



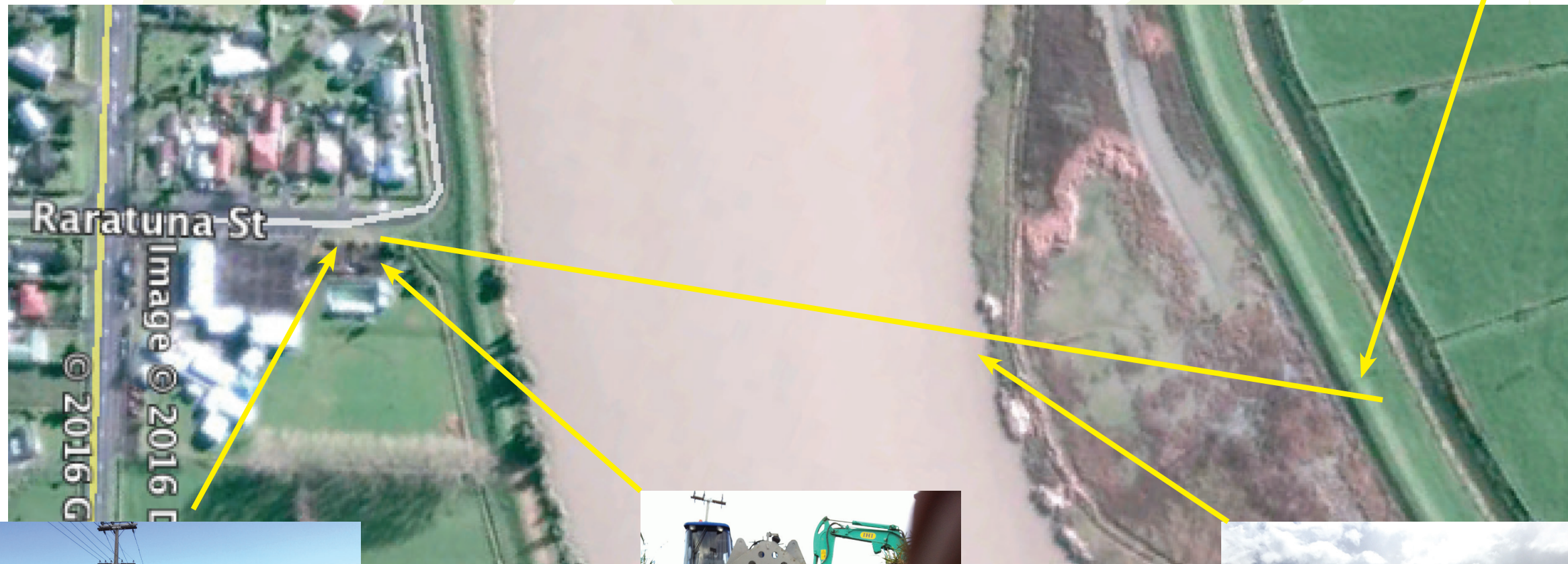
▲ Existing power cable dangerously exposed on the west bank of the Waihou River.



▲ 160mm diameter PE pipe in 17m lengths welded into a 500m long pipe string.



▲ Pipe string entering the ground on the East Side of the river



▲ Drill site managers Tim Mitchell & Glyn Jones.



▲ Pipe exiting at drill after crossing under the river.



▲ Locating the drill head at low tide.

Crossing Deep under the WAIHOU RIVER

Environmental effect.....ZERO



UNIVERSAL
UNDERGROUND

P 07 823 7415 F 07 823 7416 E neil@uul.co.nz

M 027 431 2158 | 027 431 2159

34 Matos Segedin Drive, RD3, Cambridge 3495

500m of river no barrier to mighty Universal Directional Drilling Rig



▲ HDD rig set up on West Bank.

In January 2016 Universal Underground established on the West bank of the Waihou River to install a pipe deep under the river for a replacement strategic power cable. Two previous power cables over the years had been laid across the river bed but had aged and failed over time.



▲ View across the Waihou River.

This was a lump sum contract and no ground investigation was included in the tender documents. UUL had to make some broad assumptions and the risk of possible encounter of underground timber and / or boulders was tagged. All to often power projects lack any sort of ground investigation and they ring fence the project as a lump sum to control escalation. UUL negotiated a shared risk approach to unforeseen ground conditions.

In order to locate the drill head seven metres below the riverbed plus 6 metres below the water, standard location equipment could not be utilised. An SST transmitter was utilised. This special piece of equipment senses the earths magnetic field and obtains a bearing. This information is fed back up through a wire running inside the drill string. The drill operator processes this information and applies the correct steering corrections. After the drill head exited the ground, it was removed and replaced with a reamer. The pipe was connected with a swivel and the drill string pulled the pipe back under the river taking a full day

After 500m of drilling the drill head exited right on target



UUL installed a pull rope through the pipe before handing it over to the client. This project was a textbook crossing undertaken professionally with the right equipment. UUL are a specialist directional drilling company installing pipe under rivers and challenging terrain all over New Zealand. UUL have installed pipe up to 200 tonnes and over one kilometre into a single tunnel and continue to offer professional value for money projects.

