

Ferry Development Plan

Adopted 25 November 2014

Ferry Development Plan

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Executive Summary

Introduction

The Ferry Development Plan (the Plan) provides a 10-year ferry programme for Auckland that:

- programmes service improvements to meet the service level standards specified in the RPTP and to respond to demand
- Identifies ferry terminal upgrades and renewals
- considers possible new projects and provides criteria for assessing their feasibility

The Plan has been developed in line with the Auckland integrated public transport network specified in the Regional Public Transport Plan (RPTP) and in accordance with the Auckland Plan transport network scenario. It assumes a matching level of funding.

Purpose

Ferry services are integral to the new public transport network. The Ferry Development Plan:

- is aligned with the AT strategic themes
- identifies ferry service development and infrastructure projects such as terminal upgrades, additional Park and Ride provision for inclusion in the Auckland Integrated Transport Programme
- supports integration of ferry services with supporting feeder bus services, integrated ticketing and fares
- takes into account development such as that in progress at Pine Harbour Marina and Beachlands, Gulf Harbour and Hobsonville
- is based on projected growth from the Auckland Plan's medium growth scenario

Strategic Themes

AT has identified five strategic themes aligned to the Auckland Plan. Table 1 below indicates how the proposed development programme aligns with the themes.

Table 1: Strategic themes

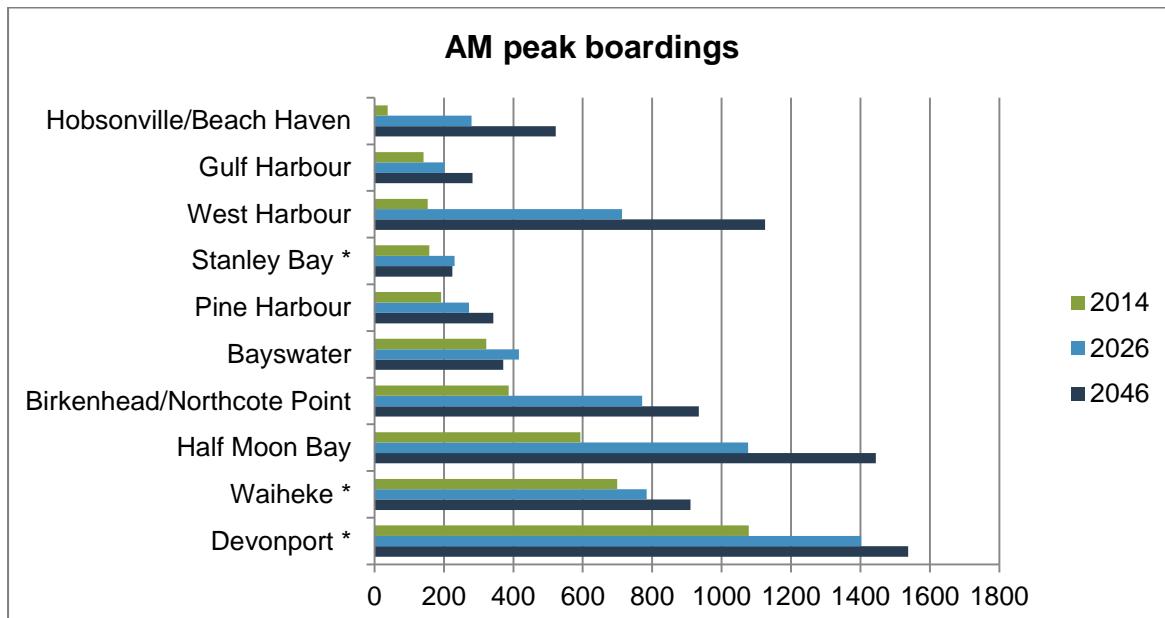
Theme	Ferry contribution
Prioritise rapid high frequency public transport	Service frequency increased to RPTP levels Reliable bus-ferry connections provide a faster combined trip
Transform and elevate customer focus and experience	Increased frequency creates greater choice New and upgraded infrastructure improves customer experience
Build network optimisation and resilience	Ferry alternative increases overall regional resilience Direct ferry routes save travel time and enable optimal use of network resources
Ensure a sustainable funding model	Longer PTOM contracts produce lower contract costs and encourage operator investment and greater

	commerciality
Implement accelerated adaptive innovative solutions	Proposed investigations e.g. alternative fuels, vessel configurations

