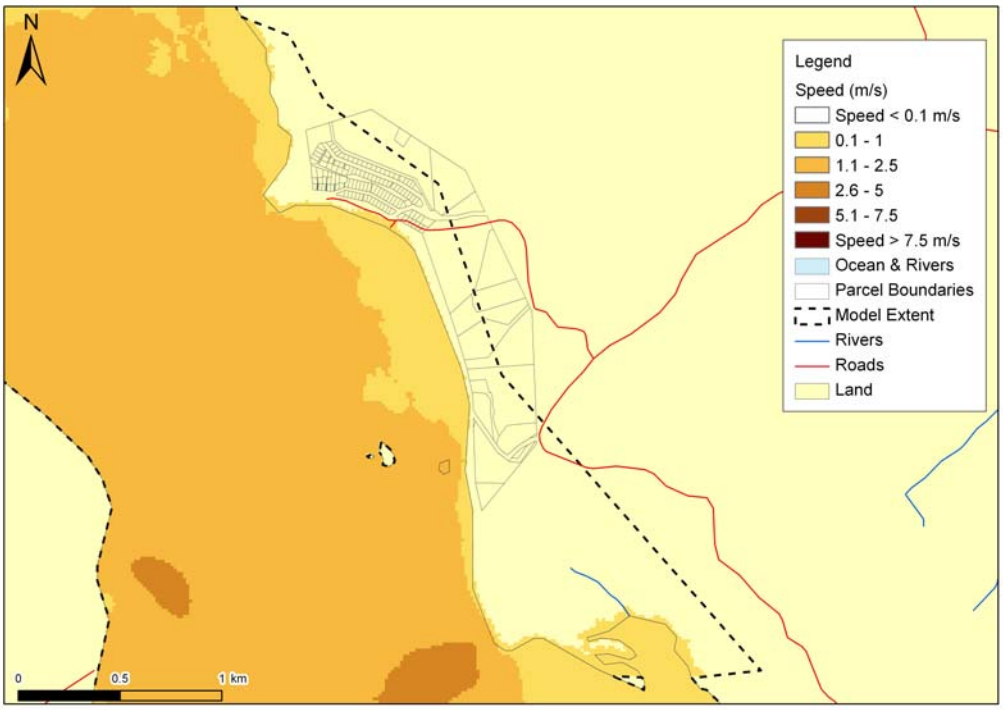
4.13. East Beach, Rangiputa

Predicted inundation depths and current speeds for East Beach, Rangiputa are presented in Figures 70-75. The South American tsunami results in inundation to the south of Koura Point, from Kotiatia Point around Kohanga Bay and around Wairakia Point. Sea level rise is predicted to increase the extent and depth of flooding around Wairakia Point. Current speeds across the mouth of Rangaunu Harbour average 2.5 m s^{-1}.

The TKSZ M_w8.5 event is predicted to have a similar impact as the South American tsunami, both with and without sea level rise. However, current velocities increase to 5 m s^{-1} in the harbour entrance. The TKSZ M_w9.0 event causes significantly more inundation, both in terms of extent and depth. Kohanga Bay is predicted to be inundated up to depths of 4 m, flooding the road along the beach and the settlement of Rangiputa. Water speeds exceed 5 m s^{-1}.



