

SEALORD TO THE RESCUE



BY KEITH INGRAM

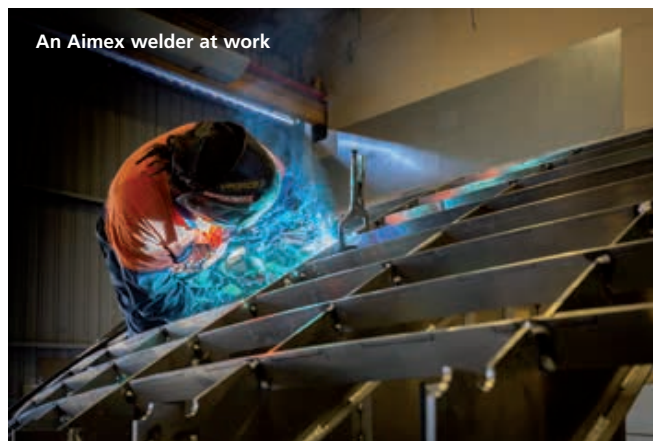
Without Coastguard volunteers the upper South Island would have no maritime search and rescue service.

Nelson Volunteer Coastguard currently operates a single Naiad 8.5 metre, fast response vessel *Talleys Marine Rescue*. The vessel carries a normal operational crew of four.

Coastguard Nelson looks out for the safety of every person in the wider Tasman Bay area, from the northern tip of D'Urville Island to Farewell Spit. It's a huge area with challenging sea conditions and the unit was finding that the current boat was struggling to cope with increasing demands from boaties for help.

Nelson Coastguard unit President Peter Kara said, "The current vessel is too small, 17 years old, and needs considerable maintenance, so getting the build underway is a hugely significant milestone in the fundraising campaign for the much anticipated boat. Despite the challenges of Covid-19 disrupting businesses and many facing hardship, Sealord has come to the party to ensure we can continue with our much needed project. This will be our first new vessel that's been purpose-built for the region, engaging a number of local firms to help make it happen."

Peter added, "Our plan was to build a new purpose-designed, heavy weather rescue vessel, that will serve the Nelson, Tasman and Golden Bay boating community for the next 20 years."



An Aimex welder at work

The new purpose-built rescue vessel will be based at Port Nelson, a point roughly equidistant from the furthest reaches of its operational area.

It will also be able to cover the rescue area more effectively across a wider range of changing weather conditions.

"Major improvements include diesel power and longer-range fuel tanks will enable the new rescue vessel to stay at sea to complete longer searches. Twin water jet drives will remove the operational hazard of propellers when in shoal waters.

"The new boat will have a fully enclosed wheelhouse, along with sheltered areas where patients can be given first aid," said Peter.

Also, it will be cheaper to run and maintain, by moving from a twin-engine petrol unit (which uses more than 70 litres an hour) to a twin diesel-powered jet unit.

SEALORD SUPPORT

Sealord Chief Operating Officer Doug Paulin said Sealord has been a long-time supporter of the Nelson Coastguard.

Doug said, “Like them, we are focused on safety both on land, and given our fishing operations, also at sea. We sponsored the build and subsequent renovation of the Rescue Centre several decades ago and we will continue to be involved over the long-term.

“As a major employer and contributor to the Nelson economy, Sealord is very keen to continue to support our community, particularly at times like these. This is a significant project and fits well with the message for locals to support locals post-Covid-19. The boat has been designed in the top-of-the-south by Naiad and was built by Aimex here in Nelson. That’s pretty cool,” said Doug.

DESIGN

Stepping back in time to 2017, Nelson Coastguard approached Naiad now part of ‘The Whiskey Project Group’ (who maintain an office based in Picton) to discuss a new vessel. The unit’s members had trialled the *Kaikoura Naiad* and were keen to secure a ‘sister’ vessel for their extended operating area.

