

SEALINK EXPANDS PINE HARBOUR FLEET



BY KEITH INGRAM

In November Sealink took delivery of the second of its new generation 99 passenger Clipper class fast ferries, which was promptly entered into service on Auckland's Pine Harbour-to-CBD ferry run.

Once again, this fast growing coastal community continues to surprise both Auckland Transport and the ferry operators with the continued annual growth in patronage since the ferry service started in January 2003. This demand stands as a testament to Auckland's need for a network of small, low-wash fast ferries to link our coastal suburbs with downtown Auckland.

Pine Harbour Marina opened in May 1988 on Auckland's Pohutukawa Coast – an eastern coastal area nestled in a secluded cove near the small coastal township of Beachlands.

The ferry service is operated from inside the 570-berth marina, only a 35 minute ferry ride from downtown Auckland. This marina has developed into a fashionable marine precinct, with a fast-growing middle class residential community adjacent. There are two large new housing estates adjacent, and the development of multistorey apartment blocks within the marine precinct is on the books. All this development will continue to add to commuter demand as Pine Harbour becomes a fashionable worker feeder

suburb for Auckland's CBD.

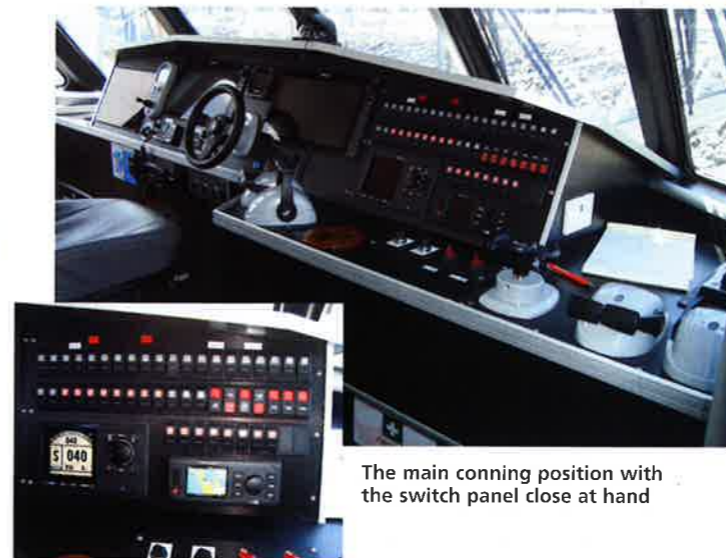
This continued steady growth means Pine Harbour now has a fleet of four modern, efficient, fast ferries with two 15m x 49 seaters and two 17m x 99 seaters. The firm makes a minimum of 16 return trips per weekday to Auckland's CBD, plus weekend trips to Waiheke Island and other charter work.

When the service first started with the original, smaller *Clipper I*, the ferry carried a modest 90 passengers per day. Since those early days, 12 years ago, the company has experienced growth of 10 percent compounding each year. Currently the fleet carries approximately 136,000 passengers to Auckland per annum.

Pine Harbour Ferries was purchased by the Sealink Group in mid 2014 and with inherited the commitment to build a second 99 seater, *Clipper V*.

Due to the continued growth and thinking ahead, the company has recognized the potential for further substantial growth and is already talking about its next new build. To achieve this, they will have to book a build slot at the Q-West yard (which has already committed to build two 36m fast ferries for Fullers Auckland in the next two years as well as other refit work for clients (see *Waterfront Business*, this issue).

Apart from some minor changes in equipment, *Clipper V* is a true sister to *Clipper IV* which was the first of the new-generation craft. While still from the Teknikraft Design board incorporating the unique hydraulically operated foil between the hulls, it is some



The main conning position with the switch panel close at hand

2.7m longer and 1.35m wider, than the first, *Clipper II* and *III*, giving increased capacity inside to take the additional passengers, offering improved comfort and sea keeping abilities.