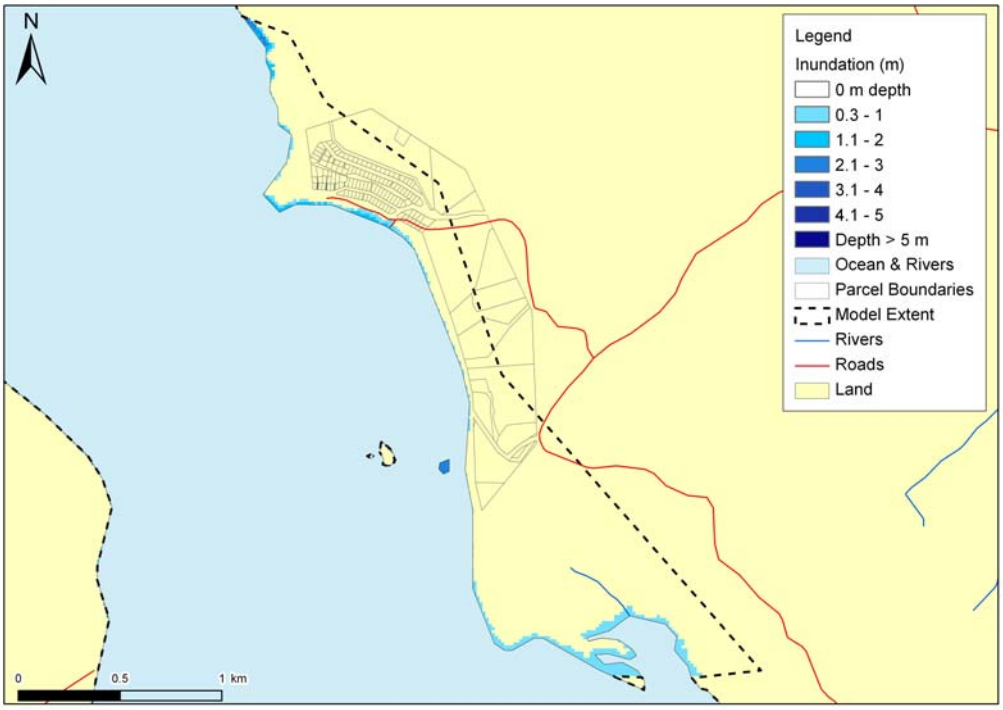


Figure 70: East Beach, Rangiputa: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS (to extent of LiDAR).