Geoff Eban, project manager for Coastguard Nelson, advises that the unit has benefited from Naiad’s 11.3m rescue boat already being in service with Coastguard Kaikoura since 2006. This allowed Coastguard Nelson to assess the configuration and seaworthiness of the vessel that has operated in a very harsh environment over a long period. “This helped to confirm our decision to go ahead with the design, but it also allowed us to enhance the design, learning from Kaikoura’s real-world ▶



The hull under construction



Starting to take shape



Based in Port of Nelson Aimex Service Group has a wide range of specialist machinery, 1300 square metres of workshop space and employs over 100 staff and additional contractors.



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experience,” said Geoff.

The brief was to base it on the 11.3m vessel, its aluminium hull, twin jet design having proven itself over 15 years of operation off the Kaikoura Coast.

To suit Nelson Coastguards’ needs, and to bring it more in-line with the modern Naiad development, several changes were made to the original design.

The exterior windows of the cabin are re-designed for greater visibility.

The interior remained largely unchanged, but with some minor alterations made to the dash layout to improve visibility and ergonomics, fit bigger displays, and allow for the new HTX control units.

The dinghy storage in the aft cockpit was no longer required and removed and a full-width transom has been implemented.

The transom was further reinforced to facilitate the new Coastguard New Zealand requirements for towing.

The Nelson vessel’s fendering system has been upgraded from the original round air collar for the Kaikoura vessel to Naiad robust “D-shape” foam fender system. While the overall dimensions of both vessels remain the same, the internal volume was significantly improved.

A unique feature was the helm station, the remote-operated self-deploying and stowing ‘under chine’ anchor that has been fitted for convenience and safety. Fitted with a 30kg plough anchor, plus a spare, to survey specifications the rode is made up of six metres of 10mm short-link chain (DIN766), 60m Nylon 16mm 8-braid SP3169 warp.

POWER AND CONSTRUCTION

Furthermore, the hull structure has been updated to suit the new power and propulsion units because Naiad was able to offer the vessel with increased horsepower weight to power by using Yanmar 6LY440 324kW (440mhp) @3300rpm (Common-Rail) engines, with twin ZF280-1 ratio 1.514:1 gearboxes. The vessel



The main helm and conning position

has the latest generation mixed-flow HTX30 waterjets providing efficiency at medium to high speeds, and AVX electronic controls with the JETAnchor positioning system via ‘mouse boat’ controls.

Coastguard Nelson came up with a state of the art electronics package from Furuno, and working with Naiad they were able to make other enhancements such as improved visibility and improved cabin ventilation.

They also changed the aft deck configuration, opting not to have the cutaway transom with onboard tender, but a conventional open aft deck.

Managing Director of Aimex Service Group Steve Sullivan said Aimex was thrilled to have the opportunity to support the new build.

“Getting this crucial project underway is very pleasing, both for its significance to the community, but also for our business having lost some projects during Alert Level 4 due to Covid-19,” said Steve.

He added, “Life-saving vessels come with a high level ▶

“catch fish...not cables”

There are a number of international submarine cables which come ashore in the Auckland area. These cables supply international communications for both New Zealand and Australia to the rest of the world.

New Zealand is a very isolated nation and as such is extremely reliant upon global communication via submarine cables. Here in New Zealand over 98% of all international communication is carried via submarine fibre optic cables. These cables are a key component of New Zealand’s infrastructure and play a significant role in our everyday lives, the general economy and future growth of New Zealand.

These cables are laid in three submarine cable corridors in the greater Auckland area where anchoring and fishing is prohibited under the Submarine Cables & Pipelines Protection Act.

These areas are:

- **Muriwai Beach** out to the 12 mile territorial limit where both anchoring and fishing is prohibited.
- **Scott Point to Island Bay** in the upper Waitemata Harbour where anchoring is prohibited.
- **Takapuna Beach** this runs from Takapuna Beach in the south to just north of the Hen & Chicken Island (opposite Taiharuru Head) where anchoring and fishing is prohibited.

Note: These protected areas are monitored by sea and air patrols.



