

Memorandum

27 March 2023

To: The Planning, Environment and Parks Committee

Subject: Boat haul out and hardstand provision in Auckland

From: Taryn Crewe, General Manager Parks & Community Facilities
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Purpose

1. To: provide a summary of information on boat haul out and hardstand services across the Auckland region.

Summary

2. In response to a presentation from the Auckland Marina Users Association and Auckland Yacht and Boating Association to the Planning, Environment and Parks Committee (2 March 2023) the following resolution (PEPCC/2023/21) was passed:
 - a) whiwhi / receive the public input from the representatives of the Auckland Yacht and Boating Association regarding to the importance of regional assets required for boat maintenance and biosecurity in the Hauraki Gulf and whakamihi / thank them for attending the meeting
 - b) whakaae / agree to refer the matter of hardstand capacity to the Chief Executive for report back at the next Planning, Environment and Parks Committee meeting.This memorandum fulfils the report-back requirement of that resolution.
3. A letter from the Hauraki Gulf Forum raising concern at regional hardstand capacity and supporting a regional solution to the prevention of marine invasives was received by Council on 17 March 2023. (**Attachment A**) The Deputy Chair of the Committee has directed staff to have regard to the matters in that letter in this report back to the Committee.
4. With the closure of the hardstand at The Landing, Ōkahu Bay in February 2023 there are no council-run or council-funded hardstand facilities in the Auckland region. The majority of haul out and hardstand services in Auckland are provided by commercial operators, with clubs making up the remainder.
5. Two hardstand provision assessments have been produced by external consultants in recent years. Both reports noted restraints on capacity for antifouling within the Auckland region under the current situation where the majority of anti-fouling takes place in spring in preparation for summer boating. Combined with a reported trend towards more and larger boats, there is pressure on boat maintenance facilities. However, capacity can be increased if the sector shifts to spreading maintenance activities throughout the year. Some commercial facility operators have indicated an ability to expand services.
6. Auckland Council's marine biosecurity focus is on education and compliance. This includes encouraging the sector to shift towards year-round boat maintenance, to reduce pressure on facilities in peak periods.

7. If the Committee wished to consider developing regional policy or commencing providing a regional network of hardstand facilities further policy work would be required as to whether hardstand services are a core service Council should deliver or whether these are better provided by commercial and club facilities. The significant cost implications of either of these approaches would need to be addressed.

Context

8. Haul out and hardstands service the approximately 9,000 boats either moored or berthed in marinas across the Auckland Region. Biofouling risk primarily stems from moored and marina berthed boats as trailer boats do not accumulate fouling through being moored or berthed in the marine environment. Services sought by moored or marina berthed boat owners at hardstand facilities include engine and prop maintenance, mechanical replacements, and general repairs. Hardstands also provide wash down and antifouling services, activities that contribute to limiting the spread of marine pest species.
9. There are 20 hardstands in the Auckland region. Significant hardstands in the Waitematā Harbour include Orams Marine at Westhaven, Hobsonville Marina, Tamaki Marine Park, Half Moon Bay Marina, Gulf Harbour and Pine Harbour Marina. Commercial operators provide the majority of hardstand services with clubs making up the remainder. With the closure of the hardstand at The Landing, Ōkahu Bay in February 2023 Council does not operate or fund any hardstands. Auckland Council does own the underlying land on which some hardstands are located. There are also hardstand services on private land. Leases held by commercial hardstands are managed by Eke Panuku as non-service property. Club-based hardstands on Council land are subject to a community lease that is managed by Auckland Council's leasing team.

Discussion

Council's role in relation to hardstands

10. As a Unitary Authority, Auckland Council has the duties of a Regional Council under the Biosecurity Act 1993 relating to pest management. Council is required to provide leadership in activities that prevent, reduce, or eliminate adverse effects from harmful organisms present in Aotearoa New Zealand. Council does so by (among other things):
 - Promoting alignment of pest management in a region.
 - Facilitating the development and alignment of regional pest management plans and regional pathway management plans.
 - Promoting public support for pest management.
 - Facilitating communication and co-operation among those involved in pest management.
11. Auckland Council's regional focus for the control of marine pests is on monitoring, research, education and advice, requirements on boat owners to act and enforcement.
12. The provision of wash down and antifouling services which are provided by commercial and club operations is not an activity Council is required to undertake.
13. The Auckland Regional Pest Management Plan 2020-2030, created under the Biosecurity Act 1993, requires that all owners or persons in charge of any craft in the Auckland region ensure that the level of fouling on the hull and in niches of craft does not exceed 'light fouling'. A national 'Clean Hull Plan' is being developed, which would create consistent rules for hull cleaning across the upper North Island, also under the Biosecurity Act 1993. The next step will be public consultation on a proposed plan. Auckland Council staff are working closely with the Ministry for Primary Industries as well as other upper north island regional councils and the Department of Conservation and will ensure Aucklanders are aware of the consultation when it is confirmed.
14. The Council also undertakes the following activities in relation to the antifouling of boats and marine pest control:

- Setting policy in relation to discharges and activities in the marine area under the Auckland Unitary Plan.
- Providing regulatory settings under the Regional Pest Management Plan.
- Undertaking education, monitoring and research in accordance with Auckland Council's roles under the Biosecurity Act 1993.

The Landing at Ōkahu Bay

15. Until February 2023, The Landing at Ōkahu Bay was the only Council operated or funded hardstand in the Auckland region. The hardstand was located within a local park held by Auckland Council for recreation purposes. The Landing closed on 28 February 2023 pursuant to a decision of Ōrākei Local Board made in May 2022 not to further extend the Services Agreement with the contractor at the site.
16. The Landing serviced a mainly local catchment of yachts and motorboats from Waitematā Harbour moorings and local marinas and provided approximately 5% of the commercial hardstand space in Auckland. The Landing hardstand had been operated by Auckland City Council prior to amalgamation and decision-making responsibility in relation to it was allocated to the Ōrākei Local Board at amalgamation. Budget to fund the hardstand (which operated at a loss) came from the Ōrākei Local Board.
17. Decision making responsibility in relation to The Landing is allocated to the Ōrākei Local Board under section 17(2) of the Local Government (Auckland Council) Act 2009 which sets out the principles for allocation of decisions between the governing body and local boards. Section 17(2) provides that decision-making responsibility for a non-regulatory activity of the Auckland Council should be exercised by its local boards unless the nature of the activity is such that decision making on an Auckland-wide basis will better promote the well-being of the communities across Auckland. The governing body has allocated decisions in relation to the use of and activities within local parks to local boards as set out in the allocation table in the long-term plan.
18. The Auckland Yachting and Boating Association has provided a draft statement of claim to Council and intends to file proceedings which would seek judicial review of the decisions in relation to The Landing which were made in May and June 2022 by the Ōrākei Local Board as the allocated decision maker of Auckland Council for the local park.

External assessments of hardstand capacity

19. Two externally produced hardstand provision assessments have been produced in recent years. A 2021 assessment prepared by Urban Solutions (**Attachment B**) was commissioned by the Ōrākei Local Board and looked at The Landing at Ōkahu Bay in the context of Auckland wide haul out services. A 2022 assessment prepared by Ecometric (**Attachment C**) was commissioned by the Top of the North Biosecurity Partnership (which includes Auckland Council) and looked at the demand for antifouling services across Northland, Auckland, Waikato and Bay of Plenty.

Urban Solutions February 2021 - Auckland Haul Out and Hardstand Facilities Assessment

20. The Urban Solutions assessment considered hardstand service provision at The Landing and the impacts of its removal in the context of the wider provision of hardstand services in Auckland. It identified that the closure of a board subsidised haul out and hardstand operation at the Landing could have the following impacts:
 - The boat owners who use The Landing for haul out, antifouling and maintenance will be faced with 30 – 60% increased costs at other commercial facilities.
 - Boats berthed at Outboard Boating Club, Ōrākei Marina and local moorings will need to travel greater distances to haul out. Haul out facilities at Westhaven are around a 3 nautical mile distance which was not considered significant by Urban Solutions.
 - Pressure on peak period haul out and maintenance would be exacerbated within the local area with maintenance having to be scheduled at less favoured times during the year.

21. The assessment concluded that should haul out and hardstand services at The Landing be scaled down, or removed, the surrounding network of commercial operators and clubs have the capability and capacity (at least across the year if not specifically during the preferred months between September and December) to accommodate displacement at current rates of demand within the Auckland region.

Ecometric Consulting December 2022 - Capacity and Accessibility of Haul Out and Antifouling Services in the Top of the North Marine Pest Management Area

22. The Ecometric assessment surveyed haul out or hardstand providers (commercial and clubs) on the cleaning and antifouling services they provide in the Northland, Auckland, Waikato and the Bay of Plenty regions.
23. The assessment was a measure of the demand that largely occurs between September to December rather than a quantitative measure of capacity or a measure of the sector's ability to respond to increased demand outside of the maintenance window preferred by moored and marina berthed boat owners.
24. The assessment identified that the provision of antifouling services is limited by a number of factors of which hardstand space (in coastal locations which are increasingly attractive to alternative development) is just one. Factors increasing demand for antifouling included:
- reported increasing boat ownership rates
 - reported trend towards longer and wider vessels and more multihulled vessels
 - environmental compliance standards
 - availability and remuneration of skilled labour.
25. Under current antifouling patterns where the majority occurs in preparation for the summer, Auckland had capacity to antifoul between 33-66% of its fleet, depending on frequency of antifoul application.
26. There is potential for operators to respond to growing demand by increasing capacity with The Ecometric Report stating the following in this regard:
- *Ten facilities (23%) [across the Upper North Island] had plans to increase capacity. Of these, four would or could increase the hardstand areas if demand increased, two planned to increase covered areas, and six planned to increase their infrastructure, such as trailers.*
 - *Hull cleaning between antifouls is necessary for antifoul maintenance and will be required to meet the proposed standard. Service providers generally considered they had capacity to increase this service, particularly if they had more than one travel lift.*
 - *Fifty percent (23) of the facilities [across the Upper North Island] could increase antifouling throughput, but for half of those the increase depended on extending into the months prior to the current peak period of September to December.*
27. The Ecometric Report identifies that extending anti fouling and hull cleaning operations beyond the traditional September to December maintenance window is a means by which capacity could be increased. There are technological advancements that mean biofouling activity can be undertaken at less favoured times of year by for instance working under covered spaces and with antifoul paints that can be applied in cooler winter temperatures.
28. One of the biggest limiting factors identified in the assessment regarding antifouling outside of the preferred spring / early summer window is motivating moored and marina berthed boat owners from what is traditionally seen as a spring task to antifouling in late summer, autumn or even winter. Council plays a role in shifting this demand through its regulatory role and through education and communications.

Consideration of regional provision of hardstands

29. There is no regional policy on the provision of hardstands in Auckland. Nor has there to date been an intention to deliver a regional hardstand service.

30. Notwithstanding the requirements for owners of craft to have a low level of fouling under the Regional Pest Management Plan, the Council is not required to provide services for boat-owners of moored and marina-berthed boats to undertake washdown and antifouling. The provision of hardstand services is a discretionary activity.
31. Staff have not identified a need for, and do not recommend, the development of a regional policy on the provision of hardstands. If the Planning, Environment and Parks Committee wanted to investigate such a policy, or to investigate providing a regional network of hardstand facilities, further policy work would be required on the following matters:
- Acknowledging that this is not a core council service, whether the provision of hardstand services is a service that Council wants to deliver.
 - Whether Auckland Council is the best service provider (or whether hardstand services are better provided by the private market and club facilities).
 - Whether any identified capacity issues would be resolved by Council provision of hardstands in light of other constraints identified on capacity (such as space, skilled labour and the time of year at which moored and marina berthed boat owners undertake haul out).
 - How the delivery of the service fits with the outcomes identified in the Auckland Plan.
32. Other factors relevant to the development of a regional policy include:
- The council's current financial position, the severe budget constraints presently in place and current focus on stopping all discretionary spend.
 - The cost of policy development which is currently unbudgeted.
 - The cost implications of delivery of hardstand services.

Next steps

33. Auckland Council staff are working on public education, with a focus on encouraging marina berthed and moored boat owners to undertake maintenance activities year-round, thereby increasing overall capacity in the sector.

Attachments

Attachment A – Letter from Hauraki Gulf Forum – 17 March 2023

Attachment B – Urban Solutions Auckland Haul Out and Hardstand Facilities Assessment – February 2021

Attachment C – Ecometric Capacity and Accessibility of Haul Out and Antifouling Services in the Top of the North Marine Pest Management Area – December 2022

Mayor Wayne Brown
Chief Executive Jim Stabback
Auckland Council

Copy to:

Chair Pamela Storey & Chief Executive Chris McLay, Waikato Regional Council
Deputy Director-General Stuart Anderson, Biosecurity NZ

Clean boats or biosecurity risks – the developing situation in the Auckland Region

He waka kōtuia kāhore e tukutukua ngā mimira.

A canoe that is interlaced will not become separated at the bow. In unity there is strength.

17 March 2023

Tēnā kōrua,

In recent months the Hauraki Gulf Forum has become concerned at developments in the Auckland Region, where decisions have been taken by Council bodies to reduce the region's boat haulout facilities.

Haulout facilities are used to clean and antifoul the hulls of boats so that they do not become vectors in an increasingly intense effort to control the spread of marine pests. Most notably with the recent arrival of the invasive seaweed *Caulerpa* at Aotea Great Barrier and Ahuahu Great Mercury. Should *Caulerpa* establish itself in bays around Waiheke, or the eastern or north shore beaches, the impact on the marine ecology, communities, tourism, and the city could be significant.

At the same time as Auckland has moved to strengthen its marine pest management framework - through the Regional Pest Management Plan 2020-30, including increased enforcement and potential penalties for non-compliance (which the Forum has strongly supported) - separate decisions are reducing the region's capacity to clean its boats. Auckland already has the least cleaning capacity per boat of the four regions in the Top of the North Marine Biosecurity partnership. This is now set to worsen further.

The Forum noted that Auckland Council's Planning, Environment and Parks Committee has tasked the Chief Executive to investigate this issue and report back. **The Forum supports finding a regional solution to this Council responsibility to prevent the spread of marine invasives.** Not just for Auckland's sake, but because Auckland's trajectory also presents risks to neighbouring regions, most notably the Waikato, with whom Auckland shares the Hauraki Gulf Marine Park.

Ngā mihi nui,



Nicola MacDonald
Co-Chair - Tangata Whenua





REPORT

AUCKLAND HAUL OUT AND HARD STAND FACILITIES ASSESSMENT

22 February 2021, V3

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Limitations

This report has been prepared exclusively for Auckland Council with respect to the specific brief given to us. Information, opinions, and recommendations contained in it cannot be used for any other purpose or by any other entity without our review and written consent. Urban Solutions accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this report by any third party. Haul out and hardstand rates provided in this report are for comparison purposes and may vary from current prices advertised.

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1.0 Executive Summary – Auckland Haul Out and Hard Stand Assessment

This report provides an overview of the boat haul out and maintenance hardstand facilities located within the Auckland region. The purpose of this assessment report is to establish the local and regional role that the haul out and hardstand operation at The Landing (8-12 Tamaki Drive, Ōrākei) performs. The scope of the Auckland market assessed includes The Landing along with 10 commercial and 11 club hardstand and haul out facilities¹ which cater for yachts, launches and multihulls along the east coast of Auckland and Waiheke Island.

This assessment is intended to provide current information for understanding haul out and hard stand services currently offered to boat owners and to inform a review of “The Landing -Pathways to the Sea Concept Plan 2013” that may affect or alter the haul out and hard stand facilities at The Landing.

The sources of information include hardstand facility published information, interviews, site visits, research reports, Auckland Transport and Auckland Council GIS data and statistics.

The Landing’s current operation offers a modern, well serviced haul out operation and maintenance hardstand. The Landing provides an affordable haul out and hardstand service that is available for the public to book with no requirement for membership or restrictive terms.

The Landing haul out and hardstand services mainly a local catchment of yachts and motorboats from Waitematā Harbour swing moorings² and local marinas along with some visiting boats to Auckland.

The 5,500m² hardstand represents a 29% area contribution of the Waitematā boat haul out facilities along with Pier21 (18%) and newly upgraded Orams (53%). Regionally, the hardstand represents 5% of the total commercial hardstand space.

The Landing is unique in being the only council owned and operated haul out and hardstand facility in Auckland. It offers one of the most affordable options for recreational boat owners with lower rates than commercial facilities and similar rates to non-member club rates.

It caters well for local Waitematā based smaller yacht and launch owners on limited budgets required to undertake regular hull cleaning, antifouling, maintenance and repairs.

The Landing haul out is also the only Waitematā Harbour facility that operates an after-hours service in support of the Harbourmaster for removal of navigational hazards, abandoned vessels, salvage operations and day or night emergencies. No fees for haul out or hardstand storage is charged to the Harbourmaster as it is a council entity. Commercial hardstands do not favour salvage operations due to non-payment issues.

It has a long-established focus on handling and servicing multihull yachts utilising a 38-tonne hydraulic lift trailer and multihull specific cradles. The trailer can manage multihulls with a beam width up to 10m and 65ft in length. Rates for multihull storage is less expensive than other hardstands that can accommodate multihulls. Other facilities that can accommodate multihulls with a beam over 8m include the upgraded Orams hardstand, Tamaki Marine Park (de-rigged yachts only), Hibiscus Marine and Storage and Robertsons in Warkworth.

¹ The assessment excludes dedicated boat builder’s yards, drydocks and storage facilities not dedicated to boat maintenance purposes.

² Data from Auckland Transport Open Data GIS moorings locations.

The Landing has an established regional significance for providing an environmentally safe and sustainable hardstand for servicing the surrounding launches and boats. The facility supports the “Clean Below, Good to Go” campaign.

Should the haul out and hardstand services at the Landing be scaled down or removed the surrounding network of commercial operators and clubs have the capability and capacity (at least across the year if not specifically during the preferred months between September and December) to accommodate any associated user displacement at current rates of demand within the Auckland region.

This includes the servicing of multihulls at Orams, Tamaki Marine Park (must be de-rigged to pass under Panmure Bridge), Robertson’s or Hibiscus Marine. Other options outside the Auckland Region include facilities at Whangarei and Tauranga.

However, any alteration to the Landing’s haul out and hard stand services could have the following potential impacts:

- After hours services and emergency support and facilities for the Harbourmaster could cease at the site.
- The boat owners who use The Landing for routine haul out, antifouling and maintenance will be faced with 30 – 60% increased costs for commercial facilities (noting that commercial facilities are likely to pick up the majority of any trade displaced from The Landing).
- Boats berthed at Outboard Boating Club (OBC), Ōrākei Marina and local swing moorings will need to travel greater distances to haul out although these distances are not considered significant.
- Additional pressure on peak period haul out and maintenance will be exacerbated within the local area, with maintenance having to be scheduled at less favoured times during the year.
- The mobile marine trade businesses who service the Landing customers for cleaning, painting and refits and repairs will be displaced.

2.0 Introduction

Urban Solutions (US) have been engaged by Auckland Council Customer and Community Services to undertake an Auckland Regional haul out and handstand assessment for the purpose to:

- Clearly establish the regional role that the haul out / hard stand operation at The Landing (8-12 Tamaki Drive) performs.
- Interview commercial hard stand operators in the Auckland Region to assess the services they offer and their level of provision for DIY boat maintenance plus capacity to haul out multihull vessels.
- Provide a cost comparison of haul out services provided at The Landing with other comparable facilities in the Auckland region.
- Identify all haul out / hard stand operations in the Auckland region (east coast) that undertake maintenance on mono and multihull yachts and launches.
- Assess the provision of boat maintenance hard stand areas within the Auckland Region spatially over the past three decades.
- Consider alternative 'out of hours emergency haul out' options to The Landing for the Harbour Master within the Waitematā Harbour.

The Auckland Haul Out and Hardstand Facilities Assessment has been carried out so any service change at the Landing is clearly understood in the context of the capability and capacity of other commercial operators and clubs in the region.

The Landing, Okahu Bay, consists of a wide public boat ramp with ancillary uses such as car and trailer parking, a boat haul out facility and maintenance yard, yacht club buildings and other commercial and public amenities. The haul out and hardstand facility for boat maintenance is the focus of this assessment.

The sources of information include hardstand facility published information and rates, face to face and phone interviews with a range of hardstand operators and clubs, site visits, research reports, Auckland Transport and Auckland Council GIS data and statistics.

3.0 The Landing

3.1 Background

The Landing has operated as a boat yard for many decades servicing boats from Waitematā Harbour and Hauraki Gulf.

In 1996, ownership and administration of The Landing was transferred from the Ports of Auckland Limited to Auckland City Council. This included the boat hardstand that occupied a site area of 13,400 m². This compares to the 2021 area of the hard stand that measures around 5500 m² exclusive of administration offices, dinghy lockers and the boat ramp.

The haul out facility for boat maintenance has been a principal characteristic of The Landing for several decades. The maintenance yard area was substantially reduced in size from 140 boat spaces (13,400 m²) down to 50 (5500 m²) during its 2007/08 redevelopment, to enable other recreational uses within The Landing.

In 2010, The Landing was transferred to Auckland Council as a Parks, Sports and Recreation asset, with the decision making allocated to the Ōrākei Local Board. Since 2005, marine contracting firm, STF Limited, has been Auckland Council's appointed operator of the hardstand and haul out operation. Past investments by Auckland Council have included a 30T Travelift straddle carrier which was surplus to requirements at Westhaven, hardstand seal improvements, wastewater filtration system, ancillary buildings and a Roodberg hydraulic boat lift trailer and loader. On behalf of Auckland Council's Community Facilities department, STF continues to manage the hardstand and haul out operations. Haul out and hardstand storage fees are paid directly from customers to Auckland Council.

3.2 Research Approach

Three different approaches were used to research data and information regarding Auckland's haul out and hardstands and assessing how The Landing fits within this regional context, including:

- Interviews and enquiries
- Extracting information from published data and reports.
- Using standard industry ratios.

The author, Lorenzo Canal is an Auckland based chartered civil engineer with a focus on coastal infrastructure. He has no commercial conflicts of interest with any of the marine facilities assessed, but is a private launch owner and a member of the Sandspit Yacht Club, Outboard Boating Club, Classic Yacht Club and Kawau Yacht Club.

Interviews have been undertaken by Lorenzo Canal with a range of stakeholders to inform this report and improve the accuracy of the published data. Communications included:

- Interviews and site visits with commercial hard stand operators from Pier21 Marine Centre, Orams Marine Services, Tamaki Marine Park. Phone interviews with Half Moon Bay Marina, Pine Harbour Marina Beachlands, Gulf Harbour Marina and Hibiscus and Marine Storage handstand operators.

- Face to face interviews and site visits with the operations manager at The Landing. Discussions on site with boat owners undertaking work at The Landing during November and December 2020.
- Attendance at the Ōrākei Local Board December 2020 Workshop.
- Telephone interview with the Harbourmaster's office.
- Site visits and discussions with a range of boat owners at club hardstand facilities including Devonport Yacht Club, The Goldhole and Sandspit Yacht Club. Telephone enquiries with boat club facilities to verify haul out and hardstand capabilities and published data with Te Atatū Boat Club and Brooklands Boating Club.

Published data available from organisations' websites was used as the basis for the register and prices provided in the Appendix B. The Auckland Council GIS dataset was used to estimate the hardstand areas over the past three decades. Interviews provided updates of current and future hardstand areas and haul out equipment upgrades. The Auckland Transport GIS mooring dataset was used to determine swing mooring numbers and locations. The Panuku Marina Berth Supply and Demand Trends 2018 was used as the basis for marina and vessel data.

Industry standard haul out frequency is based on the assumption that boats on moorings or marinas require a hull and propellor antifouling renewal at the interval recommended by the manufacturer or retailer, if the paint has been scraped or damaged, or if persistent fouling is occurring. Paints generally last between one and two years where haul out is required on a hardstand for around 5-10 days before re-launching.

Boats on average require haul out annually for cleaning and inspection. Antifouling, servicing and repairs typically occur on a 48-month cycle.

"Clean Below Good to Go" is both an Auckland Council (Biodiversity Group) and central government initiative set up to control the spread of evasive marine organisms. The key to the initiative is to encourage boat owners to clean their vessels regularly and professionally.

Biofouling and invasive pest species cleaning require haul out at least annually, and anytime there is a build-up of fouling where the wash off is contained and treated before going back into the sea.

Under the Auckland Unitary Plan sections F2.13, F2.19.7 and F2.21.8. it is a requirement for boat owners to clean boat hulls to help stop the spread of invasive pests.

3.3 The Landing Concept Plan

The guiding document for further development at The Landing is the "Pathways to the Sea Concept plan 2013". The concept plan is subject to a review and potential revision in the 2021 financial year. The need for possible change to the plan is to address the increased pressure put on the site through multiple, and sometimes competing, outcomes and to realise additional recreation opportunities.

The hard stand represents one of the spaces at The Landing where service change could be achieved. However, depending on the extent of any change, this may result in a significant reduction to the boat maintenance and haul out services currently provided at the site for the boating community.

To appreciate the wider service impacts to boat owners and to inform any potential concept plan changes an assessment of Auckland's haul out and hard stand facilities has been undertaken and is the subject of this report.

This Auckland Haul Out and Hardstand Facilities Assessment has been carried out so any service change at The Landing is clearly understood in the context of the capability and capacity of other commercial operators and clubs in the region.

3.4 Current Operation

The Landing's current operation offers a modern, well serviced haul out operation and maintenance hardstand. The Landing provides an affordable haul out and hardstand service that is available for the public to book with no requirement for membership or restrictive terms.

The Landing is used to haul out and service all the Auckland Transport Harbour Master vessels at no fee. The Auckland Transport Harbour Master's office regularly utilises The Landing as the only facility for 24-hour emergency haul out services such as removal of navigational hazards, salvage and abandoned boats and emergencies.

Haul and hardstand storage operations are managed and operated by STF Limited on behalf of Auckland Council under an operational management contract. Once the boats are positioned on site on their cradle by STF operations staff, most of the owners organize their own maintenance, repairs and refits in accordance with the terms and conditions of the facility. Some boat owners choose to carry out their own work while others engage a range of trades from the Auckland marine sector who are in regular attendance at the facility and work under STF's health and safety policy and regulations.

The Landing haul out operates a loader that hauls boats with the choice of a traditional trolley and cradle system or a 38T Roodberg Boat Lift hydraulic trailer. The new boat lift trailer was introduced a few years ago to increase the number of boat movements around high tide and improve multihull lifts.

The boat lift trailer is adjustable to match the size and hull type of the vessels. The width and height can be adjusted with the hydraulic system of the towing loader. The adjustable multiple loading points are set up to match the specific hull shape to prevent damage to boats during lifting, a preferred method for multihulls.

The trailer is suitable for mono and multihulls; it can be configured for maximum beam widths up to 10m. The Landing also has a range of traditional trolley and cradles that fit a range of vessels including keel yachts, launches and multihulls.

The above mentioned haul out capabilities and affordable rates make The Landing a popular hardstand for local yacht and launch owners on a limited budget. For similar reasons, the facility services multihulls up to 65ft in length.

An existing 30 tonne capacity Travelift B straddle-carrier is based at the Landing but as no wharf structure exists for its primary purpose of boat lifting, it is limited operationally to such tasks as keel fittings and transfer of vessels between cradles and flat-bed trucks.

The types of vessels that typically utilise the Landing include:

- Launches and keelers between 8m (26ft) to 20m (65ft) with a maximum weight of 38T. The average size of both launches and keelers hauled is around 11m (36ft).

- Multihull (powerboats and yachts) between 8m (26ft) to 20m (65ft) and beam width of up to 10m (33ft). The average size of multihulls hauled is around 13m (42ft).

The Landing hosts marine sector trades and businesses that are available onsite to boat owners. Around 600 commercial businesses are registered to work within The Landing under the operational management of STF Ltd. Around 25 marine trade businesses regularly service The Landing's customers. These trades include:

- vessel survey service
- marine chandlery
- boat builder
- marine upholstery
- yacht rigging services
- mast gantry
- marine mechanical engineers
- engine and outboard specialists
- boat painters
- boat valet
- marine electrical and electronics
- marine stainless fabricators.

3.5 Environmental

The Landing has been an earlier adopter of sustainable environmental practices. It has invested in a modern treatment plant to collect and treat stormwater runoff from within the hardstand area to prevent contamination discharging to the sea. Recently other commercial hardstand operations have implemented similar modern water quality treatment systems and environmental management plans as conditions of resource consents. Recent examples of treatment upgrades include the new facilities at Orams and Tamaki Marine Park.

3.5.1 Blue Flag Accreditation

The Landing hardstand operation is Blue Flag accredited, with a comprehensive environmental management plan in place along with a modern filtration treatment system. The Landing is the only marine haul out and hardstand operation accredited in New Zealand. The Blue Flag is an international environmental accreditation programme that works towards sustainable development of beaches and marinas through criteria dealing with water quality, environmental education and information, environmental management, operational management, health and safety.

3.6 Local Catchment

The Landing haul out and hardstand services mainly a local catchment of yachts and motorboats from Waitematā Harbour swing moorings³ and local marinas along with some visiting boats to Auckland.

³ Data from Auckland Transports Open Data GIS moorings locations

The swing mooring boat owners tend to seek affordable and close options for haul out and maintenance hardstand. The main areas of swing mooring accessing The Landing are Hobson Bay, Okahu Bay, Devonport, Northcote, Shoal Bay, Westhaven, Beach Haven, Greenhithe, Te Atatū and West Harbour. The Auckland Transport records 1253 registered moorings in the Waitematā as shown in Figure 1.

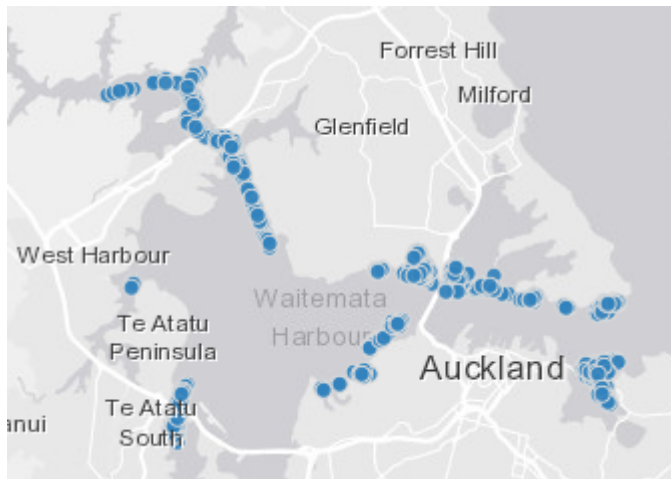


Figure 1 - Local catchment of swing moorings

Marinas close to The Landing (within 5 nautical miles) include Ōrākei (179 berths), Outboard Boating Club (213 berths), Bayswater (394 berths), Westhaven (1,419 berths) and Half Moon Bay (560 berths). There is a total of 2,765 marina berths from the 5 local marinas.

Westhaven charter boat berths, Silo superyacht marina, Viaduct Harbour marina and West Harbour marina along with smaller club marinas have not been included as they are unlikely to be significant customers of The Landing.

Outboard Boating Club OBC has a marina consisting of 213 berths ranging from 10.5m to 16m in length for launches and has a height restriction to pass under Tamaki Drive. Stage I of OBC opened in 1994 and Stage II went operational in 1997. The marina has no haul out and hardstand facility. Many boats within the OBC marina utilise The Landing as their local haul out facility for routine cleaning, antifouling and maintenance.

Ōrākei Marina is the most recent local marina to be established in 2006 and is located immediately adjacent to The Landing. The marina largely caters for larger recreational boats. Out of the 179 berths⁴, only 74 are in the 13-15m range that suit The Landing's haul out operation.

Westhaven Marina established in the 1930's is the largest marina within The Landing's catchment comprising 1,419 berths or over 30% of the Auckland marina market. The marina has 933 yachts and launches in the 8 – 12m size range and 403 in the 14 – 18m range that can be hauled out at The Landing. Westhaven is serviced by several hard stands and haul out facilities that are in proximity including Pier21, Orams, The Landing and the Floating Dock at X Pier.

Bayswater Marina established in 1996, is located just north of Devonport on the Waitematā Harbour comprising 394 berths protected by a floating breakwater. The marina has no haul out and hardstand facility. Only 15 boats are larger than the 10 - 20m range that can be hauled out at The Landing.

