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Table of Contents

3	List of figures
3	Glossary
5	Executive summary
7	Introduction
9	Study process
9	Study design
10	Member selection process
10	Reference Group
10	Consensus Working Group
11	Study scope
12	Methodology
13	CWG information gathering
13	Testing of outputs with Reference Group
13	Consultant's paper
15	Growth of Auckland's port
18	Two options for locating a new port
21	Expand or move?
22	Timing of a move
24	Conclusions and recommendations
26	Consensus Working Group members

2



List of figures

4	figure one: Waitematā Harbour and the port
9	figure two: Study timeline
12	General Marthagen Company Marthagen Company Marthagen

- *figure three:* Consensus Working Group Methodology
- *16 figure four:* Waitematā shoreline section 1840
- *19 figure five:* Long list options
- 21 figure six: Short list options

Glossary

ADC	Auckland Development Committee (committee of Auckland Council)
ATAP	Auckland Transport Alignment Project
ATEED	Auckland Tourism, Events and Economic Development
CBA	Cost Benefit Analysis - analysis that aims to assess the value of a project or competing projects on a quantitative basis
CBD	Central Business District (in city centre)
Current footprint	Fergusson Terminal plus Freyberg, Jellicoe, Bledisloe, Marsden, Captain Cook Wharves, including what is currently consented as at July 2016.
CWG	Consensus Working Group
EY	Ernst & Young, trading as EY
GDP	Gross Domestic Product
ILM	Investment Logic Map - output of workshops which bring together key stakeholders to ensure early agreement on problems, outcomes and benefits before any investment decisions are made or a specific solution is identified
MCA	Multi Criteria Analysis - analysis which assesses potential options against a set of qualitative criteria to identify those which would give the better outcomes.
NPV	Net Present Value
NZTA	New Zealand Transport Agency
PFS	Port Future Study (The Study)
PIANC	World Association for Waterbourne Transport Infrastructure
POAL	Ports of Auckland Limited
PAUP	Proposed Auckland Unitary Plan
RG	Reference Group
Term	Short: 2015-2040, medium: 2040-2065, long 2065 onwards
TEU	Twenty-foot Equivalent Unit - the nominal standard intermodal container

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figure one: Waitematā Harbour and the port

source: POAL port booklet 2014



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Executive summary

The Port Future Study's objective is to recommend a long term strategy for the provision of facilities to accommodate sea-based imports and exports and the cruise industry flowing to and from Auckland and its wider region in an economically, socially, culturally and environmentally acceptable manner, taking into account competing uses for city centre waterfront space and the various impacts of options.

The Study was designed by and conducted for Auckland Council. The design called for an independent Consensus Working Group (CWG) to develop recommendations. The CWG provided information to a Representative Group (RG) comprising stakeholders and iwi representatives and received their guidance. A consulting study led by EY was conducted to identify and assess the options. This report should be read in conjunction with the Consultant's report.

Three issues were agreed by the CWG as foundations for the Port Future Study:

- 1. Capacity will constrain the port's ability to meet future freight and cruise demands, which may limit economic growth in the long term
- 2. Tension between, and competition for, limited resources for the CBD and POAL will lead to suboptimal outcomes for one or both
- 3. Port activities create environmental, economic, social and cultural impacts which need to be understood and addressed

The Port Future Study found that:

In considering the options; 1) constrain the port, 2) downsize the port, 3) relocate trade volume, 4) grow the port, 5) build a new port, the CWG key findings reached by consensus are:

• Based on EY's findings, the existing Port will not be able to accommodate the long term freight task and cruise on the current footprint.

PORT FUTURE STUDY

- That no further reclamation beyond what is already consented in the port precinct is required for freight purposes in the short to medium term.
- There is a need to secure sufficient berth length in the multi-cargo area for the short to medium term.
- Short-term pathways need to be created to enable the Port to continue to operate efficiently prior to a planned new Port being established due to the substantial lead times involved. In this regard, the CWG identifies that additional berth length needs to be provided to fulfil the short and medium term capacity requirements of the Port in response to cruise and multi-cargo requirements.
- Retaining the bulk of port functions provides a more feasible and superior outcome for Auckland, rather than shedding cargo elsewhere or downsizing Auckland's freight task, in the short to medium term. Shedding or downsizing freight operations may weaken the case for moving the port.
- In the long term, other existing North Island ports will be unable to cope with the totality of the Auckland freight task together with their own capacity requirements
- Cruise industry facilities should be retained and improved in Auckland's city centre
- Two possible new port locations Manukau Harbour and Firth of Thames - have been identified as warranting more detailed investigation
- The triggers for a move would comprise economic, social, environmental and cultural triggers that make a move beneficial or demand/economic triggers that make a move necessary to achieve long term outcomes for Auckland.



The CWG's recommendations to Auckland Council are the following:

Note, the CWG's recommendations are offered as an integrated package. Adopting some recommendations while not implementing others could result in adverse unintended consequences.

- 1. A port relocation option is established for freight, noting:
 - If the port is moved, then cruise ships should continue to be accommodated near the CBD
- 2. Comprehensive investigation of the identified location area options Manukau Harbour and the Firth of Thames is undertaken to decide which specific option is chosen, noting:
 - Investigation to identify the specific relocation option should include consideration of at least:
 - The long term engineering requirements, navigability, safety and availability of the Manukau and Firth of Thames options
 - The effect of a west coast versus east coast location on shipping and the competitiveness of the Auckland port and the national supply chain
 - The wider and long term implications of west coast versus east coast locations including on Auckland's long term transport strategy, land use development, land-side freight routes and the potential for a super-port
 - Mana whenua values, views and opportunities for each of the potential sites identified
 - The environmental impacts of the new site and analysis of consenting pathways
 - How and when any new port could be funded

- 3. Regular monitoring of relocation triggers is undertaken to identify the time at which the port relocation option should be exercised, noting:
 - The port may move when the social, environmental, cultural, economic, urban development or other conditions indicate that moving the port is **beneficial** for the city centre, or Auckland or New Zealand
 - The port may move when expected demand growth, expected capacity growth and the time required to complete the move indicate that moving the port has become **necessary**
 - It is possible that Auckland's future unfolds in a way that neither of the triggers for the beneficial or necessary cases will be "pulled", which would mean that the port would accommodate long-term demand at the current site
- 4. Subject to confirmed and credible commitment to establishing a port relocation option and to establishing sufficient additional berth length to accommodate expected growth in large cruise and multi-cargo vessels, the port should not expand beyond its current footprint, noting:
 - The work done so far for the Central Wharves Strategy implies the need for additional cruise berths and the Consultant's report endorses POAL's case that additional long berths are required to accommodate expected short and medium-term growth in cruise and multi-cargo operations
 - The Consultant has recommended a northern east-west berth at Bledisloe Wharf and the CWG is in agreement that a northern berth presents a viable short-term option. Exact specifications to meet future berth demand will be worked through.
 - The CWG recognises mana whenua and community opposition to any further extension of port operations into the harbour and that deciding the plan to provide the required berth capacity will require rigorous identification and evaluation of alternative options
 - The Port Future Study is a study to provide a long-term strategy for the location of the port and there are established processes for short-term berth provision decisions

Introduction

Trade is critical to Auckland's prosperity. New Zealand is a small, isolated trading nation and most international trade is by sea. The Auckland port has been and remains a very important contributor to the economic well-being and growth of Auckland and of New Zealand.

The first elements of Auckland's port as we see it today were established in the mid-to-late 1800's, however Tāmaki harbours had been plied by waka for many years before that. The confluence of people and trade in the area led to it also being known as Tāmaki Herenga Waka - Tāmaki the gatherer of many canoes.

The city of Auckland began to grow around the early port wharves in Commercial Bay and later expansion along the waterfront on land reclaimed from the Waitematā. Having the port adjacent to the city centre was important when the city was small and freight mobility limited. As Auckland has grown, the source and destination of freight shipments has spread out and is becoming more concentrated in the southern parts of the city.