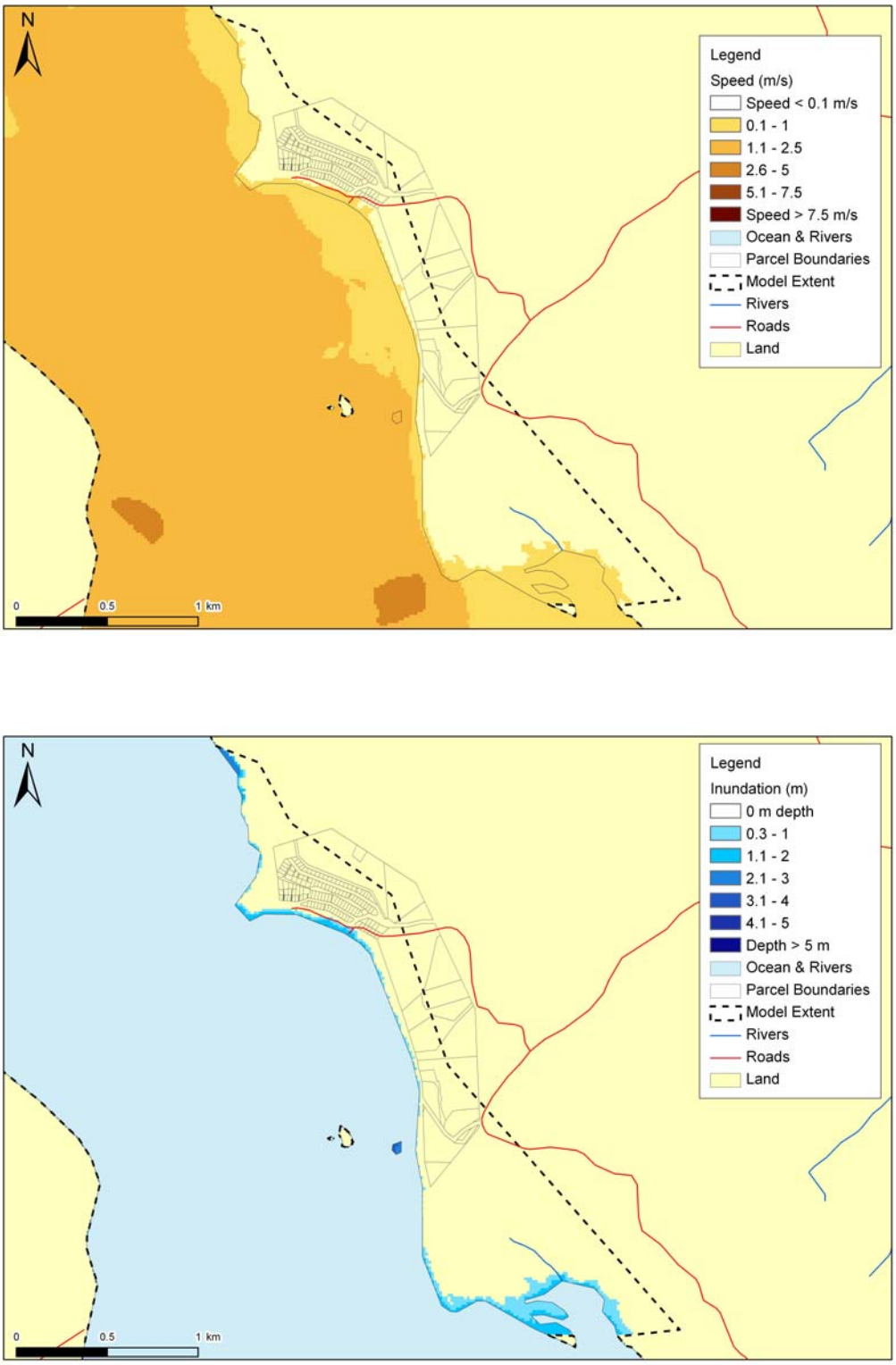


Figure 71: **East Beach, Rangiputa: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS + 50cm (to extent of LiDAR).**

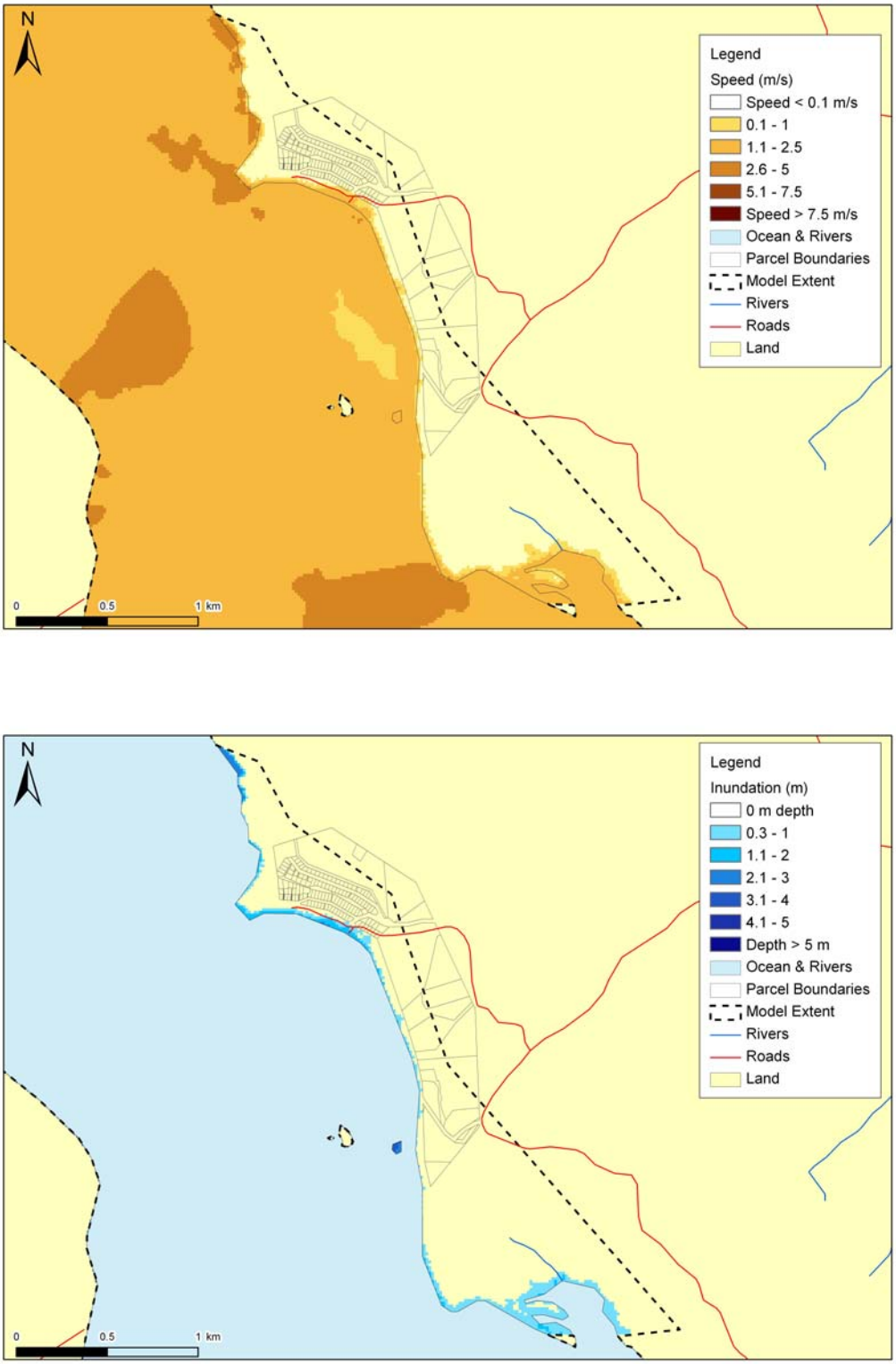


Figure 72: **East Beach, Rangiputa: Maximum inundation speed (upper) and depth (lower) plots for the Mw8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LiDAR).**