Half Moon Bay Marina HMB, first developed in the early 1970's, has 560 berths located a short distance up the Tamaki Estuary. The North Pier Marina is a new 95-berth extension development of HMB due for completion 2021. The new berths are between 15 to 30 metres to meet demand from newer larger recreational boats within the Auckland market. HMB has its own haul out and hardstand

⁴ Panuku Marina Berth Supply & Demand Trends April 2018

facility that is also being upgraded with a new 85 Tonnes Travelift to accommodate the larger vessels. Based on interviews with boat owners at The Landing during December 2020, several boats were from HMB undertaking routine maintenance and painting. This was mainly due to construction activities impacting on the availability of the hardstand space at HMB over the peak maintenance season. The HMB operations staff advised that the upgraded hardstand would be slightly smaller in size than the original hardstand once complete later in 2021.

The multi-hull catchment extends beyond the Auckland marinas to the Coromandel and up towards Whangarei along with transient offshore cruisers. There is a limited supply of multihull marina berths within the local catchment. As an example, the largest marina Westhaven has 18 multihull berths in the Westhaven Pier Y development.

3.7 Utilisation and Occupancy

The Landing sealed hardstand is around 5500 m² exclusive of administration offices, dinghy lockers and boat ramp. The facility has capacity for between 25 – 66 vessels on the hardstand dependent on the size and hull type range.

Like other Auckland hardstands, the peak demand is between September and December. During this period, The Landing is at or close to capacity with an average 15 boat movements per week required to fill the yard and keep it turning over at an efficient rate to meet bookings. During the slower winter season, the movements drop to between 8-10 movements per week.

Both long term and short-term boat maintenance is undertaken at The Landing. The long-term work taking between 3 to 14 weeks typically includes repainting, refits, fitting of imported new boats to suit local conditions, mechanical replacement, structural upgrades and damage repairs. Most of this type of work is scheduled during April to October.

Short term routine haul outs typically take between 5 – 10 days to undertake with high demand during September to December in readiness for the Summer boating season. Routine work typically includes survey inspections, antifoul, painting, engine and prop servicing and minor repairs.

From site inspections during November and December 2020, at any one time the hardstand typically has a makeup of 10-15 smaller <40ft yachts and launches, 5-12 launches and yachts >40ft, and 3-5 multihulls. It was evident during the site visits that several boat owners were undertaking their own work at the hardstand. Demand for the peak season is high with bookings for the peak season required 6-12 months in advance to secure a space.

Hauling out boats is tidally restricted to two hours either side of high water with a boat's maximum draft of 2.4m. The slipway is exposed during Northerly and North Easterly winds. The operators, STF estimate that between 1-3 working days per month are impacted by un-favorable sea state conditions. The tidal and northerly exposure issues do not significantly impact on the ability of the facility to operate at capacity to match peak season demand since the introduction of the boat lift hydraulic trailer.

The annual boat movements and yard utilisation data in the graphs below was provided by The Landing operations manager. During the 2020 year, a national emergency was declared due to the COVID-19 pandemic. The hardstand operation was closed during a six-week period between March and April.

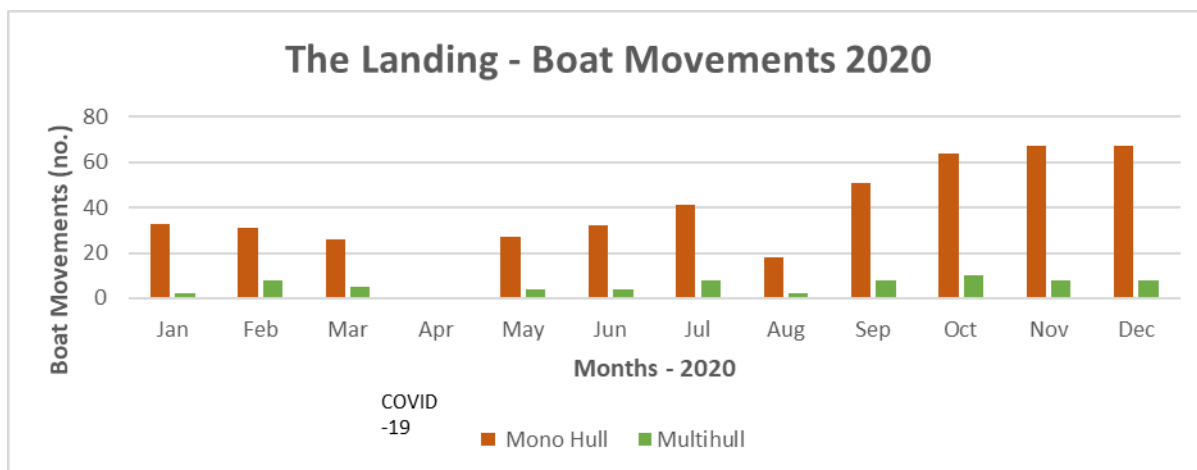


Figure 2 - Boat Movements 2020

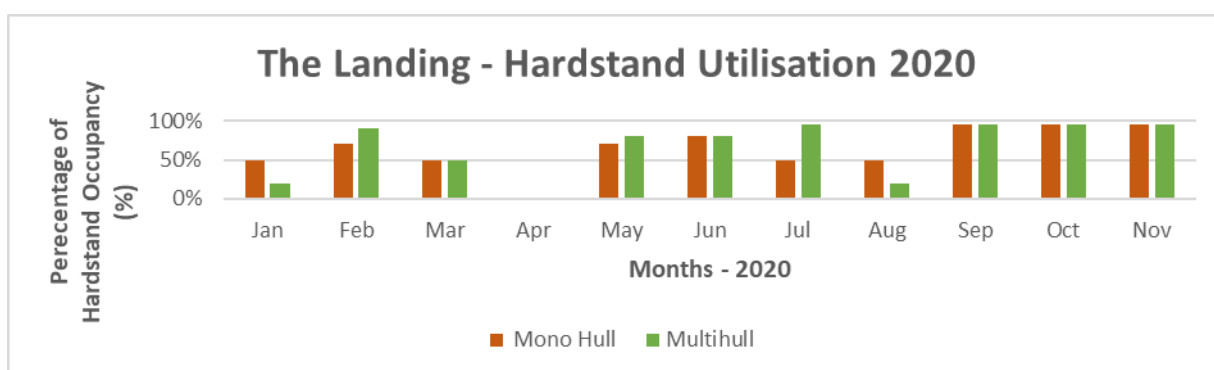


Figure 3- Hardstand Utilisation 2020

3.8 The Landing – Hardstand Market Role

The local and regional role that the haul out / hard stand operation at The Landing (8-12 Tamaki Drive) performs is as follows:

- The 5,500m² hardstand represents a 29% contribution to the Waitematā boat haul out facilities along with Pier21 (18%) and newly upgraded Orams (53%). Regionally, the hardstand represents 5% of the total commercial hardstand space.
- The only council owned and operated haul out and hardstand facility in Auckland.
- It offers affordable options for recreational boat owners with lower rates than commercial facilities and similar rates to non-member club rates.
- Caters well for local Waitematā based smaller yacht and launch owners on limited budgets required to undertake regular hull cleaning, antifouling, maintenance and repairs.
- Long established handling and servicing of multihull yachts utilising a 38-tonne hydraulic lift trailer and multihull specific cradles. The trailer can manage multihulls with a beam width up to 10m and 65Ft in length. Rates for multihull storage is less expensive than other hardstands that can accommodate multihulls.
- The Landing has an established regional significance for providing an environmentally safe and sustainable hardstand for servicing the surrounding launches and boats. The facility supports the “Clean Below, Good to Go” campaign.

4.0 Current Auckland Hardstand Supply

4.1 Hardstand Supply and Capability

The Auckland hardstands associated with marinas, boat yards and boating clubs are provided in figure 4. In addition to The Landing, there are 10 haul out and hard stand commercially operated facilities in the Auckland region. Recreational yachts and launches are also serviced by 11 Auckland boat clubs with haul out and hardstand facilities.

The haul out lifting equipment across the facilities includes 10 straddle carriers ranging between 30T to 820T; 3 hydraulic lift trailers ranging from 20T to 60T; and slipways trailers and cradles with winches rated up to 600T. Monohull vessels ranging between 8m to 70m with a maximum load of 820 Tonnes can be accommodated by the current Auckland facilities. The largest and most versatile hardstand is Orams upgraded facility which has recently commissioned a 600T slipway and an 820T staddle carrier. Vessels over 70m can be lifted by crane at the Orams yard or utilise the Devonport Babcock drydock.

The hardstands and haul out facilities that can cater for multihull masted yachts with a beam over 8m are: Orams, Tamaki Marine Park (must be de-rigged to pass under Panmure Bridge), Robertson's and Hibiscus Marine. Other options outside the Auckland Region include facilities at Whangarei and Tauranga.

Information for the Auckland hardstand and haul out capabilities are detailed in the directory provided in Appendix A. The hardstand areas are estimated based on Auckland Council GIS data and include the existing facilities and those that are due for completion 2021. Hardstand areas all exclude ancillary buildings, long term boat storage, carparking and slipways. The hardstands are mostly sealed with some exceptions in the club facilities.

In summary, the area of handstand with the Auckland region is as follows:

The Landing hardstand (Council facility)	5,500m ²
Commercial hardstand (associated with marinas & yards)	88,200 m ²
Club hardstand (associated with boat clubs)	<u>29,500 m²</u>
Total Estimated hardstand Area	123,200m ²

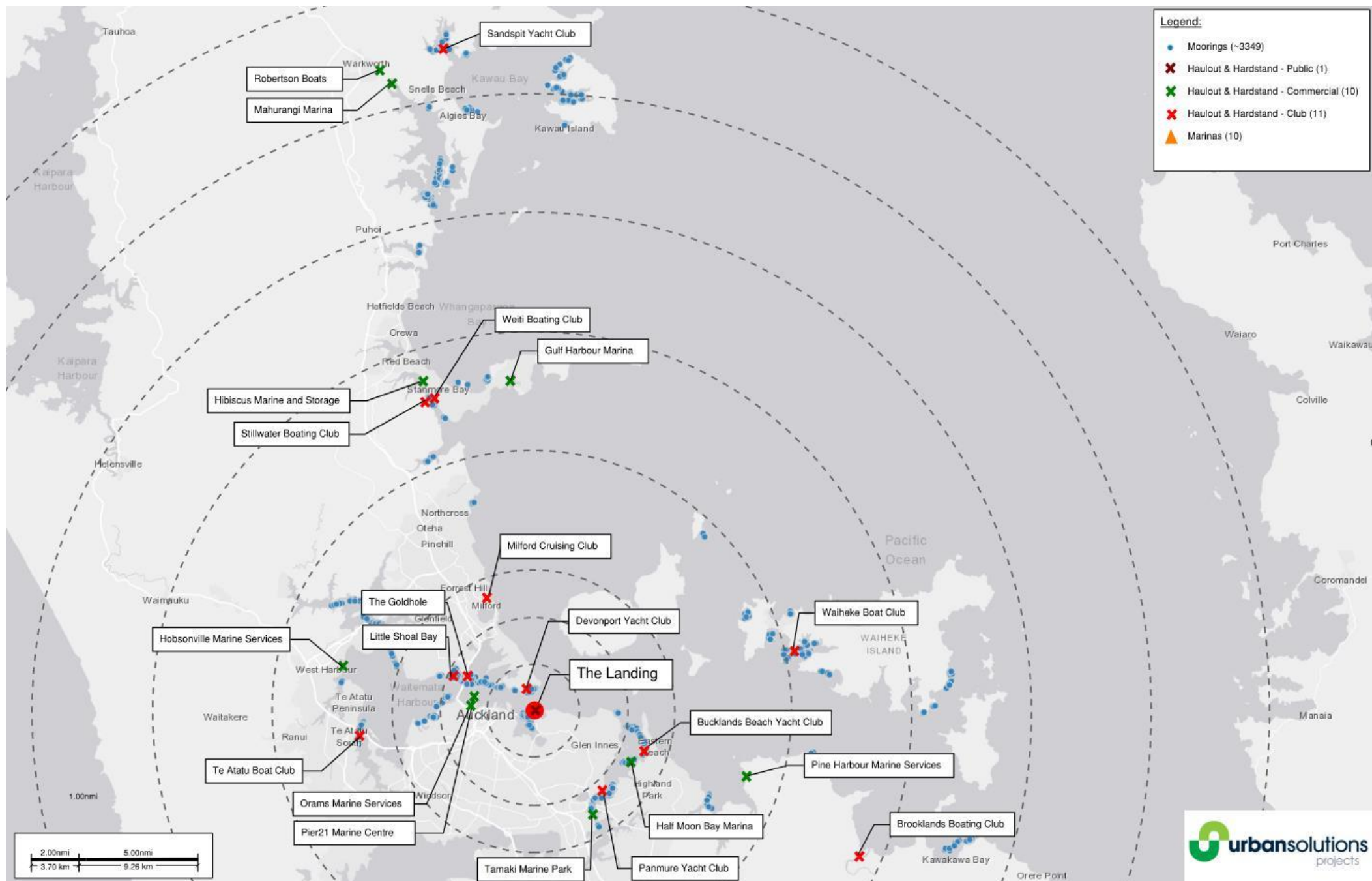


Figure 4 - Hardstand and Haul out facilities within Auckland region

4.2 Commercial Hardstands

There are 10 commercially operated haul out and hardstands within the Auckland area between Warkworth and Pine Harbour. The commercial operations, including those at marinas and boat yards, typically use straddle-carrier systems and slipways which allow them to haul considerably heavier mono hull boats than at The Landing. The number of boat movements varies considerably for each facility depending on the lifting operation and length of stay. Hardstand area has been used to compare facilities as shown in the graph below. The Landing represents 5% of the overall commercial and public hardstand areas.

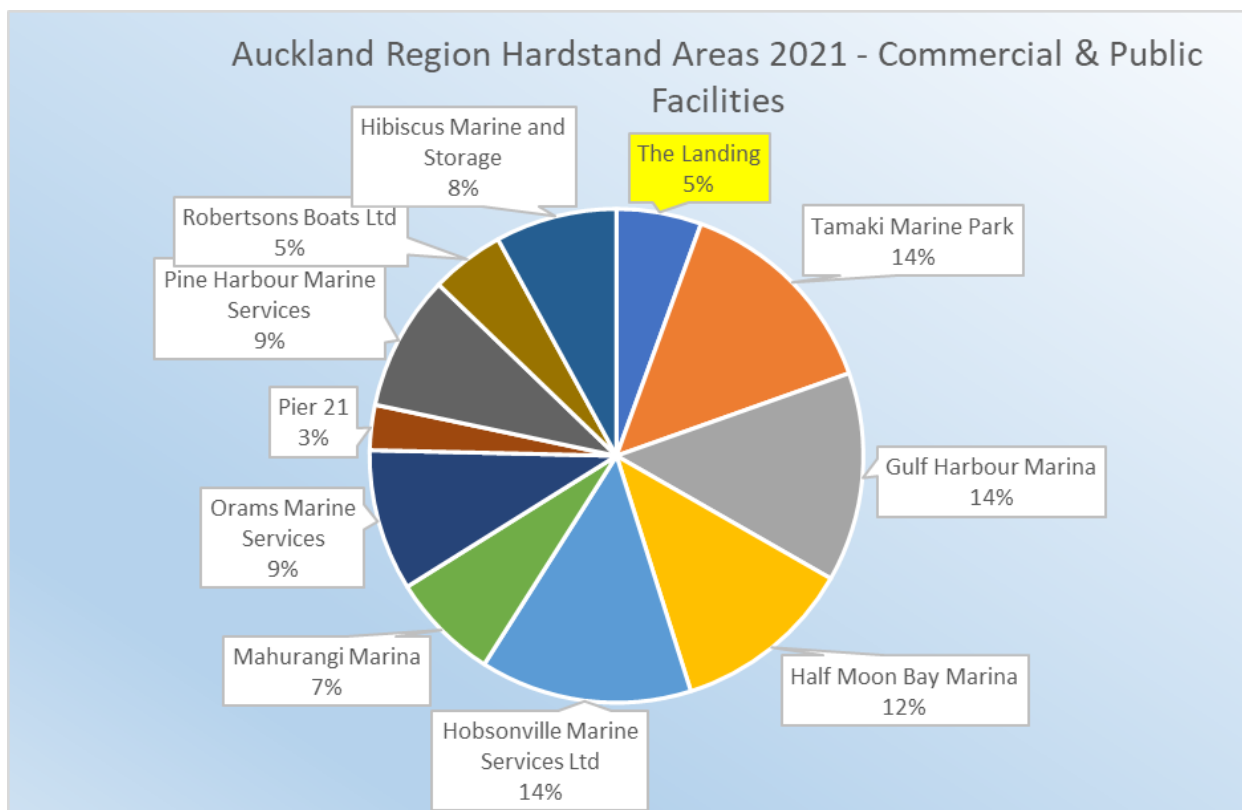


Figure 5- Hardstand Areas 2021 - Public and Commercial

4.3 Club Hardstands

There are 11 boat club operated haul-out and hardstands within the Auckland area between Sandspit and Clevedon. The club operations typically use slipways with boat trailer cradles hauled with either winches or tractors. The boat club facilities typically suit yachts and launches with a similar range to The Landing i.e. ranging between 8m to 14m in length and between 9 – 20 Tonnes. The hardstand areas of clubs are a mix of sealed and unsealed surfaces. Some clubs have seasonal restrictions that do not allow haul out during the Summer period. The area has been used to compare facilities as shown in the graph below.

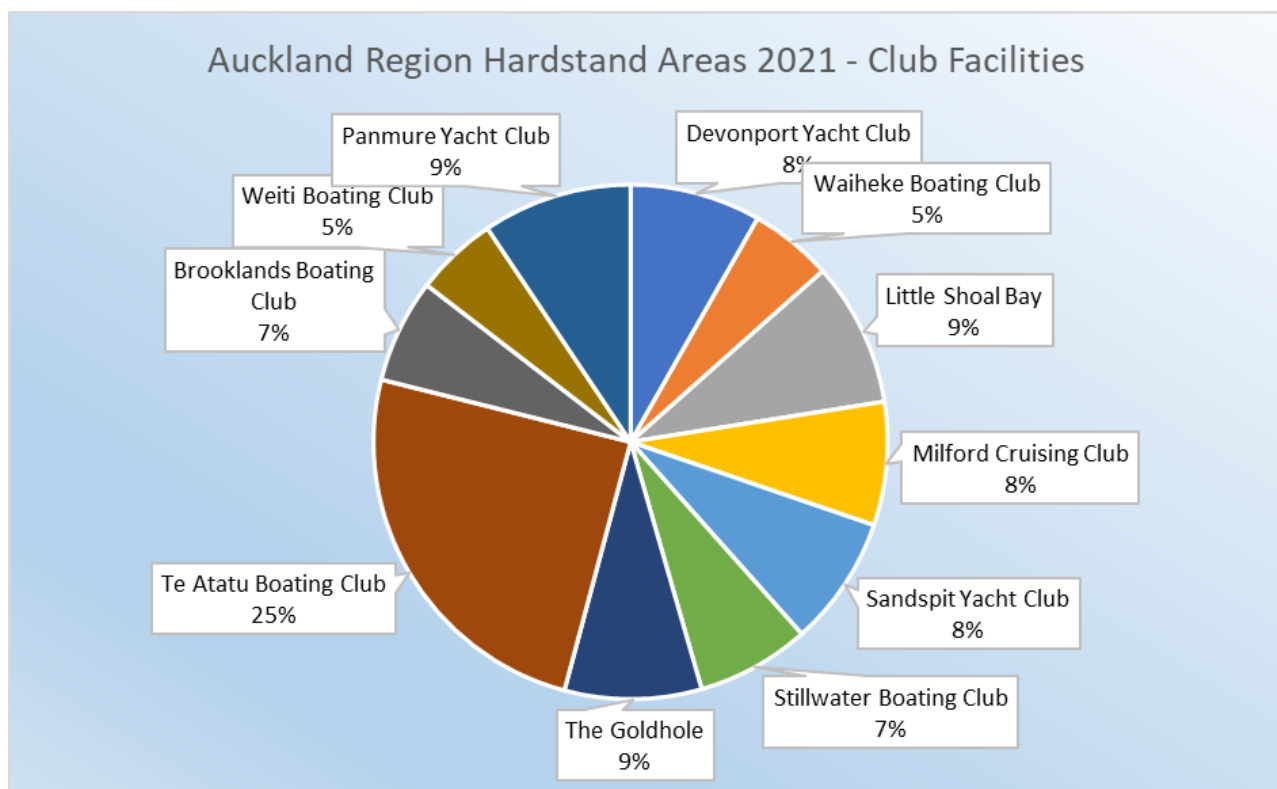


Figure 6 - Hardstand Areas 2021 - Clubs

4.4 Hardstand Trends

The provision of boat maintenance hard stand areas within the Auckland Region has been assessed spatially over the past three decades. The Hardstand Area Register provided in the Appendix details the changes in handstand areas for each facility since 1996. Until recently the hardstand areas for both commercial facilities and boat clubs were on the decline mainly due to displacement for long term boat storage and marina extensions. Recently Orams, Tamaki Marine Park and Gulf Harbour have been developing their marine sites to increase boat storage and enhance haulage capability to cater for larger vessels up to 70m.

The graphs show the changes to area over the past few decades. During 2021, the following facility changes will increase the total estimated commercial hardstand area from 78,500 m² to 86,700 m²:

- Orams hardstand is doubling maintenance hardstand area from 4,600m² to 9,200m² as part of the overall Orams site development due for completion May 2021.
- Tamaki Marine Park is creating 7000 m² of hardstand area for boat maintenance. 5000m² of space is operational with a new 60T hydraulic boat lift trailer and slipway. The remaining 2000 m² is scheduled for completion by the end of 2021. A further 5,000 m² of hardstand is schedule for development by 2024.

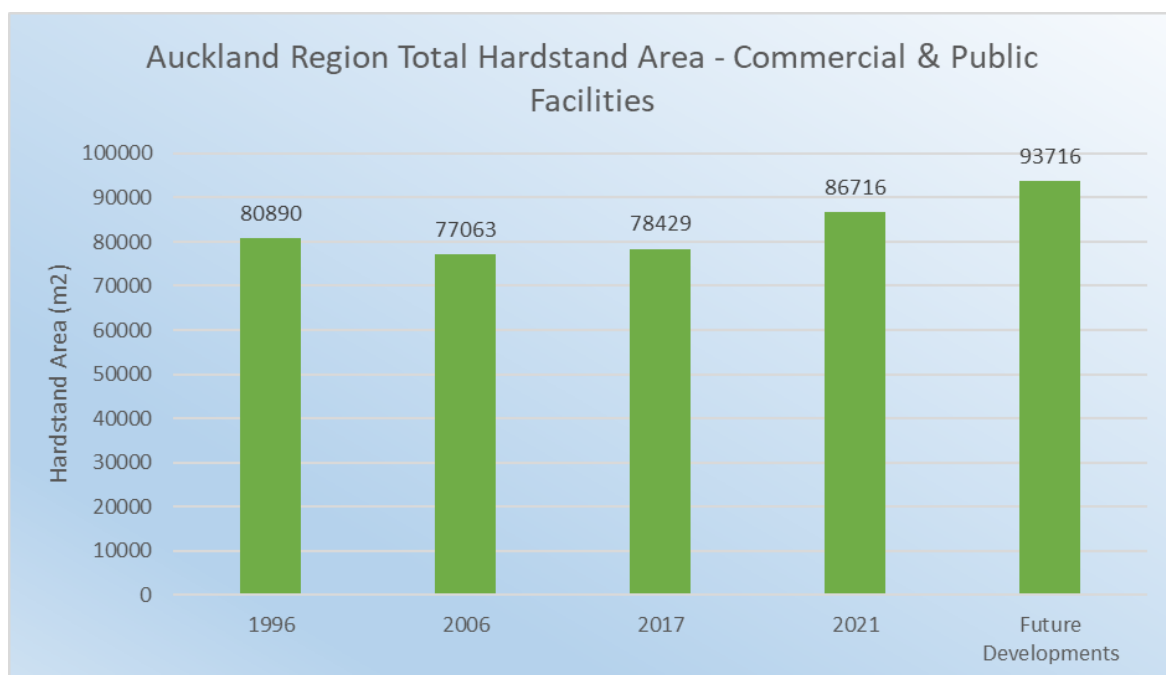


Figure 7 - Hardstand Area Trends - Commercial and Public

It can be seen from Figure 8 that over time Half Moon Bay and Pine Harbour have reduced hardstand space for long term boat storage, Tamaki Marine Park, Orams, and Hobsonville have increased space with an overall net increase of 5,800 m² since 1996. This net increase area is similar to The Landing hardstand area (5,500 m²).

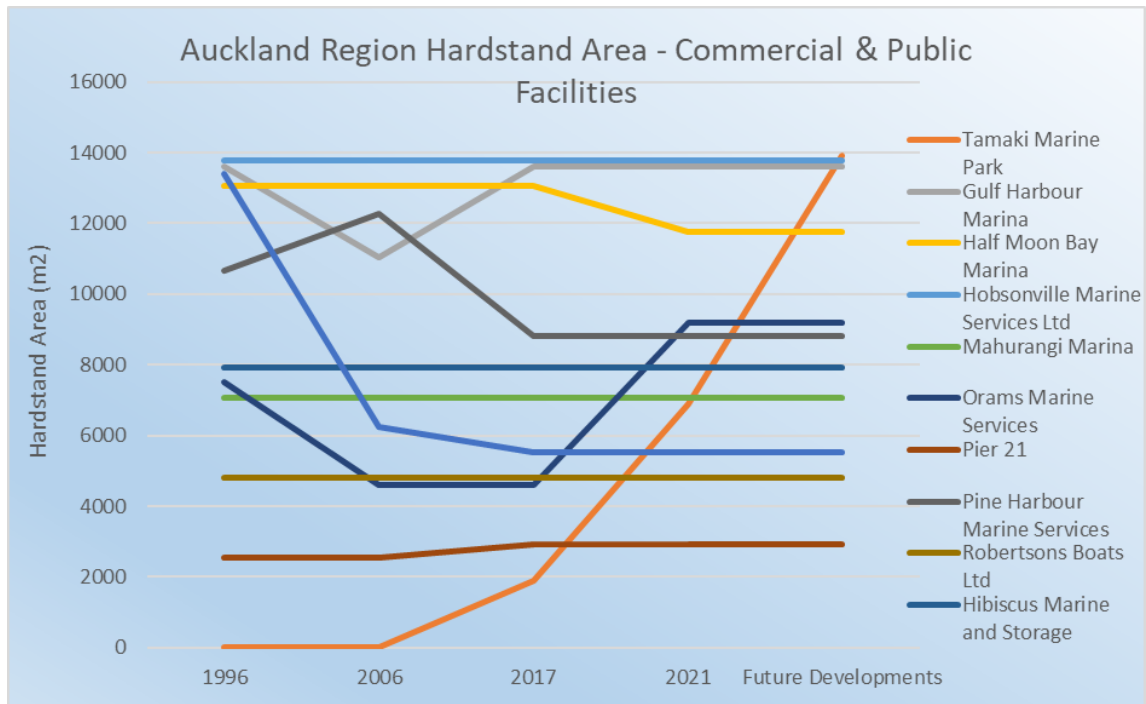


Figure 8 - Hardstand Area Changes

Club hardstand facilities have declined since 1996 by 3,750m². The most significant decline is from the Sandspit Yacht Club that reduced in size to make way for the marina carpark and amenities.

A number of club hardstands within the Waitematā Harbour such as Little Shoal Bay and Devonport Yacht Club have seasonal restrictions that do not provide boat maintenance services for many vessels during the peak season between October and December. A few boat clubs such as Little Shoal Bay and The Goldhole in Northcote are finding it difficult to meet current environmental and safety management conditions and regulations and risk closure for non-compliance matters.

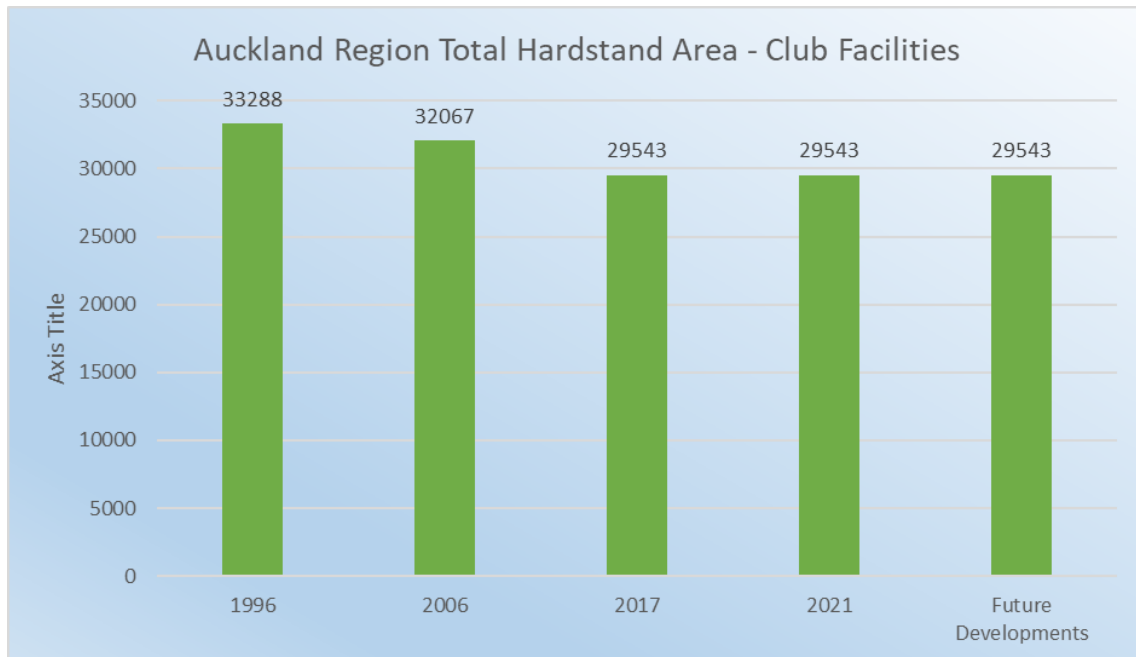


Figure 9 - Hardstand Area Trends - Clubs

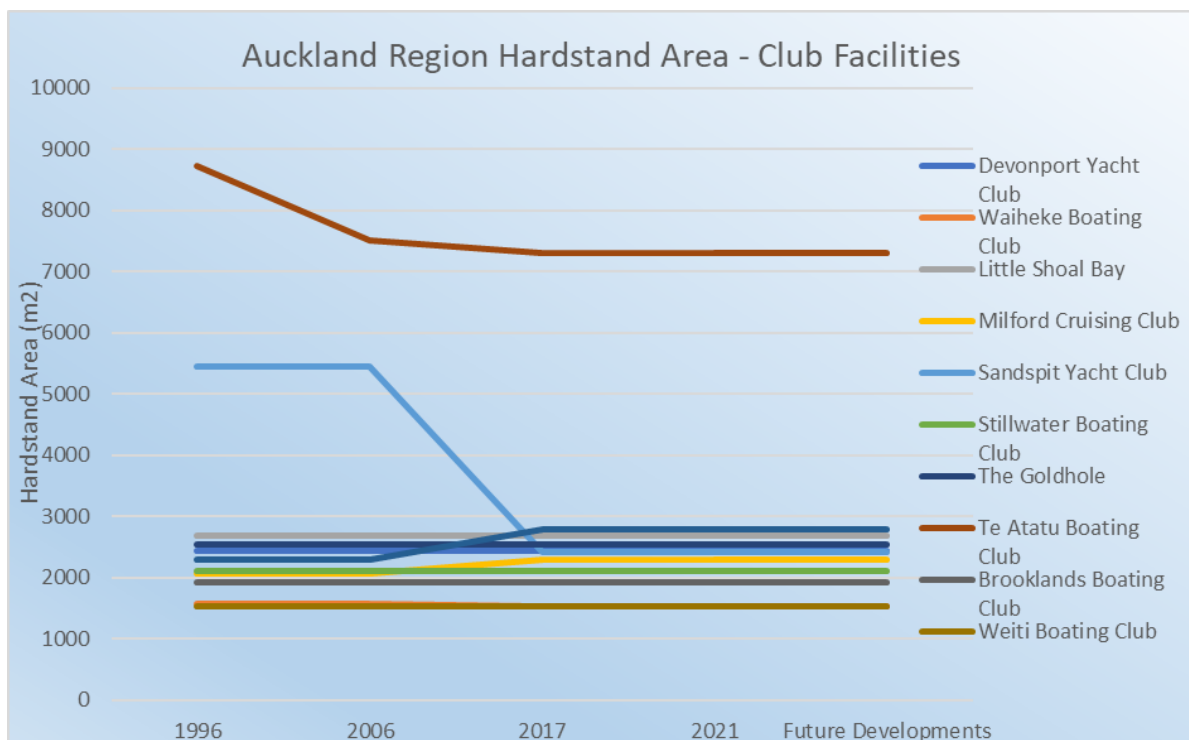


Figure 10 - Hardstand area changes - Clubs

5.0 Demand for Hardstands

As previously mentioned in Section 3.6, The Landing haul out and hardstand services mainly a local catchment of yachts and motorboats from Waitematā Harbour swing moorings and local marinas along with some visiting boats to Auckland.