In recent decades the CBD has become a commercial and consumption centre. The CBD, waterfront and Waitematā Harbour provide recreational opportunities for residents and visitors and contribute to liveabilty. The CBD is expected to grow in population and tourism numbers are projected to increase.

The growth of trade alongside growth of the inner city communities and increasing recreational use of the harbour has led to tension between the port and the community. This tension 'boiled over' with the 2015 proposal by POAL to extend Bledisloe Wharf 98 metres out into the harbour. Expansion was stopped by a High Court action bought by Urban Auckland. That tension has contributed to the Port Future Study being commissioned by Auckland Council and to the Study's scope including the social, cultural and environmental impacts of location options.

PORT FUTURE STUDY

With Auckland's population projected to grow to around 2.5m people in the next 50 years, the question of how growth in trade will be accommodated is critical to Auckland's economic future. Auckland scores very well on the natural and physical environment dimensions of liveability but less well on economic performance. Economic success is important for the well-being of the growing population and for affordability of the infrastructure that will be needed to keep the city operating effectively. However, economic success that diminishes liveability, is inconsistent with cultural and social values and harms the environment is likely to be a short -lived success.

Auckland Council has several key responsibilities relevant to the port's future. It is the owner of the port via Auckland Council Investments Limited; an important regulator via the district plan and granting of consents; and the shaper of the urban form via the Auckland Plan and other planning processes.

Auckland Council is also the delegated agent for ensuring that the Crown's statutory obligations to Māori under the Treaty of Waitangi are given effect to or taken into account. Auckland Council is the steward for the cultural, environmental, social and economic sustainability of Auckland, and the Study's recommendations recognise and highlight port issues which impact the relationships among citizens, ratepayers, residents, mana whenua, visitors, and customers of Auckland.



Auckland must develop long term investment strategies for critical infrastructure in circumstances where the investment decisions, once made, require large and irreversible capital commitments with important cultural, social and environmental consequences. The provision of future port facilities is one example. Auckland must decide soon how to provide for the future growth of port capacity and about the implications of that long term strategy for short term port development plans. The CWG's recommended long term port strategy is being developed in the context of a great deal of uncertainty about future freight demand and technology potential, alongside strong community group advocacy for constraining port expansion, relocating the port and using the site currently occupied by the port for other uses. Modern port redevelopments usually introduce a mix of residential, commercial and amenity uses.

The challenge for the Port Future Study is to find the best port location solution that balances long term economic, cultural, social and environmental outcomes. The economy and people of Auckland depend on trade but modern industrial ports have adverse cultural, social and environmental impacts.

Three issues were agreed by the Consensus Working Group as foundations for the Port Future Study:

- 1. Capacity will constrain the port's ability to meet future freight and cruise demands, which may limit economic growth in the long term
- 2. Tension between, and competition for, limited resources for the CBD and POAL will lead to sub-optimal outcomes for one or both
- 3. Port activities create environmental, economic, social and cultural impacts which need to be understood and addressed

In leading the Port Future Study, the Consensus Working Group has been conscious of its accountability to the people of Auckland, and that, while noting the scope was limited to accommodating Auckland's freight and cruise task, the Study's recommendations may have effects on the wider region and on New Zealand as a whole.

If the port location decision was simple, then the solution would have emerged already from the many studies conducted previously. Many people we have spoken with and heard from during the course of the study have expressed confidence that they have the answer and have offered reasons for their proposed solutions. The solutions proposed and reasons offered are diverse and the thing they have most in common is the confidence with which they are expressed. As the CWG has developed shared understanding of the port location issues we have found that the issue is complex and multi-faceted, and that decisions must be made soon in the context of uncertainties that cannot yet be resolved.

Further, all of the feasible options identified in the Study would require material expenditure and would have harmful cultural, social and environmental impacts. The challenge is to find the best solution that protects future trade and cruise security, best realises the aspirations of Aucklanders and contributes to the vision of being the World's most liveable city, with the least cost and harm.

Study process

Study Design

The Auckland Council designed the Port Future Study as a Māori and stakeholder collaborative process to develop and recommend a strategy to accommodate Auckland's long-term future freight and cruise needs.

A Consensus Working Group (CWG) and larger Reference Group (RG) have been the vehicles for this collaborative process. Both groups have been led by an external Independent Chair and were without council officer or elected representative representation.

The CWG was resourced to engage consultant expertise to assist in evidence gathering and recommendation formulation. In this way, the Study was effectively 'handed over' to community, advocacy, business and iwi interests for the development of recommendations to Council.

The CWG is required to provide its recommendation to the Auckland Development Committee of the Auckland Council. The CWG has worked together to understand the issues, invited presentations from external organisations, met with the RG and reviewed the evidence and conclusions from the Consultant's report in order to develop its' own conclusions and recommendations.

The Port Future Study is a study and it was not mandated to conduct a consultation or take decisions but rather to provide recommendations on a long term strategy to council for consideration. Further investigative, consultative and regulatory work will be required before the recommended strategy to secure the long term future for freight and cruise could be implemented.

The CWG is aware that there are several investigative and decision processes in progress that are considering matters that could interact with or affect the Port Future Study's conclusions. Auckland Transport Alignment Project (ATAP), the Central Wharves Strategy, Proposed Auckland Unitary Plan (PUAP) and Sea Change – Tai Timu Tai Pari are examining infrastructure issues which connect with those considered within the Port Future Study

Figure two presents the Port Future Study timeline

Appointment of Independent Chair Selection of CWG and RG members July August First meeting of the CWG September RG meeting: Study scope Scope finalised October Open tender 2015 November 2015 Appointment of Consultants December January February 2016 RG meeting: long list March 2016 April RG meeting: short list May 2016 June 2016 RG meeting: draft recommendations

CWG final recommendations to Auckland Council

July

figure two: Study timeline

PORT FUTURE STUDY

Reference Group Member Selection

The purpose of the RG was to represent and report to stakeholders and iwi during the study, receive updates from the CWG and undertake work if required by the CWG.

The PFS was established in the context of the partnership between Auckland Council and Iwi within the framework of the Treaty of Waitangi which includes active mana whenua involvement in co-governance of wahapū (harbours) and in guardianship (Kaitiakitanga) of land and marine resources as well as recognising the interests of Māori in economic and social development.

Two separate selection processes ran in parallel at the outset of the study that reflected both stakeholder and mana whenua interests in the project. Stakeholder organisations were identified by council project staff and initially presented to the ADC on 14 May 2015, leading to the selection by those organisations of 64 individuals representing 46 organisations from environmental advocacy, businesses that trade directly and indirectly with the port, community groups, recreational marine groups, special interest groups, commercial interest groups and POAL. Mana whenua iwi chairs met with Mayor Len Brown 14 July 2015 to determine mana whenua participation in the study. At the meeting, iwi chairs offered representatives of the 13 iwi of the Tāmaki Collective as well as Waikato-Tainui as the vehicle for mana whenua membership of the RG, which resulted in 15 individuals joining the RG leading to a total of 79 RG members.

Officers and elected representatives were not invited to participate as members of the RG as it was decided that governance functions and responsibilities would play out after the study, following the reception of the CWG's recommendations to council.

The CWG distributed information to and met with the RG to receive feedback on the process and emerging conclusions. The RG met with the CWG on 30 September 2015, 19 February 2016, 13 April 2016 and 15 June 2016. Attendances at meetings reflected turnout of 30-40%.

Consensus Working Group Member Selection

The CWG was tasked with steering the Study, engaging and directing consultants and testing outputs with the RG. The CWG's ultimate purpose was to further their collective understanding of the issues and formulate recommendations, by consensus, for a long term strategy to accommodate Auckland's trade and cruise task.

PORT FUTURE STUDY

Collaborative process theory suggested groups of around 12-16 members were optimal. In order to be most effective, CWG membership was to be representative of diverse perspectives. Four CWG seats were reserved for mana whenua representatives. One seat was reserved for the CEO of POAL. Eleven seats were made available for representatives from stakeholder organisations. Members were expected to act as representatives for their organisations as well as for other RG members who were not selected for CWG membership.

