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Niho taniwha: Communicating tsunami risk

A site-specific case study for Tūranganui-a-Kiwa

An exegesis presented in partial fulfilment of the requirements for the degree of Masters of Design at Massey University, Wellington, New Zealand.

Niho taniwha: Communicating tsunami risk

A site-specific case study for Tūranganui-a-Kiwa

To my daughter, thank you for your love
and patience.



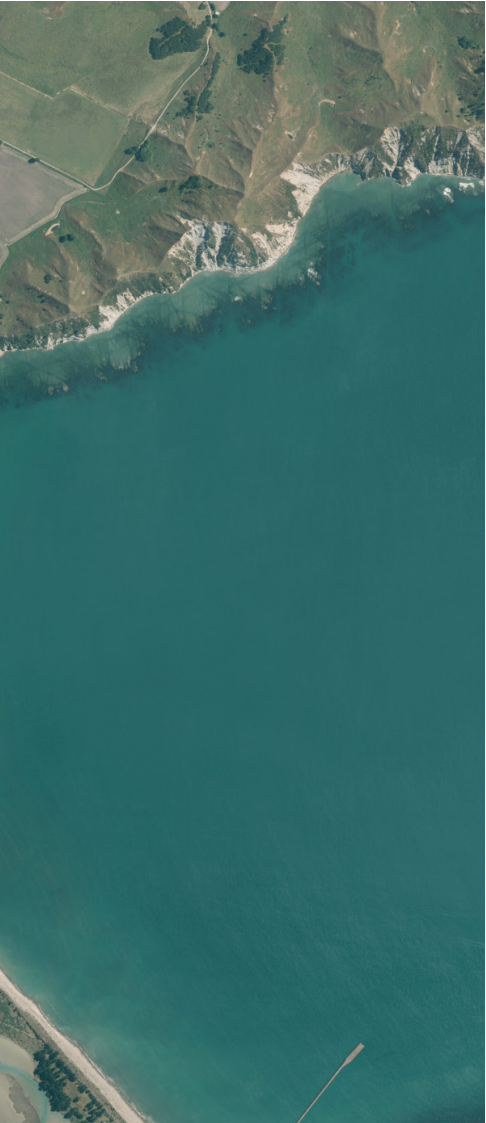
Whakapapa

Ko wai au
I te taha o toku papa

Ko Titirangi te Maunga
Ko Uawanui-a-Ruamatua te Awa
Ko Horouta te Waka
Ko Te Aitanga-a-Hauiti te Marae
Ko Ruakapanga te Whare
Ko Ngati Porou te Iwi

Ko Harmony Repia toku ingoa.

Figure. 1
Uawa



Acknowledgements

Specials thanks to my supervisors Jo Bailey and Tristram Sparks for your guidance and immense support. I will value the knowledge you have shared with me for the rest of my design practise. I would also like to acknowledge my *whanau* and friends who encouraged me every step along the way. And lastly thank you to all of the participants who shared your knowledge and expertise with me, aroha nui.

Terms that are *italicised* are explained in the Glossary section of this exegesis on page 89.

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Abstract

For some people living in Tūranganui-a-Kiwa, tsunamis are recognised as a natural hazard that could threaten the entire East Cape region at any time. However for most, an ethnographic study of local residents reveals high levels of complacency within the Gisborne urban community when it comes to being aware and prepared for tsunami risk.

A recent study by Dhellemmes, Leonard & Johnston (2016) was conducted along the East Coast of the North Island of Aotearoa to explore the changes of tsunami awareness and preparedness between 2003–2015. Results from this study revealed coastal communities including Tūranga had low levels of tsunami awareness and high expectations of receiving a formal warning before evacuation (Dhellemmes, et al. 2016).

As a result Geological and Nuclear Sciences (GNS) with the Joint Centre for

Disaster Research (JCDR) have identified that the population needs to respond with urgency to natural warning signs (one being an earthquake) rather than assuming an official warning will come through formal Civil Defence channels. There is also a need to raise tsunami awareness by understanding what influences tsunami preparedness in communities.

The *tangata whenua* of Tūranganui-a-Kiwa hold various bodies of knowledge that can contribute to our society and future risk management. Māori oral traditions are often mapped to the *whenua* and anchored in our genealogies, which King, Goff & Skipper (2007) explains enables the transfer of knowledge down through the generations. The method of acknowledging the contextual location of Tūranga is crucial in understanding the community's need to raise tsunami awareness for their own *iwi*, *hapū* and *whanau*.