Figure 11 shows the marinas and swing moorings across the Auckland Region. The Auckland Transport GIS records 3350 registered moorings in the Auckland Region. A study commissioned by Panuku “Marina Berth Supply and Demand Trend 2018” estimates the Auckland marina market comprises over 4,800 marina berths with an average length of 12.8m. Westhaven is the largest marina in this market, comprising over 30% of the marina berths.

The total estimated number of Auckland boats on swing mooring or floating marina berths is 8,150. The total number yachts and launches in New Zealand (2014) was estimated at 22,313 with annual growth of 100 per annum⁵. Based on this estimate, there are 700 more boats or a total of 23,013. This estimate may be conservative as recent interviews with boat brokers place the annual new fleet growth at 250 boats per annum.

There is a strong demand for continued growth in boat numbers and increase in boat size. The Panuku study assesses the fastest growth in new boat sales is in the 14 to 20m size range. This is evidenced by the Westhaven waiting list (2018) which has grown over the past few years with customers wanting marina berths in the 13.5m to 20m range.

This demand places increased growth pressure on existing hardstands, haul out facilities and marina berths. New hardstand and haul out facilities at Orams, Half Moon Bay and Tamaki Marine Park are upgrading to accommodate the demand for an increase in larger vessels.

⁵ NZ Marine Industry Assoc, Oct 2014

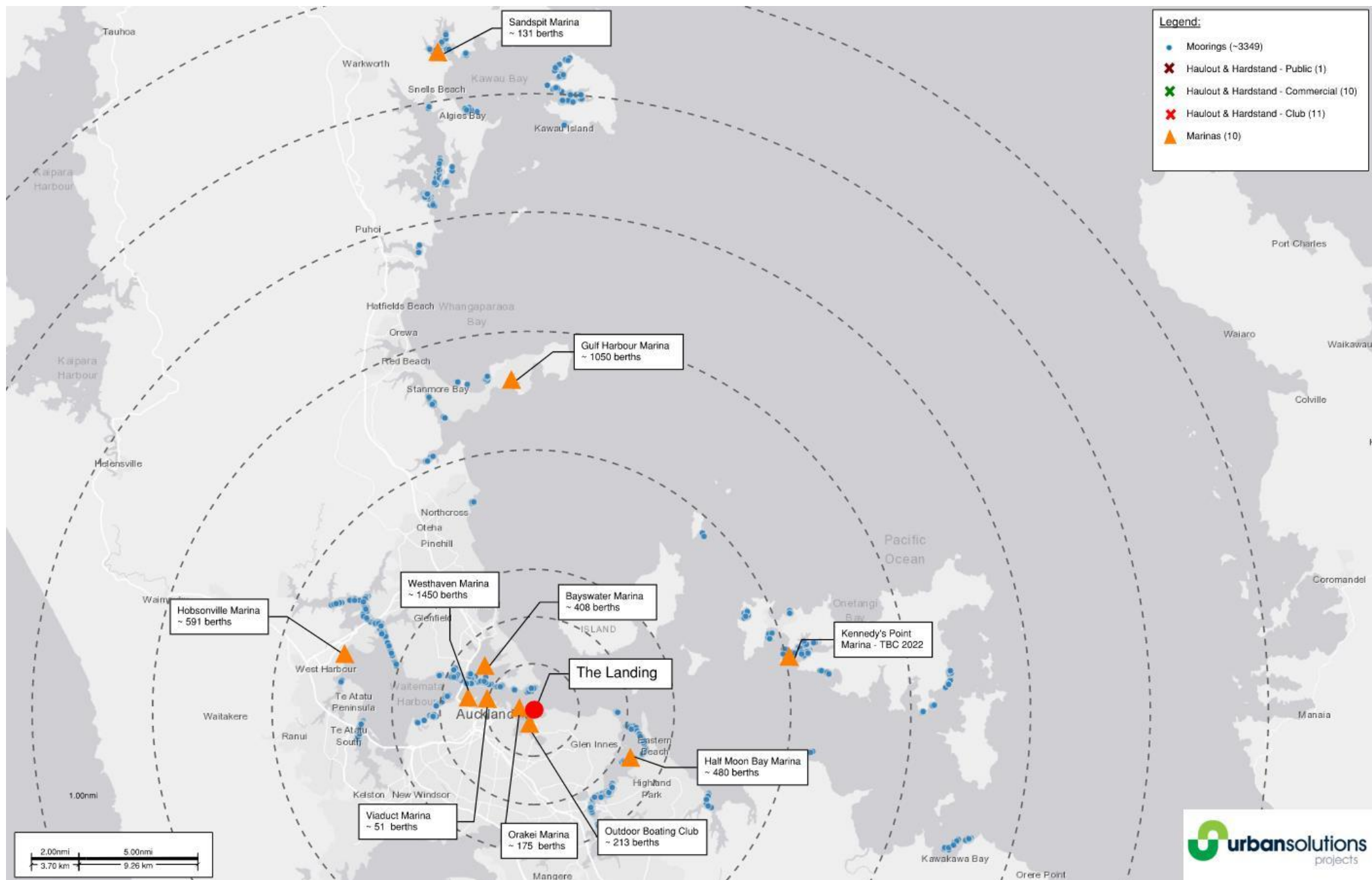


Figure 11 - Marinas & Swing Moorings in Auckland Region

6.0 Price Comparison

The Landing price list effective from 1st March 2020 is provided in the Appendix B along with other comparable commercial hardstands. The Landing prices for return hauling out range from \$202 for 8m boats to \$442 for 18m boats. Prices for daily hardstand storage range from \$25 for 8m to \$ 54 for 18m mono hulls boats and \$44 for 8m to \$96 for 18m multihulls. Overall prices have increased by around 280% since 2011.

However, compared to Auckland commercial operations, The Landing price to public customers is currently between 30% to 60% less expensive than the average commercial haul out and hardstand prices depending on boat length. The following graphs provide a comparison of the return haul out prices and daily hardstand storage for comparable commercial facilities. Further detail on rates is provided in the Appendix B.

The Landing rates are like non-member rates offered by clubs' hardstands open to the public with comparable levels of service and facilities. Taking Sandspit Yacht Club as an example for club rates, prices for return haul out for a 12m monohull boat is \$143 for members and \$287 for nonmembers. The non-member rate is similar with The Landing rate for a 12m mono hull of \$292.

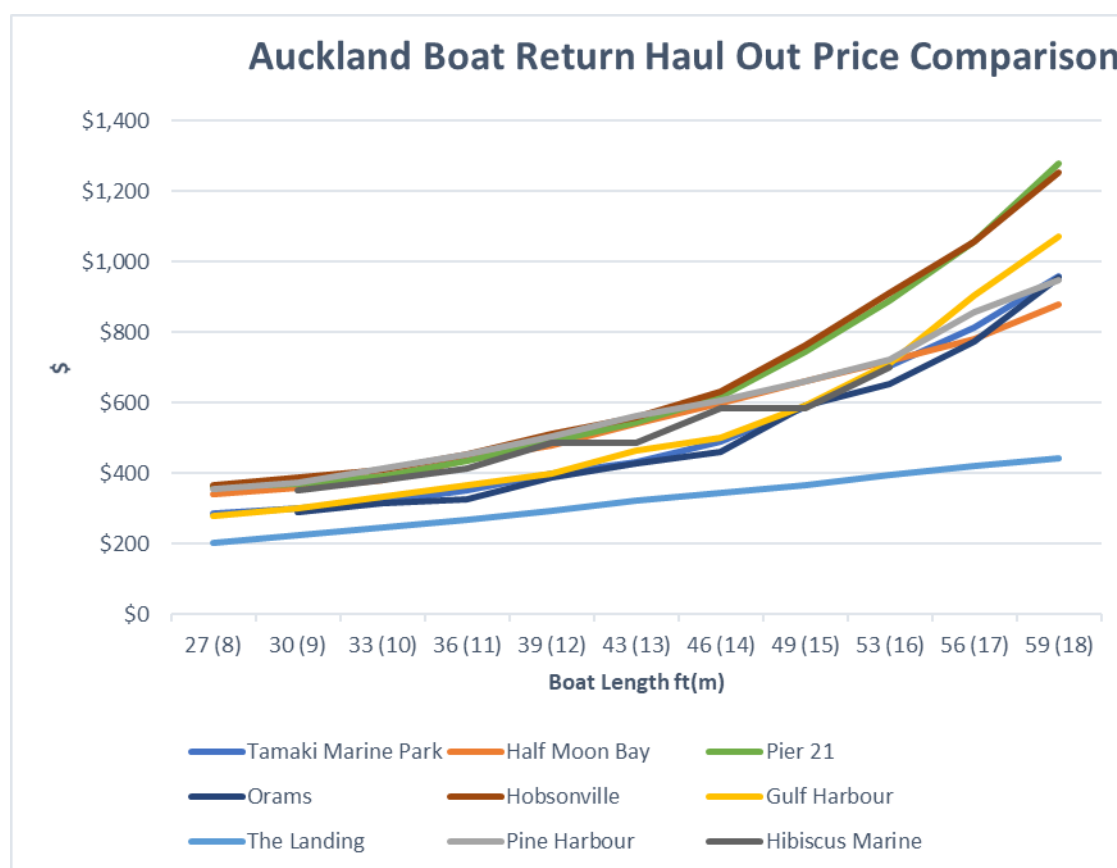


Figure 12 Auckland Return Haul out Prices

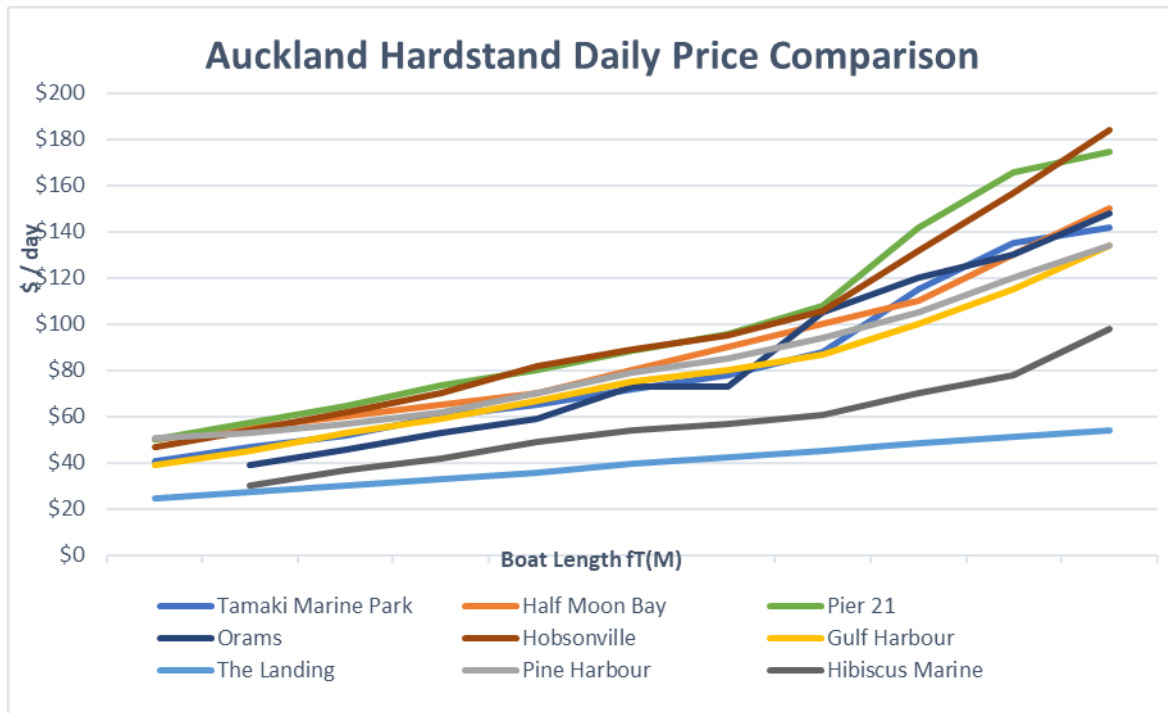


Figure 13 - Auckland Daily Handstand Prices

7.0 Service Level Impacts

7.1 Potential Impact if haul out and hardstand operation closure

Should the haul out and hardstand services at the Landing be scaled down or removed the surrounding network of commercial operators and clubs have the capability and capacity (at least across the year if not specifically during the preferred months between September and December) to accommodate any associated user displacement at current rates of demand within the Auckland region. This includes the servicing of multihulls.

Any alteration to The Landing's haul out and hard stand services could have, but not be limited to, the following potential impacts:

- After hours services and emergency support and facilities for the Harbourmaster could cease at the site.
- The boat owners who use The Landing for routine haul out, antifouling and maintenance will be faced with 30 – 60% increased costs for commercial facilities (noting that commercial facilities are likely to pick up the majority of any trade displaced from The Landing).
- Boats berthed at Outboard Boating Club (OBC), Ōrākei Marina and local swing moorings will need to travel greater distances to haul out although these distances are not considered significant.
- Additional pressure on peak period haul out and maintenance will be exacerbated within the local area, with maintenance having to be scheduled at less favoured times during the year.
- The mobile marine trade businesses who service the Landing customers for cleaning, painting and refits and repairs will be displaced.

8.0 Emergency Services

The Landing haul out is also the only Waitemātā Harbour facility that operates an after-hours service in support of the Harbourmaster for removal of navigational hazards, abandoned vessels, salvage operations and day or night emergencies. No fees for haul out or hardstand storage is charged to the Harbourmaster as it is a council entity.

Based on an interview with the Harbourmaster's office, The Landing is utilised by the Auckland Transport Harbour Master to haul out and dispose of about 25 boats deemed to be abandoned are pulled from Auckland waters annually. It is estimated there are between 200 – 400 vessels deemed to be unseaworthy in the region. The majority of these are on swing moorings and will eventually have to be hauled out of the water by AT and dumped, at ratepayers' expense.

Vessels are often abandoned by their owners if they can no longer pay mooring fees or keep up with maintenance. The owners of abandoned boats may be impacted by poor health or might not be able to afford the many running costs of a boat.

This is no obvious alternative location to replace the landing function for the Harbourmaster. Interviews with commercial hardstands revealed a reluctance to service salvage operations mainly due to non-payment issues. The option of Auckland Council paying a fee for removals has not been explored but it's possible the position of commercial operators may change if they are guaranteed a payment for each haul out undertaken by the Harbour Master.

Further work is required to explore suitable alternatives.

APPENDIX

APPENDIX A – HAUL OUT AND HARDSTAND DIRECTORY



HAULOUT & HARDSTAND DIRECTORY - AUCKLAND REGION 2021

FACILITY NAME	FACILITY TYPE	PHYSICAL LOCATION	CONTACT DETAILS	HARDSTAND AREA 2021 (excluding buildings)	TRAVEL LIFT (\$)			SLIPWAY TRAILER			MULTIHULL SUITABILITY		BOAT OWNER ACCESSIBILITY			NOTES		
				Est GIS Area m ²	Lift rating	Max Vessel Length	Max Vessel Beam	Type / Make	Max Tonnage	Max Vessel Length	Max Beam	Max Beam	Limitations	Type of public access	Open hours and seasonal restrictions	DIY Permitted	Conditions	
AUCKLAND- Public council operated facilities																		
The Landing	Affordable, well serviced hardstand open to public. Mix of marine servicing from DIY boaties, multihulls, refits and trades. Base for harbour master emergencies, salvage and navigational hazard removal.	8-10 Tamaki Drive, Okahu Bay, Auckland	Ph: 095203638 A.H: +64 27 291 0189 E: office@thelanding.org.nz WWW: thelanding.org.nz	5520	30T Travel lift straddle carrier (limitation - boat transfer only, no wharf structure)			1. Roodberg Boat Lift Trailer 2. Loader & trolley with cradle to match multihull, yacht or launch.	38T 13T	20m (65 ft) 14m (45 ft)	10m 8m	10m	Trailer limited to 20m length. Larger vessels can be craned into yard.	Auckland Council public facility with service fees for haulage and handstand paid to council.	All year operation Gates open 7am-7pm 24hr emergency response services	Yes	No restrictions beyond facility T&Cs. All contractors working on site must be registered with The Landing.	Roodberg Hydraulic Boat Lift Trailer and a range of cradles made for a range of mono and multihulls provides loading flexibility and handling care for sailing and power multihulls up to around 65ft OAL. The existing 30 T travellift straddle carrier is limited to tasks such as keel fittings and transfer of vessels between cradles and flat bed trucks.
Hardstand area Subtotal				5520	m ²													
AUCKLAND- Commercial facilities *																		
Tamaki Marine Park	Haul-out, sealed hardstand, slipway with hydraulic trailers, fork lifts, covered sheds, drystack, long term boat storage. Site under development.	36 Gabador Place Mt Wellington, Auckland	Ph: 09 534 8341 E: info@tamakimarinpark.co.nz WWW: tamakimarinpark.co.nz	6900				1. 60T Roodberg Boat Lift Trailer 2. 20T Hydraulic Trailer 3. 2x 12T forklifts	60T 20T 12T	25m (82ft) 17m (56ft) 12m (40ft)	10m (32ft) 7m (23ft)	10m	Power or un rigged multihulls only. Not suitable for rigged sailing Multihulls as Panmure bridge has 6.8m height restriction. 2m max draft, therefore not suitable for deep keeled yachts.	Commercial operation open to boat owners and service agents subject to T&Cs and space availability.		Yes	H&S induction and yard T&Cs. No spraying by boat owners. Contractors must be approved by TMP.	Site currently under development with 5000m ² area of hardstand currently operational utilising new 60T boat lift trailer with an additional 2000m ² planned to be complete by end of 2021. A further 5000m ² planned to be developed by 2024.
Gulf Harbour Marina	Travel lift, haul-out, sealed hardstand	895 Laurie Southwick Parade, Whangaparaoa, Auckland	Ph: 09 424 6200 E: marina@gulpharbourmarina.nz WWW: gulpharbourmarina.nz	13600	100 T	35m (114 ft)	7.8m					7.8m	Insufficient beam for multihulls typically over 45ft.	Commercial operation open to boat owners and service agents		Yes	H&S induction and yard T&Cs. No spraying by boat owners. Contractors must be approved by GHM.	2020 NZMOA marina of the year, Sealed hardstand with water and power.
Half Moon Bay Marina	Haul-out, Hardstand	50 Argo Drive, Auckland	Ph: 021 867 728 E: WWW: hmbmarina.co.nz/	11763	85T 35T	20m (82 ft) 18m (60ft)	6.5m 4.6m					6.5m	Insufficient beam for multihulls typically over 40ft.	Commercial operation open to boat owners and service agents		Yes	H&S induction and yard T&Cs. No spraying by boat owners. Contractors must be approved by HMB.	HMB marina is current expanding it marina by additional 100 berths. The scheme also includes as new 80T travel lift to accommodate larger boats. The hardstand area will be slightly less than pre project once the scheme is complete later in 2021.
Hobsonville Marine Services Ltd	Boat yard, marine travel lift, haul-out	18 Clearwater Cove, Hobsonville	Ph: 09 416 7447 E: info@hobsonvillemarina.co.nz WWW: hobsonvillemarina.co.nz	13767	75T 35T	25m (82 ft) 18m (60ft)	6.3m					6.3m	Insufficient beam for multihulls typically over 36ft.	Commercial operation open to boat owners and service agents		Yes	H&S induction and yard T&Cs. No spraying by boat owners. All contractors working on site must have a current Service Providers Licence from Hobsonville Marine Services.	Large hardstand with supporting services such as boat builders, engineers, painters, a marine upholstery/covers and a chandlery on site.
Mahurangi Marinas Ltd	21 T stroplift Haul-out, sealed and unsealed hardstand	Mahurangi River, Wilson Road, Warkworth	Ph: 09 425 8831 E: dixon.marine@xtra.co.nz WWW: mahurangimarinas.co.nz/	7052	21T Strop lift trailer	14m (45ft)	4m						Stroplift not suited to multihulls due to restricted beam.	Commercial operation open to boat owners and service agents		Yes	H&S induction and yard T&Cs. All contractors working on site must be registered with MM.	Berths subject to availability.
Orams Marine Services	600T haul-out slipway, 2 x travel lifts, 40T trailer and handstand (complete May 2021)	Orams Marine Village, 142- 160 Beaumont St, Westhaven, Auckland	Ph: 093039999 E: Craig@oramsmarine.co.nz WWW: oramsmarineservices.co.nz	9188	820 T Travellift 85 T Travellift	70m (230ft) 20m (65ft)	13.0 m 7.8m	Trolley on slipway rails	600 T	58 (190ft)	13.5 m	13.5 m	Slipway and travel lift is suitable for multihulls. Lifting beams may be required to suit specific hull configurations.	Commercial operation open to boat owners and service agents partnering with Orams		Limited	H&S induction, no spray painting and cannot engage non-certified Orams contractors without prior approval.	Newly upgraded , comprehensive facility catering for a wide range of vessels sizes and types from 10m - 70m. The new 820T travel lift operational from Jan 2021. The new hardstand area doubles the existing area by May 2021. Larger vessels can be hauled by crane due to deep water at sheet piled wall. Up to date filtration plant newly installed with hardstand upgrade.
Pier 21 Marine Centre	Haul-out, hardstand, travel lift, waterblast facility	15 Westhaven Drive, Westhaven, Auckland.	Ph: 09 374 4461 E: admin@pier21.co.nz WWW: pier21.co.nz/	2934	50T travellift	22.8m (75 ft)	6.2m					6.2m	Insufficient beam for multihulls typically over 36ft.	Commercial operation open to boat owners and service agents		Yes	No restrictions beyond facility T&Cs. All contractors working on site must be registered with Pier21.	Located in Westhaven Marina with parking on site. For antifoul painting or boat repairs visit our web site.
Pine Harbour Marine Services	Haul-out, hardstand	190 Jack Lachlan drive, Pine harbour, Auckland	Ph: 09 536 4720 E: office@pineharbour.co.nz WWW: pineharbour.co.nz	8805	50Ttravellift 12t Forklift	24m (79 ft) 12m (40ft)	6.8m					6.8m	Insufficient beam for multihulls typically over 40ft.	Commercial operation open to boat owners and service agents		Yes	H&S induction and yard T&Cs. No spraying by boat owners. All contractors working on site must have a current Trades Licence from Pine Harbour Marina.	Large hardstand with supporting services, boat storage and marina.
Robertson Boats Ltd	Haul-out, hardstand, maintenance, refit, painting, new builds, commercial	Mahurangi River, Warkworth (Ainwick Street Extension)	Ph: 09 425 7001 E: info@robertsonboats.com WWW: robertsonboats.com/	4791	85T Travellift	34m (111ft)	8m					8m	Suitable for multihulls up to 8m beam.	Boat building and marine servicing operation.		Limited	Full service boat yard and boat builder.	We have a Travellift and are a full service yard offering painting, electrical, engineering, fabrication, interiors. All types of boats – commercial, fishing, yachts, multihulls, launches in all types of construction.
Hibiscus Marine and Storage	Haul-out, hardstand, maintenance, refit, painting, new builds, commercial. Crane onsite used for boat lifts.	1 Poplar Lane, Stannore Bay, Whangaparaoa, 0932 Auckland	Ph: 021916133 E: info@hibiscusmarineandstorage.co.nz WWW: hibiscusmarineandstorage.co.nz	7916	80T Crane on site	22m (70ft)	12m					10- 12m (17 tonne max)	Suitable for multihulls up to 10-12m beam.	Commercial operation open to boat owners and service agents		Yes	H&S induction and yard T&Cs. No spraying or dry sanding by boat owners. All contractors working on site must be registered with HMS.	80T Crane onsite to lift vessels of up to 22 tonne. Lifiable weight does depend on type of vessel. Launches <6m beam up to 22 tonne/ >6m 20 tonne Multihull yachts with rig up to 17 tonne Monohull yachts with rig up to 20 tonne Vessels heavier than 22 tonne can be lifted out with a larger crane up to 100 Tonne vessels mobilised to site. Max draft able to navigate the river access is 2.8M

HAULOUT & HARDSTAND DIRECTORY - AUCKLAND REGION 2021

FACILITY NAME	FACILITY TYPE	PHYSICAL LOCATION	CONTACT DETAILS	HARDSTAND AREA 2021 (excluding buildings)	TRAVEL LIFT (\$)			SLIPWAY TRAILER			MULTIHULL SUITABILITY		BOAT OWNER ACCESSIBILITY			NOTES		
				Est GIS Area m²	Lift rating	Max Vessel Length	Max Vessel Beam	Type / Make	Max Tonnage	Max Vessel Length	Max Beam	Max Beam	Limitations	Type of public access	Open hours and seasonal restrictions	DIY Permitted	Conditions	
Commercial Hardstand area Subtotal				86,716	m²													
AUCKLAND - Club facilities																		
Devonport Yacht Club	Club facility with two slipways with trolleys on rails and boat relocation using greasy ways all operated by trained club members. Unsealed hardstand. Winter storage and maintenance.	25 King Edward Parade Devonport Auckland 0624	Ph: 09 445 0048 E: haulage@dyc.org.nz WWW: dyc.org.nz/	2432	2 slipways with rail trolley and winch slipways.	14m (45ft)							Insufficient beam for most multihulls.	Club facility where only members vessels may be hauled or stored.	Seasonal restrictions. Haul out and hardstand only available outside summer months. Only slipways can be used all year.	Yes	Club members and club rules.	Seasonal restrictions. Facility mainly used for winter boat storage and maintenance. Boats come out and typically stored for off-season.
Waiheke Boating Club	Club volunteer staffed Haul-out facility and small hard-stand maintenance area on the Causeway at Ostend.	Causeway Road Ostend Waiheke Island 1081	WWW: waihekeboatclub.co.nz	1538	Slipway trolley and cradle.	13m (43ft)							Small multihulls only	Club facility where for boat maintenance.		Yes	Club members and club rules.	
Little Shoal Bay Boat Owners Association Haul Out & Maintenance Yard	Small, seasonal restricted club unsealed maintenance on Little Shoal Bay Reserve.	Little Shoal Bay Reserve		2676	Unsealed ramp and grass reserve.								Typically used for shall draft and light trimarans.		Seasonal restrictions. Haul out and hardstand only available winter months.	Yes	Club members and club rules.	Seasonal restrictions, no haul out plant on site, environmental compliance incidents in recent past.
Milford Cruising Club	Club Haul-out facility and hard-stand maintenance area by Milford Marina.	24 Craig Road Milford Auckland 0620	Ph: 09 4896837 E: milfordcruising@xtra.co.nz WWW: milfordcruising.co.nz	2289	Slipway trolley and cradle.	13m (43ft)	3m						Insufficient beam for most multihulls.	Club facility where only members vessels may be hauled or stored.		Yes	Access to Hardstand and Slipway for boat maintenance is only available to MCC members.	
Sandspit Yacht Club	Club Haul-out facility and hard-stand maintenance area by Sandspit Marina.	1287 Sandspit Road Warkworth	Ph: 09 425 9008 E: sandspit_yc@xtra.co.nz WWW: sandspit.org.nz/	2414	Slipway trolley and cradle. 13T winch and tractor.	14m (45ft)	7m					7m	Cradles with cross beams suitable for multihulls up to 12m (40ft) and less than 13T.	Club facility that has non-member rates for haulage and hardstand.		Yes	Open to both club members and non members. Club members rates are discounted.	
Stillwater Boating Club	Club Haul-out facility and hard-stand sealed maintenance area.	70 Duck Creek Rd, Stillwater, Auckland 0993	Ph: Stu Hunton 0226531674 E: yardmanager@swbc.co.nz WWW: swbc.co.nz/	2105	Slipway trolley and cradle with tractor (9T)	13m (43ft)	4.4 - 7m					7m	Cradles with cross beams suitable for multihulls up to 12m (40ft) and less than 9T.	Club facility where only members vessels may be hauled or stored.		Yes	Use of the hardstand is for full members only.	
The Goldhole, Birkenhead and	Birkenhead and Northcote Boat Club operates slipway and hardstand. Aging facility with many long term storage boats.	Goldhole Reserve, Princes Street, Northcote.	Enquire at site. No contact details.	2545	Slipway rail trolley and cradle. Winch and tractor unit.	13m (43ft)	4m					4m	Insufficient beam for most multihulls.	Goldhole reserve, current used by Birkenhead and Northcote Boating Club.		Not determined	Use of haul out and hardstand by arrangement on site.	Largely unknown by boating community. Reasonably informal operation with aging plant and equipment with steep access under the harbour bridge.
Te Atatū Boating Club	Club Haul-out facility and hard-stand sealed maintenance area.	32 Bridge Ave Te Atatū South Auckland	Ph: 09 834 4006 E: office@teatatuboaclub.co.nz WWW: teatatuboaclub.co.nz/	7310	Slipway rail trolley and cradle. Winch (20T)	14m (45ft)	7m					7m	Cradles with cross beams suitable for multihulls up to 13m (42ft) and less than 20T. Boat haulage operators can use crane for larger 60ft multihulls.	Club facility that has non-member rates for haulage and hardstand.		Yes	Open to both club members and non members. Club members rates are discounted.	
Brooklands Boating Club	Club Haul-out facility and hard-stand sealed maintenance area and long term storage.	600 North Road, Clevedon, Auckland	Ph: 027 596 6748 E: N/A WWW: bbclub.co.nz/	1930	Slipway rail trolley and cradle Winch	14m (45ft)							Insufficient beam for most multihulls.	Club facility where only members vessels may be hauled or stored.		Yes	Use of the hardstand is for full members only.	
Weiti Boating Club	Club Haul-out facility and hard-stand sealed maintenance area and moorings	End of Wade River Road Wade Heads Auckland 0932	Ph: 09 424 5905 E: weiti@xtra.co.nz WWW: weiti.co.nz/	1524	10 T Slipway trolley and cradle	13m (43ft)							Insufficient beam for most multihulls.	Club facility where only members vessels may be hauled or stored.		Yes	Use of the hardstand is for full members only.	
Panmure Yacht Club	Club Haul-out facility and hard-stand sealed maintenance area.	104 Kings Road Panmure Auckland	Ph: 09 570 2318 E: info@pybc.org.nz WWW: pybc.org.nz/	2780	12 T Slipway rail trolley and cradle. Winch (20T)	14m (45ft)	7m					7m	Multi-hulls (max. 9 tonne with a beam no greater than 7m)	Club facility where only members vessels may be hauled or stored.		Yes	Use of the hardstand is for full members only.	
Club Hardstand area Subtotal				27,111	m²													
AUCKLAND - Floating dock facilities																		
Floating dock services	Haul-out & underwater cleaning services	The Floating Dock, X Pier, Westhaven Marina, Auckland		n/a	Floating dock for in water cleaning and servicing							4.9m (16 ft)	3m (9.8 ft)	Insufficient beam for most multihulls.				

* Excludes boat builder yards not dedicated to haul out and hardstand maintenance incl McMullen and Wing, Yachting Developments, Titan Marine Engineering and Fusion Marine.