At their meeting with the Mayor on 14 July 2015, mana whenua offered the three iwi groupings of the 13 Tāmaki Collective as the mechanism to select CWG mana whenua representatives. A representative from Waikato-Tainui was included to reflect the boundaries of the iwi's rohe. This method produced 4 mana whenua CWG members appointed by Ngāti Whātua, Marutūahu, Waikato-Tainui, and the Waiohua-Tāmaki alliance.

The remaining 11 members of the CWG were selected at the stakeholder plenary 9 July 2015 by RG members through a facilitated session. A list of CWG members is included in the appendix.

Membership of the CWG placed considerable demands on the individuals involved and on the organisations they are from. The meeting schedule was demanding and there was often a great deal of preparation required. Meetings were often contentious but always constructive and there was a strong value that members were there to find the best possible long term solution for Auckland.

Individual members had to navigate their obligations as members of a group tasked with developing shared understanding and working towards a consensus solution, while at the same time representing constituencies with distinct and sometimes conflicting interests.

Study scope

The design of the study was developed by Auckland Council and included a draft scope of the study which articulated the options for analysis and provided a table of social, environmental, cultural and economic considerations. This draft scope was presented to the CWG at its first meeting and was adapted by the CWG to form a final scope.

The Study's scope required consideration of five options:

- 1. Constraining Auckland's port to its current footprint
- 2. Downsize Auckland's port by shifting some of the operations to another location
- 3. Relocating some or all volume or activity of Auckland's port
- 4. Enabling growth of Auckland's port in its current location
- 5. Building a new port elsewhere

The Study is required to consider a future period of at least 50 years for the purposes of future location options, and for freight estimations not less than 30 years.

PORT FUTURE STUDY

The study design specified that the CWG would appoint consultants to conduct the investigation.

The study design further specifies that the consultants' methodology would identify a long-list of options before identifying a short-list for more in-depth analysis. The consultants were tasked with the development of a recommended long term strategy, supported by compelling evidence that the recommended solution is better than the alternative.

The CWG provided the final scope for the Port Future Study to the Auckland Development Committee on 15 October 2015 together with the study objective:

"The Port Future Study will recommend a long term strategy for the provision of facilities to accommodate sea-based imports and exports and the cruise industry flowing to and from Auckland and its wider region in an economically, socially, culturally and environmentally acceptable manner, taking into account competing uses for city centre waterfront space and the various impacts of options."

Methodology

The methodology of the Port Future Study had several components. In preparation of its recommendations, the CWG worked to develop three inputs: CWG information gathering (including CWG and invited external presentations); input from the study's RG on study outputs including the draft recommendations and a technical paper prepared by consultants. These components are presented in figure three below.

figure three: Consensus Working Group Methodology



PORT FUTURE STUDY



CWG information gathering

The CWG met 22 times during the course of the project for at least four to five hours on each occasion. CWG members used this time to prepare the study scope, make presentations to one another on the issues and perspectives in play, work with the consultants, review invited presentations from external presenters¹ and discuss implications of the evidence presented.

Testing of outputs with RG

The CWG distributed information to and met with the RG to receive feedback on the process and emerging conclusions. The RG met with the CWG on 30 September 2015, 19 February 2016, 13 April 2016 and 15 June 2016. Meetings were two to three hours in duration followed by a debrief session for CWG members. At each stage of the study the CWG took the feedback of the RG into account before proceeding.

Consultant's report

Following an open tender², in November 2015 the CWG, supported by Auckland Council's procurement team, appointed a consortium led by EY for delivery of the consulting services. The consortium comprised EY (economic, financial and consortium lead, with EY Tahi as cultural and Māori outcome lead), Black Quay (strategic port planning), Jasmax (urban planning), GHD (landside engineering support), Aurecon (landside transport planning), eCoast (natural environment), JLL (property and land holding)

The Consultant delivered its draft report to the CWG on April 30 2016 and its final report to the CWG on 22 June 2016.

Having chosen the appointed Consultant from among the bidders, the CWG relied upon the Consultant to implement the methodology. The CWG was engaged throughout the consulting stage, reviewing progress and providing guidance and input to the consultants. The CWG had the opportunity to review and respond to emerging conclusions and drafts of the Consultant's report.

The Consultant's methodology is covered in detail in its report appended. Early in the process the consultants led the CWG through an Investment Logic Mapping process which developed agreement about the issues being addressed in the study and produced the issues statement presented at the end of the Introduction above.

The consultants conducted analysis to estimate the long term future demand for freight and cruise services and the potential capacity of the port. POAL provided valuable input to that analysis and the consultants developed their own independent conclusions about future demand and capacity. Both Northport and Port of Tauranga were considered as alternatives to provide Auckland with necessary port capacity in place of the existing port, and / or a new port. Notwithstanding considerable public discussion and advocacy of these ports to provide for Auckland's needs, the findings were that neither of these ports has sufficient capacity in the long term to accommodate both their own growth and cargo for Auckland. Therefore, they were discounted as feasible long-term options. Any temporary measures involving these ports would result in dislocation of existing supply chain infrastructure, operations and employment, require further investments, result in substantial environmental and amenity impacts and increase in freight costs. Any temporary measure would also spread the freight volumes that would be required to justify a port relocation.

A long-list of 27 potential new port locations was developed based on locations identified in previous studies³ and a systematic examination of the physical characteristics of coastal areas near Auckland. This new foreshore scan and the previous studies assessed – at a high level - locations based on coastal geography, surround ecology, hydrology and environmental impacts

The long-list was reduced to a shorter list of 14 sites (including the current location) through a more detailed evaluation of the locations based on their physical suitability, eliminating locations based on their performance on seven criteria:

- Shipping navigation (potential, based on horizontal access and natural obstructions)
- Natural water depth (chart overlays, potential channel alignments)
- Natural land topography (presence of cliffs or other significant elevation at foreshore)
- Distance from identified industrial concentration
- Distance from existing primary land transport
- Feasibility of land for port footprint capacity and transport access
- Coastal processes (sediment transport, wave- and current- patterns)

3: Development Plan for Auckland Report, POAL, 1989, Port Development options for the Auckland Region, POAL 1999, Statement of evidence of Stephen John Priestly for POAL, hearing on the proposed Unitary Plan, 2014

^{1:} Auckland Design Office, Auckland Transport, ATEED, City Centre Integration Group, KiwiRail, NZTA, Panuku Development Auckland, Martyn Evans Architects 2: The initial project design indicated a closed tender process, however in its work to define the project scope the CWG moved to an open tender approach. This was done to ensure RG and CWG member expectations of transparency were met.



The shorter list of 14 sites was reduced to the short-list using a multi-criteria analysis (MCA) led by the consultants but with detailed input from the CWG. In scoping the study the CWG included a list of 90 physical, economic, cultural, social and environmental criteria that were assessed as potentially relevant for the port location strategy. The consultants facilitated a collaborative process where the CWG reviewed the list of criteria, adding some, removing some and forming combinations to agree the final list of 36 criteria to be used for selecting the short-list ports. Percentage weightings were assigned to the criteria reflecting the CWG's consensus judgements about their relative importance to a long term strategy. When shortening the criteria list the consultants aimed to retain the most important criteria, while removing those which would be the same for all of the short-listed options.

The MCA scored each potential location against each of the criteria using a five-point scale. Each of the 14 potential short-listed locations was given a summary score based on the Consultant's assessment of the scores on each of the 36 criteria and the importance weightings gave the criteria judged to be more important a larger influence in the analysis.

A test of the robustness of the MCA analysis was made by ranking the shorter-list locations based on weighted and unweighted criteria and by eliminating the physical and economic criteria so that only cultural, social and environmental criteria were used in developing the ranking. The ranking among the locations was very similar regardless of which method was used, supporting the conclusion that the short-listed options were the best location options to consider in more detail.

A Cost-Benefit analysis (CBA) was used to compare the shortlisted options. CBA is based on estimates of the monetisable future values and costs that will result from choosing an option. Discount rates are used to translate future values and costs into their equivalents in today's dollars. The estimated future values and costs that were included in the CBA were port revenues and operating costs (including capital and maintenance dredging), port construction investments, port maintenance costs, cost of land transport infrastructure, freight operating costs, and land value from sale of the current site.