Future Demand

This Ferry Development Plan will result in a growth of ferry patronage from 5.1m per annum currently to c.7.5m per annum by 2026. The modelled future demand for ferries is based on the Auckland Plan medium growth scenario and assumes that ferry services levels are increased in line with the RTPP and associated infrastructure improvements. Figure 1 below illustrates patronage growth in most areas, particularly in Hobsonville/Beach Haven, West Harbour and Half Moon Bay. The ferry service development programme describes how the ferry services will meet the modelled future demand.

Figure 1: Current and future peak demand



*Exempt services

Ferry network development

Auckland has a relatively mature ferry network and there is limited scope to expand ferry services to new destinations. The first priority is to improve the existing ferry services by increasing frequency to at least the levels specified in the RTPP and ensuring that infrastructure is maintained and upgraded. In some cases, additional capacity will be provided through larger vessels rather than increased frequency. The additional ferry services proposed to be provided to support the forecast demand for 2026 are set out in table 2. This level may vary in response to patronage growth that is greater than forecast, provided funding is available for additional capacity or services.

Table 2: Additional services

Route	Current return services daily		2014 AM peak Patronage demand	Additional services daily 2015 - 25		2026 AM peak Patronage demand
	Mon-Fri	Weekend		Mon- Fri	Weekend	
Bayswater	21 M-Th 23 F	6 Sat 5 Sun	322	11	7	407
Birkenhead / Northcote Pt	24 M-Th, 25 F	6 Sat 5 Sun	387	5	with Bayswater loop	819
Half Moon Bay	11 M-Th 13 F	6 Sat 5 Sun	593	10	6	1,063
Gulf Harbour	6 M-F	0	141	6	4	203
Pine Harbour	15	0	192	7	9	271
West Harbour	14	0	156	6	7	355
Hobsonville / Beach Haven	5	0	35	9	5	302
Devonport (exempt)	35 M-Th, 41 F	37 Sat, 27 Sun	1,078	16	At RTPP level	1,392
Waiheke (exempt)	20	17 Sat, 14 Sun	699	3	At RTPP level	783
Stanley Bay (exempt)	11	0	158	2	0	229
Total AM peak patronage			3,761			5,824

Existing ferry services will gain patronage as development continues in Special Housing Areas and Spatial Priority Areas, in particular at Hobsonville and Scott Point (Hobsonville and West Harbour services) and at Pine Harbour, Beachlands and Gulf Harbour.

Ferry Infrastructure

In addition to the Downtown Ferry Terminal redevelopment as part of the City Centre Integration, the infrastructure upgrades considered necessary include a new terminal at Bayswater, improvements to the Half Moon Bay passenger terminal, and an investigation to determine whether improvements can be made at Northcote Point to improve service reliability. These upgrades are set out in Table 3 below which also includes planned renewals.

Table 3: Proposed capital and renewal projects

Passenger ferry terminals	Proposed Capital work	Programmed renewals 2014 onward (totals)	Longer term projects - upgrades and new terminals
Birkenhead		\$278,750	
Bayswater (old)		\$1,162,500	\$12,500,000 – Recommend bring forward funding for new terminal

Northcote Point		\$985,625	Recommend investigate options for terminal upgrade and review renewals
Devonport		\$1,560,125	Wharf upgrade as part of Devonport Transformation project – in progress
Half Moon Bay (Passenger terminal upgrade stage 1) Renewals cover passenger & vehicular facilities)	\$1,800,000	\$1,277,825	\$5,600,000 – New passenger terminal only, Phase 2 - physical works \$11.4 million +- Master Plan including vehicular ferry terminal – no date
Matiatia (Waiheke)		\$675,751	
Sandy Bay (Rakino)		\$36,250	
Pine Harbour*			
West Harbour*			Park & Ride proposed
Hobsonville			Park & Ride proposed
Beach Haven		\$100,325	
Gulf Harbour*		\$28,125	
Stanley Bay			
Downtown Ferry Terminal	\$15,000,000	\$1,183,750	DFT development - Proposed by City Centre Integration as part of a co-ordinated redevelopment of the downtown waterfront area
Downtown Ferry Terminal (Piers 3 & 4)	\$700,000	\$250,000	
Other wharves			
Kawau & Sandspit		\$402,375	
Great Barrier Island		\$860,625	
Waiheke (other than Matiatia)		\$178,750	

*These services operate from privately owned marinas

The proposed park and ride programme supporting ferries is set out in Table 4. Other sites may be investigated later e.g. Pine Harbour and Beach Haven.