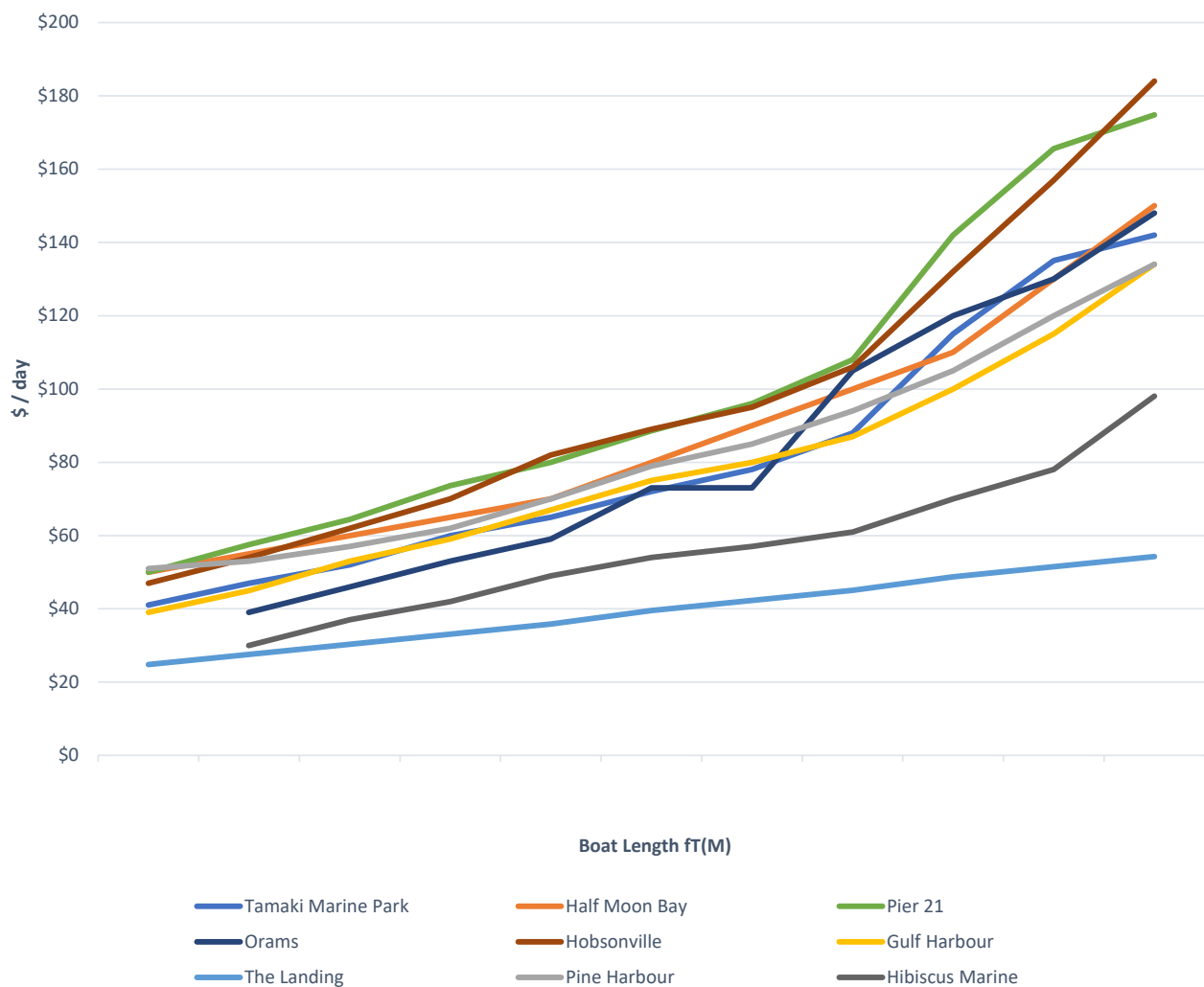
APPENDIX B – PRICE DATA



Auckland Hardstand Daily Price Comparison - 2021

Boat Length	Tamaki Marine Park	Half Moon Bay	Pier 21	Orams	Hobsonville	Gulf Harbour	Pine Harbour	Hibiscus Marine	The Landing	Average	The Landing as a % cheaper than average
27 (8)	\$41	\$50	\$50		\$47	\$39	\$51		\$25	\$43	43%
30 (9)	\$47	\$55	\$58	\$39	\$54	\$45	\$53	\$30	\$28	\$45	39%
33 (10)	\$52	\$60	\$64	\$46	\$62	\$53	\$57	\$37	\$30	\$51	41%
36 (11)	\$60	\$65	\$74	\$53	\$70	\$59	\$62	\$42	\$33	\$58	42%
39 (12)	\$65	\$70	\$80	\$59	\$82	\$67	\$70	\$49	\$36	\$64	44%
43 (13)	\$72	\$80	\$89	\$73	\$89	\$75	\$79	\$54	\$40	\$72	45%
46 (14)	\$78	\$90	\$96	\$73	\$95	\$80	\$85	\$57	\$42	\$77	45%
49 (15)	\$88	\$100	\$108	\$105	\$106	\$87	\$94	\$61	\$45	\$88	49%
53 (16)	\$115	\$110	\$142	\$120	\$132	\$100	\$105	\$70	\$49	\$105	53%
56 (17)	\$135	\$130	\$166	\$130	\$157	\$115	\$120	\$78	\$52	\$120	57%
59 (18)	\$142	\$150	\$175	\$148	\$184	\$134	\$134	\$98	\$54	\$135	60%

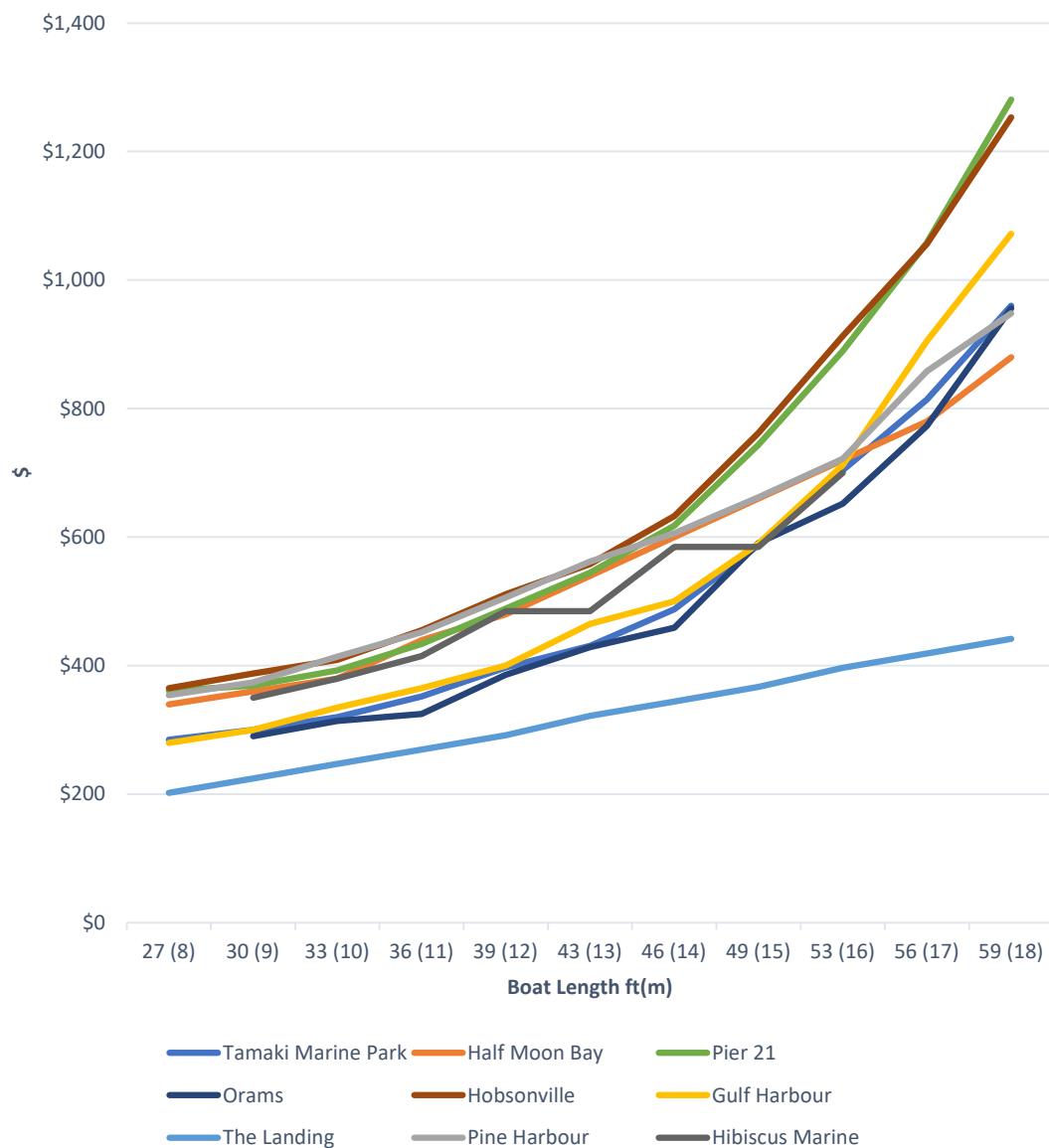
Auckland Hardstand Daily Price Comparison



Auckland Boat Return Haul Out Price Comparison - 2021

Boat Length Ft (m)	Tamaki Marine Park	Half Moon Bay	Pier 21	Orams	Hobsonville	Gulf Harbour	Pine Harbour	Hibiscus Marine	The Landing	Average	The Landing as a % cheaper than average
27 (8)	\$285	\$340	\$361		\$365	\$280	\$354		\$202	\$312	35%
30 (9)	\$300	\$360	\$369	\$290	\$388	\$300	\$374	\$350	\$225	\$328	32%
33 (10)	\$320	\$380	\$393	\$314	\$409	\$335	\$414	\$380	\$247	\$355	30%
36 (11)	\$352	\$440	\$434	\$325	\$455	\$365	\$452	\$415	\$269	\$390	31%
39 (12)	\$397	\$480	\$489	\$386	\$511	\$400	\$506	\$485	\$292	\$438	33%
43 (13)	\$431	\$540	\$545	\$429	\$558	\$465	\$562	\$485	\$322	\$482	33%
46 (14)	\$488	\$600	\$618	\$459	\$633	\$500	\$606	\$585	\$344	\$537	36%
49 (15)	\$588	\$660	\$744	\$591	\$762	\$590	\$662	\$585	\$367	\$617	41%
53 (16)	\$704	\$720	\$890	\$652	\$913	\$712	\$722	\$700	\$397	\$712	44%
56 (17)	\$814	\$780	\$1,058	\$773	\$1,056	\$905	\$858		\$419	\$833	50%
59 (18)	\$960	\$880	\$1,281	\$956	\$1,253	\$1,072	\$948		\$442	\$974	55%

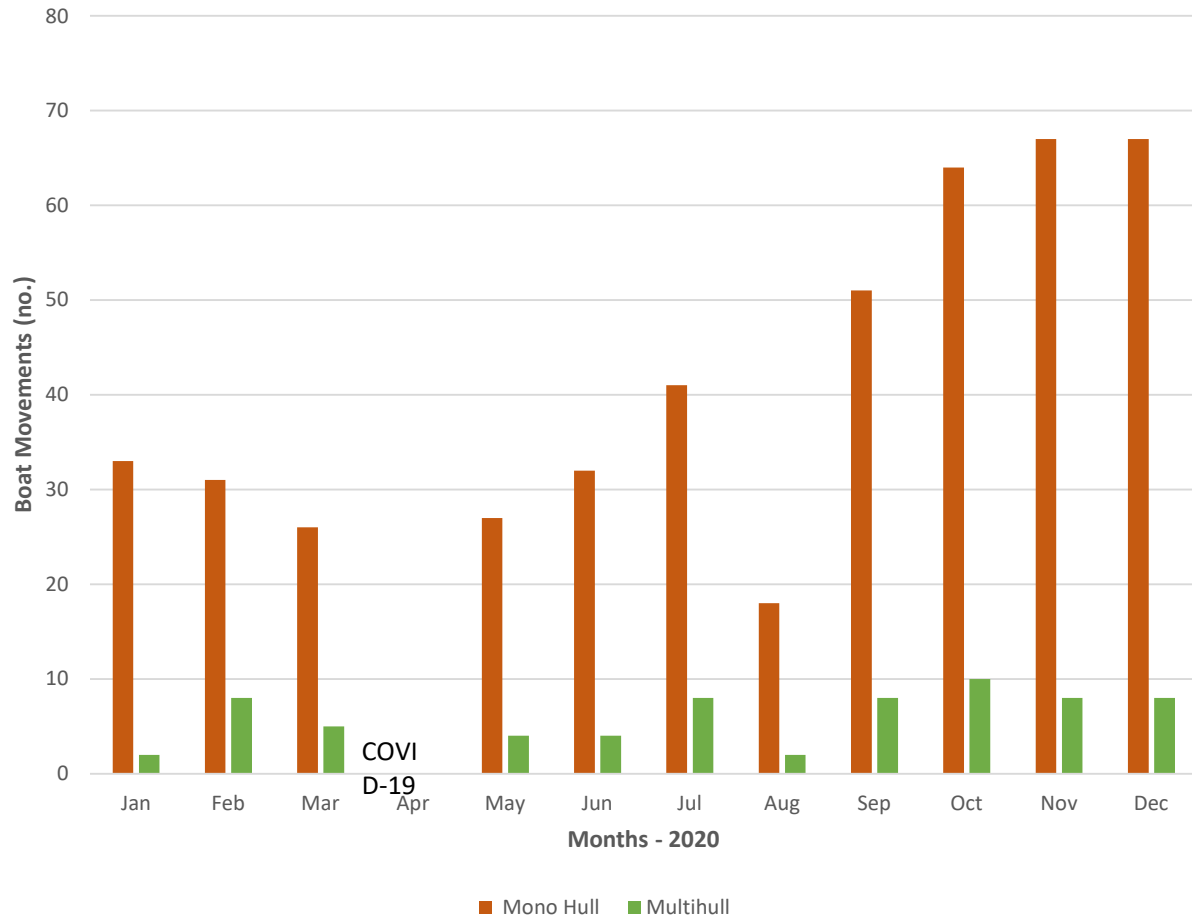
Auckland Boat Return Haul Out Price Comparison



The Landing - Boat Movements 2020

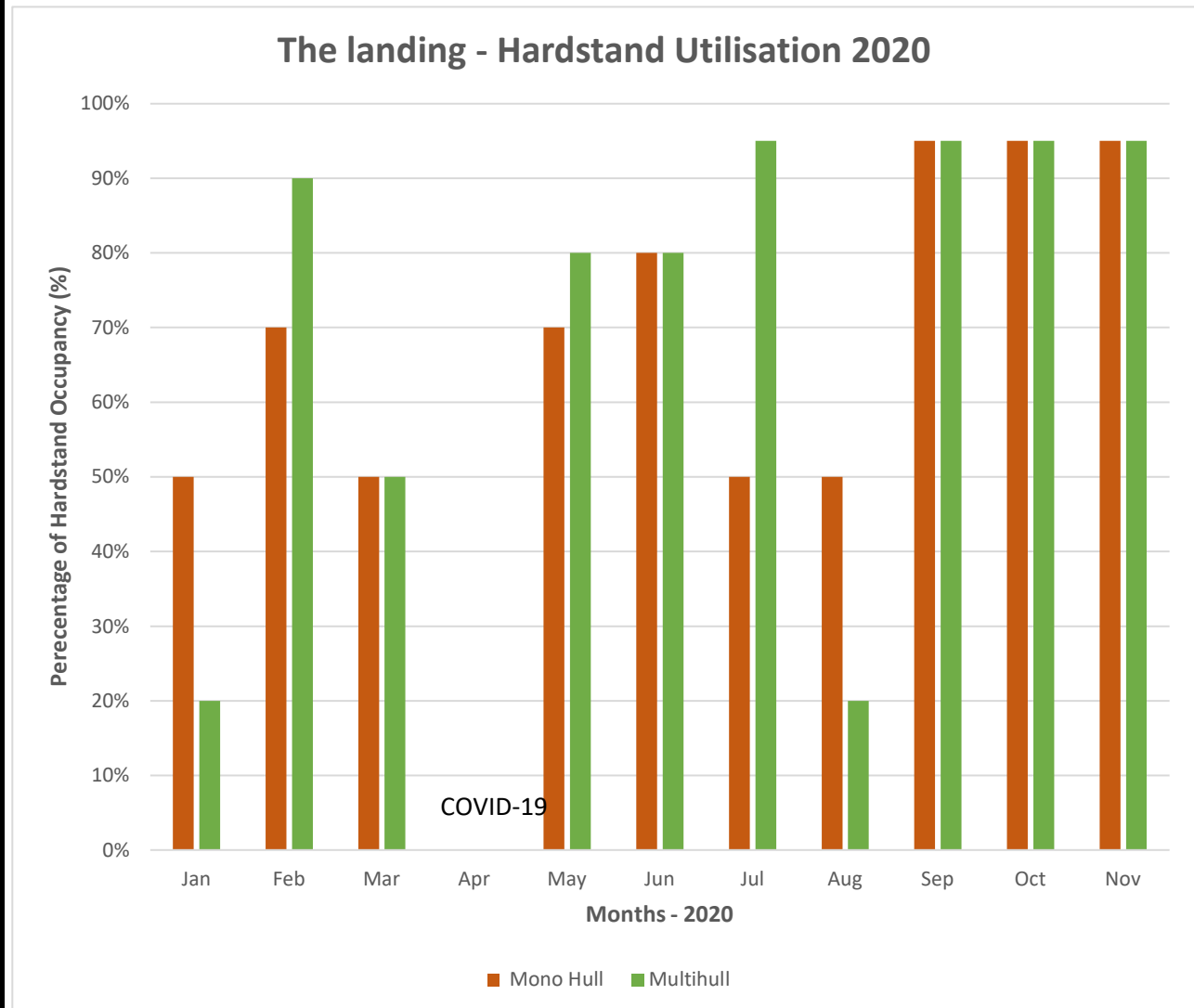
Boat Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
Mono Hull	33	31	26	COVID	27	32	41	18	51	64	67	67	457
Multihull	2	8	5	COVID	4	4	8	2	8	10	8	8	67
Total Boats	35	39	31	COVID	31	36	49	20	59	74	75	75	524

The Landing - Boat Movements 2020



The Landing - Hardstand Utilisation 2020

Boat Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Mono Hull	50%	70%	50%	COVID	70%	80%	50%	50%	95%	95%	95%
Multihull	20%	90%	50%	COVID	80%	80%	95%	20%	95%	95%	95%



THE LANDING PRICE LIST – Inclusive of GST



LOA		Haul & Launch		Mono Hull			Multi Hull		
ft	m	Each Way	Both	Hard Stand	Standard Wash	Power Wash	Hard Stand	Standard Wash	Power Wash
20	6.10	88.07	176.14	22.07	55.03	110.06	37.52	82.68	165.36
21	6.40	92.47	184.94	23.17	57.79	115.58	39.41	86.82	173.64
22	6.71	96.88	193.75	24.28	60.54	121.08	41.29	90.95	181.90
23	7.01	101.28	202.56	25.38	63.29	126.58	43.18	95.09	190.18
24	7.32	105.68	211.37	26.48	66.05	132.10	45.06	99.22	198.43
25	7.62	110.09	220.18	27.59	68.80	137.59	46.94	103.36	206.71
26	7.92	114.49	228.98	28.69	71.54	143.09	48.83	107.48	214.97
27	8.23	118.90	237.79	29.80	74.30	148.61	50.71	111.62	223.25
28	8.53	123.30	246.60	30.90	77.05	154.10	52.60	115.75	231.50
29	8.84	127.70	255.41	32.00	79.80	159.60	54.48	119.89	239.78
30	9.14	132.11	264.22	33.11	82.56	165.12	56.36	124.02	248.04
31	9.45	136.51	273.02	34.21	85.31	170.62	58.25	128.16	256.32
32	9.75	140.91	281.82	35.32	88.07	176.14	60.13	132.29	264.58
33	10.06	145.31	290.63	36.42	90.82	181.63	62.02	136.43	272.86
34	10.36	149.72	299.44	37.52	93.56	187.13	63.90	140.56	281.11
35	10.67	154.12	308.24	38.63	96.31	192.62	65.78	144.70	289.39
36	10.97	158.53	317.05	39.73	99.07	198.14	67.67	148.82	297.65
37	11.28	162.93	325.86	40.84	101.82	203.64	69.55	152.96	305.93
38	11.58	167.33	334.67	41.94	104.57	209.14	71.44	157.09	314.18
39	11.89	171.74	343.48	43.04	107.32	214.63	73.32	161.23	322.46
40	12.19	176.14	352.28	44.15	110.08	220.15	75.20	165.36	330.72
41	12.50	180.55	361.09	45.25	112.82	225.65	77.09	169.50	339.00
42	12.80	184.95	369.90	46.36	115.57	231.14	78.97	173.63	347.26
43	13.11	189.35	378.71	47.46	118.33	236.66	80.86	177.77	355.54
44	13.41	193.75	387.50	48.56	121.08	242.16	82.74	181.90	363.79
45	13.72	198.16	396.31	49.67	123.83	247.66	84.62	186.04	372.07

Outside Dinghy Stands

\$180.00 annually only

Secure Dinghy Lockers

\$480.00 annually only

Third Party Insurance Cover Rates

1 – 15 days - \$115.00

Full month - \$230.00

(subject to approval)

Labour & Equipment Standby Rates

Tractor, Equipment, and Operator
– \$100.00/hr.

Additional Operator
– \$75.00/hr.

Travel lift including operator
– \$140.00/hr.

Hiab including operator
– 165.00/hr.

46	14.02	202.56	405.12	50.77	126.59	253.18	86.51	190.16	380.33
47	14.33	206.96	413.93	51.88	129.34	258.67	88.39	194.30	388.61
48	14.63	211.37	422.74	52.98	132.08	264.17	90.28	198.43	396.86
49	14.94	215.77	431.54	54.08	134.84	269.69	92.16	202.57	405.14
50	15.24	220.18	440.35	55.19	137.59	275.18	94.04	206.70	413.40
51	15.54	224.58	449.16	56.28	140.34	280.68	95.93	210.84	421.68
52	15.85	228.98	457.97	57.38	143.10	286.20	97.81	214.97	429.94
53	16.15	233.39	466.78	58.49	145.85	291.70	99.70	219.11	438.22
54	16.46	237.79	475.58	59.59	148.60	297.19	101.58	223.24	446.47
55	16.76	242.20	484.39	60.70	151.36	302.71	103.46	227.38	454.75
56	17.07	246.60	493.20	61.80	154.10	308.21	105.35	231.50	463.01
57	17.37	251.00	502.00	62.90	156.85	313.70	107.23	235.64	471.29
58	17.68	255.40	510.80	64.01	159.61	319.22	109.12	239.77	479.54
59	17.98	259.81	519.61	65.11	162.36	324.72	111.00	243.91	487.82
60	18.29	264.21	528.42	66.22	165.11	330.22	112.88	248.04	496.08
61	18.59	268.62	537.24	67.32	167.27	334.54	114.77	252.18	504.36
62	18.90	273.02	546.05	68.42	170.62	341.23	116.65	256.31	512.62
63	19.20	277.42	554.83	69.53	173.36	346.73	118.54	260.45	520.90
64	19.51	281.82	563.64	70.63	176.11	352.22	120.42	264.58	529.15
65	19.81	286.22	572.45	71.74	178.87	357.74	122.30	268.72	537.43
66	20.12	290.63	581.26	72.84	181.62	363.24	124.19	272.84	545.69
67	20.42	295.03	590.06	73.94	184.37	368.74	126.07	276.98	553.97
68	20.73	299.44	598.87	75.05	187.13	374.26	127.96	281.11	562.22
69	21.03	303.84	607.68	76.15	189.88	379.75	129.84	285.25	570.50
70	21.34	308.24	616.49	77.26	192.62	385.25	131.72	289.38	578.76
71	21.64	312.65	625.30	78.36	195.38	390.77	133.61	293.52	587.04
72	21.95	317.05	634.10	79.46	198.13	396.26	135.49	297.65	595.30
73	22.25	321.46	642.91	80.57	200.88	401.76	137.38	301.79	603.58
74	22.56	325.86	651.72	81.67	203.64	407.28	139.26	305.92	611.83
75	22.86	330.26	660.53	82.78	206.39	412.78	141.14	310.06	620.11
76	23.16	334.67	669.34	83.88	209.14	418.27	143.03	314.18	628.37
77	23.47	339.07	678.14	84.98	211.90	423.79	144.91	318.32	636.65
78	23.77	343.48	686.95	86.09	214.64	429.29	146.80	322.45	644.90
79	24.08	347.88	695.76	87.19	217.39	434.78	148.68	326.59	653.18

**Casual Car and Trailer Parking at
The Landing**

\$2.00/hr. – Pay & Display machines
on site.
(Max. of \$24.00 a day)



Haul Out & Hardstand Service Price List

Other Services

Wash & Scrape

2 x Wash only rate

Additional Lift

50% Haulout & Relaunch per lift
No holding time

Machine Time/Mast Removal

Inc. Standing time or non-standard
cradle. Min 1 hr
30T Machine \$240/hr
100T Machine \$350/hr

Lift & Hold Overnight

1 hr Lift & Hold Rate + 20%

Hold Overnight

From h/s held overnight before first r/l
30T + H/S Rate
100T + H/S Rate + 30min machine
time

Lift On or Off Transporter

One way charge + 20%

Fork Hoist Hire

\$80/hr (min 30 min)

Multi Hulls or 5.8m+ (19ft) Beam

Storage: 1.5 x daily rate
Wash: 1.5 x daily rate

Fixed Scaffold

Storage 1.5 x daily rate

Tows

Within GH Marina \$98 each way
Out of Marina \$135 each way

After Hours Call Out

\$350 + Standard Charges

Effective 1 January 2020 All prices exclude GST						
LOA up to		Haulout & Relaunch*	Daily Hardstand Storage	Wash Only (Min)	Lift Wash & Immediate Return**	Lift & Hold 1 hr inc. Wash
m	ft					
8	26.2	\$280.00	\$39.00	\$64.00	\$135.00	\$270.00
9	29.5	\$300.00	\$45.00	\$67.00	\$160.00	\$280.00
10	32.8	\$335.00	\$53.00	\$75.00	\$180.00	\$310.00
11	36.1	\$365.00	\$59.00	\$82.00	\$200.00	\$330.00
12	39.4	\$400.00	\$67.00	\$93.00	\$220.00	\$355.00
13	42.7	\$465.00	\$75.00	\$101.00	\$250.00	\$385.00
14	45.9	\$500.00	\$80.00	\$111.00	\$270.00	\$420.00
15	49.2	\$590.00	\$87.00	\$129.00	\$295.00	\$490.00
16	52.5	\$712.00	\$100.00	\$138.00	\$340.00	\$550.00
17	55.8	\$905.00	\$115.00	\$146.00	\$440.00	\$624.00
18	59.1	\$1072.00	\$134.00	\$155.00	\$490.00	\$700.00
19	62.3	\$1210.00	\$147.00	\$171.00	\$560.00	\$750.00
20	65.6	\$1413.00	\$168.00	\$247.00	\$700.00	\$890.00
21	68.9	\$1528.00	\$190.00	\$308.00	\$780.00	\$980.00
22	72.2	\$1666.00	\$210.00	\$351.00	\$860.00	\$1050.00
23	75.5	\$1809.00	\$235.00	\$378.00	\$980.00	\$1150.00
24	78.7	\$1949.00	\$274.00	\$390.00	\$1200.00	\$1350.00
25	82.0	\$2071.00	\$375.00	\$436.00	\$1300.00	\$1450.00
26	85.3	\$2242.00	\$430.00	\$492.00	\$1450.00	\$1560.00
27	88.6	\$2457.00	\$550.00	\$530.00	\$1700.00	\$1790.00
28	91.9	\$2601.00	\$610.00	\$588.00	\$1900.00	\$1950.00
29	95.1	\$2714.00	\$735.00	\$644.00	\$2100.00	\$2150.00
30	98.4	\$2871.00	\$810.00	\$754.00	\$2290.00	\$2290.00

Over 25m - Price on application

*Haulout and relaunch rates inc. both movements

**No time allowed for zinc or anode changes

HARDSTAND & HAULOUT SERVICES PRICE LIST

EFFECTIVE 1ST FEBRUARY 2020 (GST EXC)

Phone: 09 5343139 (Press 1)

LOA up to Feet / Metres	One Way Lift	Waterblast (min)	Hardstand per day	On / Off Transporter	Lift & Hold One Hour (Wash Extra)	Lift - Wash - Return (Half Hour)
27 (8)	170	75	50	200	280	140
30 (9)	180	85	55	215	300	150
33 (10)	190	95	60	245	320	160
36 (11)	220	105	65	280	340	170
39 (12)	240	115	70	310	380	190
43 (13)	270	125	80	360	440	220
46 (14)	300	135	90	390	480	240
49 (15)	330	145	100	430	540	270
53 (16)	360	155	110	480	600	300
56 (17)	390	175	130	550	650	325
59 (18)	440	195	150	580	670	350
62 (19)	490	205	170	640	690	375
66 (20)	540	230	200	690	710	400

ADDITIONAL SERVICES	
Double slings (for some larger vessels)	\$44 per strop
Emergency call out (1 man up to 3 hours) + normal haulout services	\$300.00
Forkhoist using HMB Marina staff only (min charge \$35.00)	\$72 per hour
Mast Storage - boats up to 40 feet Others POA	\$10 per day
Mobile shed (small) hire per day (plus normal hardstand rate)	\$42 per day
Mobile shed (large) hire per day (plus normal hardstand rate)	\$55 per day
One Night Stand (wash extra)	Lift & Hold + \$50
Overnight Hold (Vessels from Hardstand prior to relaunch)	One way lift + \$50
Vessel movement (using trolley)	\$33 per movement
Vessel lift/movement on yard (using travelift)	One way Lift
Tow Inside Marina (min 1 hour charge)	\$120 per tow
Travelift hire - keel jobs	\$220 per hour
Wash - extra per bin (scraping of barnacles, weeds etc)	\$110 per 200 L bin
PLEASE NOTE	
Berth holders of HMB Marina receive 10% discount on all haul out & storage charges except Lift/Wash/Return (half Hour)	
Haul out capacity - Beam 5 metres/weight 35 tonne	
Overnight holds are only available from Monday to Friday morning at our discretion	
Lift and hold timing commences on start up of travelift and finishes when travelift has released vessel into the water. Price is per hour and does not include wash.	
Lift-Wash-Return is half hour booking - additional charges will apply for extra time	
Prices are subject to change without notice. GST is to be added to all prices	

TRAVEL LIFT PRICES
PRICES EXCLUDE GST

		HR	DS	WB	LHS	LT	LHW
LENGTH UP TO FEET	MTR	HAULAGE & RETURN \$	DAILY RATE \$	W/BLAST \$	L & H FOR SURVEY \$	LIFT OFF TRANS. \$	LIFT & WASH \$
30	9.14	290	39	76	265	208	111
32	9.75	308	46	82	277	227	144
34	10.36	314	46	88	288	227	151
36	10.97	325	53	88	295	252	164
38	11.58	368	59	95	307	252	178
40	12.19	386	59	101	329	295	178
42	12.8	398	59	101	340	295	196
44	13.41	429	73	101	363	340	196
46	14.02	459	73	107	363	340	263
48	14.63	537	79	119	386	378	263
50	15.24	591	105	119	404	378	361
52	15.85	652	105	132	457	422	361
54	16.46	688	120	132	462	422	361
56	17.07	773	130	144	496	466	406
58	17.68	923	135	157	560	466	406
59	17.98	956	144	169	570	529	525
60	18.29	1226	148	175	610	580	525
62	18.9	1274	151	182	614	592	525
64	19.51	1377	164	182	664	642	590
66	20.12	1395	170	188	665	642	590
68	20.73	1406	184	202	722	692	656
70	21.34	1509	190	214	745	692	656
72	21.92	1682	198	260	845		748
74	22.56	1845	206	290	967		840
76	23.16	1992	216	320	1090		932
78	23.78	2030	235	340	1223		1024
80	24.39	2180	270	355	1356		1116
82	25	2260	320	370	1490		1208
84	25.6	2295	370	390	1625		1300

Shed 25
Middle Bay
Side Bays

185 per day

Double the vessels daily rate

Shed 75

245 per day

Travel Lift Hire (Keels/Eng)
Fork Hoist Hire

Min 1/2 hour

300 per hour

Min 1/2 hour

52 Per hour

Afterhours call outs

3 hours + normal charge

Haulout Prices - 85 Tonne travelift**PRICES EXCLUDE GST**

	HR	DS	WB	LHS	LHW
LENGTH UP TO MTR	HAULAGE & RETURN 85 Tonne	Daily rate 85 Tonne	W/BLAST \$	L & H FOR SURVEY \$	LIFT & WASH \$
8	310	50	80	260	140
9	347	56	87	283	157
10	389	62	95	309	176
11	436	68	104	337	197
12	488	76	113	367	220
13	546	84	123	400	247
14	612	94	134	436	276
15	704	107	150	488	318
16	809	122	168	547	365
17	931	139	188	613	420
18	1,070	158	211	686	483
19	1,231	180	236	768	556
20	1,415	205	265	861	639
21	1,628	234	297	964	735
22	1,872	267	332	1,080	845
23	2,003	288	355	1,347	1,131
24	2,143	311	380	1,401	1,210
25	2,293	400	407	1,457	1,294

Vessels over 25 mts OR rates for the 820 tonne travelift, available on application

Sandspit Yacht Club Inc

Haul out and hardstand rates

(all specified rates are GST inclusive)

Haul-out, relaunch or movement within yard

Rate per movement

	Member	Non-member / Commercial
Up to 9 metres	\$135	\$270
10 m	\$145	\$290
11m	\$155	\$310
12m	\$165	\$330
14m	\$175	\$350
Over 14m	\$195	\$390
Multi Hull	Above x 1.5	Above x 1.5

Hardstand per day by boat overall length:

	Member	Non-member / Commercial
Up to 9 metres	\$10	\$30
10 m	\$10	\$30
11m	\$12	\$36
12m	\$12	\$36
14m	\$15	\$45
Over 14m	\$20	\$60
Multi Hull	Above x 1.5	Above x 1.5

Cradle Hire per day (private cradles may vary)

Up to 9 metres	\$10
10 m	\$10
11m	\$10
12m	\$10
14m	\$10
Over 14m	\$10

Other variables:

After 30 days x 1.5

After 60 days x 2

After 90 days x 3

A charge of \$75 per hour will be made for work carried out by the haul out crew that is over and above the work required for a regular haul and cradle siting, or is outside normal hours of operation.