The short-listed locations included three sites within the Manukau Harbour, two in the Firth of Thames and two off the coast at Muriwai. For both the MCA analysis and the CBA analysis the Manukau options were best, followed by the Firth of Thames options and then the Muriwai options. In the course of their analysis, the consultants met with experts on the various matters being assessed. This included interviews with North Island port operators and other experts including the Auckland Harbour Master. They also met with mana whenua identified by the mana whenua CWG representatives to identify views held about the specific location options and the conclusions from that dialogue are summarised in the Consultant's report.

The CWG reviewed initial drafts of the Consultant's report and provided detailed comments to EY. The CWG commissioned peer reviews on the future trade demand and port capacity, on the CBA methodology and its application, and on the navigability and dredging requirements for the Manukau Harbour. Feedback from peer reviewers and CWG members has been used to inform EY and improve the quality of their report, and used to inform the CWG as it has developed its recommendations. Not all matters raised have been resolved but the CWG has concluded that remaining differences are not sufficiently material to alter its conclusions and recommendations.

Additional effort from the Consultants was also requested to conduct initial "fact-finding" conversations with mana whenua in the short-listed areas. This input provided some potentially indicative views on implications of new port locations, but was not intended or considered to be comprehensive or definitive, and does not have the standing of a Cultural Impact Assessment or other formal consultation process.

During the consulting process the CWG reviewed and debated evidence assembled by the consultants as well as input from third parties. The data and presentations allowed the CWG to develop shared understanding of the issues and evidence as a foundation for developing their consensus on conclusions and recommendations.

Growth of Auckland's port

Auckland's port and harbour accommodate freight trade, cruise ships, ferries, the fishing industry, private boats and tourism operators.

More and larger freight and cruise ships are anticipated, and growth of ferry services is planned. Recent port expansions and POAL's expansion plans have created public concern in themselves and that concern is heightened when people consider the expansions that might be implied as the port grows to meet the freight and cruise needs of a much larger Auckland.

POAL has consents for port expansion work nearing completion at Fergusson Wharf. POAL sought approvals to create more berth length and cargo handling area at Bledisloe, which were overturned in the High Court. Local communities are concerned about the noise, air pollution, visual and congestion impacts of port throughput growth, and there has been strong opposition to having the port expand further into the Waitematā.

Port infrastructure location decisions establish facilities that have long lifetimes and high costs. Parts of the freight port are around 100 years old, but the vast majority of the modern freight port has been constructed post 1950, and parts such as Fergusson are still under construction. Parts of the cruise infrastructure are closer to 100 years old. Any new port considered should have an expected life of more than 100 years, and perhaps much longer, and would cost an estimated \$4 billion to \$5.5 billion dollars, depending on the location chosen.

PORT FUTURE STUDY

Figure four shows the Waitematā shoreline in 1840, pre reclamation.

figure four: Waitematā shoreline section - 1840





For the purposes of this report, short-term is defined as from now to 2040, medium as 2040-2065, and long-term as beyond 2065. Over such long time periods there is great uncertainty about the demand for freight and cruise services and the consultants have committed considerable effort to develop estimates of expected demand. Estimating future demand requires taking a view of future population growth or GDP and the volume of trade per capita or trade per billion dollars of GDP. The Consultant's report describes the process and conclusions of that effort in detail.

In 2014/15, Auckland port's container throughput was around 970,000 twenty-foot container equivalent units (TEUs) per year, with over 3 million bulk tonnes of freight and close to 250,000 cars. As a short-hand we follow the Consultant's lead and refer to the basic growth of the port by referencing the container volumes handled, in millions of TEUs per year. It must be acknowledged that the port includes other important trades; specifically, bulk and multicargo⁴, including vehicles, and cruise. There are estimated growth rates for these other trades in the Consultant's report. When this report refers to port growth in millions of TEUs that is a short-hand for growth of the port, with container growth in millions of TEUs and with accompanying growth of the other types of trade.

The long term future is uncertain and there has been considerable debate within the CWG about what future trade growth should be expected. However, the CWG is agreed that it is possible, and some would say likely, that the trade task will grow from around 970,000 today, to at least 3 million TEU per annum over the 50 years plus time horizon of the Study. Further, we should consider the possibility that demand could grow considerably beyond 3 million TEU over the much longer period during which we should expect Auckland's port to be used. EY's mid-point demand estimates have the port reaching three million TEU in about 40 years⁵.

Auckland is unusual, in being a fast-growing city in a developed country. Most developed country populations are projected to grow only slowly if at all during the next few decades. Auckland's growth is projected to continue and may be sustained or even accelerated because New Zealand appears to be becoming increasingly attractive as a safe haven in a time of growing global uncertainties. New Zealand's resource endowments could become a foundation for growth of value-added exports to populous and resource-constrained Asian countries that would imply long term export growth and many affluent consumers demanding imports. We are also aware that over the long time horizon of the Port Future Study there could be major changes reducing freight demand growth or increasing port productivity; for example, an aggressive dematerialization and localisation of economies, disruption of the global growth path, or dramatic transformations of shipping or port technologies. These fundamental uncertainties may be much larger than the estimation uncertainties in the Consultant's demand and capacity forecasts.

There are three important operational constraints on the port's volume growth. The first is the footprint required to operate the port and to accommodate short term storage of freight. That is important because it is constrained by the boundaries of the current port precinct and public opposition to further expansion into the harbour via reclamation or wharf extensions.

The port has firm plans to increase throughput to just over two million TEUs per year and less firm plans and estimates that might allow the port to handle up to three million TEUs per year on approximately the current footprint. Those plans require capital investment in automation equipment that has not yet been committed and that automation investment could reduce the noise, emissions and lighting impact that the port has on surrounding communities. Volume growth would offset this potential for reduced environmental impacts.

The second constraint is the berth lengths to accommodate more frequent visits of larger cruise and cargo ships. Cruise berth capacity is already constrained at the port with berth length limitations preventing accommodation of the larger ships that are now being added to the global cruise fleet and starting to visit Auckland. Cruise visits are increasing as the global industry expands and Auckland is becoming a more popular destination.

The largest cruise ships could be anchored in the harbour and lighters could be used to ferry passengers to and from the shore but that would provide a lower quality experience for cruise passengers, reduce the attractiveness of Auckland as a cruise destination and reduce the economic benefit from cruise ship visits. There is a strong incentive to increase the number of berths available for cruise⁶.

4 Multi cargo refers to break-bulk (timber, steel, 'high and heavy' machinery/trucks etc), bulk (gypsum, cement, sand and aggregates, wheat, iron sand etc), vehicles (new and used cars)

5 Previous reports (NZIER 2015, PWC 2012, ARH 2009) considering POAL capacity have indicated capacity may be reached between 2035-2045, depending on growth rates and other assumptions made. These dates are broadly in line with EY's findings.

6 Reprovisioning ships with food and supplies generates almost as much economic benefit as is generated from tourism spend. In 2014/15 there were 115 voyage calls and 188,500 unique passenger visits to Auckland, which generated \$190.7m (Economic impact of the 2014–2015 cruise sector in New Zealand and forecasts to 2017, Cruise NZ)



The Central Wharves Strategy is being developed to accommodate expected cruise ship growth, including provision of berths for larger cruise ships, to expand public use of the waterfront and to provide for growth of ferry services. The preferred options being considered within the Central Wharves Strategy imply a need for additional berth provisions for vehicle and other multi-cargo operations. All recent studies, including the Consultant's report for the Port Future Study agree that berth capacity constraints are evident now, and if capacity is to match demand, some berth development will be required in the short term.

Berth development options have been proposed by the Consultant and POAL. We expect these and other potential solutions will be evaluated and decided upon using short-term planning processes.

The third physical constraint is the land-side transport connections via road and rail to move freight from the port for imports and onto the port for exports. POAL plans to materially increase rail use for land-side transport using existing rail lines. Major expansion of land-side rail connections is constrained by the need for freight to share the rail lines with passenger trains. Longer term, there are options to add one or two more rail tracks to release that constraint. Increasing rail traffic would increase noise and emissions effects on residents along the rail corridors.

