

PROJECT UPDATE

MARCH 2018

Following a wet spring, the Matakohe Bridges realignment earthworks team is making the most of the summer months with the occasional storm thrown in to keep things interesting. Earthworks near waterways or that involve moving machinery off the road carriageway can only be carried out in the typically drier months.

Building a 2.5km new road alignment means at times we will need to carry out large scale excavation to remove the soil from an area, and also import material and build up an area. Material excavated from one area is typically reused as fill where possible. However, at Matakohe a significant amount of the material we are removing is unsuitable for road fill and this material will be deposited in the old quarry. Where we need more fill we will excavate limestone from the quarry.

Over this summer, haul roads have been constructed and new causeways are being built into the two tidal estuaries so that we can build the abutments of the new bridges. This will allow the bridges team to get established on site during autumn and commence work. First up is piling which involves working on the causeways constructed at each end of the bridges or over the water on temporary staging so there is no seasonal limitation on when this work can take place.

EARTHWORKS FACTS

- › 2540m long realignment of SH12 including 2 bridges.
- › 3000m³ rock revetment (armour)/coastal rock protection.
- › 158,000+m³ of material cut (excavated) to maximum cut of 14+m high.
- › All cut to waste material remains on site.
- › 65,000+m³ of fill (building up from existing ground level) to maximum height of 13m.
- › New alignment cuts through two existing landslides.
- › 5+km of drainage swales (open culverts).



Looking across to the west end of site where a haul road has been installed to provide access to the tidal estuary that Bridge no.1 will span.



Taken from the east end of the new road alignment, looking westwards to where a haul road has been installed to provide access to the tidal estuary that Bridge no.2 will span, with the limestone quarry in the background.



Hardies Bridge is one of Matakohe's two, single lane bridges that is being retired from the state highway network.

WHAT'S BEEN HAPPENING



Sediment ponds have been installed across the length of the site to ensure that any water that flows down into the tidal estuaries is first filtered of sediment. Pictured are the ponds at the base of the Matakohe quarry from which limestone is being excavated and used in causeway and below sub-grade road alignment works.



Removal of plant vegetation and trees is limited to only what is necessary to construct the new bridges and road alignment. Several small groups of macrocarpa and pine trees have been felled and mangroves have been cleared from the foreshore of both tidal estuaries where the two new bridges are to be constructed. Pictured is the mangrove clearing at Bridge No.2 site, the eastern end of the new alignment. Bridge No.2 will replace the existing Hardies Bridge.



Surveying levels on the causeway alignment at Bridge No.1 site.

The Matakohe Bridges project involves the construction of new bridges across two tidal estuaries along with a 2.5km realignment of SH12 through Matakohe. Excavating, removing and laying new material both on land and in the coastal marine area form the basis of the initial stages of construction works. Vegetation and mud is being removed from two tidal estuaries and replaced with rock and strong geo-cloth to construct a causeway in preparation for bridge construction. Topsoil and various types of rock are being excavated on land with sediment controls in place to prepare for road construction.

INTRODUCING THE TEAM



TeAmorangi (TA) Simeon is a Northlander who attended Whāngārei Boys High School. Currently working with the Matakohe Bridges Earthworks team, TA has a responsibility for environmental controls and will be involved in upcoming drainage works. Life's busy for TA – in addition to working as a trainee engineer, he is studying part time with NorthTec and NZIHT. His previous

projects include Wilson to Fourth, Kensington Roundabout, Hospital Road and Waipu Wastewater. TA is keen on rugby, playing weekends.



James Harrison grew up in Hastings before moving to Auckland to study for a Bachelor of Engineering at the University of Auckland, and has now relocated to Northland. He is currently assisting the Earthworks team managing zones both sides of Bridge No.2, and will then move back to the Structures team as their site engineer for the construction of both bridges. His previous projects include the

foundation works for a BMW showroom and constructing the pipe bridge for a trunk sewer upgrade on Auckland's North Shore. James' pastimes include competitive cricket, photography and music.

KAITIAKI MONITORING PROTECTING OUR HISTORY

Matakohe's rich history means it is likely that project works will lead to the discovery of culturally and archaeologically significant sites and objects. To date, several shell midden (place where the debris from eating shellfish and other food has accumulated over time) and a toki (adze) have been uncovered. Monitoring by Te Uri o Hau kaitiaki from Waihaua and Ōtamatea marae is critical to the safety and care of any discoveries during excavation works. Te Uri o Hau is a hapu of Ngāti Whātua arising from descent of Haumoewaarangi. The tribal groups of Te Uri o Hau are Ngāti Kaiwhare, Ngāti Kauae, Ngāti Kura, Ngāti Mauku, Ngāti Rangī, Ngāti Tahinga and Ngāti Tahuu.

Environs Holdings Limited, led by Tina Latimer, is the environmental arm of Te Uri o Hau Settlement Trust. Kaitiaki monitors work on site in partnership with machine operators and site crew to ensure the protection and preservation of the coastal environment, archaeological sites, taonga tuturu (objects that relate to Māori culture, history or society) and discovery of koiwi (human remains). Tina explained that the role of kaitiakitanga is underpinned by the Resource Management Act 1991, Heritage New Zealand Pouhere Taonga Act 2014, Protected Objects Act 1975 and the Marine and Coastal Area (Takutai Moana) Act 2011.



Site Foreman Tia Walters (left) discusses excavation works with Kaitiaki Monitor Ngahua Wright.

The project archaeologist Jono Carpenter advises the planning and construction teams of areas where there is the potential or likelihood of a discovery, and is involved whenever a discovery is made. Local knowledge is invaluable to the assessment process. He draws information from a wealth of historical resources – written, visual and oral. If you have history to share, please contact Jenny Scott – contact details appear at the bottom of the next page.