Table 4: Proposed park and ride projects for ferry terminals

Location	Year	Estimated cost	Existing spaces	New spaces
West Harbour	2015-2025	\$0.429M	38	50
Hobsonville extension	2015/16	\$0.859M	31	100
Half Moon Bay	2018/19 onwards	New project (est 2 levels) \$6.0M	305	305 - replace existing parking; potential public-private partnership
Birkenhead	2018/19	New project (\$0.429M)	150	50 additional spaces depending on feasibility

Economic analysis

The BCRs have been calculated taking into account the proposed improvements to existing services and infrastructure and assuming that full fare integration is in place.

High BCR >4:	Half Moon Bay, Devonport, Gulf Harbour, Birkenhead, West Harbour, Hobsonville, Downtown Ferry Terminal
Medium BCR: 2 to 4	Pine Harbour, Waiheke Island
Low BCR <2	Bayswater, Browns Bay and Takapuna combined, Te Atatu, Takapuna (stand-alone)
Overall BCR	4.9

Potential new ferry connections include Browns Bay, Takapuna and Te Atatu. Patronage projections and high infrastructure costs do not justify these suggested new terminals and services.

Consultation

Targeted consultation has been undertaken with ferry operators. The proposed ferry service development and infrastructure programme is incorporated into the draft ITP and will be incorporated into the review of the RPTP in 2015.

Introduction

The Auckland Transport (AT) Regional Public Transport Plan (RPTP) adopted in September 2013 sets out the objectives and policies for developing the public transport network including the ferry network. The RPTP describes a new integrated network structure for Auckland's public transport system.

This Ferry Plan has been developed to review the role that ferries currently play in the integrated public transport network, and how this should evolve over the 2015-2025 period. The directions in this plan are carried forward into the review of the RPTP in 2015.

The Plan has been developed in line with the Auckland Plan transport network and assumes a matching level of funding.

Purpose

Provide a 10-year ferry programme for Auckland that:

- Programmes service improvements to respond to RPTP service level standards and to future demand
- Identifies ferry terminal upgrades and renewals
- Provides the policy framework to guide the operation and management of existing and new ferry services.
- Identifies potential new projects and provides criteria for assessing their feasibility.
- Recognises that the availability of the ferry alternative increases the overall resilience capacity of the Auckland transport network.
- Indicates how the ferry development programme aligns with the AT strategic themes

Ferry service definitions

Contracted services

The following ferry services operate under contract with AT between the Auckland City Centre (Downtown Ferry Terminal) and the following areas. They are specified in the RPTP as integral to the Auckland public transport network.

Bayswater	Birkenhead via Northcote Point	Half Moon Bay	West Harbour
Pine Harbour	Gulf Harbour	Hobsonville and Beach Haven	Rakino Island.

Contracted ferry services are operated under a contractual arrangement with AT and are subject to the RPTP's objectives and policies.

Exempt services¹ are fully commercial services and are not operated under a contractual arrangement with AT. AT may describe exempt services in its RPTP and may classify them as integral to the PT network but may not make them subject to the RPTP's objectives and policies. The following exempt services are specified as integral to the Auckland public transport network:

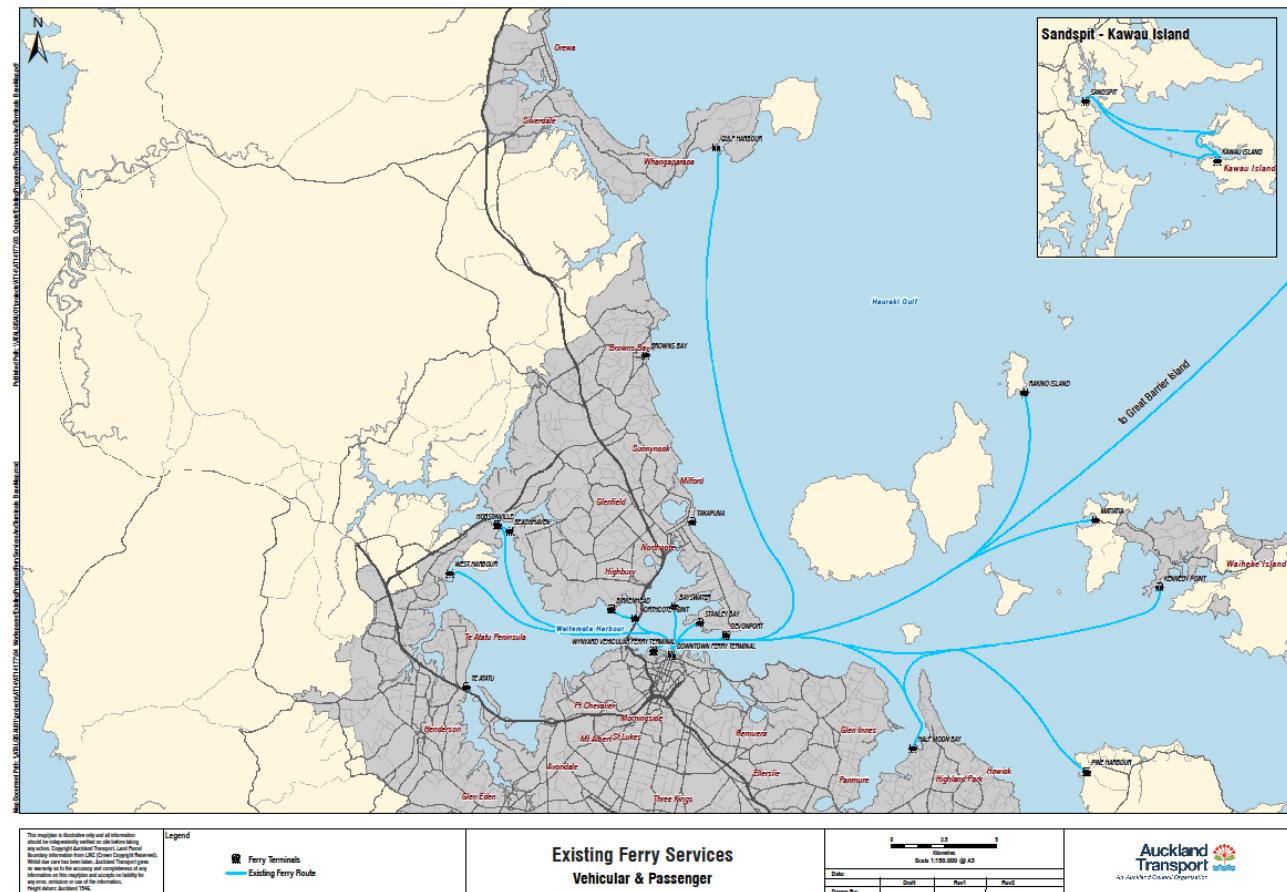
- Auckland - Waiheke Island (Matiatia)
- Auckland – Devonport
- Auckland - Stanley Bay

Other ferry services that meet the LTMA criteria for exempt services but that are not specified as integral include:

- Waiheke Island (Kennedy Point) - Half Moon Bay vehicular ferry service
- Auckland - Great Barrier Island vehicular and passenger ferry services
- Services between Sandspit and Kawau Island.

The contracted ferry services and exempt services (including those to Great Barrier Island, Waiheke (Kennedy Point) and Kawau Island are set out in the map below:

Figure 1: Existing ferry services



¹ Sections 130(2) and 153(2) of the Land Transport Management Act 2003

1. The role of ferries in Auckland's public transport system

The long-term strategic role for ferry services in Auckland is to be an integral part of the public transport network and to play a targeted role providing direct services between selected coastal communities and the City Centre. The role of ferries can be defined in the following classification²:

1. **Essential** routes with no viable land-based alternative e.g. Waiheke, Great Barrier and Rakino Island services
2. **Complementary** routes that are more efficient than land-based alternatives e.g. Devonport, Half Moon Bay, Pine Harbour
3. **Discretionary** routes with equivalent land-based alternatives and some time savings e.g. Hobsonville, West Harbour
4. **Tourist** services provided on a fully commercial basis.