Expanding freight volumes at the existing port would increase the contribution of trucks to congestion near the port, through Grafton Gully and along the Southern Motorway. There is potential to spread the timing of truck movements to reduce congestion impacts that would alleviate some consequences of short term growth.

Accommodating the planned growth at the port to two or three times current volumes might imply the need for large investments in fly-overs or trenching because of space constraints, and to limit adverse consequences of increasing traffic intensity for local land-owners and communities. The Consultants' report anticipates that large roading investment is only anticipated once the port reaches around 3m TEUs, implying that port growth would increase local congestion during the short and medium term. There are existing pressures on landside transport links in the area from nonport sources and it seems likely that a land-side road solution will be required. The potential for trade growth, uncertain productivity improvement potential and limits to expansion mean that the CWG cannot be confident that the port will be able to accommodate long term demand growth on its current footprint.

That conclusion depends on the Study's time horizon. With a time-horizon greater than 50 years, say 80 or 100 years, as specified in the Port Future Study Scope, then an option for a new port or for a materially expanded port footprint should be created.

Long term demand growth is likely to exceed the expected capacity growth available at the Port of Tauranga and at Northport. Further, having Auckland's freight delivered from these more distant ports would imply large capital investments in port expansions and transport links along with long freight distances and correspondingly high freight costs.

In conclusion, there is sufficient probability that capacity on the current port footprint will be exceeded in the long term that a new or expanded port option should be created. The EY report states that there is a scenario where container capacity might be exceeded as early as 2039. It is also possible that future demand growth might be accommodated on the current site within the current footprint but there is sufficient uncertainty that it would not be prudent to rely on that possibility.



The Port Future Study methodology required identification of a long-list of options, reduction of that long-list to a shortlist, and then more detailed assessment to select preferred option(s) from the short-list.

The long-list was identified by referencing locations considered in previous studies and a scan of the upper North Island coast-line. Locations were included for consideration if they appeared to meet the physical requirements for a port location. The long-list was reduced to a short list using the MCA analysis. The options selected for the short-list included an expanded port on the current site, three locations in the Manukau Harbour, two locations in the Firth of Thames and two locations near Muriwai. The Manukau options were ranked more highly than the Firth of Thames options, followed by the Muriwai options.

PORT FUTURE STUDY



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figure five: Long list options

Indicative only. See Consultant's report for more detail



PORT FUTURE STUDY

All of the options on the short-list could have a port capacity of approximately 10m TEUs and so would provide for capacity expansion for the long term.

The sites identified on the map should be regarded as indicative. Physical potential for a port at the site is confirmed but more detailed analysis would be required to determine the best specific positioning at each site.

The Manukau options are highest ranked in the Consultant's report on both the MCA analysis and the CBA analysis. Manukau is the closest location option to the current and expected future location of freight destinations and sources. Among the Manukau sites, the Puhinui site is the highest ranked option in the CBA, with the highest NPV advantage over expanding at the current site. For the long time horizons considered for the Study, the land transport freight cost advantage more than offsets the cost of port construction and relocation. Lower freight costs would reduce the costs of imports for consumers and industry and would increase the competitiveness of exports.

The prospect of establishing and operating a major freight port in the Manukau or indeed in any location raises many important questions. Transferring a port's impacts from one community to another requires careful consideration of the social and cultural consequences. It is not considered likely that a port relocation would be welcomed by communities or mana whenua in or near the new location. Further, there are already concerns about environmental impacts of past infrastructure developments on the Manukau and a history of contention about environmental care and remediation may make it difficult to establish agreements.

While the Manukau has had an operational port for many years, the potential environmental impacts would call for excellent harbour and port management practice and rigorous monitoring⁷. This expectation for excellent environmental outcomes is heightened by the recent strides made in remediation of the Manukau harbour and foreshore, and the strong sense of Kaitiakitanga felt by local lwi, hapu and by Aucklanders more generally.

Any discussion of shipping matters involving the Manukau harbour will trigger concerns about the Manukau bar and channel. Weather and sea conditions experienced on the West Coast of New Zealand are challenging. The wreck of the Orpheus in 1863 and the challenges of the Manukau bar have created a widespread pre-conception that a major port on the Manukau would create unacceptable safety issues.

The Consultant's report is informed by analysis done by eCoast, which indicates that a major port on the Manukau is a feasible option, requiring initial dredging of the channel and on-going costs for channel maintenance. Conscious of the challenges of the Manukau and expecting a sceptical response to presentation of a Manukau option, the CWG commissioned a peer review of the eCoast work. The peer reviewer's conclusions were provided to eCoast leading to an updated, more conservative design which increased the estimated costs for establishing and operating a Manukau port but not by enough to alter the Study's conclusions. Safety and navigability issues were assessed by testing the preliminary design and the resulting port functionality and safety using the PIANC guidelines, which are the standard for port location evaluation. The assessment indicates that a port at the Manukau would be feasible and safe. Weather conditions on the West Coast could lead to the port being closed occasionally, and this could become a more important concern over time because climate change is projected to increase the frequency and intensity of adverse weather. However, the port, once constructed, would not be unusual among existing ports, world-wide.

A safer and more reliable channel on the Manukau harbour would potentially increase utilisation by recreational, tourism and fishing boats. This could take pressure off the Waitematā harbour which is already highly utilised and with likely population and tourism increases will see its utilisation grow further.

The Consultant and the peer reviewer both indicated that the design work completed for the Port Future Study must be regarded as preliminary and that more detailed engineering assessments covering geology, hydrodynamics and reliability would be required before the feasibility of a Manukau port could be definitively confirmed. Therefore, pending the results of those studies, the Port Future Study cannot firmly recommend a Manukau port location.

A second possible knock-out for a Manukau location, identified by CWG members and others, was that a Manukau location would imply a major shift of shipping patterns. A preliminary study of additional shipping costs from the west coast location was completed by the consultants and the costs did not alter the conclusions of the CBA.

The physical characteristics of the Manukau Harbour, the west coast location and the potential difficulties with gaining the necessary land, agreements and consents imply that an alternative location should be examined in parallel at the next stage of port relocation planning.

A port relocation to the Firth of Thames might be required if more detailed analysis of the Manukau options demonstrates that it is not feasible, and would reduce any navigability, safety and shipping issues that might remain with a feasible West coast option. However, a location at the Firth of Thames would imply higher costs for land-side transport infrastructure and freight. The MCA and CBA both indicate that a Kawakawa Bay location would be preferred relative to a location nearer to Waimango Point.

Both of the identified Firth of Thames locations would raise important cultural, social and environmental issues, described in the Consultant's report, that would need to be navigated before an option could be established. Further, the preferred transport route to the coast would pass through a rural environment that would be substantially altered by construction of large scale road and rail links.

7 This applies to any other new location that might be decided upon, and relates to expectations for improvement at the current location.

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PORT FUTURE STUDY

While a Manukau location might ensure freight is close to the to the industrial centres and would strengthen transport links down the western edge of the city, a Firth of Thames location might have different future land use benefits. A Firth of Thames location would create transport links that could open up land that is relatively close to Auckland for development. Growth of Auckland over the long term to accommodate the projected 2.5m plus population might require additional land so that land development potential in the east might become relevant to the final port location decision.

Another larger scale consideration follows from the larger potential scale of a relocated Port. Port of Tauranga's growth appears to be constrained long term so a future port at the Firth of Thames might become a "super-port" that would serve the upper North Island. While a super-port seems a more obvious option in the Firth of Thames, a super-port might also be located in the Manukau Harbour.

These wider transport, land use and upper North Island port strategy implications should be examined when deciding which of the port location options to develop.

Whichever option is chosen there will be important challenges and high capital costs and these should be considered in the context of the need to ensure provision of cost-effective facilities for freight services so New Zealand can sustain trade and economic well-being.

There would be implications for owners and other affected parties from changing the expected land use activities by designating corridors and rezoning for port precincts.

