



MATAMATA INDUSTRIAL MACHINERY IMPORTS LTD

2021 ENVIRONMENT & COMMUNITY AWARD



“It is not a case of whether quarrying occurs in New Zealand; it is *how* to enable responsible quarrying to meet demand for cost-effective product. The annual MIMICO Environment & Community award for the quarry sector is a material and valuable contribution to this debate.”

- Bernie Napp, MIMICO Award judge

Blackhead Quarries Ltd

First electric truck at a New Zealand quarry

Logan Point Quarry, Dunedin

The Hunter family travelled to China to watch a 30-tonne electric dump truck in action at a gold mine, and then bought one of the first 100 models to be made under the XCMG brand. In operation since January 2020, the e-truck can work close to three days before recharging, and makes substantial savings in energy costs, as well as in carbon dioxide emissions. The first e-truck at a quarry in New Zealand heralds a lower-carbon future for the industry.



Blackhead Quarries Ltd



Blackhead Quarries Ltd

At the mine in China,
3 hours north of
Kumming. Hi-vis
hadn't made it this
far yet...



Blackhead Quarries Ltd

Lots going on while waiting to get loaded for the test drive at the mine.



Blackhead Quarries Ltd

Inside the truck
factory was very
impressive and very
tidy!



Blackhead Quarries Ltd

Line up of diggers waiting to leave the factory. Another very tidy factory.



Blackhead Quarries Ltd

Joe Hunter, Quarry
Manager



Blackhead Quarries Ltd



Blackhead Quarries Ltd



Ravensdown – Ngarua Lime

Ravensdown – Active member of a community conservation group

Ngarua Quarry, Takaka hill, Tasman District

An eco-sourced native plant nursery, fencing out stock and feral goats, a waste recycling centre, and a native *Powelliphanta* land snail survey are among conservation initiatives on farmland where Ravensdown operates a limestone/marble quarry. The fertiliser co-operative supports a local conservation trust with more than \$30,000 of annual funding. It sees its active involvement as essential to being a good neighbour, and to retaining its social licence to operate.



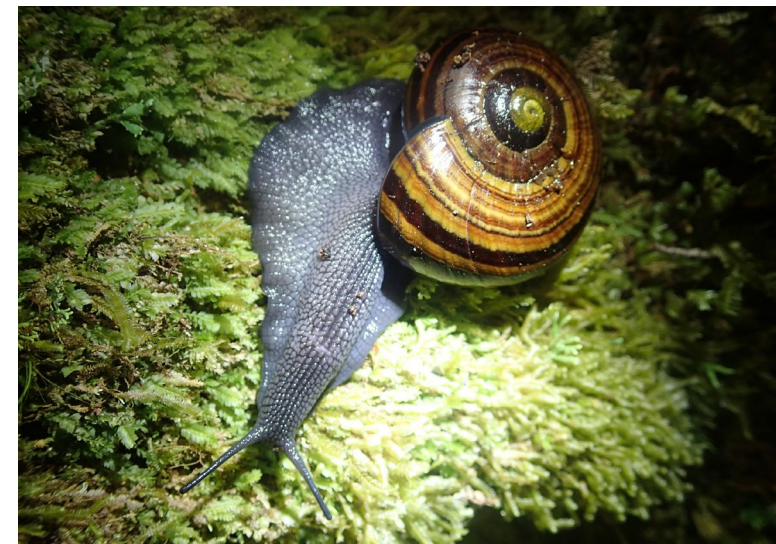
Limestone outcrops with significant vegetation

Ravensdown – Ngarua Lime

Stakeholder
engagement session
with Ravensdown
and the Takaka Hill
Biodiversity Group
Trust



Ravensdown – Ngarua Lime



Powelliphanta hochstetteri research

Ravensdown – Ngarua Lime

Site rehabilitation



Ravensdown – Ngarua Lime



Stevenson Aggregates – Drury

Stevenson Aggregates – Large-scale ecological restoration

Drury Quarry, South Auckland

Envoco has planted 67,000 native seedlings to date to connect several patches of native forest on farmland in hilly terrain adjoining Drury Quarry. This project stands out for attention to rare and threatened native plant species in the area, and its scale, covering 55.8 hectares. Fencing out stock and feral deer from planted areas, animal pest and weed control, and lizard conservation round out this five-year initiative, now in its third year.