This plan does not include tourist services except where regular commuter services (such as Devonport and Waiheke) also cater for tourism and where they use AT-provided terminal facilities. The importance of tourist services to the overall viability of ferry business and to the region's economy is acknowledged and AT will make terminal facilities available provided that regular passenger services are not disrupted.

Ferry Customers

Ferry customers who rely on ferry services to go to and from work or tertiary education, want fast, reliable services. They rely on good interchange opportunities with other modes such as bus, train or park and ride stations. These customers generally travel in the morning and afternoon peaks.

Tourist and leisure customers want comfortable, reliable services in the off peak periods and on weekends to key destinations in the Hauraki Gulf, such as Waiheke Island. Gold Card users are also significant users in the off-peak periods.

A customer survey³ has shown that 64% of ferry passengers have access to a car but choose ferry travel rather than driving. Ferry services increase the range of travel choices available for Aucklanders and contribute to reducing the growth of congestion on the road network during peak times.

Integration with other modes

An integrated public transport system requires bus, ferry and train services to make reliable connections and enable seamless transfer between modes. To facilitate this, the ferry

² Based on TCRP report 152 – Guidelines for Ferry services; Transportation Research Board, Washington DC, 2012

³ AT Customer Satisfaction survey June 2014

sailings should be as close to clock-face as possible so that waiting time for connections is minimised. Integrated tickets can be used on bus, train and ferry. The introduction of integrated fares for ferries is proposed although this may be at a later date.

Space for bicycles is available on ferries and cycle parking is or will be provided at ferry terminals. Cycle network improvements will include connections to ferry terminals. The AT Code of Practice (ATCoP) sets standards for ferry terminals and wharves including barrier-free pedestrian facilities to ensure accessibility for disabled people.

Resilience

Ferry services provide alternatives to vulnerable land transport connections which may be subject to disruptions e.g. a blockage on the road network⁴ and road-based systems provide back-up for ferries when adverse weather prevents sailings. The availability of the ferry alternative increases the overall resilience capacity of the Auckland transport network. The utility of ferries in the event of natural disaster will depend on the availability of accessible infrastructure.

Ferry service levels

The RPTP specifies the minimum service levels for each ferry route, as shown in Table 1.

Table 1: RPTP service specifications

Period	Minimum Frequency (contracted services)	Exempt services
Peak	30 minutes	Devonport 15 minutes (7 am – 7 pm) lower frequency outside these hours (Frequent network)
Off-peak	60 minutes (Half Moon Bay 30 minutes)	Stanley Bay - 30 minutes peak only
Evening	60 minutes	Waiheke - 30 minutes peak (Mon-Fri) 60 minutes all other times
Weekend	60 minutes	

The service specifications provided for exempt services are for guidance only as there is no contractual relationship between the operator and AT. Service improvements may be negotiated by AT with operators.

2. Ferry network development

Auckland has a relatively mature ferry network where the majority of the essential and complementary ferry routes are already operating. There is limited scope to expand ferry services to new destinations in Auckland. Many coastal areas have insufficient water depth

⁴ When road access to Kawakawa Bay was blocked by a slip in September 2008, an interim ferry service to Half Moon Bay was provided.

close to the shore so that construction of wharf and terminal facilities to ensure all-tides operation has a high cost. In addition, potential ferry catchments generally have low residential density and other travel modes (such as car and bus) may offer shorter travel times to key destinations. The catchment for ferry terminals can be extended with feeder bus services or supporting park and ride facilities.

