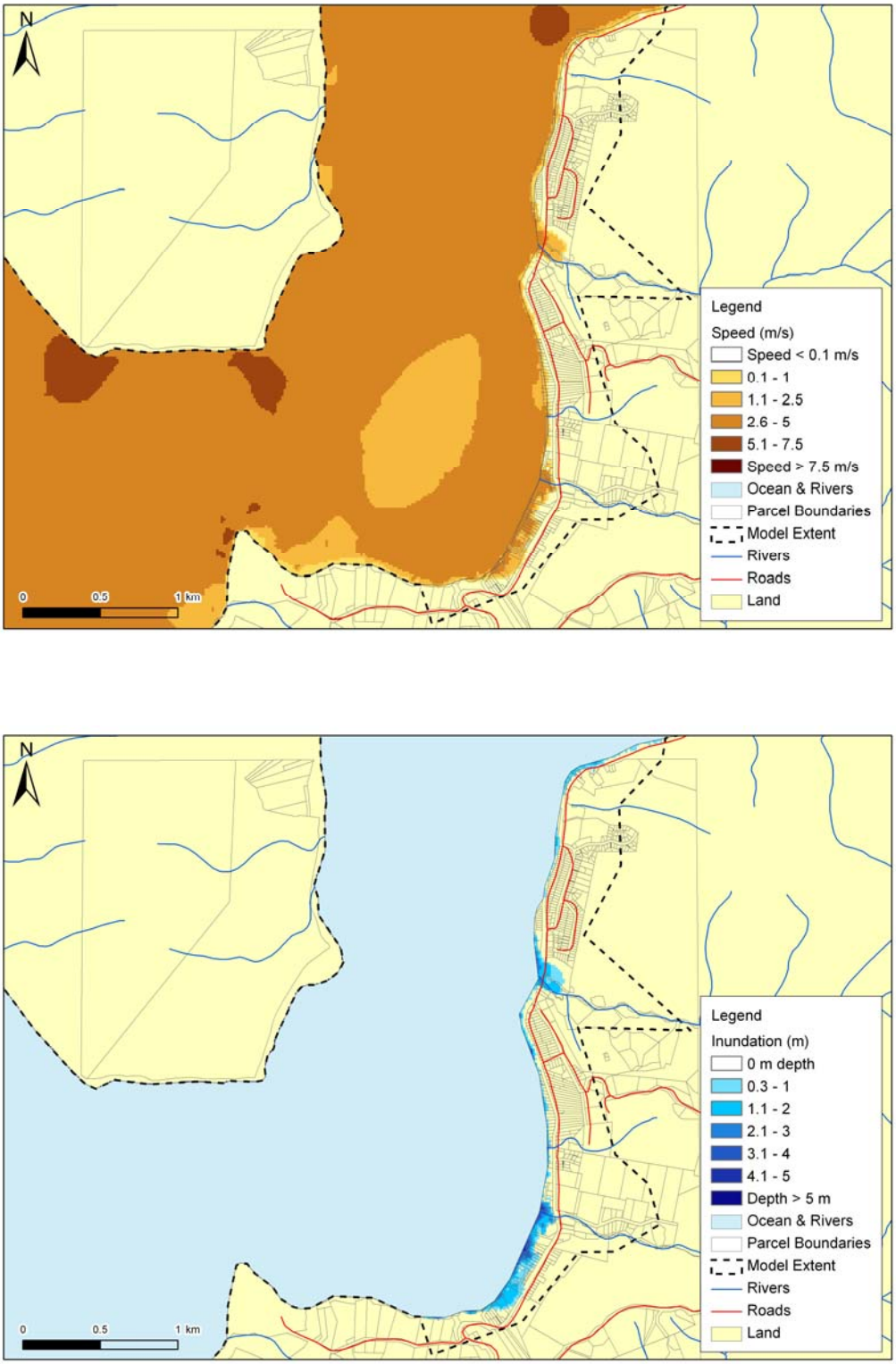


Figure 92: **Omapere: Maximum inundation speed (upper) and depth (lower) plots for the Mw9.0 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LiDAR).**