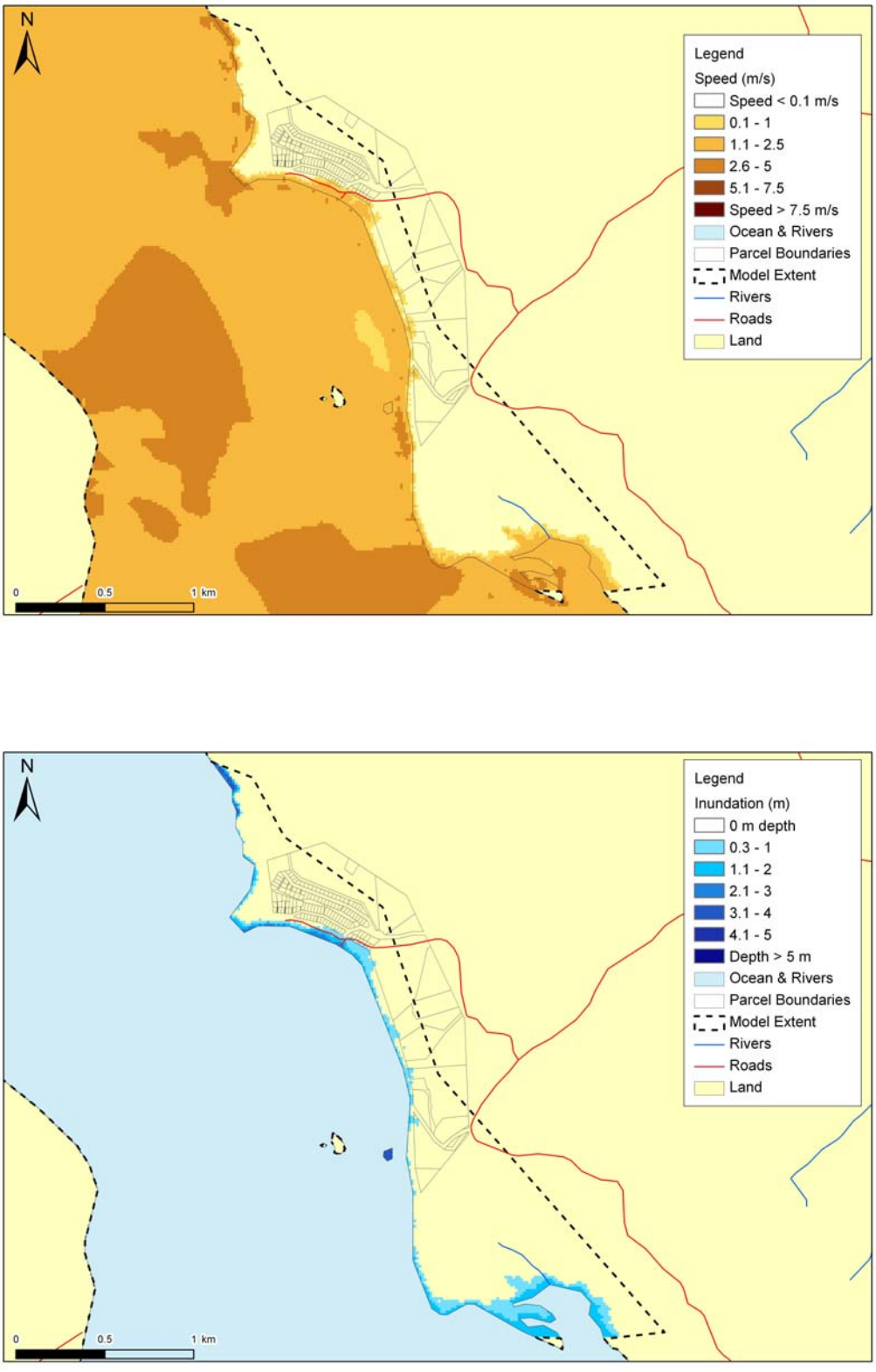


Figure 73: **East Beach, Rangiputa: Maximum inundation speed (upper) and depth (lower) plots for the Mw8.5 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LiDAR).**