Each vessel is powered by twin MTU series 60 825hp marine diesels coupled to Hamilton blueArrow HJ403 waterjets. We note a slight change here: this cat has the waterjets mounted with a five degree down angle to assist in lift and performance under load.

Clipper V is capable of speeds up to 40 knots, with a service speed of 28 to 30 knots. These vessels can operate in all but extreme weather, giving a fast and smooth ride. The travel time between the marina and downtown Auckland of 35 minutes compares favourably with a roadtrip on Auckland's snailways of as much as an hour twenty.

Senior delivery master Mike Roycroft advises that to get the best out of the waterjet power with these hulls, you need to be doing more than 26 knots, and 28-30 knots is the optimum for fuel-per-mile economy.

Access to the engine room is via two deck hatches situated fore and aft of the machinery space, or through a watertight door from the lazarette housing the waterjets.

The big beasts below have over 800 horses and require good fuel and large amounts of cool, dry air to keep them going. The main engine room ventilation intakes in the sheltered roof top above are fitted with Seaworth Defence filters to protect the machinery space from any water or moisture intake – an all-important feature on any commercial craft.

Build-in fire protection is provided for the machinery spaces, with the engine room ventilation flaps shut-off controls accessed from the aft deck. The emergency engine room smother system panel is just inside the aft deck door, beneath the ticket booth at the rear of the cabin. This contains the emergency fuel shut-off and the dual *FirePro* two shot fire-suppressant release controls in an alarmed box.

It was interesting to note the seawater cooling water is drawn off the waterjet pump, with the strum box debris strainer mounted on the protective landing platform above the jets.

Even waterjets are prone to sucking up debris, and while most just gets squirted out the back with no adverse effect, if the cooling water takeoff is from the jet unit, there is a risk some rubbish might get forced into the cooling system.

This being the case, it is easy to check the strum boxes, which have plastic strainers, and clean them if required, eliminating the chance of wetting dry bilges. We also note the bright yellow screw caps float and are easy to spot if accidentally dropped.

Another plus is when the engines are shut down, the water drains back into the jet units – along with most of any debris trapped by the strainer. This is smart thinking. ▶



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The main saloon



Tables are handy for laptops



Wheel chair bay

These platforms are also used to recover any potentially hazardous flotsam (or a man overboard) although we have to say that like all fast ferries, it is highly unlikely a normally well-behaved passenger would fall from the vessel when underway.

Most incidents on Auckland's harbour records can be attributed to skylarking drunks or, as sad as it might seem, a jumper who has had enough of life. Fortunately, given the number of passengers, approaching six million carried annually on Auckland's harbour, both incidents are rare, even though our crews still train for them.

The *Clipper V*'s hulls are constructed of marine grade Sealium high strength aluminium, 6mm bottom, 5mm sides and 4mm cabin. The alloy on the topsides, where not covered in vinyl coloured sheathing, is left *au naturel* to weather and attain its own protective patina. Underwater, the hulls are painted using the approved antifoul system for high speed alloy craft, International antifoul made by AkzoNobel.

The hulls are divided into five voids with a separate lazarette where the waterjets are, then the engineroom with the tank space. Moving for'ard, the next void is largely clear, and finally the

collision bulkhead at the rear of the foc's'le void.

In the tank void the main fuel tanks are separate, being a large 1000 litre round tank aside rather than being built into the hull. This adds improved security of the fuel tanks, meeting the MARPOL regulations for high speed craft.

Access to the lazarette is off the aft deck, with a comprehensive toolbox and a small workshop in the port hull.

Unisex heads are installed aft and accessed off the aft deck from behind the saloon doors. Both heads discharge into a sewage holding tank. Stepping into the saloon, one quickly appreciates the change in size, with seating for 99. The outer seats are arranged around 10 tables, while the central 32 seats remain for'ard-facing, aircraft-style. Under each seat is a locker where each passenger will find their own lifejacket should the need arise.

Another modification to meet with the Auckland Transport contract was to provide suitable wheelchair access into the main saloon. With some minor alteration, this was achieved by lowering the port rear door sill and providing a drop-in sill to the approved height when required and a wheel chair bay just inside the door.