A Haul & Store Contract is required to be completed in advance of hauling, in which you agree to abide by our haul and store conditions.

Full payment of haul and store accounts must be made to the club office prior to boat launch or departure. All fees and charges will be invoiced monthly during your stay, and a final invoice will be sent on launching. Terms of payment - 7 days after invoice date.

Hobsonville Marina

EFFECTIVE 1ST NOVEMBER 2019 (GST EXCLUSIVE)

LOA up to		Return Lift	Waterblast	Hardstand per day	On/off Transport	Lift / hold / return 1 hour	Lift / hold / return 1/2 hour
Feet	Metres						
27	(8)	\$365.00	\$82.00	\$47.00	\$217.00	\$320.00	\$143.00
30	(9)	\$388.00	\$89.00	\$54.00	\$232.00	\$341.00	\$164.00
33	(10)	\$409.00	\$102.00	\$62.00	\$266.00	\$362.00	\$194.00
36	(11)	\$455.00	\$111.00	\$70.00	\$313.00	\$382.00	\$230.00
39	(12)	\$511.00	\$115.00	\$82.00	\$362.00	\$395.00	\$242.00
43	(13)	\$558.00	\$143.00	\$89.00	\$395.00	\$437.00	\$273.00
46	(14)	\$633.00	\$152.00	\$95.00	\$436.00	\$477.00	\$313.00
49	(15)	\$762.00	\$164.00	\$106.00	\$477.00	\$505.00	N/A
53	(16)	\$913.00	\$184.00	\$132.00	\$551.00	\$585.00	N/A
56	(17)	\$1056.00	\$198.00	\$157.00	\$622.00	\$641.00	N/A
59	(18)	\$1253.00	\$217.00	\$184.00	\$668.00	\$721.00	N/A
62	(19)	\$1635.00	\$232.00	\$194.00	\$735.00	\$777.00	N/A
66	(20)	\$1839.00	\$245.00	\$217.00	\$803.00	\$838.00	N/A
69	(21)	\$1870.00	\$259.00	\$232.00	\$817.00	\$845.00	N/A
72	(22)	\$1975.00	\$273.00	\$245.00	\$885.00	\$899.00	N/A
76	(23)	\$2112.00	\$313.00	\$273.00	\$953.00	\$1021.00	N/A
79	(24)	\$2315.00	\$353.00	\$341.00	\$1021.00	\$1171.00	N/A
82	(25)	\$2519.00	\$382.00	\$409.00	\$1089.00	\$1335.00	N/A

- Berthholders of Bayswater & Hobsonville Marina receive 10% discount on all lift, wash and storage charges. (Not available on specials or promotions)
- Wash is waterblast only. Hulls that require scraping will incur additional cost.
- Overnight hold is only available from Monday to Friday morning.
- Haul out capacity: Beam 6.3 metres, Weight 75 tonnes
- Lift and hold for survey or service charges at lift and hold rate. Wash is extra.
- Lift and hold timing commences on start up of travelift and finishes when travelift has released vessel into the water.
- All contractors working on site must have a current Service Providers Licence from Hobsonville Marine Services.
- Vessels are lifted and stored at owners risk, and otherwise on the terms and conditions of the Travelift and Hardstand Contract.
- Prices are subject to change without notice. GST is to be added to all prices

Over 25m – POA please contact office

Hobsonville Marina

Additional Services

35T travelift hire after initial lift	\$350 per hour
75T travelift hire after initial lift	\$520 per hour
Forklift hire	\$50 for 15 minutes
Tow to / from Hobsonville berth	\$150 per tow
Mast storage	\$20 per day

Pine Harbour Marina

Effective from 01 September 2020, (GST Exclusive)

LOA up to Feet Metres		LIFT one way	Waterblast	Hardstand per day	On/Off transport	Lift / hold / return 1 hr	Lift / wash / return 1/2 hr
27	(8)	177	84	51	240	334	153
30	(9)	187	92	53	254	351	173
33	(10)	207	106	57	267	373	192
36	(11)	226	117	62	301	401	219
39	(12)	253	125	70	335	424	236
43	(13)	281	141	79	435	451	263
46	(14)	303	154	85	455	476	288
49	(15)	331	170	94	479	502	320
53	(16)	361	182	105	504	568	359
56	(17)	429	198	120	590	623	402
59	(18)	474	218	134	654	662	465
62	(19)	590	247	154	759	715	528
66	(20)	647	273	176	830	773	591
69	(21)	716	301	204	924	883	
72	(22)	788	334	232	975	954	
76	(23)	858	361	260	1021	1020	
79	(24)	927	389	288	1103	1086	

Haul out capacity: Beam 7.0 metres, Weight 50 tonnes

*A minimum of 48 hours notice is required when booking a lift back into the water from the hardstand.

* Pine Harbour Berth Licensees receive a 5% discount when settling account prior to relaunch.

Wash is waterblast only.

Hulls that require scraping will incur additional cost.

Lift and hold for survey or service, charged at lift and hold rate. Wash is extra.

Lift and hold timing commences on start up of travelift and finishes when travelift has released vessel into the water.

Vessel length is defined as total length overall.

All contractors working on site must have a current

Trades Licence from Pine Harbour Marina.

Vessels are lifted and stored at owners risk, and otherwise on the terms and conditions of the Travelift and Hardstand Contract.

Accounts and costs due in respect of services shall be paid in full before the vessel departs

A cancellation fee of \$100.00 will be incurred to any change or cancellation within 24hrs of booking.

Prices are subject to change without notice. GST is to be added to all prices.

Paying by credit card will incur a surcharge of 2.1%.

Additional Services

Pine Harbour Marina

50T travelift charge after initial lift	\$422.00
Double slings additional	\$112.00 per lift
Multi hulls over 5.6m beam	1.5 times above daily & water blast rates
Forklift hire	\$112 per hour (min \$50)
Tow to / from Pine Harbour berth A – D	\$192.00 per tow
Tow to / from Pine Harbour berth E – G	\$192.00 per tow
Towing restricted to vessels less than 16 metres	
Call out 1 man + normal service rates (min 3 hr)	\$120.00 per hour

HARDSTAND PRICE LIST

Prices Exclude GST
Effective 1st March 2021



Total LOA Feet (M) up to	Return Lift	Lift and Hold/wash	Hardstand Per day	Waterblast (Minimum)	On/Off Transport
27 (8)	\$285.00	\$207.50	\$41.00	\$65.00	\$170.00
30 (9)	\$300.00	\$228.00	\$47.00	\$78.00	\$198.00
33 (10)	\$320.00	\$243.00	\$52.00	\$83.00	\$230.00
36 (11)	\$352.00	\$264.00	\$60.00	\$88.00	\$265.00
39 (12)	\$397.00	\$306.50	\$65.00	\$108.00	\$290.00
43 (13)	\$431.00	\$327.50	\$72.00	\$112.00	\$320.00
46 (14)	\$488.00	\$364.00	\$78.00	\$120.00	\$350.00
49 (15)	\$588.00	\$429.00	\$88.00	\$135.00	\$405.00
53 (16)	\$704.00	\$497.00	\$115.00	\$145.00	\$450.00
56 (17)	\$814.00	\$567.00	\$135.00	\$160.00	\$505.00
59 (18)	\$960.00	\$650.00	\$142.00	\$170.00	\$540.00
62 (19)	\$1,300.00	\$830.00	\$160.00	\$180.00	\$590.00
66 (20)	\$1,450.00	\$920.00	\$180.00	\$195.00	\$640.00

20% Discount Marina Berth Holders

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[HAULOUT/HARDSTAND](#)
[STORAGE](#)
[SERVICES](#)
[RATES](#)
[CONTACT](#)

Rates Effective 1st Oct 2020

Haul Out/ Hardstand Rates

Prices include cradle/props, power and water

All Prices Exc Gst

Boat Lengths measured overall incl an protrusions ie Boarding platforms and bow Sprites

LOA in Metres	LOA in Feet	Hardstand Cost / Day	Haulout & Relaunch
UP TO 9M	30FT	\$30	\$350
10	33FT	\$37	\$380
11	36FT	\$42	\$415
12	39FT	\$49	\$485
13	43FT	\$54	\$485
14	46FT	\$57	\$585
15	49FT	\$61	\$585
16	53FT	\$70	\$700
17	56FT	\$78	POA
18M	59FT	\$98	POA
19M	62FT	\$104	POA
20M	66FT	\$115	POA
21M	69FT	\$140	POA
22M	72FT	\$165	POA

**** Catamarans over 5.5m Beam are 1.5 X std Hardstand daily rate
Liveboard, Use of power and water Add \$5 /day**

Travelift and Hardstand Pricelist

Effective 1st October 2020 (GST Exclusive)

Prices may change at any time without notice

For the period 1st September – 31st December boats on the hard in excess of 7 days will be charged double the daily rate

Total LOA Feet (m) Up to	Return Lift	Hardstand Per Day	Waterblast (Minimum)	On/Off Transport	Lift/Hold 1Hr	Lift/Hold ½hr
27 (8)	361	50	78	215	314	146
30 (9)	369	58	96	250	329	172
33 (10)	394	64	102	291	348	205
36 (11)	433	74	108	335	360	215
39 (12)	489	80	133	367	397	242
43 (13)	545	89	138	405	435	278
46 (14)	617	96	148	443	460	315
49 (15)	744	108	166	512	534	N/A
53 (16)	891	142	178	569	584	N/A
56 (17)	1058	166	197	639	658	N/A
59 (18)	1281	175	209	683	712	N/A
62 (19)	1689	197	221	746	764	N/A
66 (20)	1834	221	240	810	826	N/A

Over 20m

Travelift Hire after initial lift

For Vessels in shed

Multi Hulls over 5m Beam

Fork Lift hire

Vessels lifted and stored at Owners Risk

P.O.A.

\$370 per hour

Double daily hardstand rate

1.5 times above daily rates

POA subject to availability

All contractors working on site must have a current Service Providers Licence and completed Site Induction health and safety from Pier 21 Ltd.

Prices for Floating Dock Services

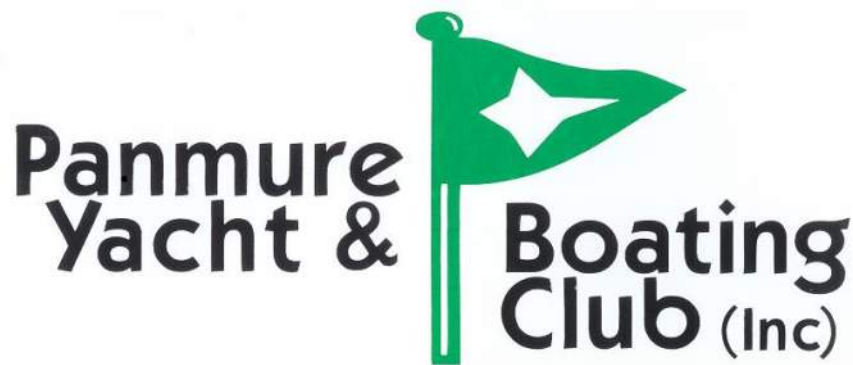
Effective 1st April 2020 - including GST

Feet	Metres	Lift & Clean - Yachts	Lift & Clean - Launches	Survey - all vessels (1.5 hours)	Overnight - all vessels	Weekend - all vessels
26-28ft	less than 9m	\$219	\$230	\$360	\$410	\$520
29-31ft	9 - 9.5m	\$225	\$242	\$370	\$440	\$570
32ft-34ft	10 - 10.5m	\$230	\$260	\$390	\$480	\$600
35-36ft	10.6 - 11m	\$260	\$305	\$420	\$495	\$640
37ft	11.5m	\$270	\$315	\$430	\$500	\$660
38-39ft	11.6 - 12m	\$280	\$325	\$460	\$520	\$680
40-41ft	12.1 - 12.5m	\$299	\$345	\$500	\$530	\$700
42-44ft	13 - 13.5m	\$315	\$395	\$505	\$540	\$740
45-47ft	14 - 14.5m	\$335	\$425	\$515	\$575	\$770
48ft	14.8m	\$345	\$460	\$520	\$585	\$780
49ft	15m	\$415	\$470	\$525	\$595	\$790
50ft	15.5m	\$425	\$475	\$530	\$600	\$800
51ft+	16m	\$430	\$480	\$535	\$610	\$810
52ft+	16.5m+	P.O.A if under 20 tonne	P.O.A if under 20 tonne	P.OA if under 20 tonne	P.O.A if under 20 tonne	P.O.A if under 20 tonne



The Floating Dock in Westhaven Marina, Auckland is a convenient option for your next haul-out.

Additional charges may apply due to the condition of the hull, e.g. if there is heavy growth attached to the hull.
We recommend advising when your last haul out was at the time of your booking to ensure adequate time to clean your hull.



YARD HAUL OUT APPLICATION

Prices effective as of August 2019

Phone: 09-570 2318

Fax: 09-527 6397

Email: info@pybc.org.nz

Postal: PO Box 14067, Panmure 1741

Physical: 104 Kings Road, Panmure, Auckland

Please complete this application and return it to the office with your payment to make a booking

2019-20 Membership Year
P: 09-570 2318 F: 09-527 6397
E: info@pybc.org.nz
W: www.pybc.org.nz



Application for: (tick appropriate option)																																																																																			
☐ Quick Haul		☐ Quick Haul Stay-over		☐ Haul Out and Storage in Yard																																																																															
BOAT DETAILS:																																																																																			
BOAT NAME: _____		TYPE: _____																																																																																	
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INSURANCE CO: _____ A copy of your insurance certificate must be attached otherwise																																																																																			
3 rd Party Insurance can be organised through the office																																																																																			
EXPECTED STORAGE TIME: _____			CRADLE REQUIRED: YES / NO (PLEASE CIRCLE ONE)																																																																																
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TENTATIVE LAUNCH DATE: _____ (IF KNOWN)			LAUNCHED: _____																																																																																
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Side hauls (depending on how much manpower the boat owner supplies) \$65 - \$100 each way
 * Boats belonging to non-members will be hauled and stored as space and conditions allow.

Only for haul out: A **deposit** has been paid when lodging this application and will only be credited to the final yard account if the area the boat was stored in has been left tidy, all rubbish disposed of, and the Yard Operator is satisfied that the area occupied was kept clean and tidy at all times.

Initial _____

DECLARATION

I/We the owner(s) of the above craft apply for use of the Club's facilities and the services of the Yard Operator for the hauling out, storage and/or launching of the craft on dates to be arranged with the Club.

I/We, the owner(s) of the craft jointly and severally agree:

- 1) To be bound by the Rules of the Yard, the conditions of Storage of Yachts and Launches and Best Practices to be followed for Hauling and Maintenance of Vessels and any other provision contained in this application.
- 2) To pay in accordance with the provisions of this application the charges as set by the Club including penalty interest at the rate of 20% pa on a cumulative basis on any outstanding account.
- 3) To be solely responsible for the safety of the craft whilst on the yard or being hauled out or launched.
- 4) To be solely responsible for the suitability and safety of any cradle on which the craft is hauled, launched or stored.
- 5) To comply with all legal requirements including without limitation all health and safety requirements.
- 6) To take all measures necessary to protect the environment and avoid pollution of any nature.
- 7) To indemnify the Club against all claims made against the club in respect of the haul out, storage or launching of the craft.
- 8) To advise the Club immediately if there is any change in the ownership of the craft giving full contact details in respect of the new owner. If the vessel ownership changes, I/we accept that this agreement cannot bind a new owner. I/we undertake to inform a new owner of a requirement (condition of sale) for a transfer of responsibilities/ liabilities for haulout, storage and launching on terms agreed by the club. Until such transfer is completed I/we remain liable for all the terms and charges of this agreement as if ownership had not changed.
- 9) Monthly yard accounts will be paid promptly and in full on receipt of invoice/statement. Final balance shall be paid prior to the vessel being launched or taken away. **All accounts must remain current.**

TERMS OF TRADE: All accounts are payable within seven days (7) following the date of invoice. If the account is not paid within 30 days after the due date, our debt recovery agency may charge you a fee equal of 25% of the unpaid portion of the invoice amount and other legal and collections costs not covered by the fee. The minimum fee will be \$25.

I/we have read the above. I/we accept all terms set out therein and overleaf and will comply with the same.

Signature: _____ Name of Signatory (PRINT PLEASE): _____

Date: _____ Membership Number: _____

Signed on Behalf of Panmure Yacht & Boating Club: _____ Date: _____

PLEASE ENSURE YOU HAVE INITIALLED EVERY PAGE.

FOR OFFICE USE

Member (circle) Yes / No Deposit invoiced ☐ Deposit paid date _____ Long term until _____
 Haul out invoiced ☐ Water-blast invoiced ☐ Launch invoiced ☐ Deposit credited ☐ Penalty warning ☐
 Week invoiced/paid _____ Overdue warning ☐ Over-due action advised _____

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	All paid including launch on.....			Deposit credited date/sign:.....		

RULES OF THE YARD

Owners are requested to keep their stay on the hardstand as short as possible to give others a chance of hauling. All yard accounts are to be paid on a monthly basis. Members with overdue accounts will be charged penalty interest. The balance is to be paid before the vessel either leaves the yard or is launched.

Remember: NO CASH - NO SPLASH!

A load limit of 12t is placed on the slipway, and the load limit on the fork hoist and trolley unit is 8t. For vessels over 8t, cradles are to be made suitable to slide sideways in our steel U-section skids. They must have fixed to the underside of their bearing surfaces wooden skids no wider than 150mm. 125mm x 40mm is ideal. Cradles must be no more than 3.6m maximum fore and aft between bearers, and bearers must be a minimum of 2.9m wide, 3.2m is ideal. The undersides of bearers must be fitted with wooden skids as for side hauling. Cradles are to be inspected by the Yard Operator with the owner at least one week before hauling. The Yard Operator has the right to refuse to haul any boat where the cradle is not considered as being suitable of safe, or the boat is too dirty. The Owner is to arrange to have the cradle ready beside the slipway on the day the boat is to be hauled. The Owner is to provide at least two other people, to assist in slipping the boat or it will not be hauled. They must also be prepared to assist other boats hauling out, particularly manoeuvring boats when tide is running. Privately owned cradles must be removed immediately after the boat is launched. Any cradle left on the Club premises maybe used by the Club at it's discretion and the Club shall be entitled to charge any user other than the owner cradle hire fees. In the event the cradle is being used by a non-owner and the owner wishes to use the cradle, the Club will make available to the owner an equivalent cradle free of cradle hire fees. The haul out area is to be left in a tidy condition each day after working on boats.

WATER BLASTING AND CLEAN OFF: The time allocated to each vessel for cleaning is 30 minutes. Alternatively, the office should be advised and the haul out arranged for a time when cleaning off can be done on the slipway without holding up other boats. In either case excess foul matter is to be disposed of at the direction of the Yard Operator and the slipway is to be tidied after cleaning. Boats will not be launched until the slipway is clean and any appropriate extra charges have been paid. Members using the water blaster should not allow over spray to affect other boats in the yard.

RESPONSIBILITIES: The Club does not accept responsibility for the safety of owners' cradles and boat owners must take responsibility for the safety and suitability of the cradle used whether or not owned by the boat owner. All vessels hauled are to be suitably insured for third party liability. Any subcontractor shall also have suitable insurance liability cover. Owners are also reminded that when moving boats the lives of helpers, bystanders and people working on other boats are at risk if the cradle fails, as well as the safety of the boat itself. An hour spent before use is a small price to pay to ensure the safety of your vessel and your friends.

FINALLY: The haul out facility is a co-operative yard with very competitive rates for the benefit of members. Most helpers in the yard are voluntary staff. The Yard Operator is responsible for the safe operation of the winch and fork hoist, not labour required with regard to the haul out. What he says goes: please respect his decisions and help the team in any way you can. Owners of yachts on the hard must ensure that their halyards are tied away from the mast to reduce noise in windy conditions.

BEST PRACTICES TO BE FOLLOWED FOR HAULING AND MAINTENANCE OF VESSELS: Please read in conjunction with Best Practice

All vessels are hauled for owner maintenance and it is up to all owners to ensure that their maintenance is carried out in accordance with the best practices for the environment and safety of all users of the haul-out area and yard. Any vessel, which is considered too dirty will be put back into the water if on the Quick-haul or will have to be moved into the yard on its cradle and cleaned off as per below. This decision will be made by the Yard Operator in charge. All scraping of paint from hulls shall be done on a tarpaulin or with a vacuum scraper unit - the scrapings are then collected and placed in a rubbish bag and sealed and put in the rubbish bins. All scraping or sanding of antifouling may only be done in the bunded catchment area. All yard rubbish is to be placed in the large jumbo bins. There are small wheelie bins available for local collection but boat owners must transfer the contents to the large collection bins. These wheelie bins be emptied into the jumbo bins daily and all sanding is to be done by using a sander which has a dust bag attached.

SANDBLASTING IS NOT PERMITTED WITHOUT WRITTEN CONSENT OF COMMITTEE – SEE YEARBOOK, ITEM 7, HAULING & STORAGE RULES

CONDITIONS OF STORAGE OF YACHTS AND LAUNCHES

1. All craft being hauled will have a minimum of current Marine and Third Party Insurance; you must complete the haul-out form stating your Insurance Company. At the sole discretion of the Club, in a particular case, the Club may agree to waive the insurance requirements on such terms as the Club thinks fit.
2. All craft are hauled out, stored and launched at Owner's risk, and the Club shall not be liable for any injury to any person or loss or damage to any craft or the rigging, spars, equipment, furniture, gear or any chattels otherwise appertaining to any craft whatsoever and howsoever arising whilst any craft is stored at the Club Yard or in the course of hauling out or launching.
3. Except when using the Club's adjustable cradle, the Owner of the craft shall supply their own cradle or like appliance for supporting the craft and shall in all cases be responsible when hauling out for the proper placing of the craft thereon. You are responsible for your boat and accept all responsibilities during haul-out, storage and launching, and understand the club will assist where possible but does not accept any liabilities whatsoever.
4. The Club may refuse to haul, launch or store any craft which, in its opinion, is considered to be unsafe or derelict or the cradle of which is not suitable or safe.
5. The Club will supply a slipway, wire ropes for hauling, and a winch, but shall not be liable if for any cause the slipway, wire ropes and winch, or any of them, are not available for use at the time for which they are requisitioned.
6. The Club will supply labour for the operation of winch but all other labour necessary for the launching or hauling out shall be supplied by the Owner.
7. The Club will, whenever practicable and convenient, move other craft being in or upon the storage area so as to facilitate the hauling out or launching of the craft subject to this application, but the Club shall not be required to move any particular craft, or to haul out or launch any craft, if in the opinion of the Yard Operator the removal, hauling out or launching of that particular craft is not then reasonably practicable and convenient.
8. The Owner of any craft hauled up, stored, or launched shall indemnify the Club against all claims by any person for injury, loss or damage occasioned during and in the course of the hauling up, launching or moving of the said craft resulting or arising out of, or connected with the storage or moving of the craft in or upon the area.
9. The Club reserves the right to move any craft on the storage area for its own purpose, or to facilitate the hauling up, moving or launching of any other craft, and in so doing does not accept responsibility for loss or damage or injury resulting from movement by the Club of such first mentioned craft.
10. The Owner of any craft hauled up, stored or launched at or in the Club Yard shall also indemnify the Club against all claims by any person for injury, loss or damage resulting from the use, on or about their craft, of any electrical equipment powered from the Club's electricity supply sockets, whether by themselves or others, and shall ensure that all such electrical equipment is maintained in good order and condition and complies in all respects with the NZ Wiring Regulations and all other applicable requirements. Users are advised that it is safer to use one appliance only from each socket.
11. All charges for hauling out, storage and launching shall be charged to the Owner on a monthly basis and shall be paid no later than the 20th of the month following the month to which the charges relate. All charges shall be paid in full prior to launching, and a receipt showing that such charges have been paid shall be produced by the Owner before any craft shall be launched or removed from the yard.
12. Where any charges for hauling out, storage, launching or any other charges are not paid by the due date for payment and such charges remain unpaid for a period of one month, then the Club may, after having given not less than fourteen days notice of its intention to do so, put the craft up for sale and disposal by Public Auction or Tender. The Club shall be entitled to deduct all unpaid charges from the proceeds of such sale including the expenses of conducting such Auction or Tender.
13. Charges shall be in accordance with those fixed by the Club from time to time.
14. In these Conditions the following phrases shall have the following meanings: "Hauling Out" shall include moving of any craft from the slipway to its place of storage. "Launching" shall include moving any craft from its place of storage to the slipway.

APPENDIX C – HARDSTAND AREAS



HARDSTAND AREA REGISTER - AUCKLAND REGION

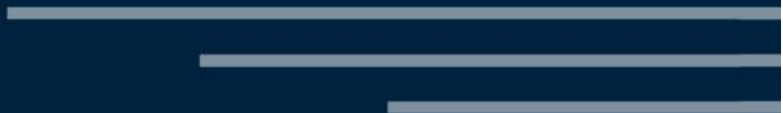
	HARDSTAND AREA (m ²)					
	1996	2006	2017	2021	Future Developments	Comments
AUCKLAND - Public Council operated facilities						
The Landing	 13393	 6252	 5520	 5520	N/A 5520	
AUCKLAND - Commercial Facilities						
Tamaki Marine Park	 0	 0	 1900	 6900	 13900	
Gulf Harbour Marina	N/A 13600	 11054	 13600	 13600	N/A 13600	No aerial available from 1996.
Half Moon Bay Marina	 13070	 13070	 13070	 11763	N/A 11763	
Hobsonville Marine Services Ltd	 13767	 13767	 13767	 13767	N/A 13767	

Mahurangi Marina	N/A				N/A	No aerial available from 1996. Hardstand on grass
	7052	7052	7052	7052	7052	
Orams Marine Services					N/A	Orams future expansion scheduled for completion in 2021 will double the hardstand area capabilities from 2017.
	7508	4594	4594	9188	9188	
Pier 21					N/A	
	2536	2536	2934	2934	2934	
Pine Harbour Marine Services					N/A	
	10650	12283	8805	8805	8805	
Robertsons Boats Ltd	N/A				N/A	No aerial available from 1996.
	4791	4791	4791	4791	4791	
Hibiscus Marine and Storage	N/A				N/A	No aerial available from 1996.
	7916	7916	7916	7916	7916	
Commerical / Public Hardstand Area Subtotal	80890	77063	78429	86716	93716	

AUCKLAND - Club Facilities							
Devonport Yacht Club	 2432	 2432	 2432	 2432	N/A 2432	Seasonal. Hardstand on grass.	
Waiheke Boating Club	N/A 1567	 1567	 1538	 1538	N/A 1538	No aerial available from 1996	
Little Shoal Bay	 2676	 2676	 2676	 2676	N/A 2676	Seasonal	
Milford Cruising Club	 2066	 2066	 2289	 2289	N/A 2289		
Sandspit Yacht Club	N/A 5435	 5435	 2414	 2414	N/A 2414	No aerial available from 1996.	
Stillwater Boating Club	 2105	 2105	 2105	 2105	N/A 2105		

The Goldhole	 2545	 2545	 2545	 2545	N/A	
Te Atatu Boating Club	 8721	 7500	 7310	 7310	N/A	
Brooklands Boating Club	N/A 1930	 1930	N/A 1930	N/A 1930	N/A	No aerials available from 1996, and 2017.
Weiti Boating Club	 1524	 1524	 1524	 1524	N/A	
Panmure Yacht Club	 2287	 2287	 2780	 2780	N/A	
Club Hardstand Area subtotal	33288	32067	29543	29543	2780	29543

*Excludes boat builder yards not dedicated to haulout and hardstand maintenance including: McMullen & Wing, Titan Marine Engineering, Yachting Developments, Fusion Marine.



Capacity and Accessibility of Haulout and Antifouling Services in the Top of the North Marine Pest Management Area



Ecometric Consulting Limited

Tauranga

Sandra Barns

Bruce Willoughby

Maddie Giles

Acknowledgements

The authors thank the survey participants who willingly gave up time to share information about their businesses and in doing so helped to improve the quality of information in this report. Participants are listed in Appendix 1.

Cover photo: 35-tonne travel lift at Whitianga Marina, Waikato.

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Executive summary

Auckland Council and the Northland, Waikato and Bay of Plenty regional councils are investigating introducing a rule to curb the spread of marine pests in the top of the north area (the Management Area). The proposed rule would require the owner or person in charge of a boat in the Management Area to ensure that fouling on the boat does not exceed '*a slime layer and barnacles when moving*'. Policy success would require suitable haulout facilities and antifouling services available across the Management Area for the recreational and commercial fleet.

This report is focused on boats up to and including 20m (up to 20m) in length and identifies the numbers and location of boats and the capacity and location of facilities and services for antifouling.

The councils provided data identifying the number and location of moorings in each region and marina managers provided data for berths, berth sizes, and in some cases occupancy rates.

Table 1: Number and location of berths/moorings of up to 20m and less in the Management Area

	Northland	Auckland	Waikato	Bay of Plenty	Management Area
Boats up to incl. 20m	4,382	9,366	1,116	1,504	16,368
% of fleet	27%	57%	7%	9%	

Capacity for antifouling and hull cleaning services depends on haulout equipment, hardstand space and antifouling service provision. In larger facilities the haulout and hardstand service is separate from the antifouling services, while in smaller facilities all are owned or managed together. Boat clubs are different again, managing the haulout and hardstand as a club, with boat owners providing their own antifouling services.

We interviewed staff at haulout/hardstand facilities (including boat clubs) and antifouling services throughout the Management Area, using semi-structured interviews and a mix of closed and open questions. Technical staff in the marine antifouling paint industry provided data and insights on the perceived and actual constraints on the performance of different types of antifouling paints.

Fleet (boat numbers) and facilities (hardstand and antifouling capacity) was analysed by distance analysis (GIS).

Results and Conclusions

Based on interviews with haulout facilities and antifouling service providers, we estimate that under current practice, 9,000 boats up to 20m are antifouled every year – 55% of fleet in the Management Area. That suggests that on average boats in the Management Area are antifouled 2-yearly on average. Council surveys suggest that some boats will require more frequent antifouling than is currently undertaken.

Interviewees indicated the boat fleet, particularly in the Auckland region, is increasing in numbers and boat size. The increase in boat length is accompanied by a trend for increased beam (boat width). Multihulls are becoming more popular.

Distance analysis was undertaken for three scenarios (antifouling 12,18, and 24 months) to estimate the effect of increased demand on haulout and hardstand capacity:

- When all boats are antifouled annually, capacity is sufficient for 48% of boats in the Management Area. Across the regions this is 79%, 33%, 48%, and 49% of the fleet for Northland, Auckland, Waikato and Bay of Plenty respectively.
- When antifouling occurs at 18-month intervals (on average), capacity is sufficient for 72% of boats in the Management area. Across the regions this is 119%, 50%, 73%, and 74% for the fleet for Northland, Auckland, Waikato, and Bay of Plenty respectively. The outcomes of this scenario would be dependent on timing with regard to summer months.
- When antifouling occurs at 2-yearly intervals (on average), capacity is sufficient for 96% of the fleet across the Management Area. Northland has capacity for 159% of its fleet, while Auckland has capacity for 66% of its fleet. Waikato and the Bay of Plenty regions are at or close to capacity.