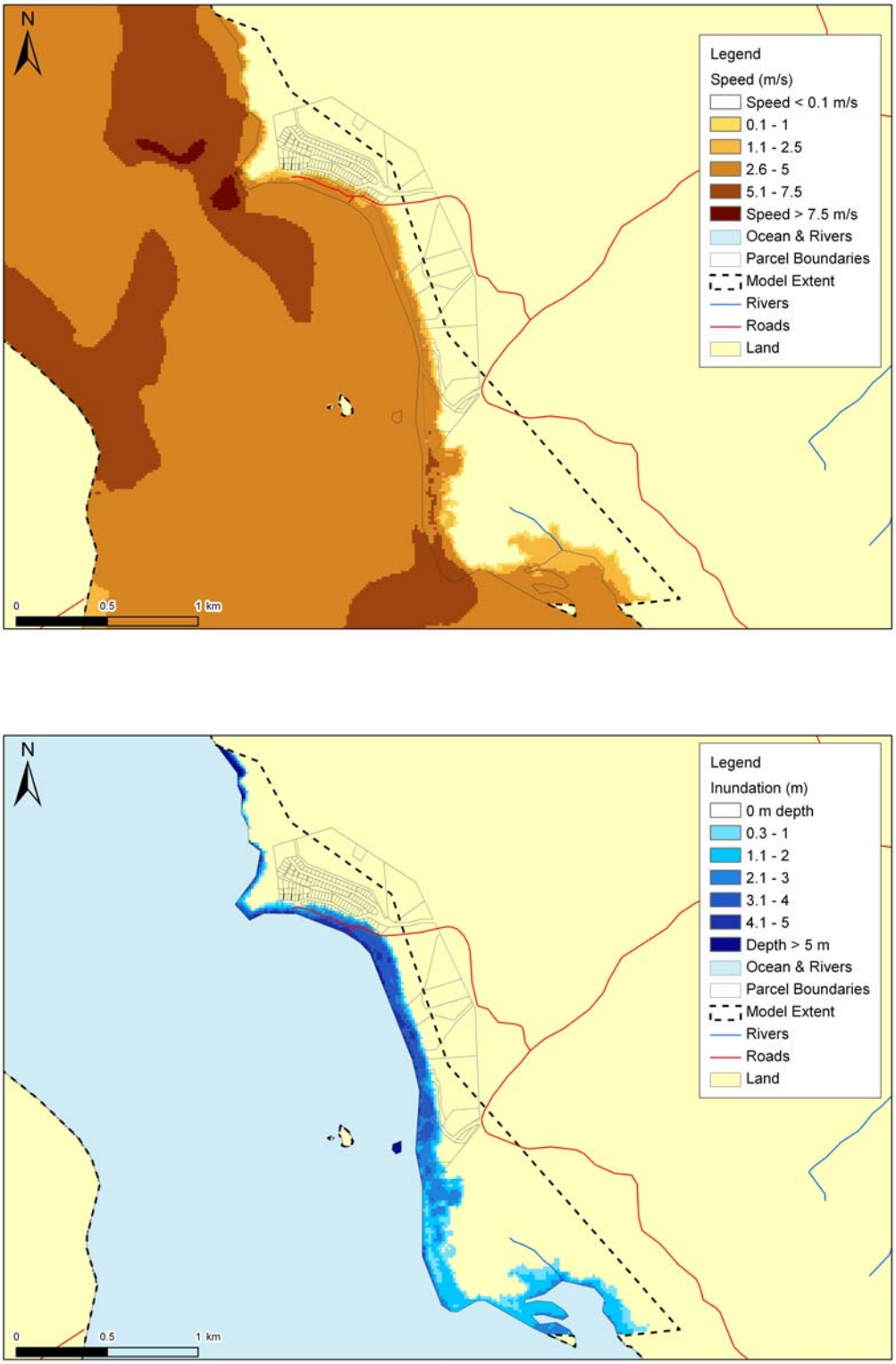
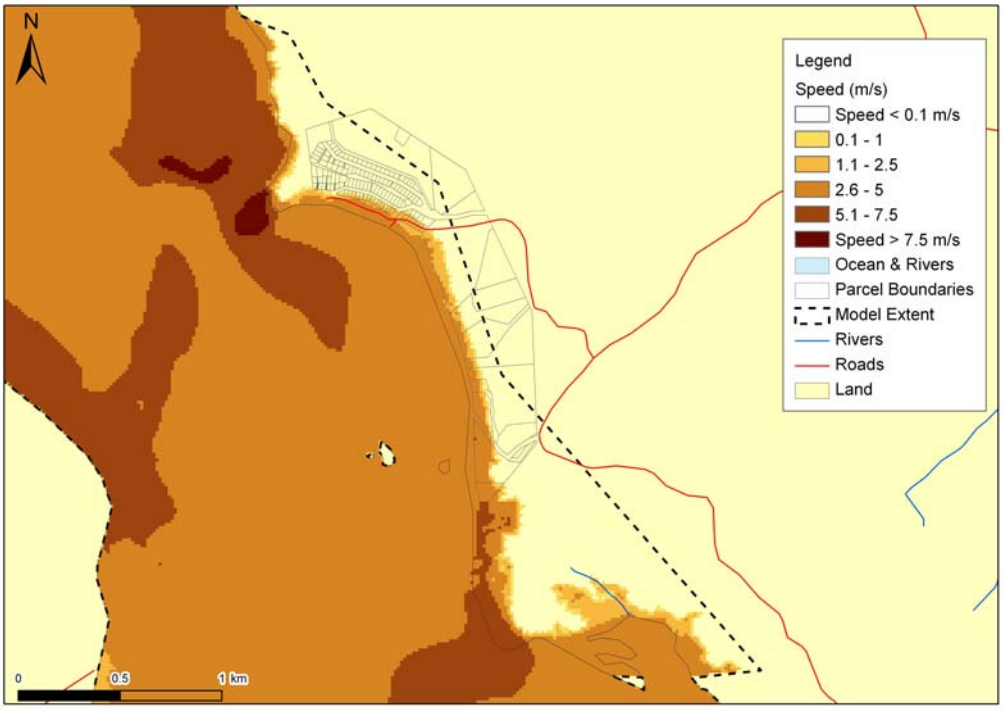


