

4.4.2. Inundation Maps – M_w8.5 Tonga-Kermadec subduction zone

As opposed to the South American scenario there is significant inundation of all low-lying areas both north and south of Wairoa Stream. This is merely enhanced with sea level rise. It is worth noting that the main road to the southern part of the community is inundated by the MHWS scenario and all subsequent sea levels. Water speeds in all scenarios are high enough to cause significant coastal erosion. Areas of particular concern are mid-way along the southern part of the community where inundation will isolate the southernmost part. It will be important to ensure that the community is aware that evacuation via Gumfields Road would be a recommended option in certain circumstances. Maps showing maximum inundation and maximum water speed for the M_w8.5 Tonga-Kermadec subduction zone tsunami for the three sea levels are given in Figures 37, 38 and 39.

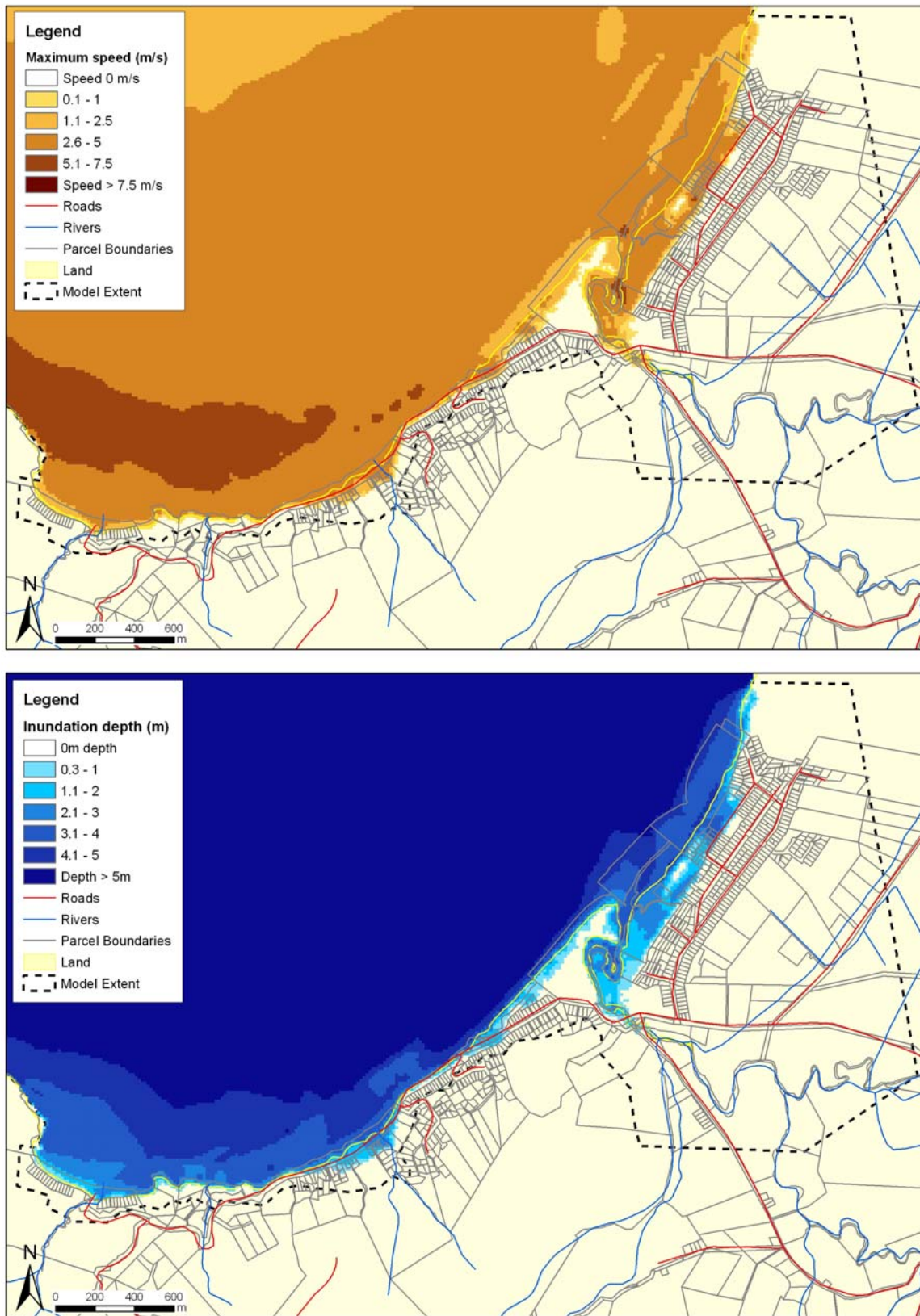


Figure 37: Ahipara: Maximum inundation speed (upper) and depth (lower) plots for the Mw8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR).