Foc's'le and stowed anchor



Rooftop power and air con



Main mast



Kohler genset

The main saloon is air conditioned for passenger comfort with all windows doubled-glazed, eliminating that annoying fogging problem on chilly mornings. Overhead deckhead panels are made from a ventilated aluminum giving a functional and attractive lift to the saloon.

The décor throughout has been tastefully done, making a relaxing atmosphere for commuters. But there is no café nor provision for a bar service.

We note the use of knurled grooved stainless steel tubing for the overhead and other handrails throughout the ferry by Dixon Stainless. These not only look good and give a positive grip on the rails, but they also do not show grubby fingermarks.

To ensure the crew can keep the main cabin spic and span, the *Clipper V* is equipped with an internal vacuum system with two sucky-moto connections, one for'ard and one aft.

Moving for'ard, we enter the spacious wheelhouse and step out onto the starboard wing where there is a small side gate and a Blue Arrow Mouse-boat control for berthing. I have said it before that every boat should have this system, as it makes the master of the

vessel look good. It's child's play, and one of the most innovative leaps forward in the world of waterjet power, from our world-leading New Zealand company Hamilton Jet who developed it. Kiwi ingenuity at its best.

The foredeck is clear apart from the small capstan and winch, and the Ex-Cel plow type anchor mounted securely on deck.

Crew access to the top deck is on the port side. Once up top, we find two air conditioning units, with the Kohler 17EFORZD 20kVa gen-set in its own hush box for'ard, just behind the wheelhouse screen with the static solid emergency floats stowed aft. These will be replaced by the new reversible inflatable 50 man life rafts.

Mounting the gen-set up top, close to the main aircon units reduced cable runs and kept the unit out of the hulls – reducing the potential for transferred noise into the cabin.

Back in the wheelhouse, the main conning position is central with two KAB hydraulic safety pilot seats facing an impressive range of Simrad electronics on the dash panel.

Pine Harbour Ferries was very specific about the requirements of their navigational equipment, said Ryan Castles from Pine ▶



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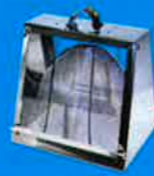
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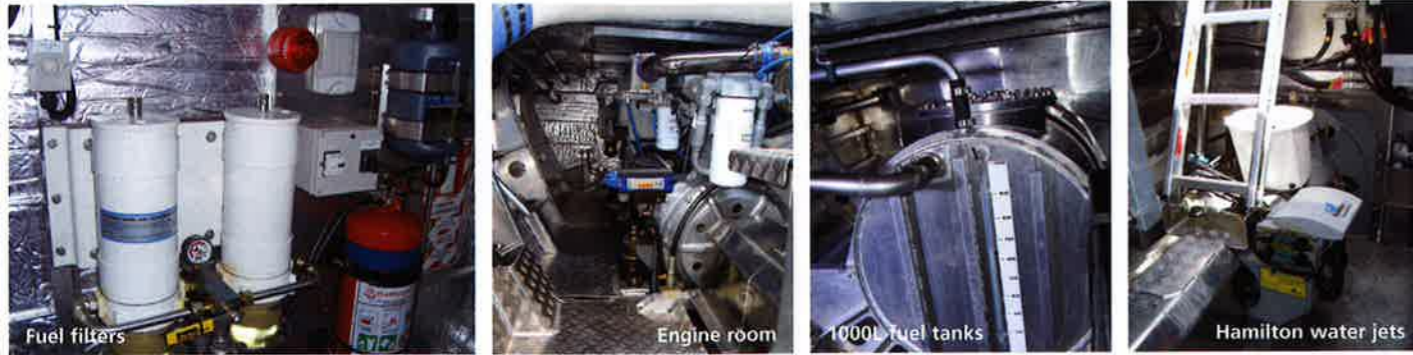
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High performance – low wash

Harbour Electrical Ltd, who was responsible for the supply and install of the Simrad electronics package. It included two Simrad Evo 2 x 16 inch displays, OP-40 Controllers with a 10 kW open array radar scanner. The heading sensing is from a HS-70 GPS sensor with a Simrad plotting system. The AIS is a Simrad Class A and auto pilot is a Simrad AP-70 auto pilot.