Relevant points from the distance analysis are:

- There is insufficient overall capacity in the 18-month and 12-month scenarios.
- Boat location is not matched with facility location, suggesting a significant number of boats must travel to be antifouled, potentially creating a biosecurity risk.
- In general boats can reach a facility within 50 nautical miles, but demand for services locally may mean boats have to travel further. Northland was an exception, with a significant number of boats unable to access a facility within the distance limit.

Hardstand capacity is a key factor in determining antifouling capacity. From September to December hardstands across the Management Area are full as boats are antifouled and readied for summer boating. Few existing facilities could increase hardstand space. Other means for increasing throughput include increasing the covered hardstand space for weather protection. While increasing the covered area would increase the capacity for boat refitting through the winter months, the impact on antifouling capacity will be more limited due to winter weather conditions (relative humidity and dew point) which are not conducive to effective curing of antifouling paints. The *6 or 1 requirement* creates an incentive for boat owners to antifoul from September onwards.

A trend for increasing boat size and population identified by marina operators will exacerbate issue around the undersupply of services, and the potential net loss of existing services, particularly in the Auckland region. The increase in boat length is accompanied by a trend for increased beam (boat width). Multihulls are becoming more popular. Potentially the market will respond to these changes, providing the barriers to entry enable new facilities to be established. This is a topic that could be further investigated.

Boat clubs complete about 16% of antifouling activity in the Management Area, mostly in the Auckland and Northland regions. They tend to have limited hardstand capacity and antiquated equipment. Haulout is usually confined to an hour or so either side of high tide in daylight hours and is reliant on volunteer labour. Antifouling capacity could be increased in this area with wider community support to upgrade equipment.

Antifouling services are usually provided independently of haulout and hardstand services. This service has the potential to expand to meet an increase in demand. Attracting reliable and competent employees to the task of cleaning and antifouling boats was an issue for some service providers.

The industry is highly reliant on boat owner labour. About 40% of antifouling on recreational boats of up to 20m is done by boat owners. This figure is near to 100% for antifouling

completed at boat club facilities. Ensuring access to good quality technical information and support for the boat owners has the potential to improve antifoul performance.

Hull cleaning between antifouls is necessary for antifoul maintenance and will be required to meet the proposed standard. Lifting and holding boats solely to waterblast and re-float is generally only undertaken by facilities with travel lifts. Service providers generally considered that they had capacity to increase this service, particularly if they had more than one travel lift.

The estimated number of boats across the Management Area was based on the number of berths and moorings. Berth occupation was estimated at 90% for the distance analysis. The fragmented nature of moorings made it difficult to use a percentage occupation in the distance analysis, and so all moorings were counted. Overall, 94% of berths and moorings are assumed to be occupied with boats that will require antifouling. While this approach may overstate the demand for antifouling services, reducing the numbers by 5-10% would not change the conclusions of the report.

In the absence of more complete data on boat dimensions, boat length was used as access criteria of boats to haulout facilities. As a result, some boats may have been allocated to an unsuitable facility for the distance analysis, but the overall effect is likely to be small, affecting individual boats rather than the population of boats. Boat weight in the up to 20m category was not a limitation for haulout.

Introduction

Auckland Council and the Northland, Waikato and Bay of Plenty regional councils are investigating introducing a rule to curb the spread of marine pests in the top of the north area (the Management Area). The proposed rule would require the owner or person in charge of a boat in the Management Area to ensure that fouling on the boat does not exceed '*a slime layer and barnacles when moving*'. While many boat owners are likely to be achieving this standard, some will require more frequent antifouling and hull cleaning.

Successful policy implementation will require sufficient and accessible haulout facilities and antifouling services to enable boat owners to meet the standard.

This report focuses on boats of up to and including 20m (up to 20m) in length, identifying the location of these boats within each region by length, and the location, capability, capacity and accessibility of haulout and antifouling services. Information about the number and location of boats is based on mooring data provided by regional councils, marina berths provided by marinas in the Management Area and information from canal developments (Whitianga and Pauanui).

Where data has been provided, boats moored on the west coast of the Management Area have been included in maps, but not in the analysis. It is anticipated that they would travel around to the east coast relatively infrequently. Were they to arrive at any marina the *6 or 1 requirement* would apply.

Haulout and antifouling service information is based on interview of staff at facilities throughout the Management Area. Facility capacity is identified in four sectors.

1. Haul out (travel lift, trailer, rail mounted trolley) considered within the context of boat type (yacht or launch), hull type (mono, multi), weight (tonnes) all within 20m length overall (LOA).
2. Hardstand area (number of boats held).
3. Hull preparation and antifoul paint application (DIY or contractor) in relation to hardstand capacity.
4. Lift and hold for hull washing (confined to travel lift, except for a single floating dock based in Auckland).
5. Capacity for in-water hull wash (DIY, diver, locations where the practice is acceptable).

The methods used in this report include survey and interviews, and a distance analysis (GIS). These are described in Section 2. Section 3 describes the results both at the Management Area level, and by region where relevant. Section 4 provides a discussion on points of interest that have emerged through the research process, and Section 5 provides the conclusions regarding the ability of boat owners to undertake more antifouling and cleaning than is required under the current regime.

The lack of a centralised database for boats means we have relied on marina and mooring information to describe the boat population. We assumed that marina berths are at 90% occupancy but were unable to make the same assumption for moorings because of their scattered distribution. As a result, there is an implicit assumption that 94% of marina berths and moorings are occupied by boats that will require antifouling. In the distance analysis we have used length as a proxy for boat size. Boat characteristics are relevant because access to and infrastructure at different haulout facilities is specific to size and types of boats. Using

boat length in this way may mean that the analysis incorrectly allocated a small number of boats to unsuitable facilities but will not change the overall results of the analysis.

Regarding facilities and services, the analysis relies on estimates of the number of haul- outs and antifouling services provided by facilities. In many cases the antifouling services are undertaken by separate firms, or by boat owners themselves. Cross checking with service providers has helped to ensure the results are robust.

Method

Fleet size

Moorings

- The four councils across the Management Area each provided the GIS locations of moorings and the details of the moorings in their respective regions.

Marina berths

- Most marinas were identified through the New Zealand Marina Operators Association website “Find a marina or boatyard in New Zealand”. Each marina was approached and information on the number of berths by size was requested. In most cases a marina map was provided. The information was transferred into a dataset of berths.
- Boat clubs were approached using email addresses and phone numbers published on the Yachting NZ website. Boat clubs not listed on the website were identified during the interviews and approached to participate. Few clubs have marinas.

Pontoons

- Pontoons in the Whitianga and Pauanui waterway developments were not included in the GIS information provided by Waikato Regional Council. The managers of the waterways developments provided the number of pontoons and occupancy.

Survey of facilities and services

A survey document was developed with the objective of identifying current capability and capacity, and constraints to capacity (e.g., availability of cover to extend capacity in adverse weather and seasonal conditions) for haulout and antifouling services in the Management Area. The interviews were semi-structured, including open and closed questions. The survey questions were tested at three haulout facilities in the Bay of Plenty/Waikato regions, and the final survey questions developed (Appendix 2).

Where practical, the interviews were conducted face-to-face, usually at the haulout or service facility, and often including a walk around the facility (if invited to do so). Where face-to-face interviews were not practical, telephone interviews were conducted. The objective was to survey all haulout facilities across the Management Area and avoid the issues associated with extrapolating results from a sample across a diverse population. The survey was conducted throughout July and August 2022.

Thirty-four commercial facilities, including 27 haulout facilities, and 18 boat clubs were interviewed (Table 2).

Table 2: Number of face-to-face and telephone interviews undertaken

	Management Area	Northland	Auckland	Waikato	Bay of Plenty
Face-to-face	18	4	8	3	3
Telephone	34	11	20	1	3

Potential survey participants were identified through the ‘Clean Below? Good to Go’ website (‘Find a Haulout’ page), through the Marina Operators Association marina list, and through the Yachting New Zealand website. Initial contact was made either by email or by phone,

ascertaining whether the facility or club had a haulout facility, and requesting an interview. One of the survey questions was whether there were other haulout facilities, which provided a 'snowball' approach and enabled the identification of some additional facilities.

Interviews were undertaken by two people, and the survey took 20-30 minutes in a direct run through. A high level of engagement meant that people tended to discuss issues and ideas, and the survey could take more than an hour in face-to-face interviews, and up to 45 minutes in phone interviews.

Survey responses, including quotes, were recorded by hand during the interviews, and later transcribed for analysis. As part of the analysis key information, such as the relationship between the size of hardstand and number of haulouts, was plotted to identify outliers which were then followed up and verified as necessary.

Mapping and distance analysis

Feature Manipulation Engine (FME) program was used to collate and do data cleaning for the mooring data from Northland Regional Council, Auckland Council, Waikato Regional Council and Bay of Plenty Regional Council. As each council holds different information about mooring consents a new field was created for length of boat. The field was based on boat length if available, and if not, on mooring capacity (length).

As some information was missing - no length in the data from either the boat length or the max mooring length these data points were assumed as 10m for the analysis.

Marina and haulout facility information from the surveys was geocoded to get the spatial locations.

The distance analysis was done using ArcGIS Pro Desktop. A surface raster layer was created from the New Zealand island polygons. This served as the barrier layer (land being a barrier) which represented the area in which boats could travel over (water). A cost surface raster was then created with 50 nautical miles (NM) around the haulout facilities, this defined the limit of how far boats could travel to get to a haulout facility. Finally, a flow direction raster which was used to represent the way boats would travel around the land barriers. A Euclidean distance tool was used to create the shortest path between the moorings/marina locations and the haulout facilities.

The distance analysis was done iteratively to account for the different scenarios of how far boats had to travel within the 50 NM limit to a facility with capacity.

Scenarios

Three levels of frequency of antifouling were modelled to calculate the number of boats that could be antifouled across the region, assuming boats would travel to the nearest facility that would accommodate their length and can travel up to 50 NM from their berth/mooring. The three scenarios were:

1. All boats require an antifouled each year (on average) to meet the proposed standard of *'no more than a layer of slime and barnacles when moving'*.
2. All boats require an antifoul every 18 months (on average) to meet the proposed standard.
3. All boats require an antifoul every two years (on average) to meet the proposed standard.

Results

Fleet size

The boat numbers by region were estimated based on the number of marina berths and moorings (Table 3). The study is limited to boats of up to 20m in length. Berth numbers and lengths were obtained from the marina operators, in most cases based on a marina map. Mooring information was provided by the regional councils in GIS format. The mooring information included either boat length or consented mooring length. In the modelling the marina berths were treated as 90% occupied. Moorings were assumed to be fully occupied.

Table 3: Marina berths and moorings of up to 20m, by region (excl. west coast)

Region	Berth type	10m or less	10.1-12m	12.1-14m	14.1-16m	16.1-18m	18.1-20m	Total up to 20m
Northland	Marina	59	509	458	279	93	66	1,464
	Mooring	1,059	969	327	314	197	52	2,918
Auckland	Marina	842	2,733	1,084	627	299	170	5,755
	Mooring	2,064	948	274	317	6	2	3,611
*Waikato	Marina	112	299	142	107	66	51	609
	Mooring	63	0	0	194	0	50	307
Bay of Plenty	Marina	166	591	143	87	52	10	1,049
	Mooring	180	188	38	40	9	0	455

**The Waikato region includes an estimate of non-trailered boats in the Pauanui and Whitianga waterways under the marina berth figures.*

The 437 boats on moorings with no mooring length information assumed to be 10m or less for the purpose of analysis (243 in Northland, 174 in Auckland, 20 in Waikato).

Information on boats and haulout facilities supplied by the four councils for the west coast of the Management Area has been included in the maps, but not included in the analysis based on a small likelihood of travel from one side of the island to the other. The number of boats making the trip would make little difference regarding facilities.

Length and tonnage

In some cases, we were able to obtain details of tonnage and hull type. However, the only consistent measure was length, which is what we have used in this study. To arrive at conclusions about the capacity of haul out facilities we have relied on the experience of Bruce Goodchap (Bridge Marina Travelift, Tauranga) to obtain estimates of boat weight with respect to construction method and boat type (Table 4). This allowed us to observe that weight for boats up to 20m is not a constraining factor for a 35-tonne travel lift.

Table 4: Estimated boat weights by type and construction

Boat type	Construction		8m	10m	12m	14m	20m
Launch	Wood or fibreglass	Range	3.0-5.0t	6.0-7.0t	9.0-13.0t	11.0-18.0t	16.0-25.0t
		Mean	4t	6.5t	11t	14.5t	20.5t
Launch	Steel	Mean	5.3t	8.6t	14.6t	19.3t	27.3t
Yacht	Wood or fibreglass	Range	2.0-3.0t	3.5-6.0t	5.5-13.0t	12.0-18.0t	16.0-25.0t
		Mean	2.5	4.75	9.25	15	20.5
Yacht	Steel	Mean	3.3	6.3	12.3	20.0	27.3

Source: B. Goodchap, Tauranga Bridge Marina, Tauranga.

Final fleet count

Fleet numbers are based on the number of marina berths and moorings by region. In the absence of registration of boats, this is a practical approach. For the analysis we assume that 90% of marina berths are occupied. For the purpose of this report estimates of boats on unregistered moorings have been excluded.

Many of the interviewees said that the number of boats was increasing, particularly in the 14m to 16m range. This was seen in some marinas, where changes in configuration and expansion to provide more space for larger boats was being undertaken. For example, in Half Moon Bay Marina, Whitianga Marina and Tauranga Marina. The pattern of change was similar in the service sector, with boatyards moving towards equipment to haul out larger boats.

Bigger, wider, lots of cats. Not necessarily traditional boaties.

Has grown. Every year we start building more cradles.

Growing – volume demand. Bigger boats, standards of service.

Survey results

The capacity to haul out and prepare/apply antifouling paint in terms of number of moored boats up to 20m identified two main providers, commercial facilities and boat club facilities.

All interviewees had a high level of engagement with the marine pest issue and a desire to see a solution, although potential solutions and confidence in the ability to solve the problem differed between interviewees. Most haulout and service providers were enthusiastic to participate in the survey and share their information and concerns.

We are treating this as a full dataset and estimate that the haulout facilities we have interviewed make up more than 97% of boats hauled out at commercial and club facilities in a typical year¹.

Commercial facilities

Twenty-six commercial haulout facility operators were identified throughout the Management Area. The commercial facilities can be divided into those that directly employ a range of boat servicing trades (e.g. marine electronic/electricians, engineering and painting services), those that provide a limited service (e.g. hardstand space, lift and hold, cleaning and antifouling), and those that are service facilitators (hardstand space, lift and hold/wash) (Figure 1).



Figure 1: Bay of Islands Marina, Opuia provides a haulout and hardstand. Businesses providing other services such as painting and engineering are located on-site, but not part of the marina service.

¹ Haulouts and antifouling undertaken at The Landing (Auckland) and Pier 21 in a typical year have been counted in the demand for antifouling in any one year but are excluded from further analysis because they have closed (Pier 21, July 2022) or will be closing (The Landing, February 2022).

Club facilities

Seventeen clubs with actively operating haulout and hardstand facilities were interviewed². The relatively small contribution of individual clubs suggests that any omission would not change the results of the analysis.

Club facilities were limited to trailer (winch or tractor-operated) and cradles, and tended to be constrained by tides, being only able to operate at a daytime high tide, and labour which was usually volunteer. Limited hard stand was a common factor.

Total haulout facilities

Overall, we identified 43 active haulout facilities in the Management Area. One-third of these provide haul out services to fewer than 50 boats/year, and a quarter (24%) provide services for more than 500/year (Figure 2).

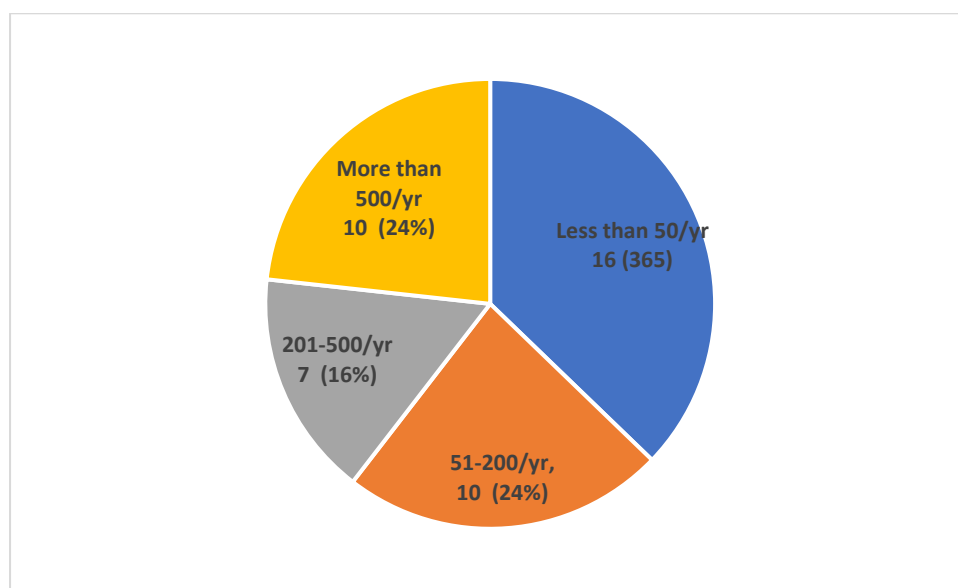


Figure 2: Size of facilities based on estimated haul outs per year.

Across the Management Area the largest haulout facilities in terms of number of boats hauled are in the Northland and Auckland regions. These two regions also have the greatest number of small haulout facilities, in the case of Auckland being mostly comprising boat clubs. Waikato and the Bay of Plenty have a relatively small number of haulout facilities, and none in the largest category (of more than 500 boats per year).

Table 5: Size of facilities based on estimated haul outs per year

Region	Total	Less than 50 per year	51-200 per year	201-500 per year	More than 500 per year
Management Area	43	16	26	33	10
Northland	15	6	4	1	4
Auckland	22	8	5	4	5
Waikato	4	1	1	2	0
Bay of Plenty	3	0	1	2	0

² Little Shoal Bay Boatyard (Auckland) is excluded from further analysis as its haulout facility is currently not active (pers. Comm C. Laseto, Yard Captain, Little Shoal Bay Boatyard).

Future marina developments include:

- Marina developments currently underway in Opotiki and Whakatane will provide additional haulout and hardstand facilities in the Bay of Plenty region, catering particularly to commercial boats.
- A marina development at Kennedy Point, Waiheke Island has recently been consented. It does not include a haulout or hardstand facility³.
- The Whangaroa Harbour Marina (Northland) is undertaking a feasibility study for a haulout facility (Figure 3)⁴.



Figure 3: Whangaroa Harbour Marina, Northland.

Services available

Commercial businesses were split into service facilitators, limited services and full services:

- Service facilitators will haul out the boat, typically provide a wash down (waterblast), and provide hardstand space. Boatowners organise contractors for painting, antifouling, engine servicing etc. In larger boatyards these contracting services may be on-site. Antifouling is generally a significant part of these businesses.
- Limited-service providers haul out the boat, may provide hardstand space, and limited services such as an antifoul and lift and hold/wash. Other services are contracted in by the boat owner.
- Full-service providers employ a range of skilled workers, such as painters, mechanics, engineers. These businesses tend to specialise in boat building or refits. Antifouling is not a primary focus of these businesses.

Haulout and hardstand facilities associated with marinas generally provided limited services or acted as service facilitators (e.g. providing the hardstand for the work to take place) and

³ Sarah Mair, Marketing and Sales Manager, Kennedy Point Boat Harbour Ltd. Email 10 July 2022.

⁴ Peter Sehmb, Manager, Whangaroa Marina (pers.comm).

accounted for 40% of capacity overall. Boat clubs made up 40% of haulout facilities in the Management Area (Figure 4, Table 6).

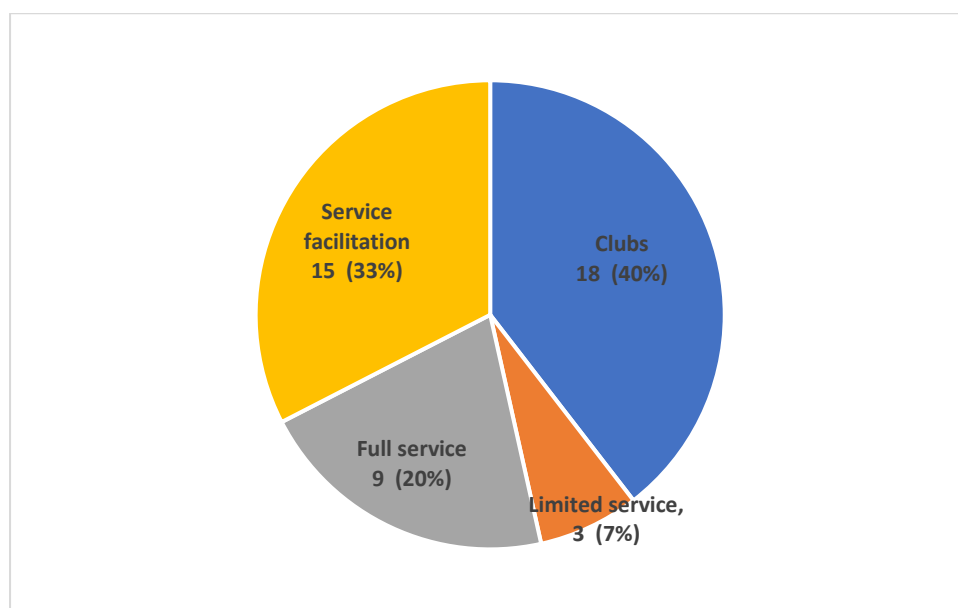


Figure 4: Type of service, by facility

Table 6 Type of haulout/hardstand service, by region

Region	Total	Service facilitation	Full service	Limited service	Clubs
Management Area	43	14	9	3	17
Northland	15	3	5	1	5
Auckland	22	7	3	1	11
Waikato	4	2	1	0	1
Bay of Plenty	3	2	0	1	0

Boat and hull types

In the absence of more detailed data being available we have relied on boat length as a proxy for boat type, beam, and hull type. More information is required to more accurately determine the suitability of haulout facilities to accommodate changes in demand and type of service. Sometimes this relates to equipment (few multihulls can be accommodated by a 35-tonne travel lift), or access (the Tamaki Bridge restricts the type of boats that can use the Tamaki Marine Park).

In Auckland region just nine of the 22 haulout facilities interviewed can accommodate multihulled boats (Figure 5). Of the nine, three are very small facilities with limited capacity, four have travel lifts, which are not always popular with multihull owners because these types of boats were not designed to be lifted in a sling, and one service has a height restriction.

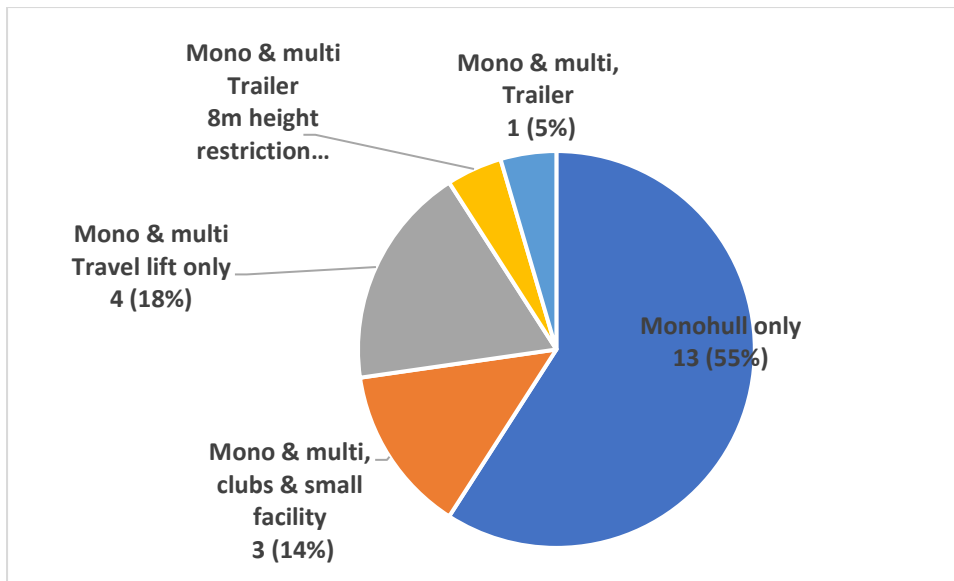


Figure 5: Haulout facilities able to accommodate multihull boats in the Auckland region⁵.

Multihull boats (catamarans and trimarans) typically have a beam (width) of 50% of their length, and most modern cruising multihulls are 12m or more in length. The popular 35 tonne travel lift generally has a width of 5.5m making them unsuitable for lifting multihulls. Modern monohulls are becoming both longer and beamier indicating that the popular 35 tonne travel lift, which comprise 36% of the 22 travel lifts in the Management Area, will lose its versatility. This trend in boat type and size will impact negatively on the capacity of the current antifouling infrastructure to service the fleet.

A common observation from many of the interviewees was an increasing number of boats and increasing size of boats. In the marinas changes to configuration and extensions to accommodate bigger boats are taking place. In the haulout sector commercial businesses are buying bigger equipment. The lack of boat registration hampers efforts to get a good understanding of these trends, which will impact on the future haulout and hardstand requirements, although the commercial sector can be expected to shift to accommodate the changes. For example, Orams Marine has recently acquired an 850-tonne travel lift.

Boats are getting bigger. 50 [feet] is the new 30 [feet]. Machines are getting bigger to pull [boats] out. Marina space is more expensive and less available.

Haulout equipment

The most versatile of the haul out equipment was the travel-lift. Capacities available ranged from 35 to 820 tonnes in terms of lift capacity. Several boatyards had more than one travel lift. However, the lift capacity was better defined by the travel lift piers in terms of dimensions (length and width) (Figure 6). For example, the 35-tonne travel-lift the piers were 20m long and 5.5m wide restricting them to a boat of these dimensions rather than weight. 35-tonne travel lift operators told us they preferred not to operate at maximum boat dimensions and that 16m to 18m was preferable. The beam dimension was absolute, meaning that multihulls (catamarans and trimarans) were usually not able to be lifted on a 35-tonne travel-lift. Travel lifts were less constrained by tide as the access to and seabed between the piers could be dredged.

⁵ Does not include The Landing, which has a Roodberg trailer and can accommodate multihulls.



Figure 6: Half Moon Bay Marina travel lift, Auckland.

Table 7 shows the haulout equipment by region.

Table 7: Haul out equipment by region

Region	Travel lift	Trailer/trolley	Roodberg/hydraulic trailer	Floating dock
Management Area	23	>30	6	-
Northland	6	>12	3	-
Auckland	12	>16	1	1
Waikato	2	>2	1	-
Bay of Plenty	3	-	1	-

Trailers rely on a ramp to operate. The trailers ran on wheels directly on the ramp or on railway lines. Some trailers were designed to transfer the boat to a cradle (Figure 7) enabling multiple boat haul out. Once hauled the boat is transferred to a cradle if possible. This is relatively straightforward when a travel lift is used, and the travel-lift carries the boat to a pre-prepared cradle or stands.



Figure 7: Roodberg trailer, Tauranga Marina, Bay of Plenty.

Boat clubs invariably have a ramp and trailer/trolley system and generally have limited hardstand (Figure 8). Where the trailer is on rails there is no capacity to transfer a boat to another cradle. Cradles are either owned by the boat owner and purpose built for their boat or owned by the club and available for lease.



Figure 8: Trollies on hardstand, Mangonui, Northland.

Many of the ramp-based facilities and some travel lift facilities are constrained by tide. That is, boats can only be hauled an hour or so either side of a high tide, and facilities must work around their individual constraints. Figure 9 shows the number of weekday/working hours high tides in Auckland during November 2022 as an example of tidal constraints. The return of the boat to the water also requires a high tide, thus halving ramp availability unless the

boat can be transferred to a cradle or trolley. For club facilities, when labour is volunteer and may be only available on weekends the window of opportunity may be further reduced.

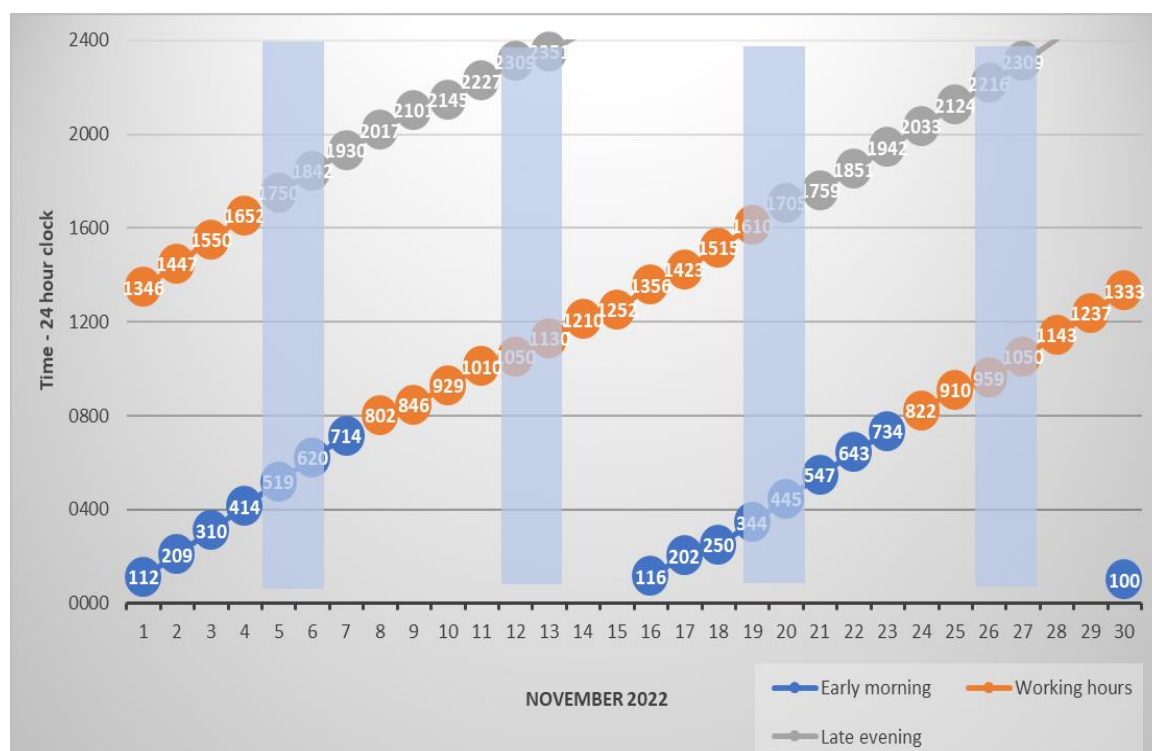


Figure 9: Auckland high tides during normal work hours in orange, November 2021. Source tidetime.org.

Hardstand capacity

The hardstand is the area available to accommodate boats while antifouling and maintenance was carried out. One of the constraining factors for antifouling was hardstand space, this being the capacity to accommodate the fleet. A useful analogy is a queue for antifouling service. Across the Management Area there are 1,234 hardstand spaces, which is 14 boats per hardstand space (Table 8)⁶. Northland has the greatest capacity relative to the regional fleet, at 9.5 boats/hardstand space, and Bay of Plenty the least, at 17.5 boats/hardstand space. However, boats travel between regions for maintenance.

Table 8: Hardstand spaces by region

Region	Total	Boats per hardstand space	Average hardstand spaces per haulout facility
Management Area	1,234	13.8	29
Northland	468	9.5	33
Auckland	599	16.2	27
Waikato	79	16.6	20
Bay of Plenty	88	17.5	29

Boat capacity is constrained by the size of the boat. For example, a catamaran may take the space of two monohulls. Longer boats also require more space both to accommodate and

⁶ Hardstand operators were asked to estimate how many boats they were able to accommodate on their hardstand. Answers are relative to the size and type of the boats typically using that facility.

manoeuvre. The boat capacity therefore can be interpreted as plus or minus twenty percent determined by the size and type of boat hauled.