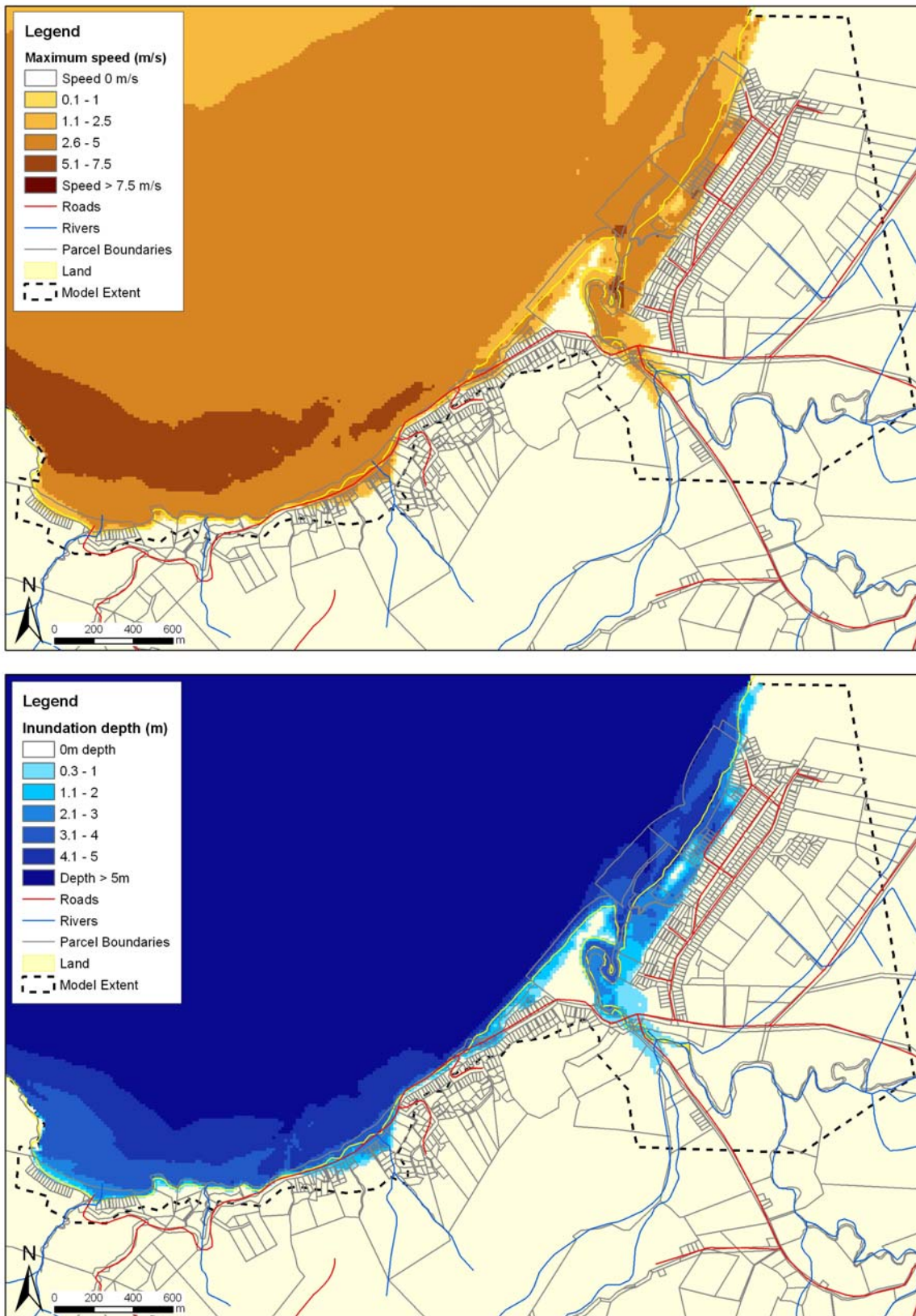


Figure 38: Ahipara: Maximum inundation speed (upper) and depth (lower) plots for the $M_w8.5$ Tonga-Kermadec subduction zone scenario at MHWS + 30cm (to extent of LIDAR).