The MCA analysis together with advice received from mana whenua representatives and from others make it clear that gaining the agreements and consents to establish any new port would present a significant challenge. Similar challenges would be faced for a proposal to expand the port further into the Waitematā Harbour. Mitigations, offsets or other arrangements might help overcome obstacles but the specifics of these are beyond the scope of this study. Changes to legislation and/or regulation may make consent achievable.

The CWG recognises the resurgence of the Māori economy involving new strategic partnerships between Māori, private sectors and local government. Noting that settlement processes continue, the CWG recognises trends towards engagement, confidence, realising and attaining potential, and of interdependence and partnership. We also understand, from the necessarily limited dialogue with mana whenua interests conducted during the study, that there have been some instances where promises of environmental protection alongside infrastructure development in Auckland have not been fulfilled.

There would be high capital costs for investment in relocation of the port and funding for infrastructure investment is constrained. Sale of land at the current port location would provide a partial offset. Capital markets might Capital markets might fund the construction provided there is a debt-servicing model. Internationally there are many funding/ownership models around major infrastructure investments such as a port which vary from full Council ownership to full private At both Auckland Airport and Port of sector ownership. Tauranga, Councils have minority shareholdings in publicly listed companies. Consideration could be given to funding the land component of the new port separately from the operating company, which might enable equity participation in the "landco" by Council and Iwi.

Establishing an alternative port location option now would be difficult and require material effort and expense. However, if an expanded port is required in the long term and an option has not been created the location options may become much more difficult because of other development and regulatory decisions. Auckland's people might then be faced with a choice between a much higher cost, more difficult port move or the ongoing high costs of longer distance freight within New Zealand. The costs of establishing an option would be much lower than the likely future costs resulting from needing a relocation option but not having one available.



figure six: Short list options

Indicative only. See Consultant's report for more detail

Expand or move?

The alternative to moving the port is to expand at the current location, reclaiming land as required to meet future demand. That is one of the options the CWG was specifically asked to consider and could become a default future outcome if a port relocation option is not created, because there are long term capacity constraints at both Port of Tauranga and NorthPort.

There are several reasons why expanding the port at the current location could be an unattractive long term option relative to a relocation.

First, in the long term, the current footprint at the port might be expanded materially but there is no certainty that such an expansion would be sufficient to accommodate the long term port growth. Expansion with high productivity might allow the port to grow to a container size of perhaps 4m TEUs or even more, with accompanying multi-cargo and bulk trades. However, a risk would remain that long term demand could exceed the feasible expansion. Recent growth has been driven partly by trends to containerisation and transfer of domestic manufacturing capacity to China but 50 years is a long time and the future is uncertain. A quadrupling of demand in the long term might seem unlikely, but the possibility should be considered in the context of port volumes in 2006 of approximately 700,000 TEUs, in 1996 of approximately 400,000 TEUs and in the early 1980's of approximately 100,000 TEUs.

Second, there is already considerable social pressure for moving the port or restricting its growth. A port with volumes much larger than the current volume would have a materially greater impact on the centre of Auckland city, on harbour users and on the communities living close to the port location. The city, harbour use and local communities are all expected to grow too, creating greater exposure to the environmental effects of the port, and increased contention. Social opposition to industrial ports has been an important driver of recent port relocation decisions internationally. Over the long time horizons being considered it is reasonable to expect that a growing port on the current site and associated landside transport would use new technologies, especially substitution of electricity for fossil fuels and automation of conveyance of freight (both at the port and along land-side corridors), which would work to reduce air pollution, carbon emissions, light pollution and noise. Investment in best practice environmental technologies would alleviate the externalities created but despite such investments the scale of potential growth could create large adverse effects.

PORT FUTURE STUDY

Third, if Auckland city and the CBD grow as expected, there will be demand for more land for commercial, residential and amenity uses. Anticipation of the long term development of Auckland as a liveable city indicates that the value of the port's land as a component of urban expansion may increase relative to the situation today. It is possible that redevelopment of the port land would contribute to continued improvement of the CBD and surrounds, as the Wynyard Quarter developments appear to be doing. These potential benefits have not been quantified within the CBA.

Fourth, the CBA completed by the Consultant indicates that moving the port to Manukau would provide a better economic outcome than expanding at the current location. The economic advantage is largely driven by lower freight costs due to locating the port closer to freight destinations. The economic advantage is estimated taking into account the estimated capital costs for establishing the new port and crediting the estimated value of the current port land released for redevelopment. The options to locate the port in the Firth of Thames are not currently shown to be more economically attractive than expanding at the current location but would release the capacity constraint.

Timing of a move

There is a strong logic to create an alternative port location option based on the long term risks from not having an option relative to the certain, near-term and smaller but important costs and difficulty of creating an option. It would be like creating an infrastructure corridor where the corridor might not be required but the costs of the infrastructure would be materially higher if plans and options are not put in place in advance.

Implicit in that analysis is that the port would be moved because expected demand is going to exceed expected capacity. In such an analysis the port would be moved as late as possible to defer costs, allow scarce capital to be put to better use and to accommodate the possibility that demand growth slows or technology changes emerge which might make the move unnecessary.

A second reason to move would be because the people of Auckland and the Auckland Council on their behalf decide that regardless of the freight demand growth, a move to the preferred alternative location would lead to economic, social, cultural and environmental outcomes that are better than the outcomes from remaining on the existing site. If moving the port could provide better outcomes than leaving it where it is then the timing of a port move becomes an important consideration.

In principle, there are three kinds of timing option. The first kind of option is to move the port when the combination of port volumes, expected growth and forecast capacity expansion signal that port relocation is required. The midpoint of the Consultant's analysis indicates a move being required in 2055 though there is a great deal of uncertainty. That would leave open the possibility that a move might never take place and so the relocation option would remain unexercised. It would also leave open the option for a later decision to move the port for other reasons.

The second kind of option is to move the port as soon as possible to realise the benefits from relocation, including social and political pressures in favour of relocation. Allowing 10 years for making a decision and completing planning, and then five years for development, the port might be able to relocate during the 2030s. Those times may prove optimistic given the difficulties likely to be encountered but they illustrate what an early option might look like. The third kind of option is to seek a "sweet spot" for timing of a port move that is neither as late as possible nor as soon as possible. Finding such a sweet spot could allow for reduced uncertainty as evidence on future demand and capacity growth accrues. It might prove optimal to match relocation timing to the time when the city is ready to redevelop the port site for alternative uses. That might imply a relocation during the 2040s.

PORT FUTURE STUDY

In any plan to preserve an option to move the port, the issue of immediate constraints on multi-cargo and cruise capacity remains to be addressed. Options for both have been investigated by EY and POAL, and reviewed by the CWG. A long-term option needs to be implemented for cruise, and a short – medium term option for multi-cargo. The requirement is for berth capacity – to cater for larger ships and more ships associated with the predicted growth in cruise and freight.

Creating a port relocation option is preferable to any shortterm relocation of multi-cargo volume to Northport or Port of Tauranga because:

- Neither of those ports offers a long-term feasible alternative to Auckland because of their own capacity constraints, and so such a move would be temporary anyway.
- Relocation of volumes would result in split supply chains, additional freight costs and environmental impacts to transport cargo, redundancy of existing supply chain infrastructure and of associated employment and investment
- Volume expansion at the existing site retains economies of scale in operations, makes use of existing supply chain infrastructure and allows for more balanced growth of the port up to the capacity constraint
- Retaining concentration of volumes at the existing port protects the revenues and freight savings required to justify future investment in a new port

Port landside demand would be catered for with vertical infrastructure, such as a car park building.



Monitoring and reporting on triggers is important to understand the timing and value proposition of any move.