Symbols Relating To Submarine Cables

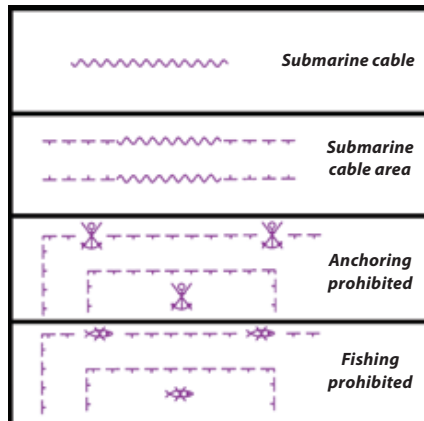


Figure 1.

These are some of the penalties

- A maximum fine of \$20,000 for a non-commercial vessel.
- A maximum fine of \$100,000 for a commercial vessel.
- A maximum fine of \$250,000 for damaging a submarine cable.

Additional to the fine for damage, the cable owners would inevitably pursue the recovery of costs associated with repairs, this could be up to \$100,000 plus a day; a typical repair can take up to two weeks.

Be Aware

These International submarine cables carry up to 10,000 volts to power the system repeaters along the cable.



For more detail refer to appropriate marine charts.

What should you do?

- If you are going into any of these areas, be sure to check your marine charts and/or GPS plotter so you know the exact locations of the prohibited zones. The relevant charts are NZ53, NZ5322, NZ532, NZ522, NZ52, NZ42 and NZ43. The symbols used to mark the zones are detailed in Figure 1.
- If you suspect you have snagged your anchor or fishing gear on a submarine cable in one of these areas, don't try to free it. Note your position, abandon your gear, then call 0800 782 627.

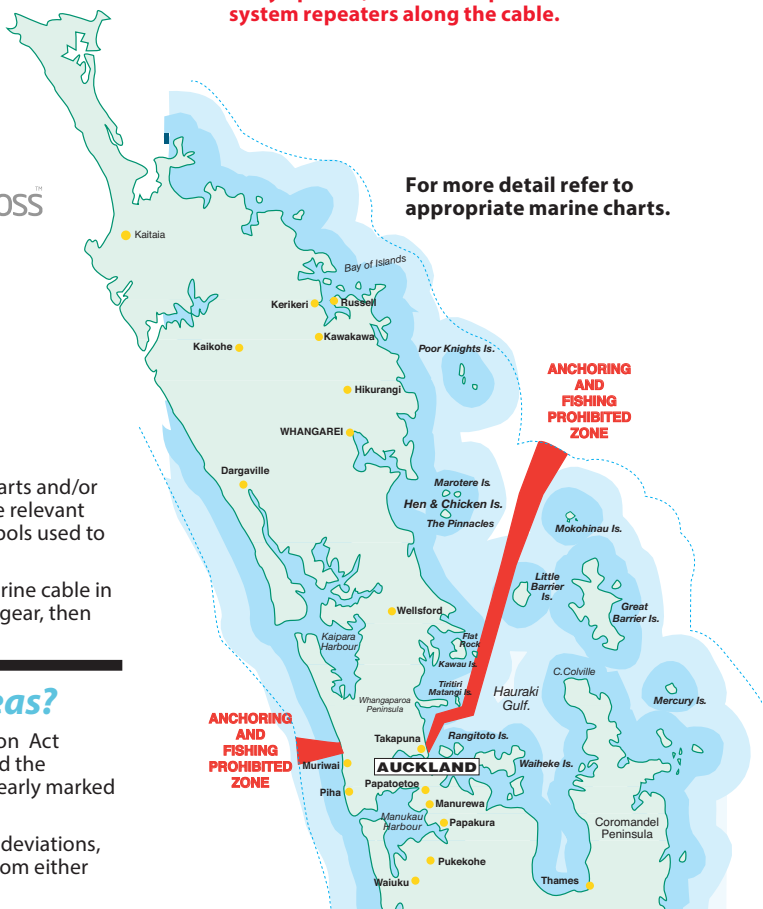
What happens outside the prohibited areas?

These cables are covered by the Submarine Cables and Pipelines Protection Act regardless of whether they are inside or outside a prohibited area. Beyond the confines of the “anchoring and fishing prohibited” areas, the cables are clearly marked on the appropriate marine charts.