Employment and population growth over the next 10 years will increase travel demand between the City Centre, metropolitan centres and coastal suburbs. Ferry services have an important role to play in meeting the additional travel demand. In developing the ferry service network, the following principles are considered:

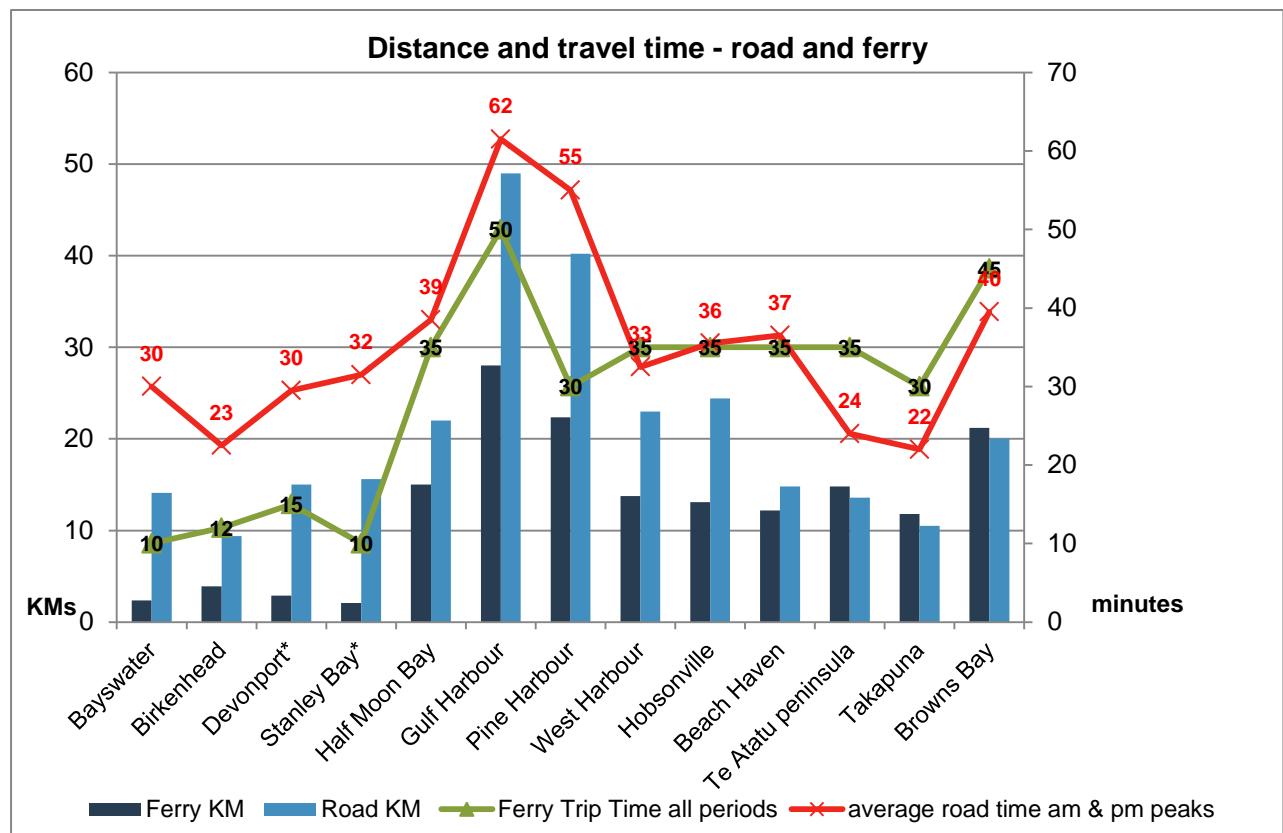
- Integrate ferry services into the wider public transport network and provide connected services that support Auckland's growth
- Retain ferry services at the Downtown Ferry terminal as the most important ferry terminal in the region
- Provide reliable and competitive travel times as an alternative to congested land transport corridors
- Ferry services and facilities provide safe and secure travel options, accessible to all travellers, using vessels that comply with AT's Vessel standards for ferries
- Ferry services and infrastructure represent value for money, while balancing user contributions and public funding and revenue from commercial opportunities
- AT provides, owns and maintains ferry infrastructure to a high standard
- Funding for ferry services and infrastructure will be targeted first to improving existing services to improve value for money and to increase their farebox recovery
- Ferry services continue as an essential mode of transport for moving people and goods between the main Hauraki Gulf Islands and the mainland
- Ferry services and facilities are developed in a manner that avoids or minimises adverse effects on the coastal marine area and on public use of water space
- Ferry services promote economic development through access to tourism and leisure destinations in the Waitemata Harbour and Hauraki Gulf. Freight services ensure that goods are moved to the islands and that island products can be exported