Regular, periodic monitoring and forecasting will be essential given there is a considerable and predictable delay between the point at which a trigger or triggers are 'pulled' and the point at which a new port location becomes operational. Consideration should be given to matters raised in the Consultant's report, for example but not limited to:

- Physical capacity constraints of port footprint and configuration against forecast demand for freight by trade type. Monitoring and reporting would likely include yard capacity, port productivity/efficiency, customer population growth and TEU per capita forecasts
- The port's physical externalities. Monitoring and reporting would likely include impacts on port environs such as light, noise and dust externalities, vehicle movements by vehicle type and congestion impacts
- Economic incentives for investment at current or new port location. Monitoring and reporting would likely include net present value of investment and associated benefit at current or alternate locations, and construction delivery estimations
- Social and cultural impacts and community feedback. Monitoring likely to include public expression of vision for Auckland, potentially expressed via elected officials, through Long Term Plan processes or direct engagement
- Environmental impacts. Monitoring and reporting likely to include research or information on impact of footprint and operations at current or alternative locations

Conclusions and recommendations

The Port Future Study has considered the long term future of Auckland's freight and cruise activities.

It has developed a strategy that is robust in the face of the uncertainties which emerge when considering large infrastructure investments over 50-100 years, and takes into consideration the social, cultural, economic and environmental context within which the Port operates.

The principles of partnership within the Treaty drive the relationship between Crown, mana whenua, and Auckland Council and underpin the Study's recommendations, and the CWG recognises mana whenua as kaitiaki, and highlights the importance of culture and traditions related to ancestral lands, water, sites, wahi tapu and other taonga. These are meaningful and relevant given the subject matter and the recommendations presented here, and the CWG calls for readers and decision makers to hold respect for the mana of mana whenua, mātawaka, and the wider public.

The CWG's recommendations are offered as an integrated package. Adopting some recommendations while not implementing others is likely to lead to adverse unintended consequences.

Three issues were agreed by the CWG as foundations for the Port Future Study:

- Capacity will constrain the port's ability to meet future freight and cruise demands, which may limit economic growth in the long term
- Tension between, and competition for, limited resources for the CBD and POAL will lead to sub-optimal outcomes for one or both
- Port activities create environmental, economic, social and cultural impacts which need to be understood and addressed

In considering the options; 1) constrain the port, 2) downsize the port, 3) relocate trade volume, 4) grow the port, 5) build a new port, the CWG key findings reached by consensus are:

> Based on EY's findings, the existing Port will not be able to accommodate the long term freight task and cruise on the current footprint.

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- That no further reclamation beyond what is already consented in the port precinct is required for freight purposes in the short to medium term.
- There is a need to secure sufficient berth length in the multi-cargo area for the short to medium term.
- Short term pathways need to be created to enable the Port to continue to operate efficiently prior to a planned new Port being established due to the substantial lead times involved. In this regard, the CWG identifies that additional berth length needs to be provided to fulfil the short and medium term capacity requirements of the Port in response to cruise and multi-cargo requirements.
- Retaining the bulk of port functions provides a more feasible and superior outcome for Auckland, rather than shedding cargo elsewhere or downsizing Auckland's freight task, in the short to medium term. Shedding or downsizing freight operations may weaken the case for moving the port.
- In the long term, other existing North Island ports will be unable to cope with the totality of the Auckland freight task together with their own capacity requirements
- Cruise industry facilities should be retained and improved in Auckland's city centre
- Two possible new port locations Manukau Harbour and Firth of Thames - have been identified as warranting more detailed investigation
- The triggers for a move would comprise economic, social, environmental and cultural triggers that make a move beneficial or demand/economic triggers that make a move necessary to achieve long term outcomes for Auckland.



CWG's recommendations are offered as an integrated package. Adopting some recommendations while not implementing others could result in adverse unintended consequences.

- 1. A port relocation option is established for freight, noting:
 - If the port is moved, then cruise ships should continue to be accommodated near the CBD
- 2. Comprehensive investigation of the identified location area options Manukau Harbour and the Firth of Thames is undertaken to decide which specific option is chosen, noting:
 - Investigation to identify the specific relocation option should include consideration of at least:
 - The long term engineering requirements, navigability, safety and availability of the Manukau and Firth of Thames options
 - The effect of a west coast versus east coast location on shipping and the competitiveness of the Auckland port and the national supply chain
 - The wider and long term implications of west coast versus east coast locations including on Auckland's long term transport strategy, land use development, land-side freight routes and the potential for a super-port
 - Mana whenua values, views and opportunities for each of the potential sites identified
 - The environmental impacts of the new site and analysis of consenting pathways
 - How and when any new port could be funded
- 3. Regular monitoring of relocation triggers is undertaken to identify the time at which the port relocation option should be exercised, noting:
 - The port may move when the social, environmental, cultural, economic, urban development or other conditions indicate that moving the port is **beneficial** for the city centre, or Auckland or New Zealand
 - The port may move when expected demand growth, expected capacity growth and the time required to complete the move indicate that moving the port has become **necessary**
 - It is possible that Auckland's future unfolds in a way that neither of the triggers for the beneficial or necessary cases will be "pulled", which would mean that the port would accommodate long-term demand at the current site

- 4. Subject to confirmed and credible commitment to establishing a port relocation option and to establishing sufficient additional berth length to accommodate expected growth in large cruise and multi-cargo vessels, the port should not expand beyond its current footprint, noting:
 - The work done so far for the Central Wharves Strategy implies the need for additional cruise berths and the Consultant's report endorses POAL's case that additional long berths are required to accommodate expected short and medium-term growth in cruise and multi-cargo operations
 - The Consultant has recommended a northern east-west berth at Bledisloe Wharf and the CWG is in agreement that a northern berth presents a viable short-term option. Exact specifications to meet future berth demand will be worked through.
 - The CWG recognises mana whenua and community opposition to any further extension of port operations into the harbour and that deciding the plan to provide the required berth capacity will require rigorous identification and evaluation of alternative options
 - The Port Future Study is a study to provide a long-term strategy for the location of the port and there are established processes for shortterm berth provision decisions

The Consensus Working Group thanks the many individuals and organisations who have contributed their time and information to support the Port Future Study. Reference Group members provided valuable guidance of our work. We also thank the Auckland Council which commissioned the study and has provided funding, logistical support, procurement and other advice to the Study, while operating in ways that have preserved the Study's independence. Our work could not have been completed without the contributions of our consultants led by EY and including Black Quay, eCoast, Aurecon, Jasmax and JLL. We thank the EY team and the other consultants for their effective engagement with us, and for the efforts they have made to produce the comprehensive technical report that supports our conclusions and recommendations.

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Consensus Working Group Members

Michael Barnett

Michael Barnett is Chief Executive of the Auckland Regional Chamber of Commerce and Industry, and a Director of both the Auckland Chamber and New Zealand Chambers of Commerce and Industry. He is also Chairman of the Equal Employment Opportunities Trust.

Michael was recognised by the Queen in the 2011 New Year's Honours with a New Zealand Order of Merit for services to business.

Ngarimu Blair

Ngarimu Blair is the Deputy Chair of the Ngāti Whātua Ōrākei Trust and has had a long involvement in Treaty and Māori Heritage management issues in Tamaki Makaurau.

Ngāti Whātua Ōrākei are the resident iwi of the inner Waitematā and the port study area and maintain a marae and village that has over 500 tribal residents in Ōrākei. Ngāti Whātua Ōrākei regards the Waitematā as a taonga and has numerous ecological and heritage interpretation projects that actively seeks to restore the mana and mauri of the harbour.

Ko Tuperiri te tangata, ko Maungakiekie te maunga, ko te Waitematā te awa, ko Ōrākei te marae!

Rick Boven - Independent chair

Dr Rick Boven is Chair of both the reference group and the consensus working group. He has significant commercial experience, including leading many strategy projects for transport and infrastructure companies in New Zealand and internationally. He has experience working with Australian and New Zealand central and local governments, on economic and commercial strategies, infrastructure, regulation and organisation topics.

Rick's boardroom experience includes being a director of ASB Bank, Sovereign Insurance and of several international technology companies, and he is a Chartered Fellow of the Institute of Directors. Rick has experience of collaborative multi-stakeholder processes via participation in an investigation of greenhouse gas emission reduction technologies and policies, and from being a member of the Independent Review Panel for the Tai Timu Tai Pari - Sea Change project.