Also fitted are two Simrad VHF radios – so as to be able to monitor both channel 16 and 12 respectfully, said Ryan. “We wired and did the install and commissioned the electronics at the Q-West yard in Whanganui,” he said.

Ryan was also part of the delivery crew on the vessel for its voyage to Auckland, which allowed him ample time to ensure all the electronics were bedded in and operating to expectations.

There is a CCTV system with multiple cameras, including two on the mast, one facing forward and one aft which maybe patched through to the large TV screen in the saloon. This CCTV system includes Panasonic cameras and Simrad MO-16 Display and Panasonic DVR recorder.

The main switch panels and nav controls are all within easy



reach, with the main distribution panels to the right of the dash panel. Positioned over the central front screen is a Solar Solve adjustable sunscreen protecting a double-glazed front window. In keeping with modern trends, the lighting throughout the vessel, including navigation lights, incorporates the new LED lighting systems.

PERFORMANCE

Once underway we were not disappointed, with both handling and performance. Clearly Pine Harbour Ferries now on their fifth vessel with four in the fleet have now got the formula right.

Her handling abilities, with blueARROW, in even the tightest of spots in the marina is without question. Once out of the gate, and as the revs are applied, she starts to quickly gain speed – and somewhere around 15 to 18 knots she just pops out of the water as the foil kicks in and gives added lift.

From here on in the ride becomes as smooth as the speed quickly builds to her service speed of 28 knots at 1950rpm. Keep pushing the handles down and on the calm day we were out on the water, 40 knots was soon registering in a quick smart time on the GPS. This is amazingly quick for this size of vessel, although empty, we were still not hard out.

Apply some helm and her response in the turns was quick and positive. Please do not ask the silly question of how quick can she stop. We are advised that for an emergency stop if the need ever arose, leave the throttles alone and just whack the buckets down in a two-second movement and she will stop in a little over a boat length.

That’s not something you would do unless in dire straits, because we would be guessing there would be a few bloody noses to clean up in the main cabin. But it was nice to know that even at high speeds when faced by some recreational loopy who has no idea of the rules like ‘Give way to the right’ or even that ‘Might is right’, these vessels have some serious stopping power.

Pine Harbour is part of a success story in Auckland’s water

transport. Auckland Transport’s Ferry Services Manager Gareth Willis says that the introduction of *Clipper V* on to the Pine Harbour ferry service will add much needed capacity to this service.

“AT has just completed public consultation on ferry and bus services in the Beachlands–Maraetai area and is looking to implement a new timetable in 2016 that will provide more sailings and more capacity on the ferry service. The timely arrival of *Clipper V* is of course welcomed to support these changes and the continued growth we are seeing on the service.”

With the service going from strength to strength, this is a clear example of where the local transport agencies may give companies confidence in service contracts that enable them to commit to expensive new builds.

By doing so, the company has been able to develop a very modern fleet of fast, low-wash ferries. At a shade under \$3 million, these vessels do not come cheap, but they are New Zealand-built from a New Zealand design stable with true Kiwi iconic Hamilton waterjets and lots of New Zealand componentry, making them a true example of New Zealand made.

Clipper V has been made to a quality standard and offers a capability that will not only match, but surpass any similar fast passenger ferry on the international market.

SPECIFICATIONS

LOA	17.7m
Beam	6.95m
Draft	800m at rest
Passengers	99
Power	MTU 60 Series 825hp marine diesels
Propulsion	Hamilton HJ403 water jets
Genset	Kohler 20kVa
Speed	41knots
Service speed	28–30 knots
Designer	Teknicraft Design
Builder	Q-West Boatbuilders

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