**Use of GIS in communicating information during Cyclone Gabrielle Response**

We present a case study of the Central Hawkes Bay District Council (CHBDC) Land Transport Network and the role of GIS in capturing and communicating information during the Cyclone Gabrielle Emergency Response. The CHBDC’s land transport network consists of approximately 1300km of rural roads with poor cellular connectivity. Access throughout this network was severely impacted by both road and bridge closures following Cyclone Gabrielle in February 2023. CHBDC required a method of communicating the dynamically changing environment with the local community, including bridge and road closures, the locations of developing landslides and the status of landslide and bridge debris clearance with road reopenings. Network information was received from multiple sources including the local community, maintenance contractors, council, and engineering inspectors, and a means for collating and refining this information was required. Drawing on previous experience in disaster response situations, Stantec developed a GIS information capture system specifically for CHBDC.

There are numerous benefits to this GIS system, including allowing ‘real-time’ data capture, prioritisation of actions for maintenance contractors, data visualisation of priority roads for community connectivity and network logistics, visual aids for community meetings and engagement, and an interactive map. The system was refined throughout the ongoing emergency response phase, to better meet CHBDC’s needs. Adaptations were made following client feedback including alterations made to better facilitate their reporting requirements. Future opportunities for this GIS system include further development to make the system more user-friendly, inclusion of actions tracking, additional features that allow direct, live updates to the community, and providing ‘field reporter’ options for the community to directly input data.

This case study highlights the importance of GIS in capturing and communicating information during emergency response situations. It provides a means for clients to engage with their communities and provide them with accurate and up-to-date information in emergency situations.