Stevenson Aggregates - Drury

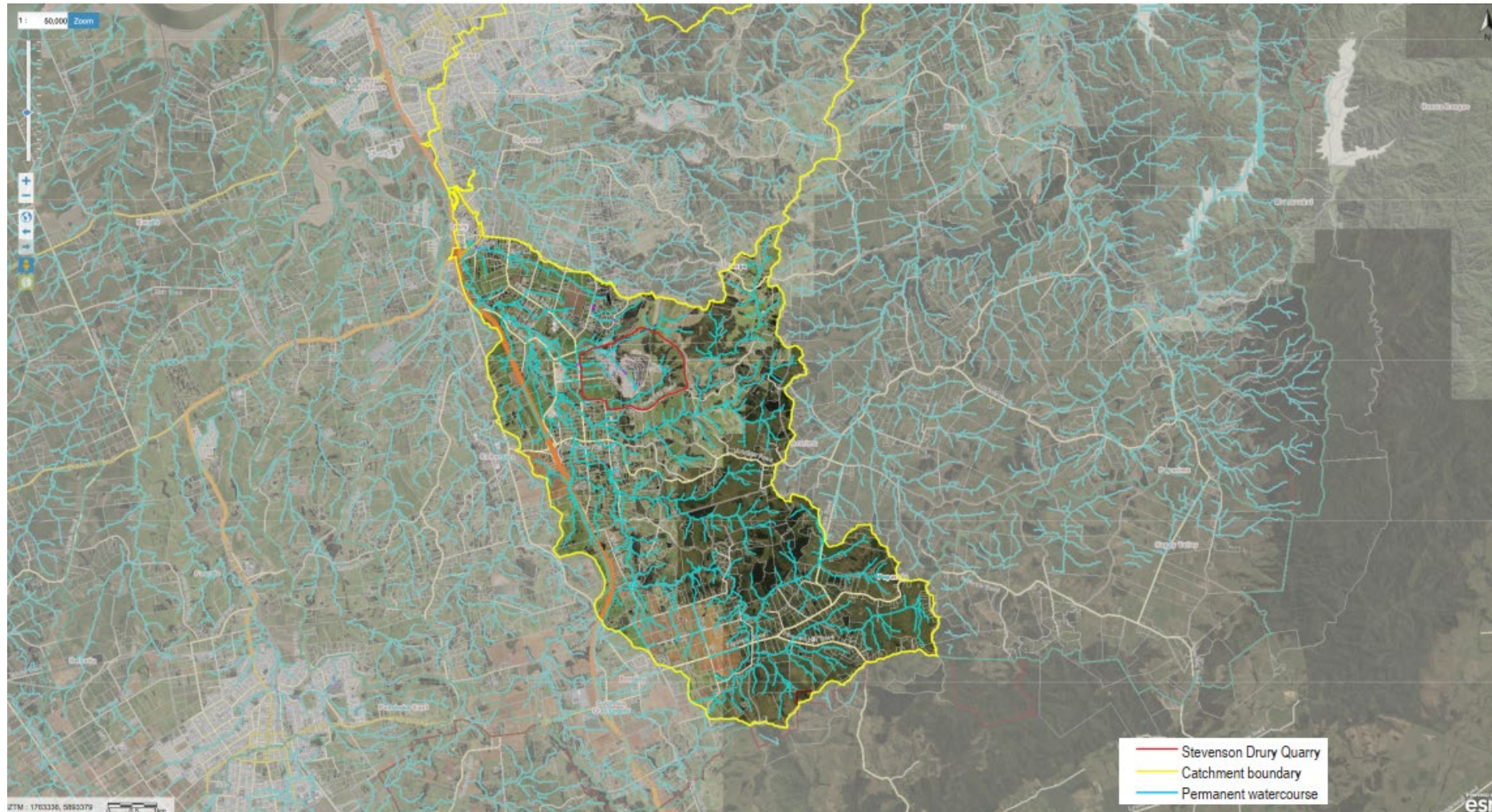


Figure 1: Location of Stevenson Drury Quarry in relation to the Hingaia Stream catchment and surrounding landscape features.

Stevenson Aggregates - Drury



Figure 3: Results of large scale pest plant control in the northern gully with first stage of riparian planting in progress.



Figure 4: Area of native planting that will eventually connect Ballard's Cone to an adjacent forest fragment.



Figure 5: Edge of a forest fragment near Ballard's Cone showing a wide range of mature and regenerating native tree species (kohekohe, rewarewa, nikau - front, taraire - middle, kahikatea, totara and rimu - back). Open pasture surrounding this fragment has since been planted with native pioneer species.

Stevenson Aggregates - Drury



Native flora and fauna

Stevenson Aggregates - Drury

Native flora and fauna



Figure 9: Kereru perched on a kawakawa tree in one of the forest remnants in the Thorburn Block.