Figure 74: **East Beach, Rangiputa: Maximum inundation speed (upper) and depth (lower) plots for the Mw9.0 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LiDAR).**



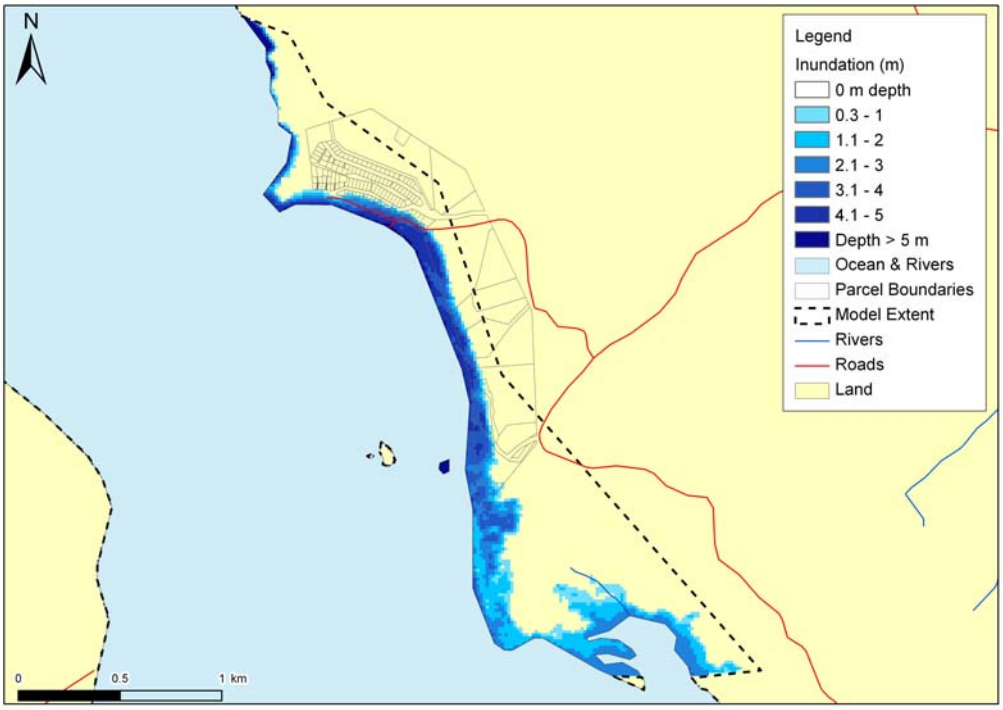


Figure 75: East Beach, Rangiputa: Maximum inundation speed (upper) and depth (lower) plots for the M_w9.0 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LiDAR).