Appendix I

Summary of Maximum Wave Height and Water Velocity Results from Tsunami Modelling to the Northland Shoreline.

NIWA modelled wave propagation to the Northland shoreline from several regional and distant tsunami scenarios, from which maximum wave height and water velocity at shoreline were determined for 13 'districts' in the Northland region (refer to Section 1 for full details).

NIWA provided these data to the Northland Regional Council as ascii files, containing georeferenced outputs of maximum wave height and maximum onshore water velocity at the shoreline for each 'district'. Data in the ascii files were provided at a 200 m resolution along the shoreline (i.e. one data point per 200 m length of shoreline modelled).

These data were imported into ArcMap and displayed in maps of maximum wave height along the Northland shoreline at each 'district' for which model outputs were obtained. These outputs are displayed in Figures A1 – A6.

Polygon shapefiles were created in ArcMap around the shorelines of individual coastal settlements of interest to further assess maximum wave height and water velocity at individual settlements. The ascii data contained within each individual polygon was exported and mean outputs of maximum wave height and water velocity calculated for each settlement. These data are summarised in Table A1 and plotted in Figures A7 – A11. The location of the individual polygon shapefiles for each settlement is displayed in maps in Appendix A1.

The data for the sea level rise scenario of 30 cm is not included in this assessment, as the sea level rise scenario of 50 cm was considered to provide sufficient information on the effect of sea level rise on maximum wave height and water velocity at shoreline.