Figure 10: Copper skink captured in boulderfield area of the Northern Extension.



Figure 11: Banded kokopu captured during fish sampling in the lower reaches of Peach Hill Stream.



Figure 12: Mangeao seedling in Ballard's Cone.

Stevenson Aggregates - Drury

Ecological restoration



Figure 13: Old growth totara, rewarewa and kohekohe on the slopes of Ballard's Cone provide ecosystem services such as erosion control, carbon storage and local climate regulation.



Figure 14: Honeybee pollinating manuka along the Thorburn stage 1 stream diversion.



Figure 15: Increasing vegetation cover in exposed areas improves soil quality, reduces erosion and contributes to local biodiversity.



Figure 16: Restoration of riparian habitat in the northern gully has included stock exclusion, pest plant and animal control and riparian planting.

Stevenson Aggregates - Drury

Pest plant control



Figure 17: Thorburn stage 1 area in 2019 (left) and 2021 (right) showing results of gorse, pampas and woolly nightshade removal.

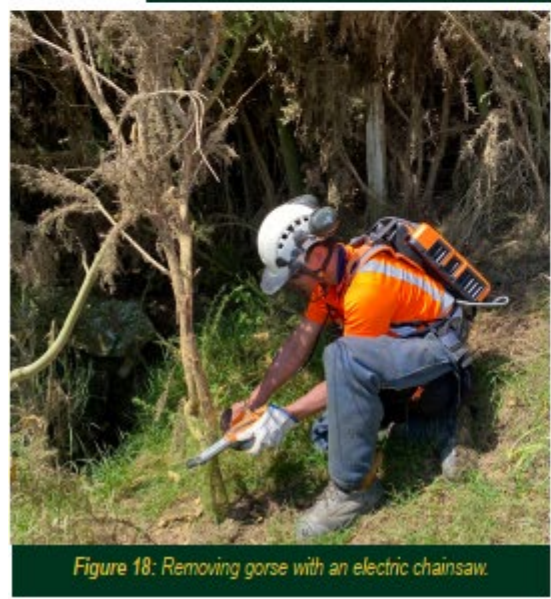


Figure 18: Removing gorse with an electric chainsaw.



Figure 19: Area of removed gorse and woolly nightshade at the edge of Ballard's Cone.



Figure 20: Dense infestations of gorse and woolly nightshade removed from above the Thorburn planting area.

Stevenson Aggregates - Drury

Pest animal control



Figure 25: Ecologist checking and setting a DOC 200 trap.



Figure 26: Ship rat (*Rattus rattus*) captured in a DOC 200 trap.



Figure 27: Possum captured in a timms trap in Ballards Cone.



Figure 28: Live cat trap set in the noise bund.