Considering possible positioning inaccuracies and repaired cable section deviations, fishermen are advised to keep a minimum distance of one nautical mile from either side of charted cables.

Note this number:

For any queries regarding submarine cables call: **0800 782 627**





Life buoy rack



Stern view

of detail and we're excited about the innovations we can deliver to enhance its critical performance. This project is a true collaboration with all the parties involved."

Built to Maritime NZ Non-SOLAS rule -40A Inshore and 40C Restricted coastal. The hull scantlings were to Lloyds high-speed craft specifications.

Constructed in 5083 marine alloy plate throughout, the vessel incorporates a 6mm alloy hull, frames (at 500mm centres) and stringers (at approx 200mm centres. Cabin 4mm alloy. Deck 5 bar deck tread alloy.

The first thing was to build the jig with the hull (keel bar to deck) built upside down on it. Once the hull plating was attached and fully welded, the hull was rolled over and sat on its launching trailer for deck plating and superstructure to be added.

The transom upstand has been built with an integrated aft tow post with a bollard pull of SWL of 2800kg and towrope locker.

The new type pontoons are heavy-duty PU3035/3050 outers 600mm diameter "D" Shape, with EVA foam inside making for a safe robust fendering system around the boat.

Most of the propulsion machinery services were introduced before all the deck plating was laid. This was carried out by Aimex mechanics and engineers. In support, all electrical cables were being run by Aimex Electrical in anticipation of the final fit-out.

FIRE PROTECTION

The machinery space is protected by a marine air engine room ventilation and shut off flaps with a fire suppression system. The fire suppression non-pressurised canisters require no plumbing work and are therefore easy to install and maintain.

Down below, extra care has gone into ensuring the machinery spaces have been fully insulated, with a fire and insulation system. The acoustic, thermal and fire protection material installation is designed to allow for the easy removal and replacement when performing maintenance and servicing to meet our local marine operating conditions.

FITOUT


Two 450 litre fuel tanks were integral with the hull along with a 100 litre freshwater tank and a 45litre black water sewerage tank.


The bilge system consists of three x 2200GPH electric bilge pumps.

There is an oil extraction pump with a four way manifold to enable oil to be extracted from both engines and gearboxes during routine servicing.

SUPPORTING THE


NELSON COASTGUARD






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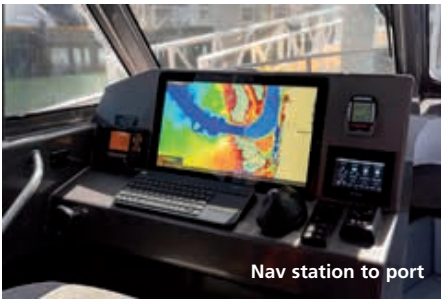
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Nav station to port



Conning position to starboard



Head and rest area below

Once the superstructure was in place, work started on the interior fit-out by Aimex shipwrights. Windows, doors, compartment doors and hatches were then fitted.

The interior is finished throughout in a dark grey, non-reflective, easy to clean, paint finish with dark grey marine fabric soft furnishings to head linings in the main cabin and down forward in the lower cabin.

On stepping down the short companionway, we find the head compartment to starboard with a flush toilet (to black water tank) and a small hand basin with cold water. Opposite we find a small but functional galley to port. Being essentially a day boat there is an electric jug for tea and coffee, a small sink with cold water and cabinet cupboards for stowage and a utensils drawer. Not fitted, but allowed for, is space for a small microwave oven or a toasting machine to provide something hot when on a long cold patrol.

The rest area also doubles as a dedicated triage bay enabling volunteers to administer first aid in a safe contained environment. It consists of two single settee berths in a vee configuration. Replenished in blue carpets the interior of the vessel looks smart

as well as being very functional.

Back in the main cabin, the command-and-control heart of the vessel we find four crew stations with the cox'n or helm to starboard, navigator to port and the command station to port behind the navigator. Opposite is a fourth seat for the crew/deckhand.