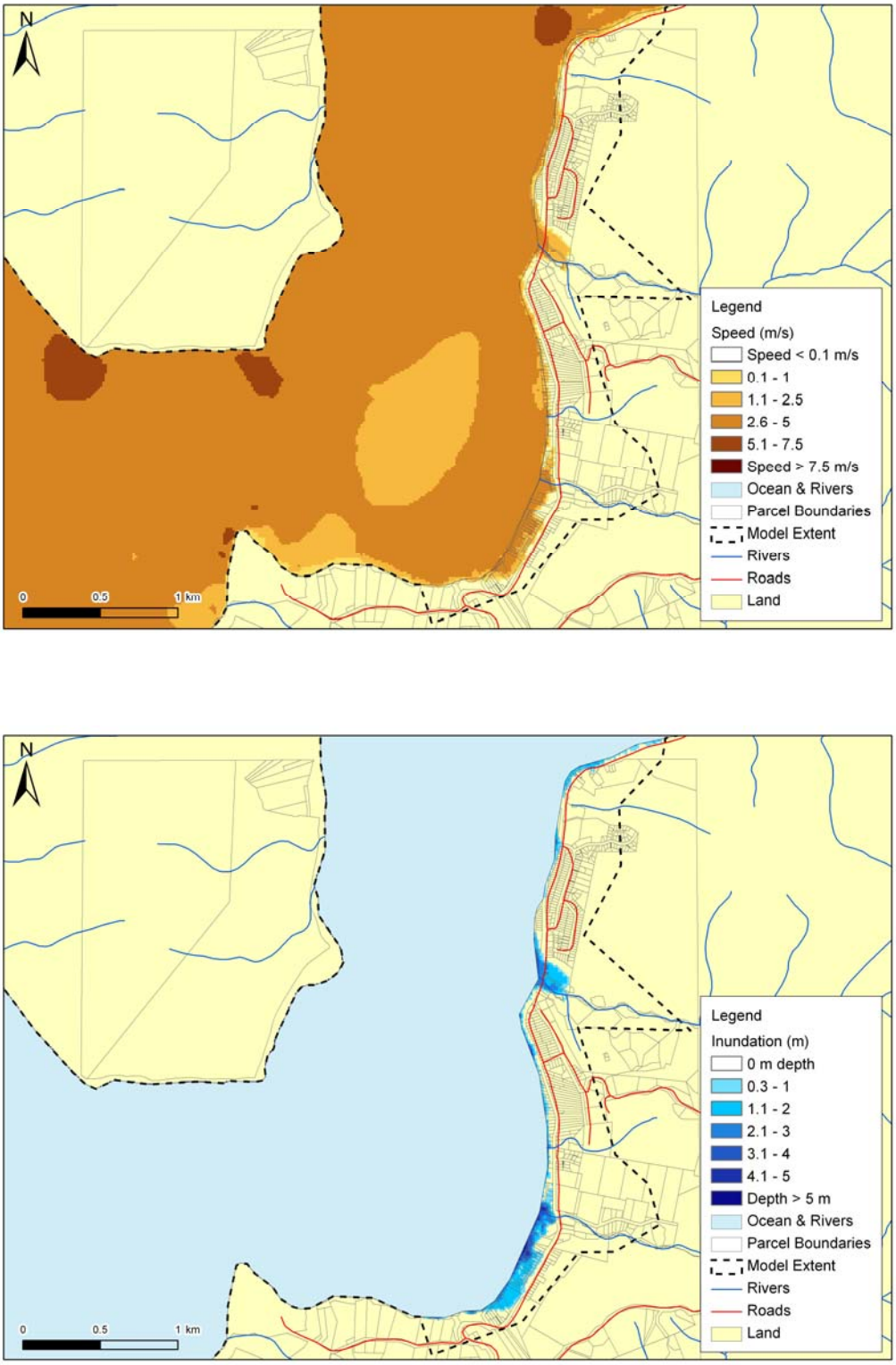


Figure 93: **Omapere: Maximum inundation speed (upper) and depth (lower) plots for the M_w9.0 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LiDAR).**