The Heritage New Zealand Pouhere Taonga Act 2014 ensures that anyone undertaking work that may damage, modify or destroy an archaeological site (known or unknown) must obtain an archaeological authority prior to commencing any such work; the project holds such an authority. Likewise, the project's consenting authorities Northland Regional Council and Kaipara District Council monitor adherence to the relevant construction management plans and from the beginnings of the design process. The cultural and historical significance of the Matakohe area has been front of mind through all stages of planning.

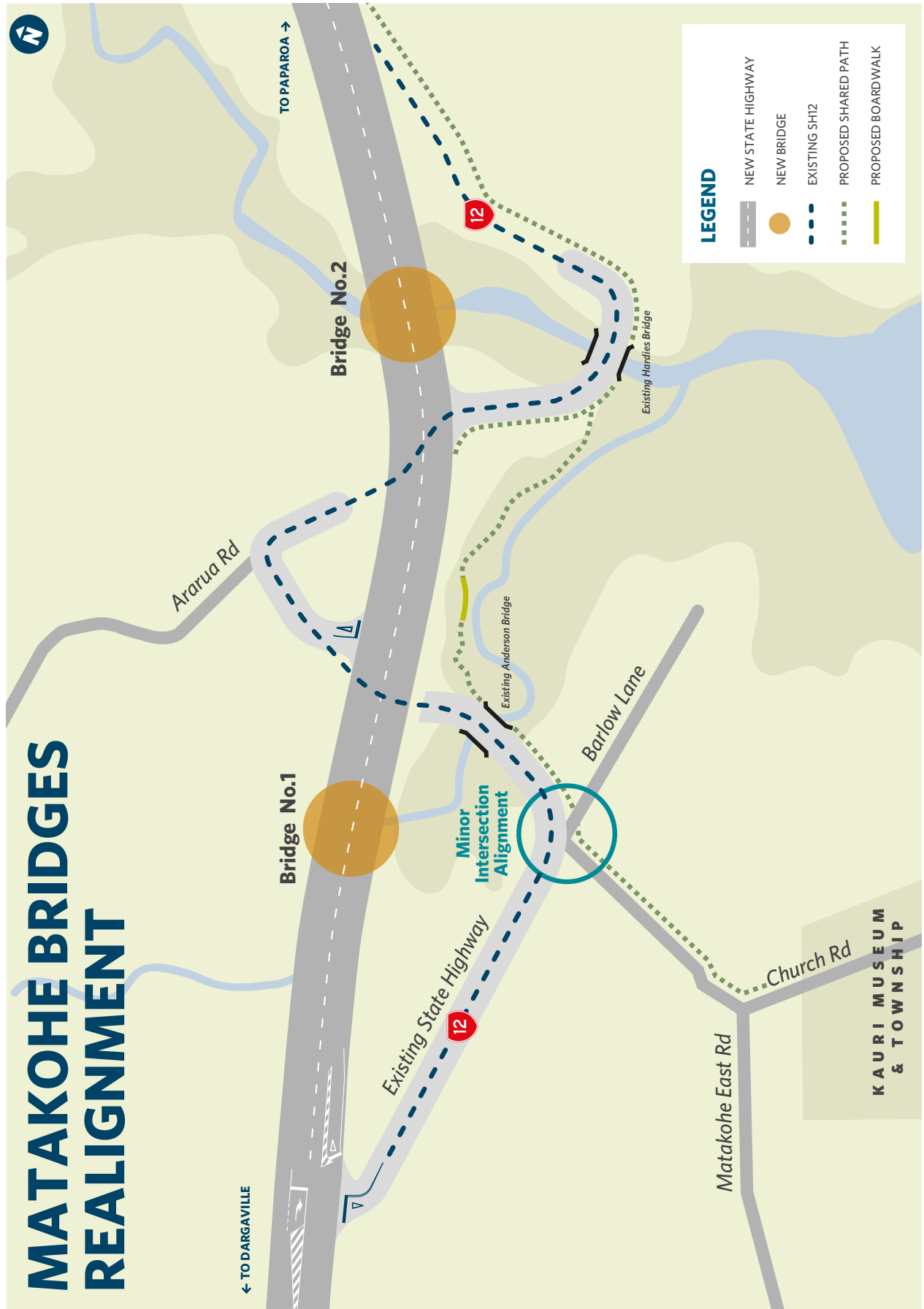
IT'S 50KM/H THROUGH SITE



STMS Owen Vercoe carrying out a site check.

As regular users of the road passing through Matakohe will be aware, this section of SH12 can be busy with heavy vehicles regularly travelling on it. With project works adjacent to 3km of the highway, the traffic management team only reduce the speed to 50km/h where active sites are operating and project trucks are entering and exiting the highway. Project STMS Owen Vercoe (pictured) has said drivers have generally been very supportive of project traffic management by slowing down, crossing the single lane bridges cautiously and often sharing a friendly wave. Please continue to slow down when signposted, to keep everyone safe.

Site Manager Mark Bond and Stakeholder Manager Jenny Scott visited Matakohe School at the beginning of the term to discuss the project, in particular pedestrian and school bus safety with pupils and staff. Family and whanau reinforcing road safety messages helps tremendously with keeping children safe, and Matakohe pupils promised to remind the adult driving them that 'it's 50 through site.' Everyone's a road user so let's all keep each other safe.



PROJECT CONTACTS

Please contact Jenny Scott 0800 900 007 or jenny.scott@fultonhogan.com
 Keep up with progress at: www.nzta.govt.nz/projects/connecting-northland/matakohe-bridges/

