

Tsunami Taumaru Project

Hawkes Bay CDEM, Tairāwhiti CDEM, East Coast LAB (Life at the Boundary), QuakeCore

Background

Hundreds of early learning services and kura in Aotearoa New Zealand are located in tsunami evacuation zones. It is important that kaiako and tamariki in these spaces know what to do and where to go, in the event of a long or strong earthquake. This is particularly urgent for East Coast communities, as a local source tsunami from the nearby Hikurangi Subduction Zone would not allow time for official warnings or guidance.

A tsunami tohu or pou was identified as a culturally relevant marker which could act as both a practical marker of a tsunami safe zone and a reminder of the hazard. This project follows work from Repia (2018), who produced an interactive pouwhenua light installation to raise awareness of tsunami risk and Kaiser and Boersen (2020) who designed culturally and locally relevant materials for ākonga, Te Kura Kaupapa Māori (TKKM) and kura in tsunami evacuation zones.

Purpose

To develop culturally relevant tohu or pou for the purpose of tsunami evacuation and have ākonga take a proactive role in making their communities' and kura tsunami safer and more resilient, through:

- Building partnerships between interested kura, emergency managers, researchers, and artists to design, develop and install a pou.
- Engaging with kura to deepen their understanding of both western science and mātauranga Māori concepts of tsunami and their schools' tsunami risk.

Key outcomes

Through engagement and partnership with two interested kura, Wainui School and Waimārama School, the following outcomes were achieved:

- Whakawhanaungatanga – partnerships were built between Civil Defence and Emergency Management Groups and local schools. Hawkes Bay CDEM partnered with Waimārama School and Tairāwhiti CDEM with Wainui School.
- Ako – Both schools were highly engaged with CDEM groups and worked together to better understand tsunami risk. Their understanding was represented in the designs of their pou.
- Mahi tahi – Pou were designed in partnership with local marae to capture mātauranga Māori and represent local pūrākau and kaitiaki, these were then installed at the kura tsunami safe point.

Due to project delays, this step is incomplete at the time. In consultation with NEMA it was decided that this outcome would be completed by QuakeCore:

- Aromātai – evaluating the effectiveness of this project through semi-structured interviews with kaiako, ākonga, emergency managers and other stakeholders involved in this process.

Students showed their understanding of tsunami risk and mātauranga Māori through designing their pou. Waimārama School kindly provided their students' speeches which exemplify this understanding:

“The māngōpāre represent the direction you need to travel to get to safety. The green lines going up the sides of the pou are the hills we have to climb. The koru shapes that are linked inside the hills represent us, sticking together and supporting each other when we evacuate from a tsunami.” – Logan.

“Our pou has the big blue waves of Tangaroa reminding everyone of how far the tsunami waves can go. The orange koru represent us getting away from the tsunami wave and the pink and purple flax ropes represent us getting to the right point when we evacuate.” Georgia.

“The spiral shells at the bottom represent the calmness we will feel when we have evacuated and the bits of shell at the top represent how far Tangaroa used to reach [...] The three different panels represent that we are all from different whānau but we all go together as one when we evacuate. The first design is the maunga with tawhirimatea winds around the top and the tsunami waves staying below us. The flax design on this panel represents the steadfastness of the maunga we use to evacuate. And the last panel has spear heads on it to represent the direction to go when we evacuate.” – Whaiora.



Ākonga reading their speeches about their pou.



Ākonga working on their designs.



Wainui School pou, from the road and on top of the hill, where it is accessible on foot or on horse.

Successes and challenges

This project has not only created a culturally responsive symbol for tsunami hazard and safety but has also built connections within communities that are vulnerable to tsunami hazard. At Waimārama, the pou is installed on the papakāinga. This has strengthened the relationship between the kura, marae and iwi. They will continue to work together to maintain the pou and tsunami evacuation route. Unison expressed their appreciation and pride at being part of this initiative, in which they could contribute to the safety of their community.

Successes

- Partnerships were formed between CDEM groups, kura, marae, and other stakeholders.
- Both kura successfully designed, decorated, and installed pou which reflect mātauranga Māori concepts of tsunami.
- Ākonga practiced tsunami hīkoi, demonstrating their understanding of tsunami preparedness.
- The pou are an important step to building culturally responsive resilience activities.
- Both kura completed the project within a budget that was identified as achievable for other schools who may wish to create their own tsunami pou. It also identified possible options for pou materials through kura partnership with Unison.

Challenges

- Staff time, both CDEM and kura, was identified as a major challenge for this project. Both sides of this partnership had limited time to devote to this project, meaning that milestones could not be met within the prescribed timeline.
- Unforeseen circumstances, including the death of a kaumatua, delays when working with artists, and covid resurgence caused further delays in the completion of this project.
- Delays meant that this project could not be evaluated within the required timeframe.

Learnings identified

Time constraints were the predominant issue that kura and CDEM faced when carrying out this project. While the project was not able to be evaluated in the necessary timeframe, we feel that the additional time that was allowed to the kura to complete the other steps was important in fostering that relationship, and also demonstrated a need to adjust timeframe expectations for schools attempting this project in the future.

- Kura schedules are often planned far in advance so engagement should begin the calendar year before a project so that this can be planned to allow for the project to be accounted for in the calendar.
- Small schools in particular often have few staff members who must split their time across many roles. In future, the school community, including whānau, could be engaged with further to build a network of people who can support the mahi that goes into this project.



Hawkes Bay CDEM Emergency Management Advisor for Community Engagement, Lily Foulds, with Principal of Waimārama School, Esther Geerlings, at the pou.

Budget

EXPENSES	
Whakawhanaungatanga and Ako <ul style="list-style-type: none"> ○ Engagement, hui with kura staff and stakeholders 	\$3,150.00
Mahi Tahi <ul style="list-style-type: none"> ○ Pou preparation and painting ○ Pou installation 	\$8,377.68
TOTAL	
	\$11,527.68

This project came in well underbudget of the \$40,000 provided by the NEMA Resilience Fund. Had this project been able to be completed within the necessary timeframe, the remaining fund would



Tamariki of Waimārama School doing their Tsunami Hīkoi to their newly installed pou

Future

This pilot project will be used to inform a “How to” guide that can be provided to schools to support them to create their own tsunami pou. Civil Defence and Emergency Management Groups across Aotearoa New Zealand can use this project as a catalyst to connect with kura in tsunami evacuation areas in their own regions.

Consistently practicing tsunami hīkoi as a kura and having a clear marker that reminds ākongā and the community of their evacuation safe point is an effective way to save lives, as demonstrated in

Japan during their 2011 earthquake and tsunami. East Coast LAB, Hawkes Bay and Tairāwhiti CDEM remain committed to connecting with local kura and working toward tsunami safer schools.



Waimārama School's three pou, overlooking the kura and marae.



All the ākonga of Waimārama School, kaiako, community members, staff from CDEM, East Coast LAB, and Unison, with the kaumatua who blessed the pou.

Photos of Waimārama School provided by their Principal Esther Geerlings and by photographer Shar Hays. Photos of Wainui School provided by their Principal Nolian Andrew.