Hardstand areas are often prime seaside locations and are increasingly attractive to alternative development. Two cases-in-point are Pier 21 (Auckland), which was sold for residential development in 2022, and The Landing (Okahu Bay, Auckland – Figure 10), which is being redeveloped as public space. These two facilities handled around 1,500 – 1,600 antifouls per year. Combined they represent a 18% loss in antifouling capacity in the Management Area, and about 36% of the antifouling capacity in the Auckland region in a typical year.



Figure 10: The Landing, Okahu Bay, Auckland (photo reproduced with permission of The Landing).

Antifouling

Approximately 9,000 boats of up to 20m are antifouled in a typical year across the Management Area, representing 54% of the fleet⁷. Of those, 37% are antifouled in the Northland region, 50% in the Auckland region, 7% in the Bay of Plenty, and 6% in the Waikato region (Figure 11). These figures include boats antifouled at Pier 21 and The Landing, in the Auckland region. The closure of these two facilities will push about 1,600 antifouls to other facilities.

⁷ Interviewees were asked how many boats they would haul out in a typical year, the percentage of those that were greater than 20m in length, and the percentage of boats that would be antifouled. Typically, the information was not readily accessible, and so estimates were deemed acceptable. In some cases, information was provided post-interview. Travel lift data tended to be based on travel lift movements and had to be broken down into antifoul (2 movements) vs lift and hold/wash (1 movement).

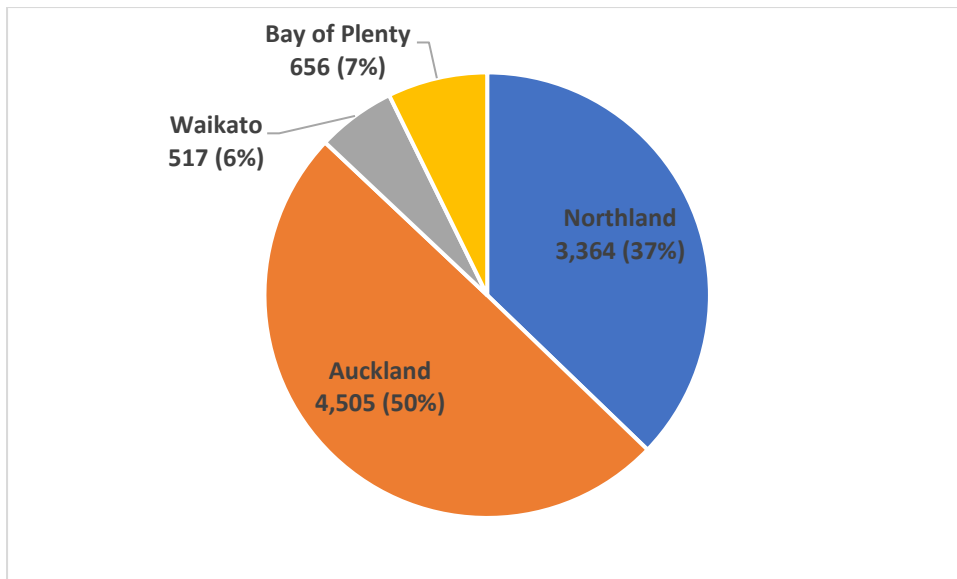


Figure 11: Number of boats antifouled each year

In terms of meeting current demand, 10% (23) of facilities were not able to meet current demand, for reasons including type of gear and high seasonal demand. This level of demand was based on antifouling every 2 - 3 years and little demand for wash down. Of facilities that were meeting demand, they generally had to carefully manage the high demand pre-summer by scheduling and waiting lists. Some commercial facilities tried to spread the seasonal demand by offering out-of-season discounts and encouraging early booking. An option available to clubs was to restrict access to members only.

Massive waiting list due to supply chain, staff, weather...

Fifty percent (23) of the facilities could increase antifouling throughput, but for half of those the increase depended on extending into the months prior to the current peak period of September to December. Some facilities indicated that they could undertake additional antifouling in the pre-summer period, but few if any had excess capacity during the peak periods. Of the remaining 12 facilities able to increase their antifouling throughput, four were full-service providers (refitting or boat building) and do not target the antifouling market, and three were clubs, which by their nature have a small throughput.

Capacity increase was also envisaged by the adoption of covered areas enabling boats to be worked on in inclement weather – the winter months outside the current peak periods. Most popular were vinyl covered metal structures that could typically accommodate launches only – covered areas can typically only accommodate yachts if they can lower their masts (Figure 12).

Having covered sheds we can keep servicing no matter what weather

Could increase in winter but labour an issue. Painters are hard to get.

It's all about flattening the [demand] curve. That's the only area for increasing capacity.



Figure 12: Covered shed on hardstand at Marsden Cove, Northland.

Extending covered areas will enable marine businesses to work more in the winter months but may not bring a big increase in antifouling activity. During the winter months there are fewer fine days, and the days are shorter. Relative humidity (RH) of more than 85% is not suitable for applying antifoul paints. By way of example, Figure 13 shows average RH and temperatures by month for Whangarei, North Shore and Whitianga.

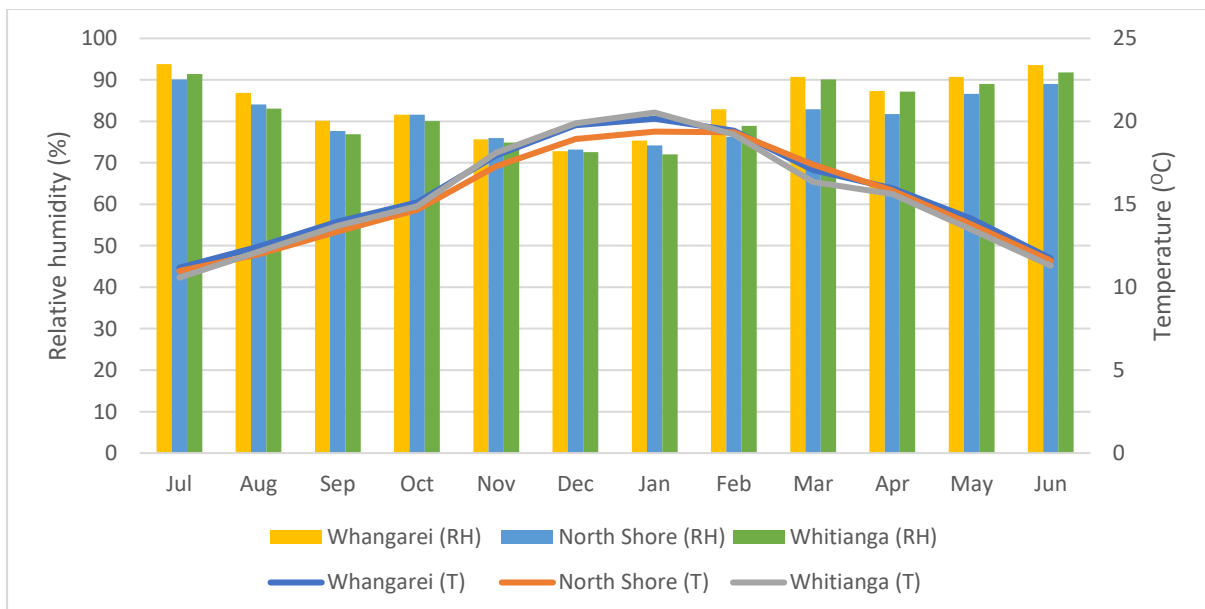


Figure 13: Average relative humidity and temperatures by month for June 2018 to June 2022 (Source: NIWA).

Impediments to extending the antifouling period into the winter months include wetter weather, shorter days, and haulout facilities, business may be quieter, but work is ongoing. During in the winter months boat owners are generally not motivated to get their boats ready for summer holidays, and the 6 or 1 requirement probably reinforces that reluctance. An

antifoul in September or later enables boat owners to travel anywhere around the regions and access to marinas in other areas.

In terms of physical increases in capacity:

- Ten facilities (23%) had plans to increase capacity. Of these, four would or could increase the hardstand areas if demand increased, two planned to increase covered areas, and six planned to increase their infrastructure, such as trailers.
- Twenty-six facilities (58%) had no plans to increase capacity or were unable to. Of those, 16 were at maximum capacity including 12 with no space to expand the hardstand. Four interviewees said it was too expensive to make any changes to increase capacity, four said their business suited them well at the current size, and four had other reasons for not expanding.
- Nine interviewees (20%) provided no response to this question.

Of the 17 clubs interviewed only one said they had plans to expand the hardstand area. Most clubs were restricted to current areas and plans to improve capacity were restricted to building more versatile cradles and finding other ways to use their current infrastructure more efficiently.

[We are] building more cradles that can be altered [to fit a range of boats].

We can't expand our area. We'd like a travel lift, improve equipment...

Need to use what we have better.

We are about as big as we can be as far as admin concerned.

Many facilities cited labour for the antifouling tasks as an ongoing issue. The job was often viewed and paid as an unskilled job, failing to attract suitable. Some hardstand operators offered a career structure towards boat refitting and general maintenance that appealed more to those wanting to gain broader skills in the industry. In smaller communities the low pay rates and scarcity of rental accommodation resulted in labour scarcity. Recognition and training in the skills required for competency in antifoul application may help overcome labour recruitment difficulties.

No applications locally, or people don't turn up.

The biggest roadblock is getting staff.

Antifouling is not a pleasant job. [We] go through a few staff.

Antifouling DIY

Most haulout facilities allow boat owners to antifoul their own boats. In commercial facilities boat owners are likely to go through an induction to work safely in the yard and are not able to use such equipment as water blasters or paint sprayers. Their activities are confined to sanding by hand and paint application with rollers or brush. Across the Management Area 35% of boat owners do their own antifouling (Figure 14). The percentage is greatest in the Waikato, at around 48%, and least in Northland, at 32%. In most clubs the percentage of owners doing this is 100%, while larger facilities the percentage is lower, but seldom less than 10%.

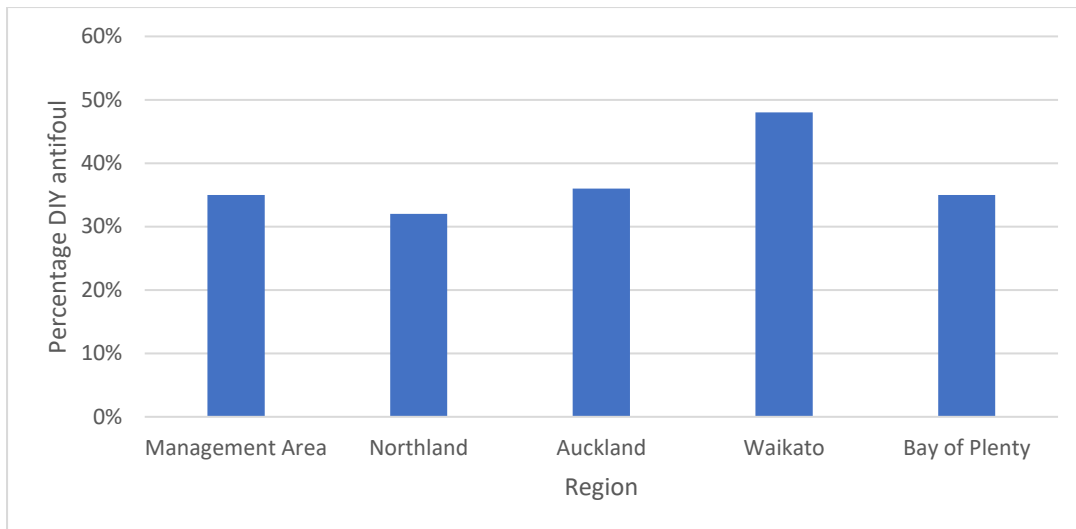


Figure 14: Percentage of boatowners who do own antifouling, by region

On average, the percentage of boatowners undertaking their own antifouling is high. Many interviewees considered that professionals do a better job than boatowners. Professionals have good quality gear including spraying equipment (rather than roller typically used by a boatowner), follow manufacturer's directions, and have more experience.

Antifouling complexities

The level of DIY in antifouling suggests that it is generally seen as a job anyone can do, but there is a lot to know about antifoul and antifouling. Some of the basic points are:

- Different antifouls suit different areas/locations – expert advice required.
- Antifoul experts talk about 'systems' which to the layman is the number of coats of antifoul – each coating representing one year. A 'system 2' should last two years (but will not be guaranteed, given the variables that impact on antifoul life).
- Preparation is important. The old antifouling must be removed. Failure to remove it can result in pancaking – antifouling flaking off.
- Paint thickness is specified by the manufacturer. For example, if 75 microns of antifouling is specified for one year protection this requires two coats if applying by spray, or three with a roller.
- To ensure adhesion the surface temperature of the boat should be less than three degrees cooler than the dewpoint – the solvents will not evaporate, and the paint will not cure properly. Basically, this means to avoid relative humidity over 85% while the paint is curing.
- Boats need to remain out of the water while the paint cures. For example, manufacturers recommend 8 hours at 24 degrees, 24 hours at 10 degrees. Winter conditions require more time for curing.
- To achieve best performance from an ablative antifoul the hydrolysed layer must be removed (waterblast, soft wash) to ensure the antifoul remains effective. Waterblasting to remove depleted paint should be with a fan head (not rotary) and at low (1,500-1,800 psi) pressure.
- Frequent waterblasting will reduce the effective life of an antifoul system.

Frequency of antifouling

Interviewees were asked to estimate how frequently boats in their specific area were likely to need antifouling to achieve the *'no more than slime and barnacles when moving'* standard. A common proviso was that the boat owner took other steps to keep the boat clean and that the response was dependent on factors such as boat usage and location. For example, where the boat was kept in areas with a high freshwater flush, antifouling tended to be effective for longer. Consideration of boat usage was not only applied to frequency being sufficient to keep the antifouling 'polished' to expose fresh biocide but also type of usage. Yachts used frequently for racing placed high demands on antifoul performance.

Thirty-five (80%) interviewees provided an estimate (Figure 15). The balance did not commit because of the complexity of factors affecting the life of an antifoul. There was no overall regional pattern, but at the more frequent end were facilities based around Opuā, where the growth of barnacles is high, and at the less frequent end were facilities in areas where boats got a good freshwater flush, deterring growth.

If in the Whangarei Harbour or Opuā your boat is a diabolical disaster if you don't antifoul annually.

Antifoul each year, especially in Coromandel [Harbour].

Freshwater wash through. If you do a good paint job, not just one coat, easily 3-4 years, but pull out seasonally.

People aim for 2 years as a goal – time and cost. Racing fleet yearly because wiping more often.

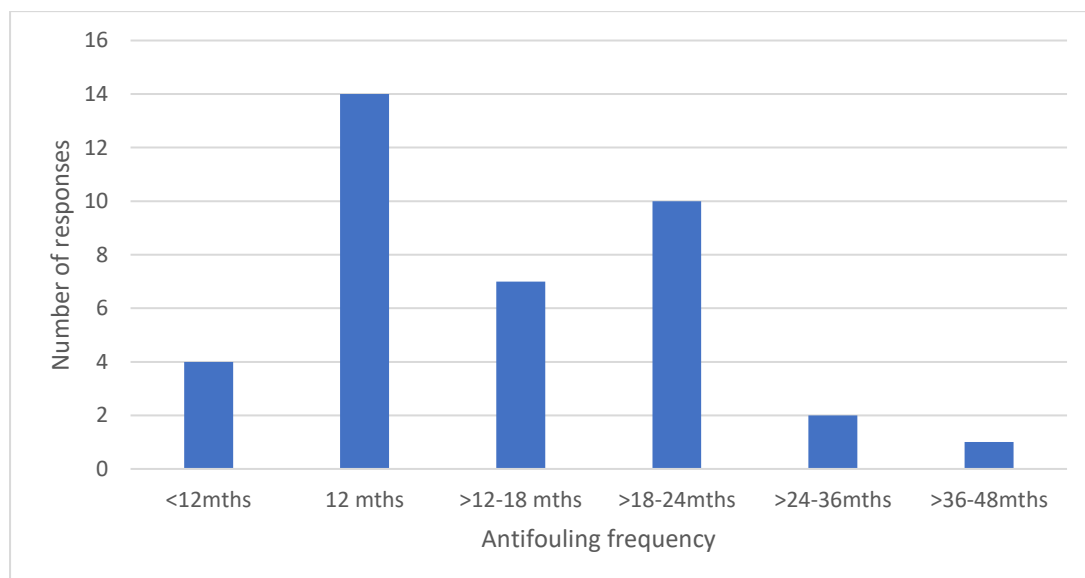


Figure 15: Facility manager estimations for antifouling frequency in the Management Area

Efficacy of antifouling paints

Prior to the interviews with haulout facility providers and service providers, we interviewed staff at Carboline (Altex) in Tauranga to learn more about antifouling. In summary the key points for an effective antifouling were paint coat thickness (being 75 microns per year of protection), spray application to ensure good uniform hull coverage and ensuring that the conditions at time of painting enabled the paint to properly cure.

During the process some interviewees expressed their frustration at the effectiveness of antifouling paints on the market:

It's absolutely crap now...using heaps more.

I feel like I'm just walking down to the end of the wharf and pouring it into the water.

Lift and hold/wash

Floating Dock Services is based in Auckland (Westhaven Marina) and is probably best suited for a lift and hold/wash service (Figure 16). Not tide dependent, boats enter the dock, are lifted, washed and refloated with the process from start to finish taking about half an hour. In the absence of a floating dock, travel lifts are the next most practical option.



Figure 16: Floating Dock Services, Westhaven, Auckland.

Twenty (47%) facilities said they provided a lift and hold/wash service. Of these, 15 used travel lifts. For facilities dependent on trailers, lifting and washing (in the absence of any other boat work) is an occasional service.

Most facilities were unable to be specific about the number of lift and hold/wash for washing only:

Truckloads. Good with two machines. Couldn't when we had one machine.

Best day four [per day], but often three.

Table 9 shows the theoretical capacity for lift and hold/wash based on the number of facilities with a travel lift providing lift-and-hold/wash for 4-6 boats per day⁸ for 26 weeks (September to March). Sixteen facilities have one or more travel lifts, and capacity would depend on the number of travel lifts, tidal access, staffing and workload. While Waikato and Bay of Plenty facilities could probably accommodate the requirements of boats in those regions, boats in the Auckland region are around double the potential capacity. In Northland the spread of the boat population would mean that distance from facilities would make lift and hold/wash impractical for many boats.

⁸ A facility with two travel lifts estimated that at best they could put through four per day on average, taking into account tides.

Table 9: Number of facilities with at least one travel lift, by region, boats <=20m.

Region	Management Area	Northland	Auckland	Waikato	Bay of Plenty
Number of facilities with travel lifts	16	4	7	2	3
Estimated lift and wash capacity/year	8,320 - 12,480	2,080 - 3,120	3,640 - 5,460	1,040 - 1,560	1,560 - 2,340
Number of boats <-20m	16,531	4,383	9,366	1,278	1,504

Washing with a water-blaster and not removing antifoul is a learned skill:

Rule of thumb – just take off the growth, not the paint. Our guys are very, very good.

So easy to do a light wash with the water blaster – gently skim.

No idle thing. You have to know what you're doing.

Boatyards need to improve standards in terms of lift and hold

In-water hull cleaning

Done properly, with a soft broom, in-water cleaning can remove slime and assist in reactivating antifouling. Done incorrectly, it can remove antifouling paint, rendering it ineffective.

A lot of people dive and clean their own boats.

Interviewees were asked whether they were aware of any local in-water cleaning services. In Northland three interviewees mentioned there were local firms providing an in-water cleaning service, mentioning approved 'in-water cleaning zone' in the Northland region (NRC, undated).

Regardless of location, marinas typically do not allow in-water cleaning for environmental and health and safety reasons. Economic reasons were also cited by one interviewee associated with a marina, who said:

No, because we want to keep our travel lift busy.

In-water cleaning could also be a bone of contention for commercial services:

Tens of thousands [dollars] getting the filtration system – double standard if council allows people to knock [the growth] off into the water.

The removal or lack of maintenance of public 'grids', structures that have traditionally been used to support a boat while marine growth is removed was seen by some interviewees, particularly those at a distance from available haulout facilities, as an impediment to meeting the standard of 'no more than a layer of slime and barnacles while moving'.

I've heard a lot of people do [in-water cleaning]. There is a grid but we are no longer allowed to use that.

Changing attitudes

A few facilities reported changing attitudes to hull cleaning, with a general acceptance of the 6 or 1 requirement:

A big shift [in behaviour]. The fleet is twice as clean as it has ever been.

Embarrassment of boat owners [if boat fouled in the marina]

Distance analysis to determine facility capacity

Three levels of frequency of antifouling were modelled to calculate the number of boats that could be antifouled across the region, assuming boats would travel to the nearest facility that would accommodate their length and could travel up to 50 NM from their berth/mooring, including traveling between regions.

Scenario 1

Under this scenario all boats across the Management Area require an antifoul each year (on average) to meet the proposed standard (Table 10).

- Each of the four regions within the Management Area have insufficient capacity if all boats required an antifoul annually. The capacity under this scenario is 48% of required capacity for annual antifouling.
- Northland has capacity for 79% of boats in that region, but 1,599 boats are either more than 50 NM from a haulout facility, or the facilities within the distance limit are at capacity. Not all the available Northland capacity is filled because of the distance of travel.
- Auckland has capacity for 33% of boats in that region. Auckland boats region take up the additional capacity in Northland (where within the 50 NM limit).
- Waikato and the Bay of Plenty have capacity for about half the boats in each of their respective regions.

Table 10: Haulout facilities and capacity under Scenario 1.

	Northland	Auckland	Waikato	Bay of Plenty	Management Area
Boat numbers	4,236	8,790	1,113	1,381	15,520
Facility capacity	3,364	2,905	538	680	7,487
Capacity as % of boats	79%	33%	48%	49%	48%
Boats antifouled within region	2,637	2,905	538	680	6,760
Boats not covered within region	1,599	5,885	575	701	8760
Boats antifouled from outside region	+620	-620	-	-	-

Scenario 2

All boats require an antifoul every 18 months (on average) to meet the proposed standard. The 18-month facility capacity is 1.5 times the annual capacity (Table 11).

- Across the Management Area there is capacity for 72% of boats to be antifouled on an 18-month basis.
- Northland has 119% capacity in relation to boats in that region. Although the region has increased in capacity (relative to antifouling requirements), the location of boats relative to capacity remains an issue.
- Auckland has capacity for 50% of the regional fleet to be antifouled on an 18-month basis. Overall, Auckland has a shortfall of 4,432 antifouling spaces. Extending the antifouling to 18 months has enabled more boats to travel to their closest facility. While boats could travel to Northland to take advantage of excess capacity in that region, the distance travelled would be greater than 50 NM.

- The Waikato and Bay of Plenty regions have capacity for 73% and 74% of the regional fleet respectively. Waikato has a shortfall of 306 antifouling spaces and Bay of Plenty of 361 antifouling spaces. There are no facilities within 50 NM with excess capacity.

Table 11: Haulout facilities and capacity under Scenario 2

	Northland	Auckland	Waikato	Bay of Plenty	Management Area
Boat numbers	4,236	8,790	1,113	1,381	15,520
Facility capacity	5,046	4,358	807	1,020	11,231
Capacity as % of boats	119%	50%	73%	74%	72%
Boats antifouled within region	3,112	4,358	807	1,020	9,297
Boats not covered within the region	1,934	4,432	306	361	6,177
Boats antifouled from outside region	-	-	-	-	-

Scenario 3

All boats require an antifoul every two years (on average) to meet the proposed standard. Over two years the facility capacity is twice the annual capacity (Table 12).

- Across the Management Area there is capacity for 96% of boats to be antifouled on a 2-yearly basis.
- Northland has capacity for 159% of its fleet, providing capacity for boats outside the region. Relaxing the timing to 2-yearly enables more boats to reach a facility within 50 NM, but 1,046 remain unable to access a facility with capacity within the distance limit.
- Auckland has capacity for 66% of its fleet to access facilities, leaving 2,980 boats unable to access facilities within the 50 NM distance limit.
- The Waikato and Bay of Plenty regions are close to capacity at 97% and 98% respectively. The 21 remaining boats in the Bay of Plenty are outside the 50 NM limit.

Table 12: Haulout facilities and capacity under Scenario 3

	Northland	Auckland	Waikato	Bay of Plenty	Management Area
Boat numbers	4,236	8,790	1,113	1,381	15,520
Facility capacity	6,728	5,810	1,076	1,360	14,974
Capacity as % of boats	159%	66%	97%	98%	96%
Scenario 3: Boats antifouled within region	3,190	5,810	941	1,360	11,301
Boats not covered within the region	1,046	2,980	172	21	4,219
Boats antifouled from outside region	-	-	-	-	-

Maps for the scenarios are provided in Appendix 3. Haulout facilities are marked, and boats are shown with small round markers (often overlapping given the size of the maps). Light green markers indicate boats that can reach a suitable facility under Scenario 1. The scenarios are iterative, and mid-green markers show the additional boats reaching a facility under Scenario 2. Dark green markers show the additional boats reaching a facility under Scenario 3. Round purple markers depict boats are unable to access facilities either because facilities within the 50 NM limit are full, or because they are more than 50 NM to any available facility.

Discussion

Dry berths

The use of dry berths was not widespread in the Management Area but may eventually provide a partial solution to marine growth on boats, particularly in areas that are remote from antifouling service facilities. Designs vary from floating platforms upon which a boat may be winched to floating pens into which the boat is driven, and the water pumped out. Depending on the design, launches and keelers up to 10m to 12m can be accommodated. The dry berths may be tethered in a marina or attached to a mooring. Getting the boat out of the water removes the need for antifouling.



Figure 17: Dry berth, Whangamata Marina.

Club facilities

The point-of-difference for clubs is a contribution to the social and cultural wellbeing of the community. Clubs provide a means of making boating available to a wider range of New Zealanders –the high costs that can be associated with boat ownership can be traded with sharing labour in the club member community...

[Our marina is] very much a working man's marina.

One of the great things about New Zealand – affordability for everyone.

Club ethos is to provide affordable boating.

Commercial facilities are starting to cater more for bigger boats.

Some clubs survive solely on voluntary labour, while others pay for key roles, such as a slip master. Typically boat club haul out equipment is confined to trailers, trolleys and cradles. Haul out by these means can be physically demanding and generally requires a team of people to ensure a safe haul out. Boat owners assist each other to bring boats in. Club hardstands vary in size from a space enabling just one boat to be serviced to up to 40 boats. The average hardstand space for clubs is 15 boats DIY antifouling was a feature of clubs, with nearly all owners undertaking these aspects of boat maintenance themselves. Lift and hold/wash is generally not practical because of the infrastructure.

With the community club membership style at one end of a spectrum of boat ownership, at the other end is a new generation of boat owners, described by some commercial facilities as 'time poor' but financially well off, who wanting to arrive at a marina with the boat prepared and ready to go, all aspects of maintenance catered for.

Frequency of antifouling

The potential for a boat hull becoming fouled with marine organisms is dependent on water temperature, water nutrient load, and marine organisms present. Each varies with respect to location. There is a high potential for fouling in nutrient loaded estuarine waters especially in the summer months when water temperatures are higher. In nutrient rich waters organic matter sticks to the boat hull and is rapidly colonised by bacteria and microscopic algae. This is slime and forms a substrate to which barnacles can attach. They arrive as free-living larvae and can be sexually mature in twelve hours. The numbers of larvae present will depend on populations of mature barnacle in the vicinity on rocks, marine structures (wharves, marina pontoons, poles and piles), and boats.

The role of water temperatures and nutrients in the water suggest that exacerbators of the survival and spread of pests could be considered more widely, for example to activities that contribute to nutrient loading, including farming activities and road/storm water runoff.

Boat usage is another factor in boat hull fouling. Antifoul paints used in New Zealand are predominantly ablative. That is the depleted antifouling paint is washed off by boat movement to expose fresh antifouling. If the boat is infrequently used the exposed antifouling becomes ineffective. Light hull washing can serve to restore antifouling efficacy.

Light hull washing to restore the efficacy of the antifouling paint may be done by a 'lift and hold', usually with a travel lift. The operation takes about 30 to 40 minutes with the boat hull being washed with a water blaster. Effective use of the water blaster is not an unskilled operation. Too much water pressure or careless use of the water blaster will remove antifouling paint that is still effective resulting in a loss to the boat owner. Understanding, locating, and cleaning areas on a boat hull that might conceal pest organisms is another important role of the person cleaning a boat hull. Cleaning the area covered by the travel lift straps may necessitate a 'double dip'. That is returning the boat to the water, adjusting the straps and re-lifting to clean the area previously covered. Lifting and holding ties up the travel lift for up to an hour and unless there are other boats waiting at the time to be lifted and washed the hardstand will require cleaning.

Efficacy of antifouling paints

In 2013 the Environmental Protection Authority (EPA) reviewed 12 active ingredients (biocides) over 60 antifoul products available in New Zealand. Antifouling paints containing *irgarol* or *chlorothalonil* were no longer be able to be manufactured or imported as the approvals to do so have been declined. Antifouling paints containing *diuron*, *octhilinone* or *ziram* had a time-limited approval of four years (2017) and *thiram* 10 years (2023). All other substances assessed continue to be approved but are subject to additional controls. These included disposals of used product removed during hull cleaning, additional protection to applicators and label/ safety information updates.

Prior to 2013, environmental data (P. Stoffers et al 1986, J. Webster et al 1999, D. Morrissey et al 1999, C. Loomb & T. Healy 2001, G. Abraham & R. Parker 2002, A. Whyte et al 2009, G. MacFarlane et al 2003, G. Abraham 2007, M. Morrissey et al 2009, N. Philips & C. Hickey 2010) while not always specific in determining source resulted in the targeting of antifouling paints as the primary source of toxins recorded from estuarine sediments in New Zealand (EPA, 2013). More recent studies identify the main sources of toxins and heavy metals from road, urban and industrial runoff and agricultural chemicals applied to nearby land (see for example, Bastakoti, et al. (2018), Stewart et al. (2014), Bourgeois et al. (2019), Thomas et al. (2020)).

Changes to the availability of some biocides for inclusion in antifoul paints has put pressure on local manufacturers to identify, test and register effective replacements. To rigorously efficacy test potential biocides for location and seasonal variations takes five to seven years in a marine environment where temperatures and nutrient loadings are increasing.

Moorings vs marina berths

Moorings were seen as a particular issue in terms of marine pests, with neglected boats harbouring excessive marine growth and a perceived liability risk to a haulout operator should they be forced to accept the boat for a hull clean.

Worse growth. Not controlled.

Abandoned boats on moorings [We are] reluctant to take it in to clean because potentially it would be left in the yard.

These observations are confirmed in surveys of level of fouling on boats. In the 2020-21 survey of boats in the Waikato region, 90% of boats in marinas scored at level of fouling 1 and 2 (out of 5, where 5 is the worst), but just 36% of boats on moorings were at those two levels (BOPRC, 2021).

Conclusions

The proposed standard for hull cleanliness is '*no more than a slime layer and barnacles when moving*'. The results of boat surveys by regional councils suggest that, for some boats, achieving the standard will require more antifouling and washing activity than is currently the case. Under current practices, approximately 9,000 boats of up to 20m are antifouled annually, or 55% of the fleet in the Management Area. It is likely that Auckland-based boats use facilities in the surrounding regions because of pressure on Auckland facilities. Closure of existing facilities will increase this pressure.

The proposed standard does not specify a frequency of antifouling or washing – that decision would remain with boat owners. Required frequency is dependent on a range of factors, including the antifouling system used, the quality of the previous antifouling, the usual residence of the boat, and how often the boat is used. Boatowners are therefore best placed to make the decision.

Estimates of regional and local variation in hull fouling were dependant of water temperatures and nutrient loading. Boats in estuarine waters adjacent to pastoral/horticultural land exhibited higher levels of hull fouling. Boats in waters with few nutrients (suspended load) and especially with an occasional freshwater flush exhibited least hull fouling. The extremes for effective antifoul life based on the same application rate ranged from 6 months to 4+ years supporting a proposal for a hull cleanliness standard rather than a frequency of antifouling.