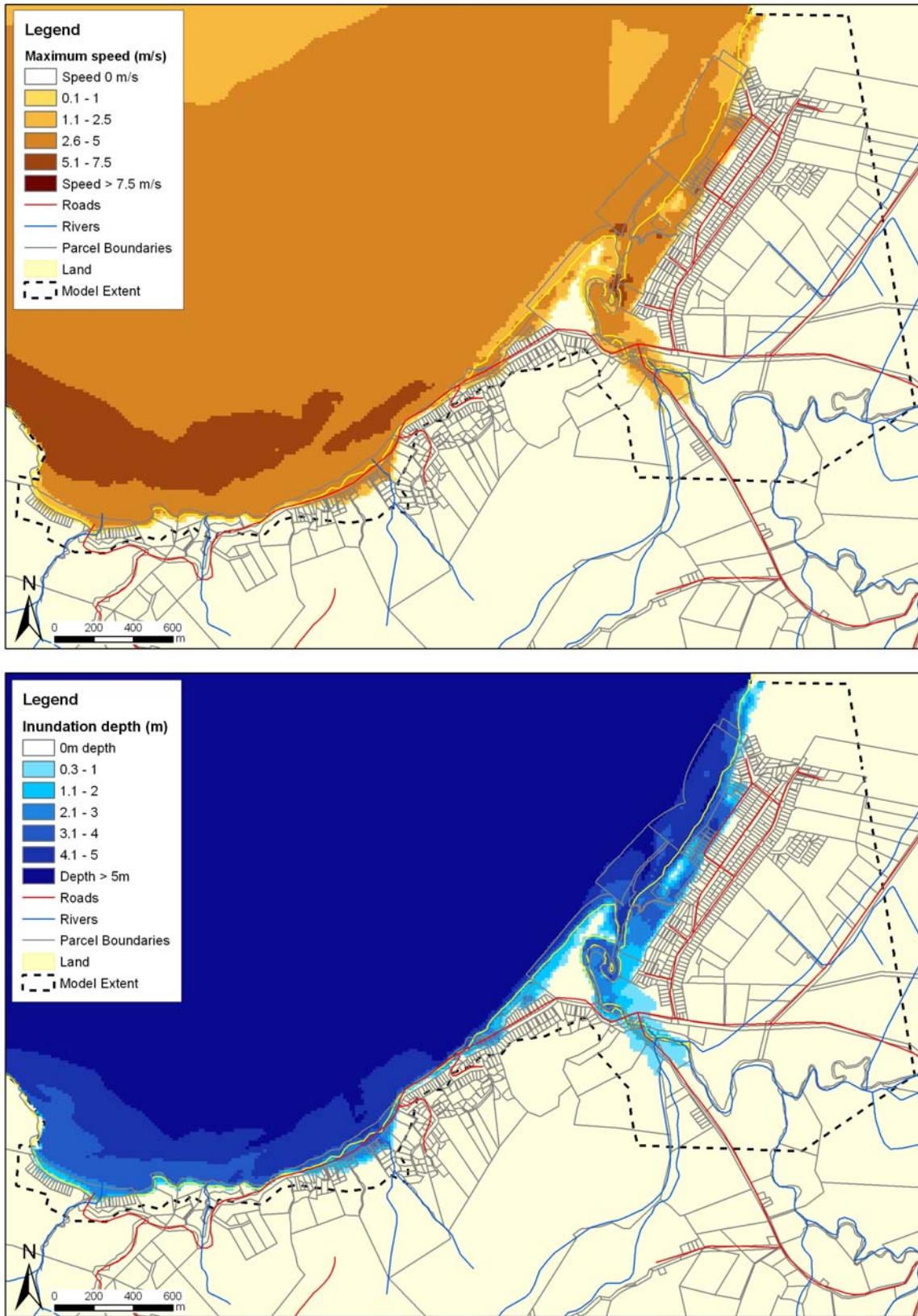


Figure 39: Ahipara: Maximum inundation speed (upper) and depth (lower) plots for the Mw8.5 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR).