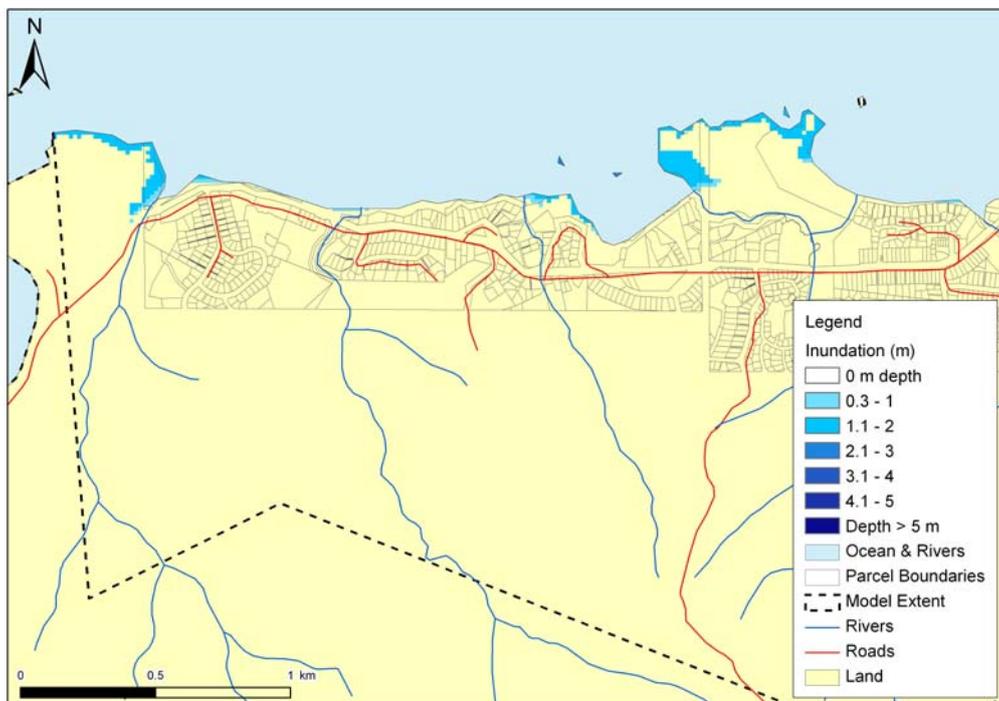
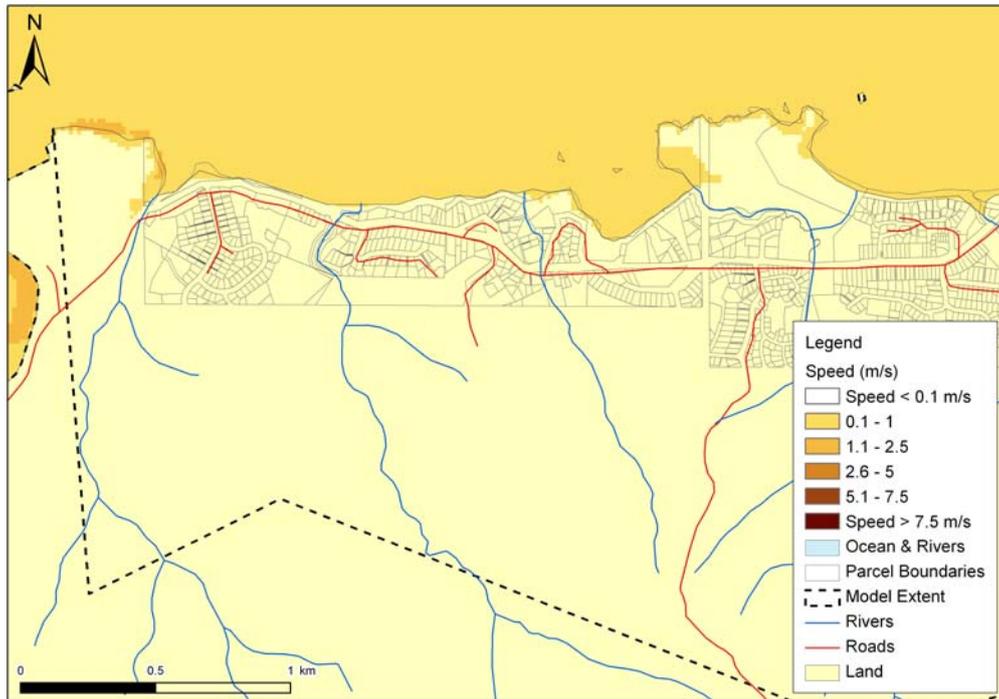


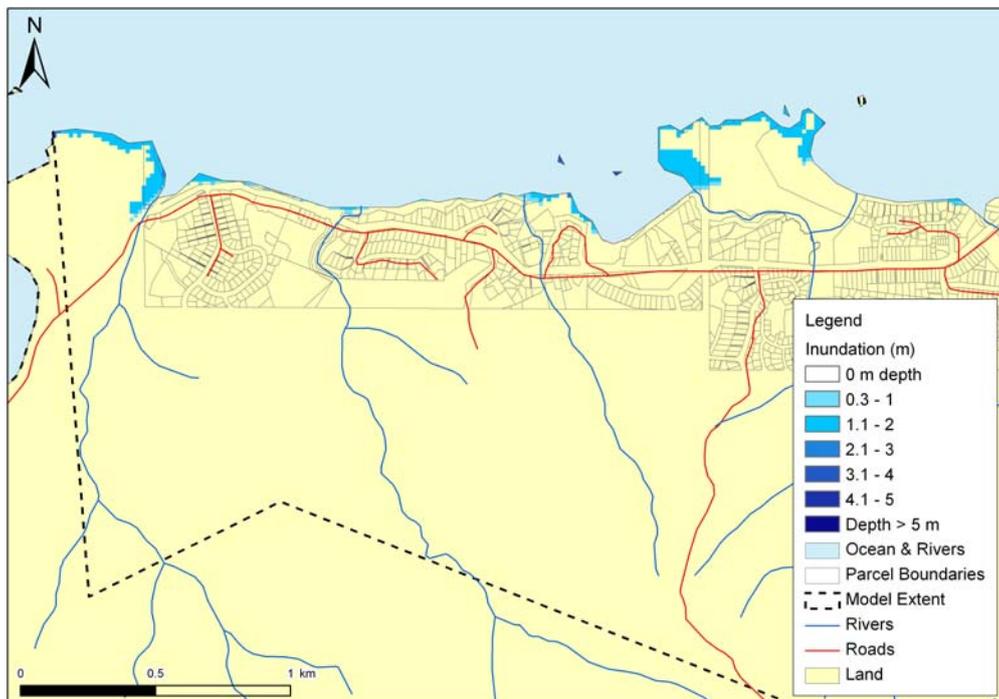
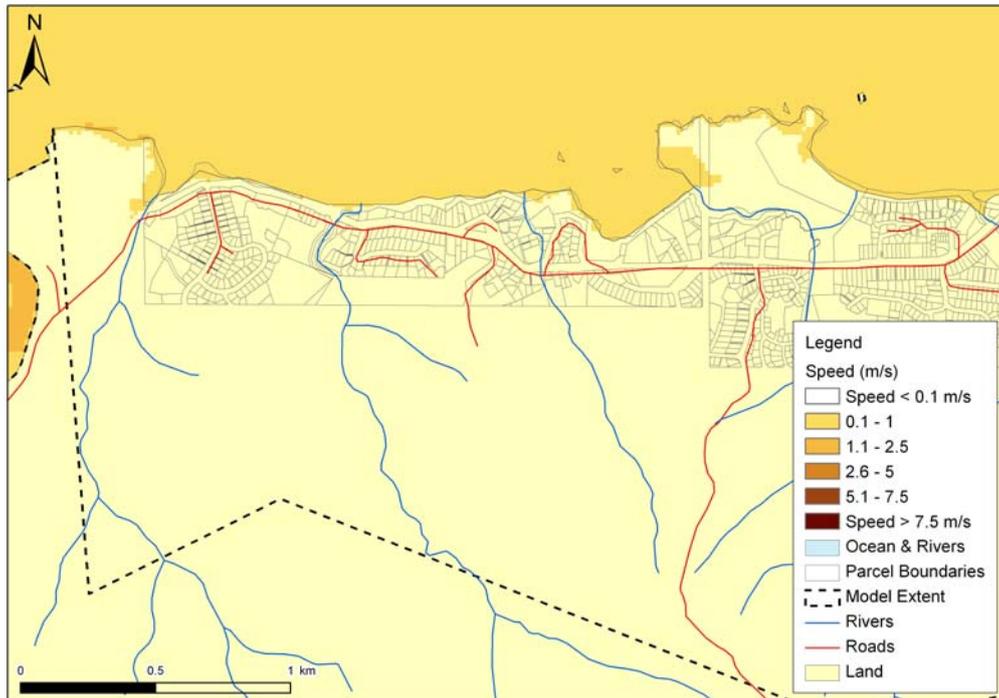
#### **4.12. Cable Bay, Doubtless Bay**

Inundation predictions for Cable Bay are presented in Figures 64-69. Impacts from the South American tsunami are relatively minor, with flooding only affecting small areas at each end of Cable Bay. Current speeds do not exceed  $1 \text{ m s}^{-1}$ . Sea level rise is predicted to have negligible impact on the extent of the inundation.

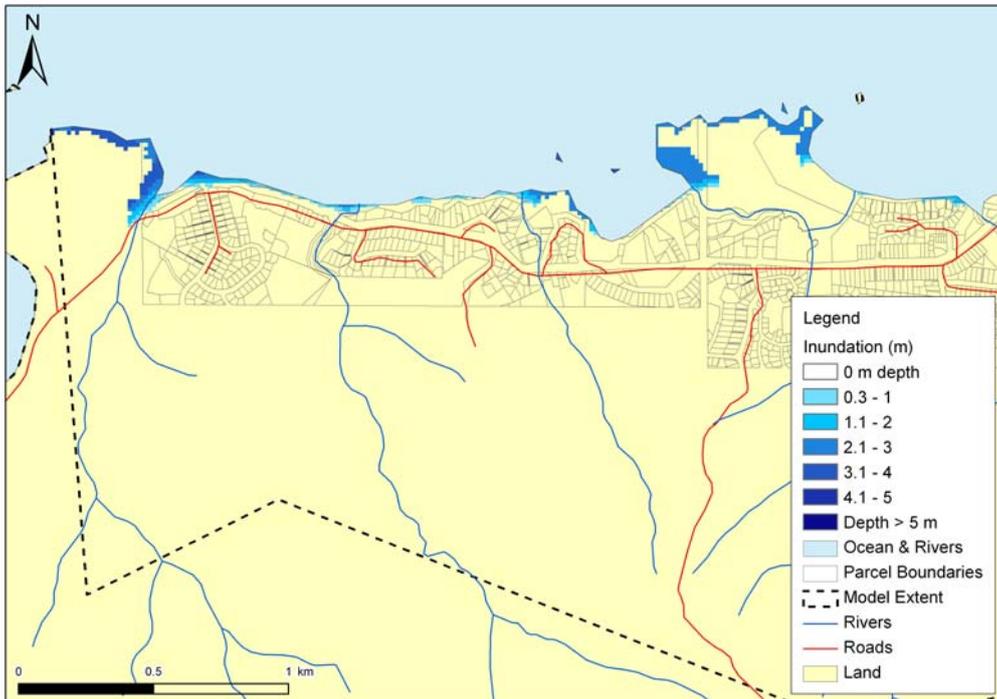
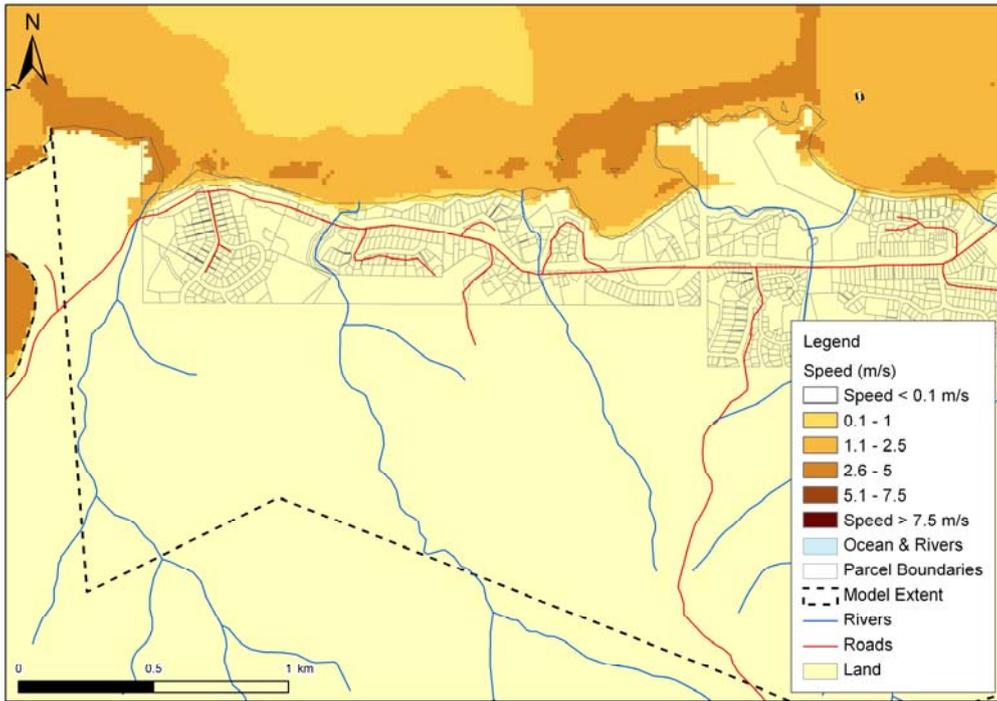
Inundation depth for the TKSZ  $M_w 8.5$  event is predicted to increase to 4 m, with the inundated area similar to the South American tsunami. Current velocities increase to  $2.6 - 5 \text{ m s}^{-1}$  at either end of Cable Bay. Sea level rise has little further effect on the extent of the flooding. The TKSZ  $M_w 9.0$  event is predicted to flood areas up to 1 km inland along the river channels with inundation depths up to 5 m. Water speeds increase to  $5 \text{ m s}^{-1}$  with localised areas of up to  $7.5 \text{ m s}^{-1}$ . When sea level rise is included, the same settlements and roads are affected.



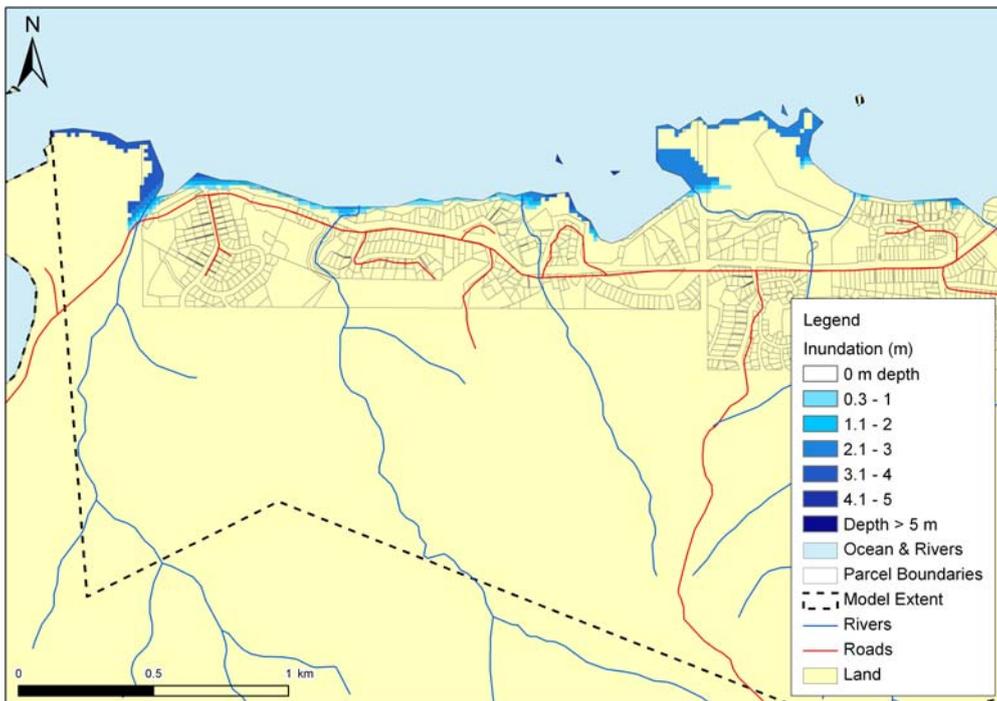
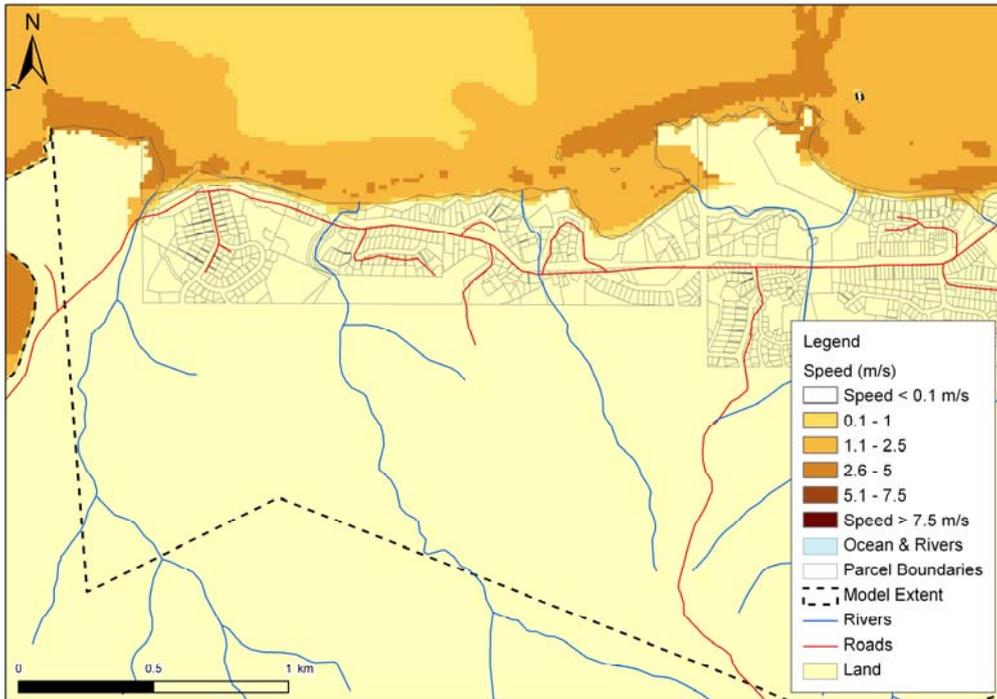
**Figure 64:** Cable Bay, Doubtless Bay: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS (to extent of LiDAR).



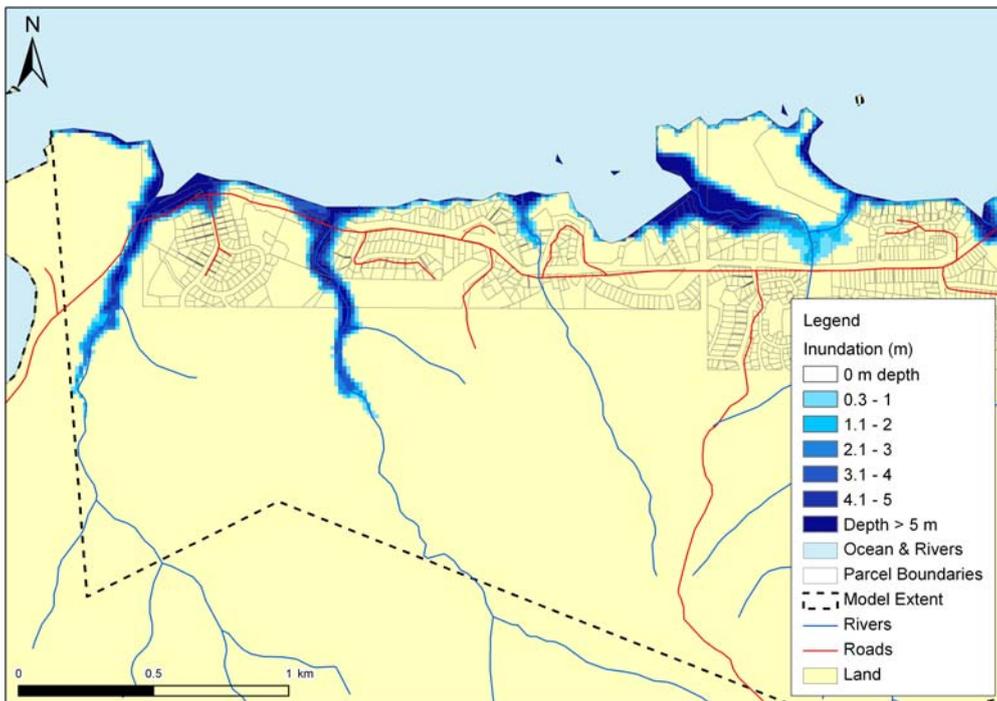
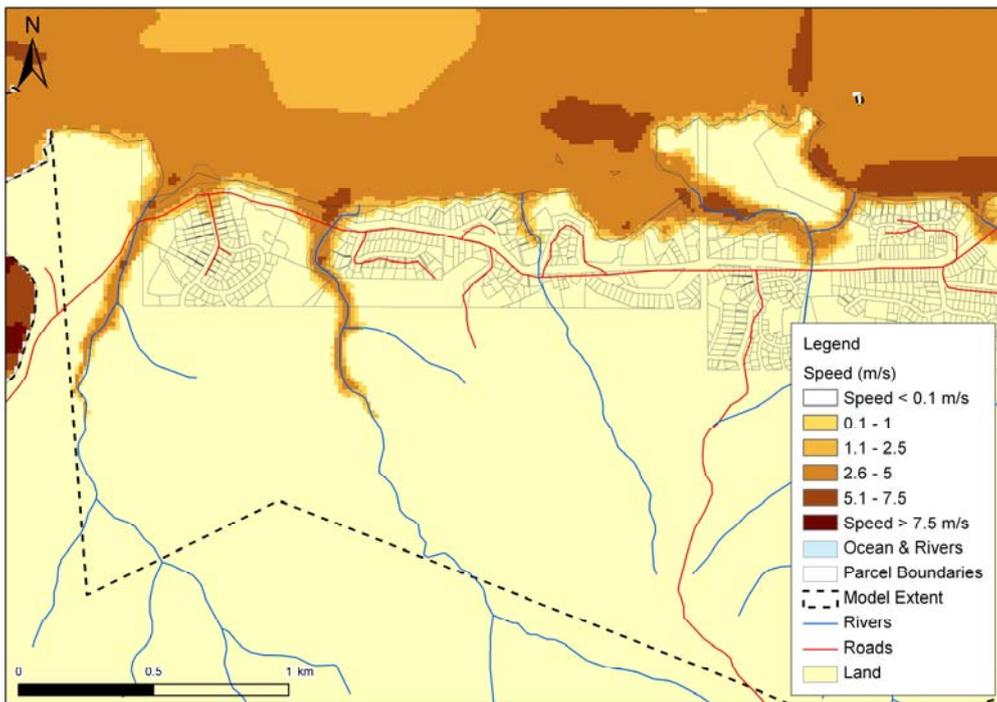
**Figure 65:** Cable Bay, Doubtless Bay: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHW + 50cm (to extent of LiDAR).



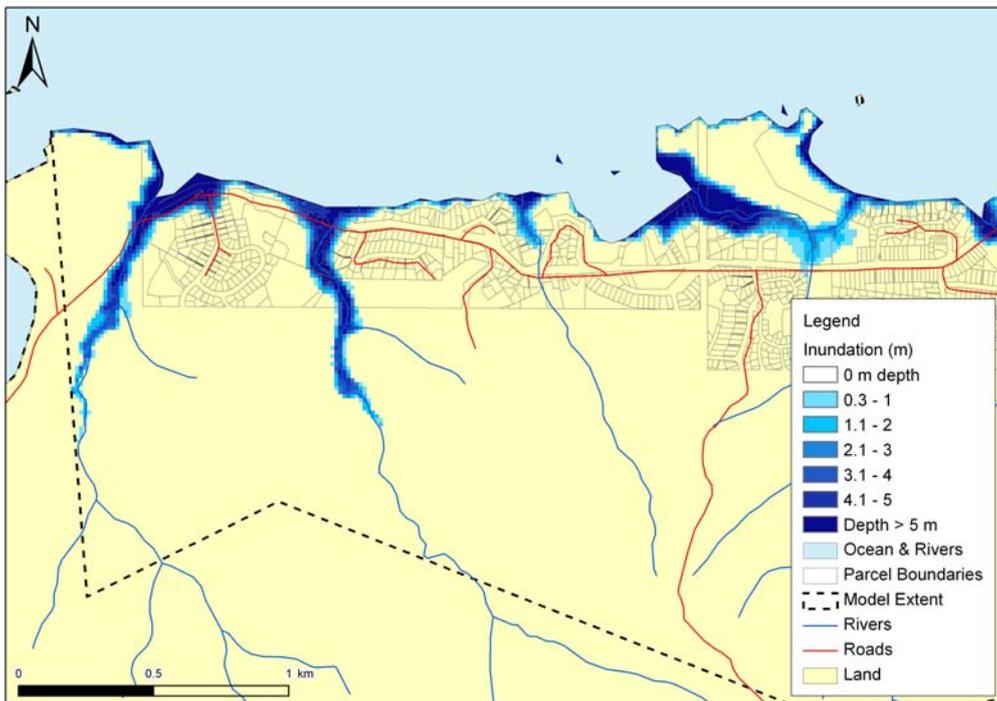
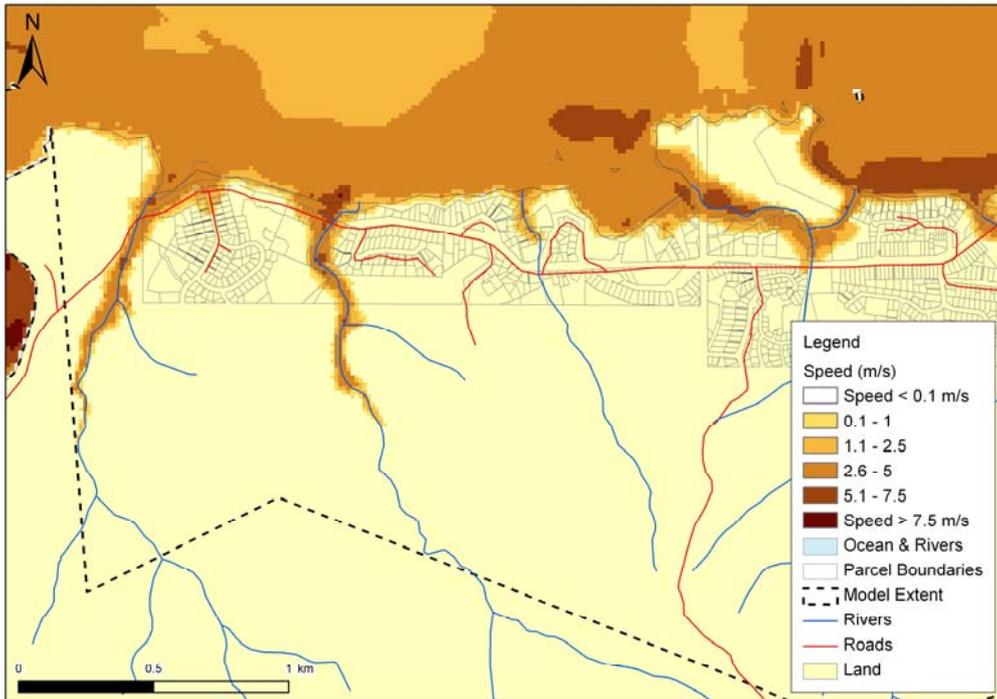
**Figure 66:** Cable Bay, Doubtless Bay: Maximum inundation speed (upper) and depth (lower) plots for the Mw8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LiDAR).



**Figure 67:** Cable Bay, Doubtless Bay: 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 68:** Cable Bay, Doubtless Bay: Maximum inundation speed (upper) and depth (lower) plots for the Mw9.0 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LiDAR).



**Figure 69:** Cable Bay, Doubtless Bay: Maximum inundation speed (upper) and depth (lower) plots for the  $M_w 9.0$  Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LiDAR).