Distance analysis to determine antifouling capacity was based on scenarios where boats were antifouled at 12- 18- and 24-month intervals. The distance analysis assumed boats would travel to the nearest facility suitable for the boat length, not travelling more than 50 NM. In reality, boat owners may travel much further for maintenance, with decisions based on factors such as hardstand availability and costs, but the method provides a practical means for assessing capacity against the fleet size by location. Key points from the distance analysis were:

- When all boats are antifouled annually, capacity is sufficient for 48% of boats in the Management Area. Across the regions this is 79%, 33%, 48%, and 49% of the fleet for Northland, Auckland, Waikato and Bay of Plenty respectively.
- When antifouling occurs at 18-month intervals (on average), capacity is sufficient for 72% of boats in the Management area. Across the regions this is 119%, 50%, 73%, and 74% for the fleet for Northland, Auckland, Waikato, and Bay of Plenty respectively.
- When antifouling occurs at 2-yearly intervals (on average), capacity is sufficient for 96% of the fleet across the Management Area. Northland has capacity for 159% of its fleet, while Auckland has capacity for 66% of its fleet. Waikato and the Bay of Plenty regions are close to capacity.

A key finding is the mismatch of haulout and antifouling capacity relative to boat locations. As a consequence, boats must travel to access facilities. The likely destination for Auckland-based boats is Northland, where there is an excess of capacity relative to boats. In the absence of a rule preventing movement without a clean hull, marine pests are likely to be transferred between areas by boat owners accessing antifouling and other services.

Few existing facilities have any ability to extend hardstand space, and most are working to improve equipment and infrastructure, such as covered areas. Potentially this would increase the amount of antifouling done, but at that time of year where days are shorter and there are fewer suitable painting days. The biggest hurdle to moving antifouling into those

months may be motivating boat owners from what is traditionally seen as a spring task to antifouling in the autumn/winter. One barrier to achieving this shift is the *6 or 1 requirement*, which has an implicit incentive to antifoul from September onwards to get through the summer season with the ability to move between areas.

Haulout facilities tend to cater for specific types and sizes of boats. For example, multihulls are often unable to be accommodated for haul out on the popular 35 tonne travel lift because their beam (width) exceeds the capacity of the travel lift, and owners may prefer to haul out on a trailer. Facilities to suit multihulls are limited. Any assessment of the capacity for antifoul and washing services in a region must consider tide and labour restrictions. It is not just a function of equipment and hard stand.

There is currently little activity in the Management Area to build new haulout facilities. The Bay of Plenty is an exception, with construction projects underway in the eastern part of the region, servicing an area that currently has no facilities. The loss of facilities such as Pier 21 and The Landing (Auckland) will result in a net loss. The Kennedy Bay Marina development at Waiheke Island does not include a haulout facility, but potentially adds to the Auckland fleet size.

A trend for increasing boat size and population identified by marina operators will exacerbate issue around the undersupply of services, and the potential net loss of existing services, particularly in the Auckland region. The increase in boat length is accompanied by a trend for increased beam (boat width). Multihulls are becoming more popular. Potentially the market will respond to these changes, providing the barriers to entry enable new facilities to be established. This is a topic that could be further investigated.

Boat clubs account for 16% (~1,175) of antifouling activity in the Management Area with limited capacity for hardstand and often antiquated equipment. Hauling out is usually confined to high tide in daylight hours. Clubs, by their nature, promote community cohesiveness and support social and cultural wellbeing through making boating accessible for a broad demographic of New Zealanders. Antifouling capacity could be increased in this area with wider community support to upgrade equipment.

The industry is highly reliant on boat owner labour. About 40% of antifouling on recreational boats of up to 20m is done by boat owners. This figure is near to 100% for antifouling completed at boat club facilities. Ensuring access to good quality technical information and support for the boat owners has the potential to improve antifoul performance.

Attracting suitable workers to the task of cleaning and antifouling boats was a challenge for many of the commercial hardstands. Often seen as a labouring job, several of the interviewees pointed out that applying antifouling is a skilled job that not just anyone can do. Designing nationally approved accreditations for the boat maintenance industry may go some way in providing a career structure.

References

- Abraham G., & Parker, R. (2002). *Heavy-metal contaminants in Tamaki Estuary: impact of city development and growth, Auckland, New Zealand*. Environmental Geology Vol 42, pp 883–890.
- Abraham, G. M. S., Parker, R. J., Nichol S. L. (2007). *Distribution and assessment of sediment toxicity in Tamaki Estuary, Auckland, New Zealand*. Environmental Geology Vol 52, pp1315–1323.
- Bastakoti, U., Robertson, J., Alfaro, A.C. (2018). *Spatial variation of heavy metals in sediments within a temperate mangrove ecosystem in northern New Zealand*. Marine Pollution Bulletin Vol 135 pp 790 – 800.
- Bay of Plenty Regional Council (BOPRC). (2021). WRC Marine Biosecurity Report 2020-21. Memorandum.
- Bourgeois, C., Alfaro, A.C., Dencer-Brown, A., Duprey, J.L., Desnues, A., Marchand, C. (2019). *Stocks and soil-plant transfer of macro-nutrients and trace metals in temperate New Zealand estuarine mangroves*. Plant and Soil Vol 436, pp 565–586.
- Environmental Protection Authority (2013). Evaluation and review report. APP201051 – Antifouling Paints.
- Gibson, A (2022). Westhaven's Pier 21 sold: Marina, dry stack, officer, hospitality snapped up in 1.2ha purchase. New Zealand Herald 25 July 2022.
<https://www.nzherald.co.nz/business/westhavens-pier-21-sold-marina-dry-stack-offices-hospitality-snapped-up-in-12ha-purchase/4N2GQ3K4ZKHTNGW6ZCPJVAWSJI/>
- Koning, J.T., Bollmann, U.E., Bester, K. (2020). *The occurrence of modern organic antifouling biocides in Danish marinas*. Marine Pollution Bulletin Vol 158
- MacFarlane, G.R., Pulkownik, A., Burchett, M.D. (2003). *Accumulation and distribution of heavy metals in the grey mangrove, Avicennia marina (Forsk.) Vierh.: biological indication potential*. Environmental Pollution Vol 123 Issue 1 pp 139 – 151
- Lomb, C., Healy, T. (2001). *Muddy Sedimentation in a Sheltered Estuarine Marina, Auckland, New Zealand*. Journal of Coastal Research Special Issue 34. International Coastal Symposium (ICS 2000): Challenges for the 21st Century in coastal sciences, engineering and environment, pp. 357-369.
- Morrisey, D. J., DeWitt, T. H., Roper, D. S., Williamson, R. B. (1999). *Variation in the depth and morphology of burrows of the mud crab Helice crassa among different types of intertidal sediment in New Zealand*. Marine Ecology Series Vol 182.
- Morrison, M. A., Lowe, M. L., Parsons, D. M., Usmar, N. R., McLeod, I. M. (2009). *A review of land-based effects on coastal fisheries and supporting biodiversity in New Zealand*. New Zealand Aquatic Environment and Biodiversity Report No. 37. 100 pp.
- New Zealand Environmental Protection Authority APP201051 – Antifouling Paints. May 2013.
- New Zealand Marina Operators Association (date). Find a marina or boatyard in New Zealand. Accessed: <https://www.nzmoa.com/directory> 8 September 2022.
- Northland Regional Council (undated). Cleaning your boat. Accessed: <https://www.nrc.govt.nz/maritime/marine-pollution-and-boat-cleaning/cleaning-your-boat/>

Phillips, N.R., Hickey C.W. (2010). *Genotype-dependent recovery from acute exposure to heavy metal contamination in the freshwater clam Sphaerium novaezelandiae*. Aquatic Toxicology Vol 99 Issue 4.

Stewart, M., Olsen, G., Hickey, C.W., Ferreira, B., Jelić, A., Petrović, M., & Barcelo, D. (2014). *A survey of emerging contaminants in the estuarine receiving environment around Auckland, New Zealand*. Science of The Total Environment Vol 468 – 469 pp 202 – 210.

Stoffers, P., Glasby, G. P., Wilson, C. J., Davis, K. R., Walter, P. (1986). *Heavy metal pollution in Wellington Harbour*. New Zealand Journal of Marine and Freshwater Research Vol 20 Issue 3 pp 495-512.

The Landing Hardstand. Hardstand closure 17 August 2022.

<https://www.facebook.com/thelandingokahubay>

Thomas, M.C., Flores, F., Kaserzon, S., Reeks, T.A., & Negri, A.P. (2020). *Toxicity of the herbicides diuron, propazine, tebuthiuron, and haloxyfop to the diatom Chaetoceros muelleri*. <http://www.nature.com/scientificreports>.

Tidetime.org. Auckland Tide calendar. November 2022 <https://www.tidetime.org/australia-pacific/new-zealand/auckland-calendar-nov.htm>

Webster, J.G., Brown, K.L., Webster, K.S. (1999). *Source and transport of trace metals in the Hatea River catchment and estuary, Whangarei, New Zealand*. New Zealand Journal of Marine and Freshwater Research Vol 34 Issue 1 2000 pp 187-201.

Whyte, A.L.H., Hook, G.R., Greening, G.E., Gibbs-Smith, E., Gardnerb, J.P.A. (2009). *Human dietary exposure to heavy metals via the consumption of greenshell mussels (Perna canaliculus Gmelin 1791) from the Bay of Islands, northern New Zealand* Science of The Total Environment Vol 407, Issue 14 1 pp 4348 – 4355.

Yachting New Zealand (date). Fine a club. <https://www.yachtingnz.org.nz/clubs/find-club>
Accessed 8 September 2022.

GIS data references

Auckland Transport (2022). Mooring Locations (updated on 13th September 2022). Feature Layer Dataset, Retrieved from: <https://data-atgis.opendata.arcgis.com/datasets/ATgis::mooring-locations/about>

Bay of Plenty Regional Council (2022) Maritime Moorings. Retrieved from: Geodatabase extract.

Northland City Council (2022). Moorings. Feature Layer Dataset Retrieved from: https://services2.arcgis.com/J8errK5dyxu7Xjf7/ArcGIS/rest/services/IRIS_Moorings__Public/FeatureServer/0

Waikato Regional Council (2022). Mooring (IRIS) Data.

Appendices

Appendix 1: Participants

The following commercial operations and clubs were either interviewed or provided information that helped inform the report.

Bay of Islands Marina
Bay of Islands Yacht Club
Boat Works, Whangamata
Brooklands Boat Club
Bucklands Beach Yacht Club
Carboline – Altex Coatings Ltd
Devonport Yacht Club
Dockland 5
Doug's Boatyard
Floating Dock Services
Gulf Harbour Marina
H & M Pascoe, Whitianga
Hackett Landing Slipway
Half Moon Bay Marina
Harbourside Boat Works (South Pacific Gateway Marina)
Hibiscus Marine and Storage
Hobsonville Marina
Kerikeri Cruising Club
Kopu Marine, thames
Lee Boat Builders
Mangonui Cruising Club
Marsden Cove Marina
Milford Cruising Club
Norsand Boatyard
Oceania Shipyards (Port Whangarei Marine Ctr & Oceania Shipyard)
Opotiki Marina Development
Orams Marine
Panmure Yacht and Boating Club
Pier 21
Pine Harbour Boat Painters
Pine Harbour Marina
Quayside Boatyard
Riverside Haulage
Riverside Marina
Robertson Boats
Rocky Bay Memorial Cruising Club
Russell Boating Club
Sandspit Yacht Club
Silo Marina
Stillwater Boating Club
Superyacht Coatings

Tairua Marina Limited
Tamaki Marine Park
Tauranga Bridge Marina
Tauranga Marina
TeAtatu Boat Club
Thames Sailing Club
The Landing
The Slipway
Total Marine Services
Vessel Works Tauranga
Viaduct Harbour
Waiheke Boating Club
Wardale Marine Industry Consulting
Weiti Boating Club
Whakatane Yacht Club
Whangamata Marina
Whangarei Cruising Club
Whitianga Marina
Whitianga Waterways

In addition to the above, marinas without haulout facilities provided information on the number and size of berths.

Appendix 2: Survey questions

Marina

1. How many boats usually resident in the marina? Detail on that – length, beam, weight, hull type.

Hardstand

2. Does the Marina own the hardstand capacity?
3. Travel lift or trailer haul out?
4. What size boats can you lift (hull type, length, beam, weight)?
5. Where do boats go if they can't be lifted locally (e.g., if too large)?
6. How many boats on average do you lift per year?
7. What percentage of the boats that you lift would be greater than 20m in length?
8. How many boats can you fit on the hardstand (on average)?
9. Any capability constraints for haulout? (e.g., tide, sea conditions)
10. Are you able to meet the current demand?
11. How do you manage seasonal demand?
12. Do you have any capacity issues with the hardstand? (e.g., obtaining parts, labour...)
13. Is business growing, or much the same? Why?
14. Do you have any plans for expansion of the hard stand?
15. Do you have any plans for increasing infrastructure?
16. Are there other hardstands in this area? If yes, where:

Services

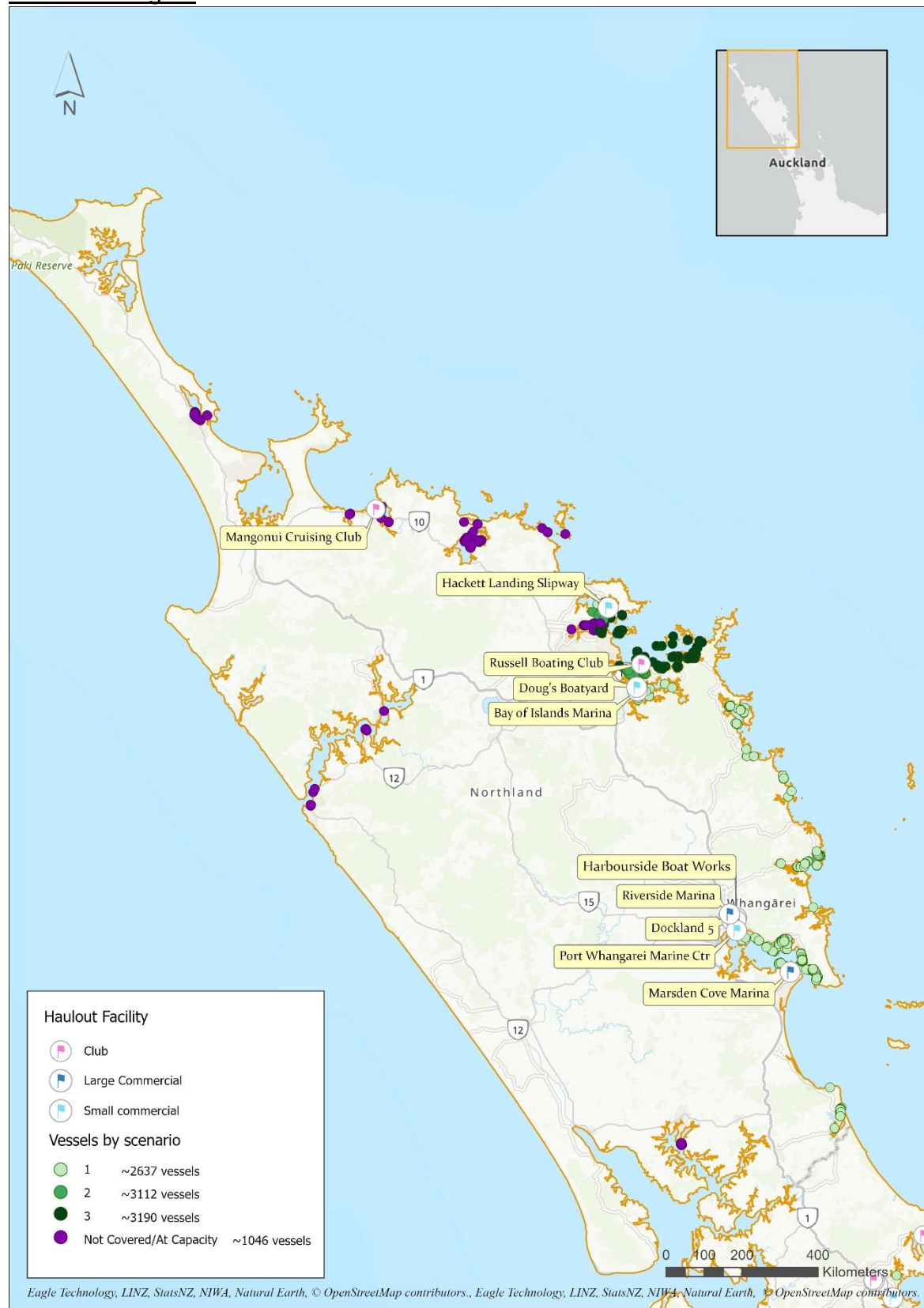
17. What services do you offer on the hardstand (tick each that apply)
 - a. Antifoul
 - b. Lift and hold/wash
 - c. Other (specify)
 - d. None (external providers)
18. Antifouling (ask even if they do not do the antifouling)
 - a. What percentage of the work here is antifouling?
 - b. Could you increase the number of boats that come out for antifouling?
If yes, by how much?
 - c. Can boatowners do their own preparation and antifouling?
 - d. What percentage of boatowners do their own antifouling?
19. Lift and hold/wash
 - a. How does that work (e.g., in and out in a day, waterblast)?
 - b. Who does the wash?
 - c. Could you increase the number of boats for lift and hold/wash?
If yes, what could you increase to?
20. In-water cleaning – is there a local service for in-water cleaning?
21. Comments on 6 or 1 requirement.

Antifouling services (for antifouling service providers)

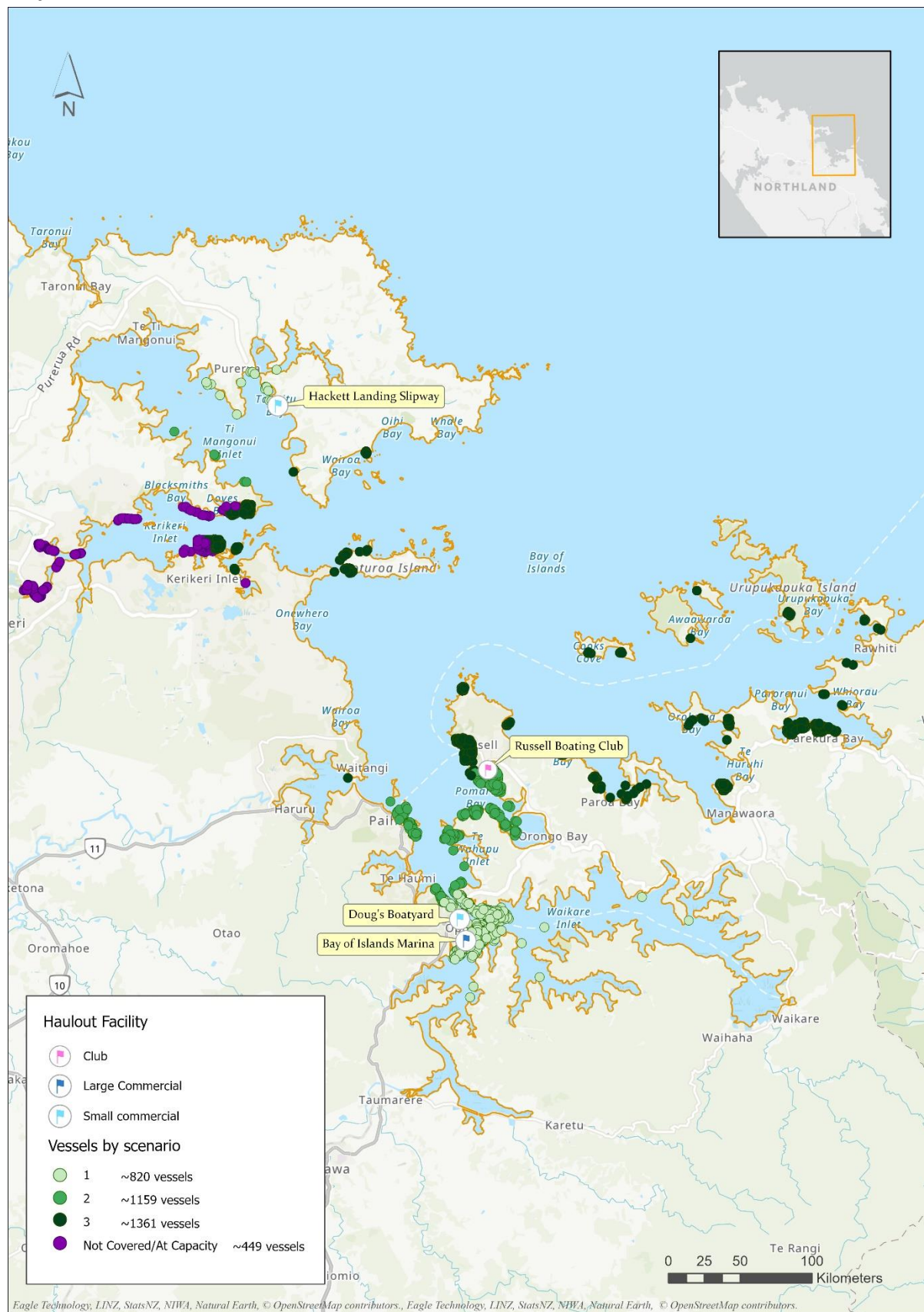
22. What frequency of antifouling and washing would be required in this area to achieve the '*not more than slime and barnacles when moving standard*'?
23. Type of antifouling used locally?
24. Could you do more antifouling than you currently do? Yes/No
25. Capacity issues? E.g., labour availability, availability of haul-out?

Appendix 3 – Maps

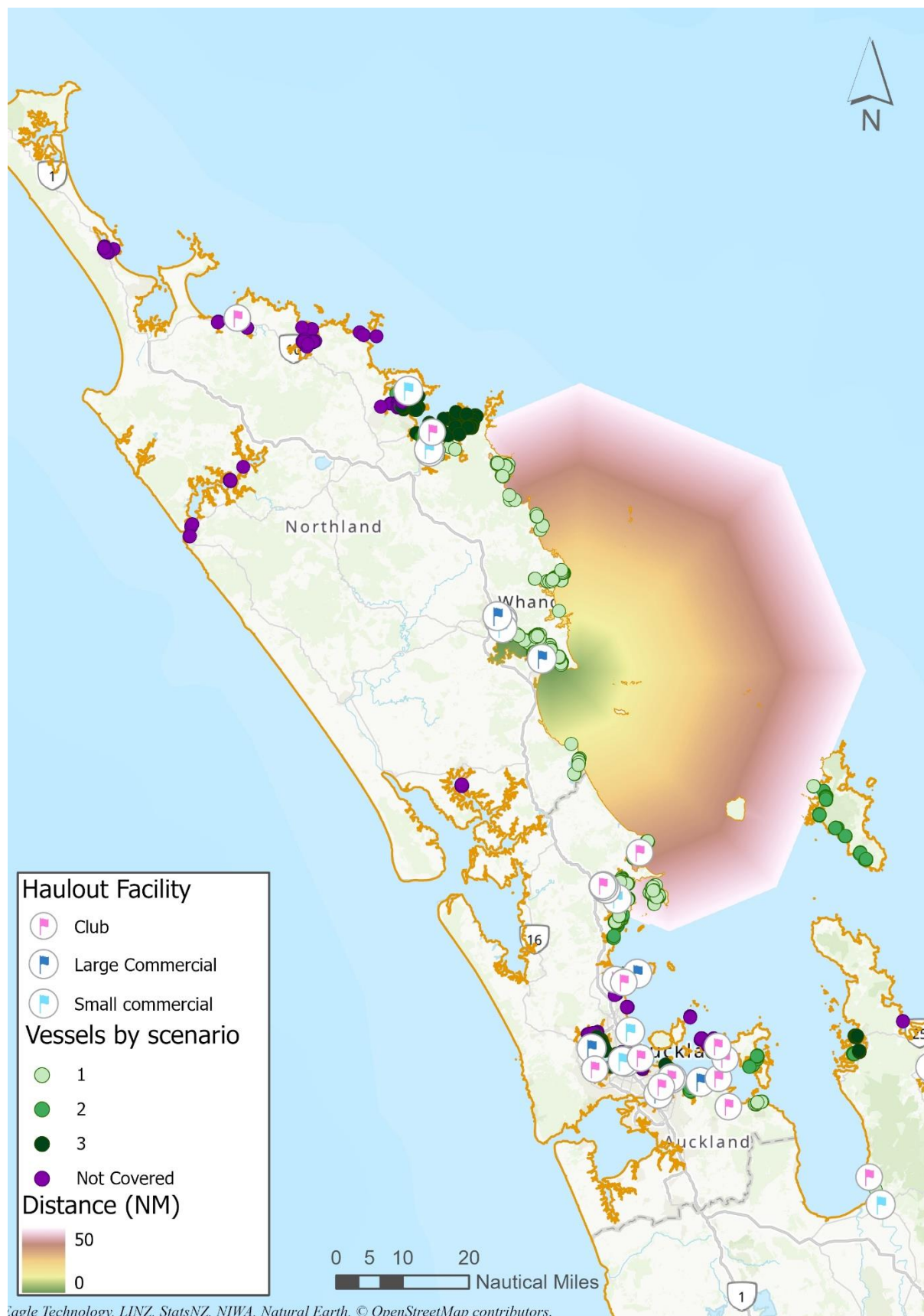
Northland region



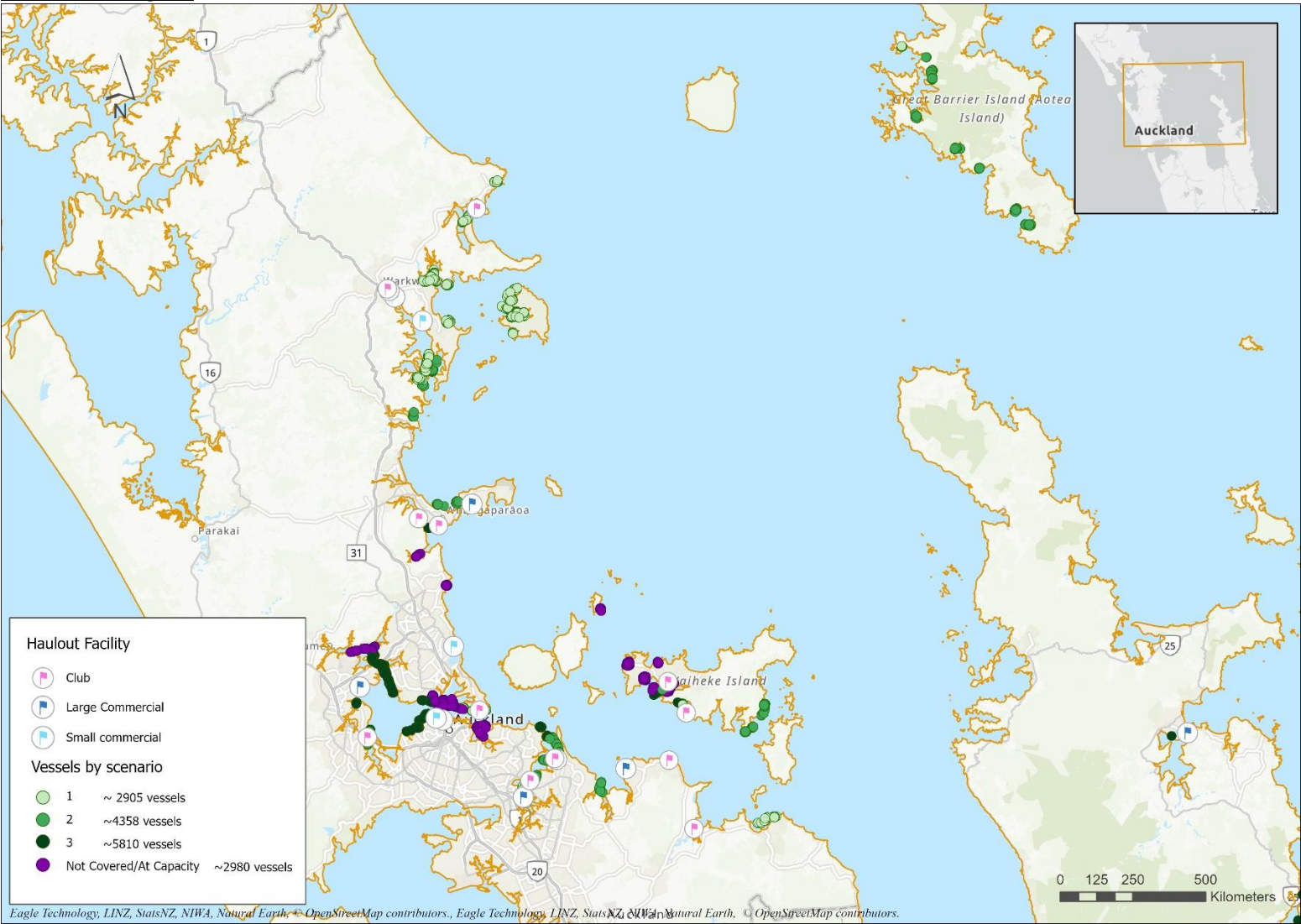
Bay of Islands area



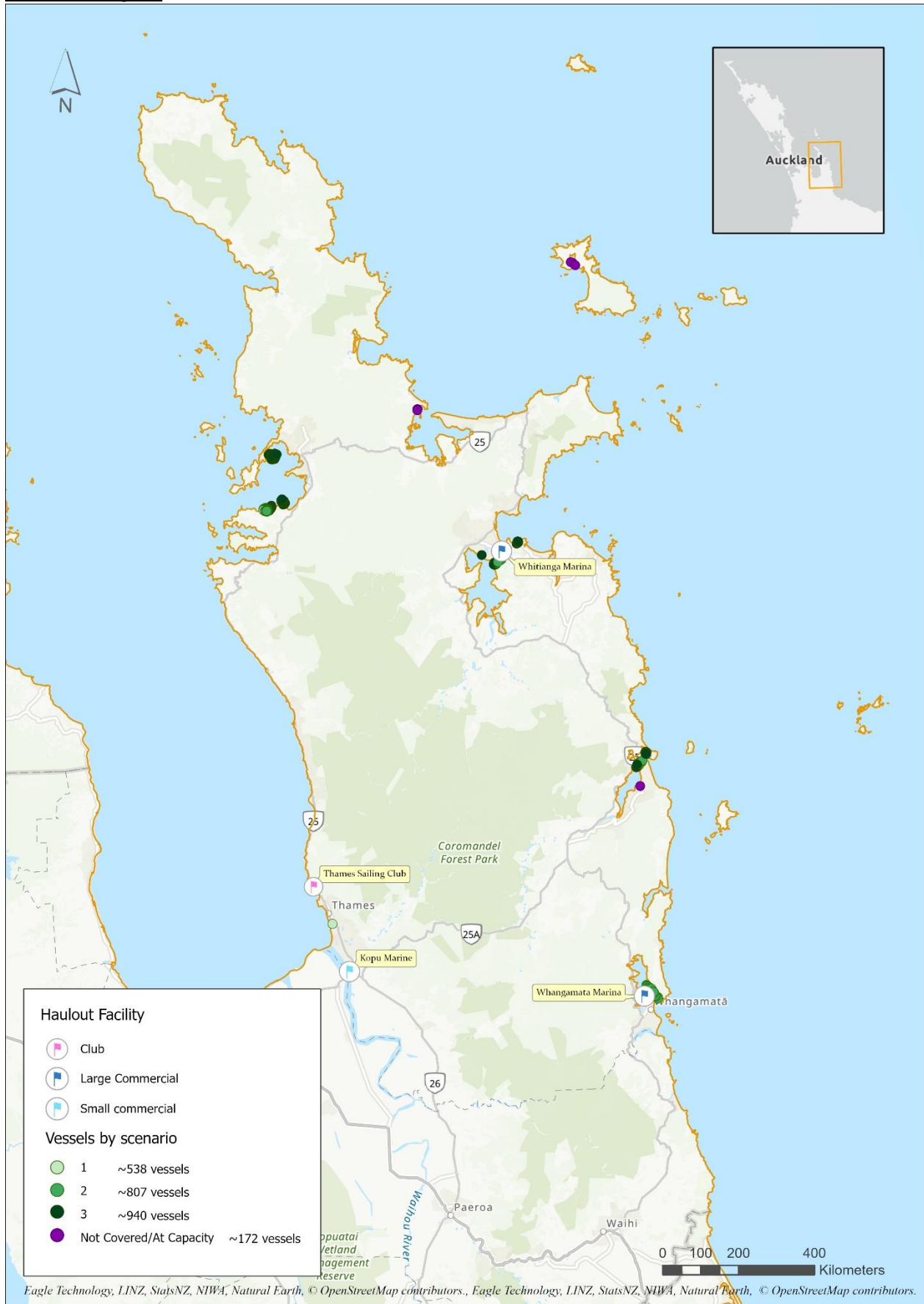
Northland - Depiction of 50 NM from Whangarei haulout facilities



Auckland region



Waikato region



Bay of Plenty region