This process proposes that by allowing the community to share responsibility for their response to an unfolding crisis, it opens up new opportunities to raise awareness. This design-led research explores how Human-Centred-Design (HCD) methodology underpinned by *Mātauranga Māori* principles can contribute new ways of designing novel tsunami communications for Tūranganui-a-Kiwa. This project intends to create a site-specific work based on an extensive community-based design

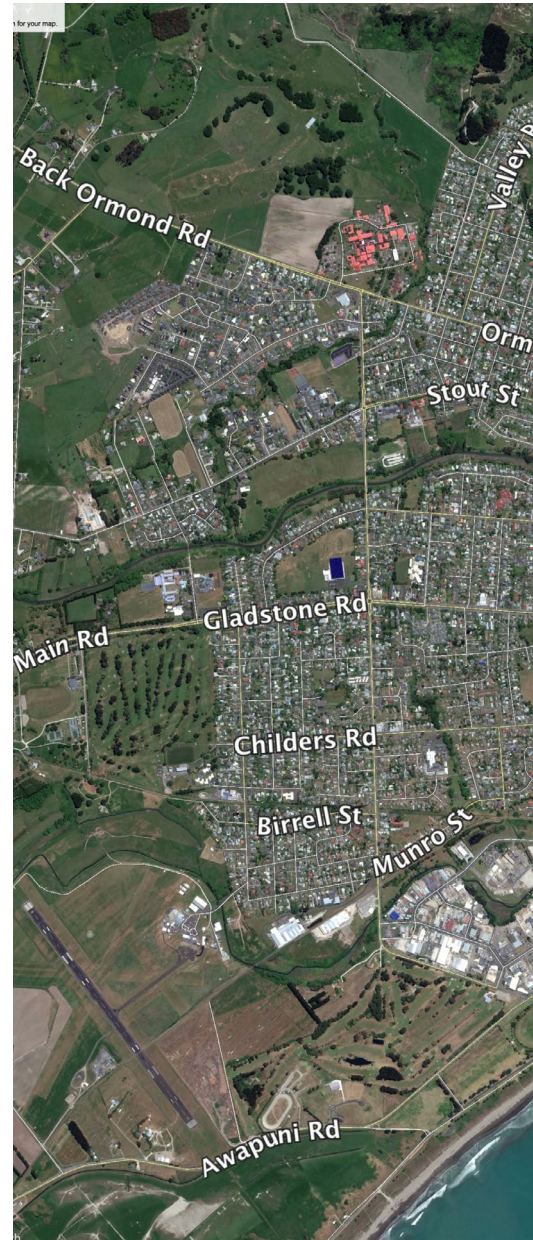
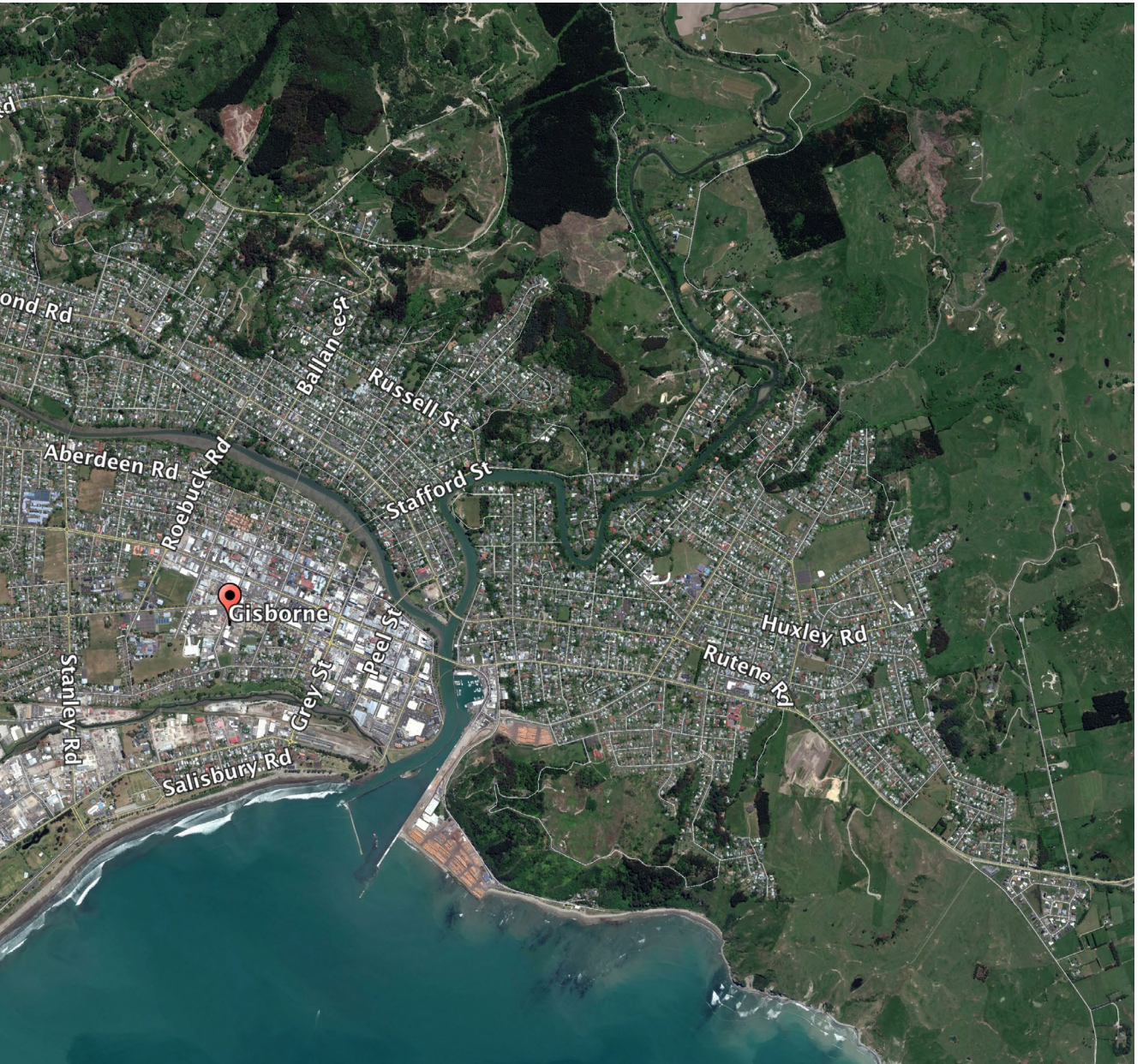