SAFETY SEATING

All positions are fitted with the latest in KAB 61K4-M high-back suspension marine seats with full four-point safety harnesses, supplied by TRT in Hamilton.

These heavy-duty suspension seats complete with fold-away armrests are rated for 170kg and offer five-position lumbar support with a fore and aft movement of 200mm. Once securely harnessed in the crew are safe and able to take whatever the weather dishes up when responding to an emergency to save lives at sea.

It is timely to remember that when most are heading home or seeking shelter, these Coastguard volunteers are invariably heading out into the worst of it to save some unfortunate soul.

To assist in these trying conditions, the vessel is fitted with ►



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The old and the new prepare for the official occasion

a smart array of electronics offering the three command positions with a large ELO touch screen monitor supported by two fan-less solid-state computers offering the main plotter and maps, a multibeam digital sounder, the solid-state 25W 36nm 24 inch radar, and the Flir camera displays.

There are also two external outdoor cameras covering the rear view of the vessel when towing, and the aft cockpit of the vessel. Remote spotlight, AIS, autopilot and the four marine VHF radios just about complete the electronic aids. Fitted with a small helm, both bucket lever controls and the throttles are to the right, within easy reach, along with the AVX electronic ‘mouse boat’ controls.

A heater/demister system is provided with outlet vents to the forward windows, and cabin heating for those chilly winter days on the water.

Up top are the very busy mast and radar arch which is powder-coated white. A forward roof light bar has to be added to space all the aerials far enough apart to prevent interference between them when operating. A further two light bars are mounted on either side

for abeam illumination when working at night. Behind the radar arch at the rear of the cabin roof, we find the vessels inflatable life raft securely mounted in its hydrostatic release cradle.

Outside at the rear of the cabin are two raised platforms for external lookouts, fitted with safety cages. For the size of the vessel, the aft cockpit is relatively small, while still having ample space for the crew to work in. A large staghorn bollard is mounted on the transom. Aft of the transom protecting the water jet units below is a full-width boarding or rescue platform.

Nelson Coastguard made the conscious decision not to carry a daughter boat or small tender. Wide side decks up either side of the waists offer ease of access to the flush foredeck supported by full-length handrails around the side and bow of the vessel. There is a bow mooring bollard with a further two recessed mooring cleats on either waist.

Below waterline, the hull is protected by the Altex anti-foul paint system for alloy hulls carried out by NZ Coating Services, and the coloured vinyl wrap and livery was produced by Speedy Signs.



The main cabin



Comms and command



Show off time to dignitaries at the official launch


NAMING CEREMONY

The *Hohapata Sealord Rescue* was launched on March 13, after a naming ceremony in which Ngāti Koata gifted the name of their tūpuna, Hohapata Te Kahupuku. He helped rescue crew and passengers from the wreck of the Delaware which founded in 1863 on rocks in a bay between Grahams Point and Pepin Island, about 30km north-east of Nelson. A place we now know as Delaware Bay.

The \$1.4 million vessel first hit the water on the of January 11, 2021 to enable both the surveyors, Hamilton Jet and the Yanmar engineers from Power Equipment to carry out successful pre-delivery sea and stability trials.

During trials a top speed of 39 knots was recorded with the vessel fully loaded with 20 persons. In lightship operational mode it is expected that a top speed in excess will be easily achieved, delivering an economical service speed of 30 knots.

Nelson Coastguard unit has been involved in countless search and rescue operations, many of which have seen the crew

spending over 10 hours on the water in rough conditions to bring people home safely. This vessel will be a game-changer for Coastguard Nelson and will greatly enhance their first responder capabilities. 

SPECIFICATIONS

LOA	11.3m
Beam	4.2m
Beam internal	3.2m
Draft	.600mm
Deadrise	21 degrees
Power	Twin Yanmar 6LY440 324kW (440mhp) @3300rpm
Propulsion	Twin Hamilton HTX30 jet units
Speed	40 knots plus – service 30 knots
Designer	Naiad Design – The Whiskey Project
Builder	Aimex Group Nelson
Deadweight	Lightship 8700kg

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