His qualifications include an MA in psychology, an MBA and a PhD in environment management.

Luke Christensen

Luke has been the Auckland Policy Director of youth led organisation Generation Zero since 2013.

PORT FUTURE STUDY

Generation Zero is focused on ensuring young people have a say in the big decisions about the future of New Zealand, such as climate change, transport and planning.

Luke has led the policy work during Generation Zero's campaigns on the Unitary Plan, Safe Cycling, Congestion Free Network and Special Housing Areas and has been a contributor to transportblog.co.nz, writing about a wide variety of Auckland transport and planning issues.

In 2014, he completed his Masters of Urban Planning at The University of Auckland, and works for a transport planning consultancy based in Auckland. Prior to his Masters study, Luke gained four years' experience as a land surveyor.

Noel Coom

Noel is the General Manager, New Zealand of ANL Container Line and is based in Auckland.

During his 44 years working within the transportation industry he has focused primarily on shipping but also completed a period as Group General Manager for TranzRail. Noel has been posted overseas in both Los Angeles and Sydney and is currently Chair of New Zealand's International Container Lines Committee (ICLC).



Richard Didsbury

Richard Didsbury graduated in Engineering at Auckland University and has had a diverse career in property.

He founded and continues as a Director of Kiwi Property which is New Zealand's largest listed property company and led the development of Auckland's biggest shopping centre Sylvia Park and Auckland's premium office building, the Vero Centre. He is currently a Director of Auckland Airport, Skycity, and Hobsonville Land Company.

Prior to the formation of Auckland Council, he was a director of Infrastructure Auckland, Tourism Auckland, and chair of Auckland Waterfront Advisory Group.

His passion for excellence has resulted in projects which have redefined communities such as that at Matakana Village, and his support for artists and architecture is highlighted at Brick Bay Wines and Sculpture Trail. He also led the formation of, and now chairs, the Committee for Auckland.

Tony Gibson

Tony joined Ports of Auckland as Chief Executive Officer in early 2011. He joined the Company with 30 years of experience in shipping and logistics, first with Seabridge in Wellington, and then with Nedlloyd and P&O Nedlloyd.

He has worked in various Senior Management roles in Africa, Asia and Europe, including as European Director of Customer Operations in Rotterdam, before being appointed Managing Director - New Zealand and Pacific Islands in 2002.

Following a take-over by Maersk, Tony served as Managing Director of Maersk - New Zealand for three years.

Tony pursues his own business interests as a director and shareholder of ERoad, a road-user charge solution provider, and is Chairman of NorthTugz Limited.

Jenni Goulding

Jenni is an independent Resource Management consultant and has her own practice currently undertaking development feasibility and project management.

With over 30 years of experience, from local authority (city planner) to project manager for a large scale consultancy, Jenni is now a sole practitioner skilled at considering both business and environmental imperatives.

She has extensive experience in regional infrastructure planning from both community and developer/provider perspectives, particularly in relation to future planning for airports, and all New Zealand Airforce Bases, taking into account conflicting demands of other neighbouring land uses.

Jenni is a voluntary planning adviser to the Parnell community. She won the Waitematā Local Board award for outstanding contribution to community in 2013 with a pilot community structure plan 'Tomorrow Parnell'.

Jenni is a member of the New Zealand Planning Institute, BTP MNZPI

Rangimarie Hunia

Rangimarie Hunia is with Ngāti Whātua Ōrākei Whai Rawa, who have interests across the Tamaki Isthmus and land owners of Quay Park which sits adjacent to the Ports of Auckland.

Nathan Kennedy

Nathan Kennedy is a long-time environmental and Māori rights advocate. He has been the environment officer for Ngāti Whanaunga for 15 years, where he has engaged in plan writing, resource consents, and appeals. He has authored Māori values assessments, including for infrastructure projects and proposed activities within the coastal marine area, and researched and written widely on Māori participation in environmental planning and on Māori environmental indicators.

Nathan is also a Treaty claims negotiator for his iwi, and a member of the Auckland Conservation Board. He has applied his background as a historic geographer in his planning work, and as a geo-spatial analyst. In the latter role, he was the GIS Administrator for Thames Coromandel District Council, undertook claims-related mapping for Te Rarawa in the north, and sites of significance mapping for Hauraki iwi. Recently, he has completed mapping of Auckland iwi tribal rohe for the Auckland Council.

He has a BSc (Hons) from the University of Waikato and is currently completing a PhD evaluating the treatment of Māori provisions in the RMA, and outcomes for Māori.



Alan McDonald

Alan McDonald is the Policy Director of the Employers and Manufacturers Association (EMA).

The EMA represents the interests of more than 4,000 businesses in the area from Taupō northwards, with the majority of those members based in the Auckland region. EMA membership covers about 40 per cent of employees in New Zealand.

Greg McKeown

Greg is a previous chair of the former Auckland City Council's transport committee with a broad knowledge and strong interest in transport, port and city centre issues.

He has submitted to the Proposed Auckland Unitary Panel Hearing process at both Regional Policy Statement and more detailed Port Precinct levels, advocating for a comprehensive, broad and independent analysis of longterm port development options.

Maxine Moana-Tuwhangai

Maxine has extensive management and accounting experience in previous roles at Tainui Group Holdings, Environment Waikato and Te Wananga o Aotearoa.

She is Chairman of Waikato Tainui's iwi authority, Te Kauhanganui Inc, and a member of the New Zealand Maritime Authority.

Maxine is an Accredited Environment Commissioner and has strong iwi links in the Waikato and King Country regions.

Julie Stout

Julie Stout is a leading Auckland architect and Chair of Urban Auckland (Society for the Protection of Auckland City and Waterfront).

She is representing groups associated with the builtenvironment professions of Auckland, plus recreational harbour users.

Annabel Young

Annabel Young is the Executive Director at The New Zealand Shipping Federation, which represents the coastal ship operators working around New Zealand.

Annabel originally qualified as a lawyer and Chartered Accountant specialising in tax for 15 years. She is the author of "The Good Lobbyist's Guide" which is based on her experience as a Member of Parliament for two terms (National Party list MP).

After she left Parliament, Annabel ran the tax lobbying team at the New Zealand Institute of Chartered Accountants, was the Chief Executive of Federated Farmers and was the Chief Executive of the Pharmacy Guild.

Shane Vuletich

Shane Vuletich is Managing Director of The Fresh Information Company which specialises in strategy, measurement, evaluation and forecasting.

He has completed many notable projects in Auckland during his 17 years as a consultant including development of Auckland's tourism, major event and business event strategies, provision of advice on cruise tourism and infrastructure, and management of due diligence processes for major events including Rugby World Cup, Cricket World Cup, FIFA U20 World Cup and the NRL Auckland Nines.

Shane has a first class honours degree in economics from the University of Auckland.

Karen Wilson

Karen Wilson is of Te Ākitai Waiohua, Ngāti Te Ata, Ngāti Pikiao and Ngāti Hau descent and is a representative of the Mana Whenua group - Waiohua - Tāmaki Alliance.

She has spent many years within the New Zealand Police as a senior manager and recently left policing to concentrate fully on the Te Akitai Waiohua Treaty Negotiations in Tāmaki Makaurau.

Karen is the mandated Lead Negotiator for Te Ākitai Waiohua, Chair of the Te Ākitai Waiohua Iwi Authority, and the Pukaki Māori Marae Committee. She also holds Chair / Co Chair / Director roles on other community entities within Tāmaki.

Karen is a member of the Independent Māori Statutory Board and allocated to the following Auckland Council committees and groups:

Environment, Climate Change and Natural Heritage, Parks, Recreation and Sports, Civil Defence Emergency Management Group, Auckland Energy Resilience and Low Carbon Action Plan Steering Group, Auckland Domain Master Plan, Arts, Culture and Events, Regulatory and By Laws, Fukuoka Friendship Garden, Seniors Advisory Appointments Panel, Regional Strategy & Policy Corrections Facility at Wiri (Kohuora), Empowered Communities Political Advisory Group and the Hunua Project Political Advisory Group.