Figure. 2
Tūranga



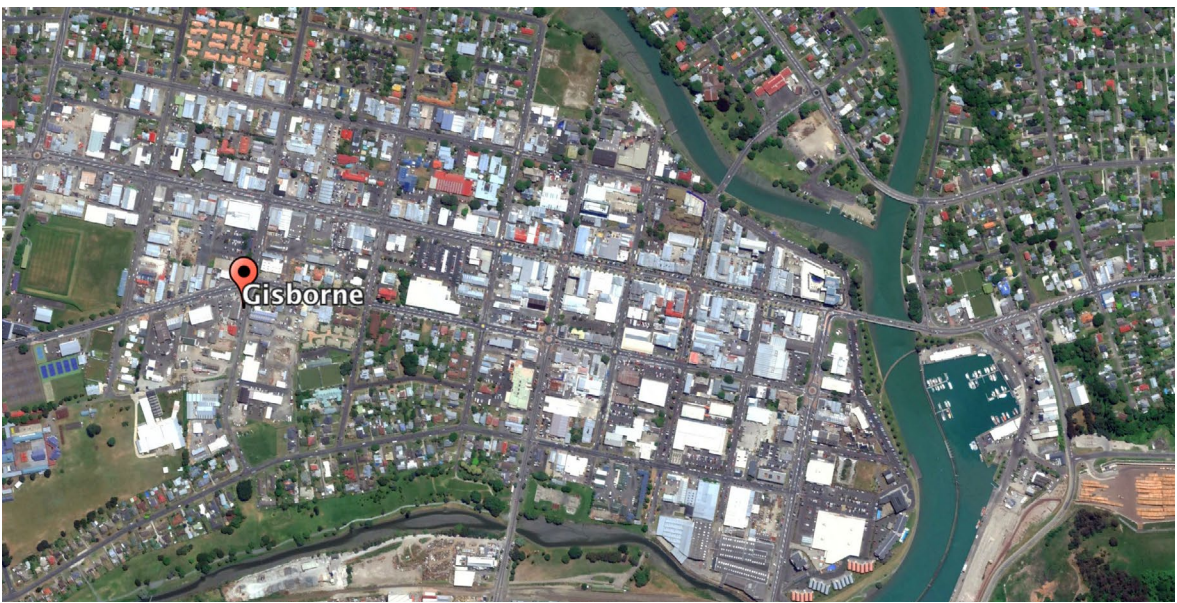


Figure. 3 (Top)
Tūranga Waikane beach

Figure. 4 (Bottom)
Tūranganui river