Stevenson Aggregates - Drury

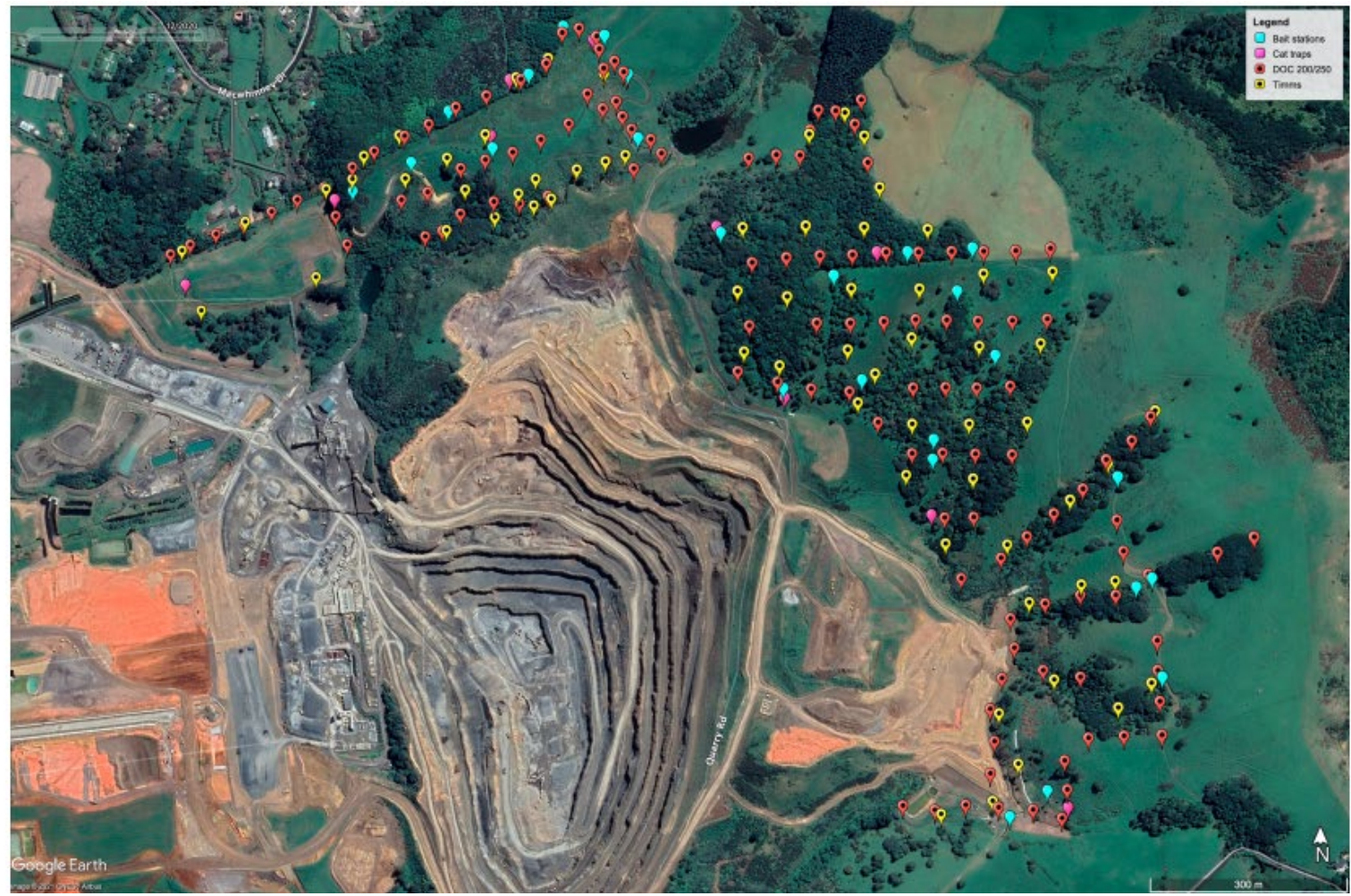


Figure 29: Distribution of bait stations, cat traps, DOC 200/250 traps and timms traps across ecological mitigation area of Stevenson Drury Quarry.

Stevenson Aggregates - Drury



Figure 30: Carrying out cross-sectional measurements during an SEV of the stage 4 section.



Figure 31: Electrofishing to sample fish in the stage 2 diversion channel as part of freshwater ecological monitoring.

Stevenson Aggregates - Drury

Fish salvage and relocation



Figure 35: Banded kokopu captured during streamworks for the stage 2 diversion channel.



Figure 36: Shortfin eel captured during trapping period prior to streamworks for the toe buttress.



Figure 37: Capturing and relocating eels during streamworks for the toe buttress.



Figure 38: Releasing shortfin eels downstream of the stage 2 streamworks area.

Stevenson Aggregates - Drury

Restoration planting



Figure 39: Native pioneer planting (2yrs old) creating a buffer on the edge of Ballard's Cone.



Figure 40: Infill planting in a gap within a forest fragment near the stage 1 stream diversion.



Figure 41: Transporting plants via helicopter to an isolated hillside near Ballard's Cone.

Stevenson Aggregates - Drury

Noise bund



Figure 42: Construction of the noise bund in 2019.



Figure 43: Swale on the eastern edge of the noise bund being planted with low growing wet-tolerant native species.



Figure 44: Noise bund planting (1yr old) on the lower slopes, planted with low-growing native species.



Figure 45: Native wineberry (Aristotelia serrata) growing on the lower slopes of the noise bund.

Stevenson Aggregates - Drury

Northern extension & northern gully



Figure 46: Planting preparation in the northern extension area using a helicopter to clear existing pasture vegetation.



Figure 47: Use of a bobcat to stockpile removed noxious vegetation.



Figure 48: Northern gully in 2019 (left) and 2020 (right) showing the effects of noxious weed removal.



Figure 49: Northern gully after noxious weed removal, with riparian planting in place.

Stevenson Aggregates - Drury



Figure 50: The primary herpetology allocated area, located in the northern corner of Stevenson Drury Quarry mitigation area.

Stevenson Aggregates - Drury



*A New Zealand endemic species of buttercup (*Ranunculus reflexus*) which has a small population in the northern gully area of Drury Quarry.*

Vickers Quarries

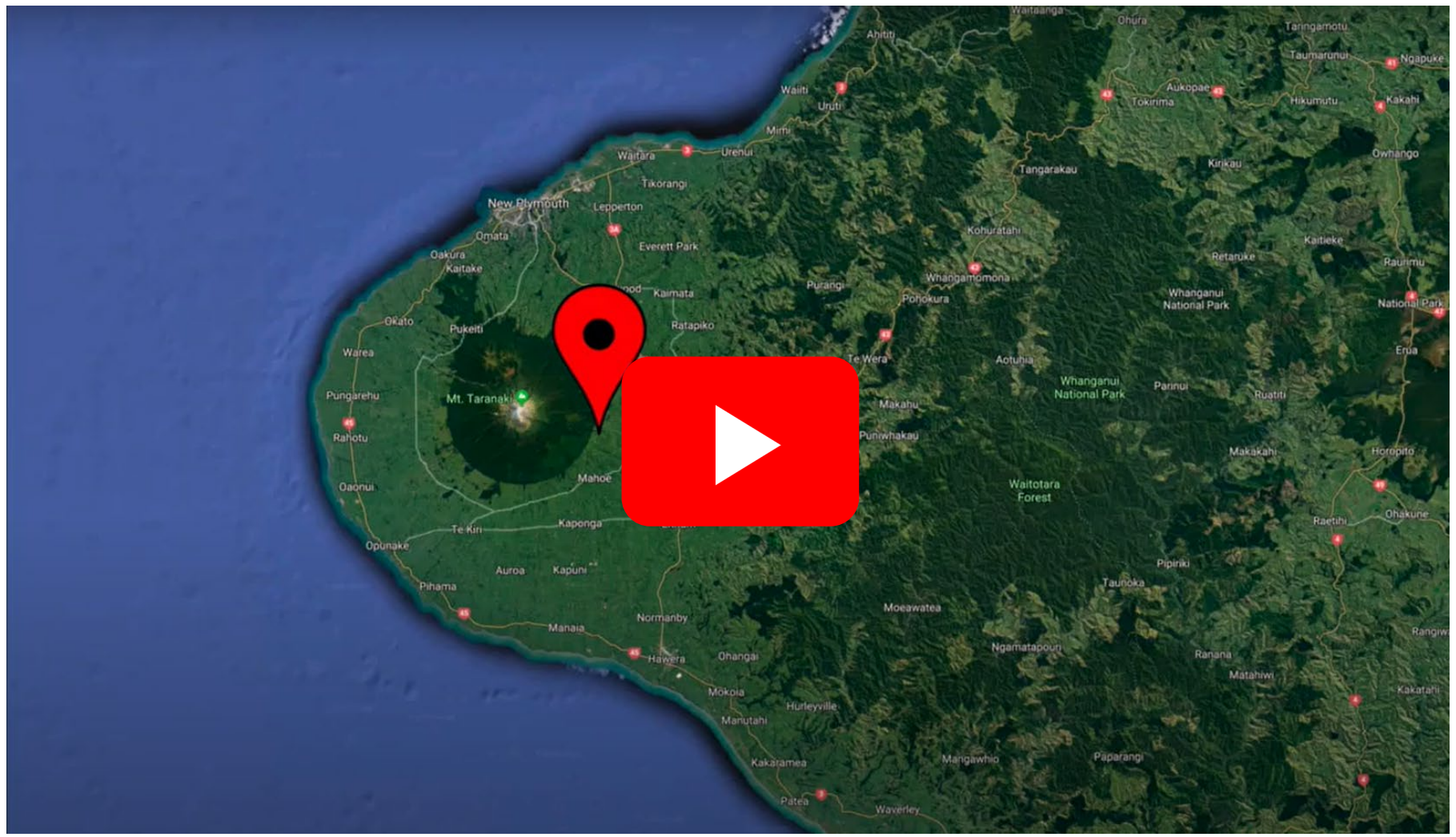
Vickers Quarries – Long-standing commitment to environmental management

Midhirst Quarry, Taranaki

The Vickers family have had as core business freshwater management, minimisation of rock waste, site rehabilitation and re-establishment of native vegetation at their andesite quarry close to Egmont National Park. Mt Taranaki is the ever-present landmark at this tidy and well-presented operation, with a history exceeding 25 years. One has to be in the quarry to know it even exists.



Vickers Quarries Ltd



Vickers Quarries Ltd



VICKERS
QUARRIES LTD

Vickers Quarries Ltd



Rehabilitation / restoration work

Vickers Quarries Ltd



Bund around settling pond

Vickers Quarries Ltd