In considering proposals for new ferry routes, a key consideration is ferry travel distance and time compared to land-based modes

Figure 2 below compares approximate travel distance and average peak travel time by road and by existing ferry services from suburban ferry terminals to the City Centre. Travel times are estimated from the ferry terminal but will vary for car users depending on start point,

traffic and daily variability in conditions. Ferries offer a consistently reliable direct trip because they use uncongested waterways although travel time may vary occasionally due to weather conditions. Road travel times by car will vary from day to day depending on traffic conditions, road works and route taken while bus travel usually takes longer due to these factors and also to frequent stops.

Figure 2: Comparative travel distances and travel times (morning and evening peak periods)



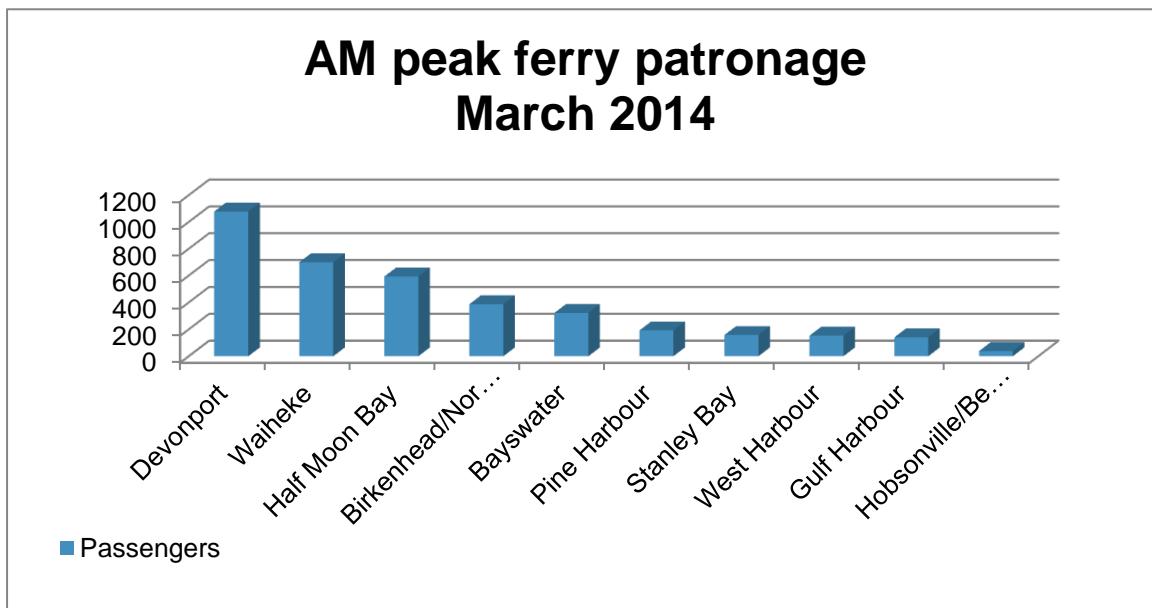
Note: road distance based on Google distance by fastest route. Road travel time supplied by Travel Demand Management team. * Exempt services - Waiheke Island excluded.

3. Ferry Service provision

Ferry patronage

Ferry patronage for the year to December 2014 is 5.3 million, a growth rate of 3.1% over the previous year and representing about 7% of total public transport patronage in Auckland. Of the total annual patronage, around 77% was carried on the Devonport and Waiheke exempt services. The AT contracted services however, carry around 49% of morning peak patronage. This indicates that off-peak, tourist and leisure travel form a reasonably high proportion of the exempt services' patronage.

The morning peak ferry patronage (counted in March 2014) is set out in Figure 3.

Figure 3: AM Peak Ferry Patronage

Source: Auckland Council cordon count March 2014

Development framework

AT has identified five strategic themes aligned to the Auckland Plan. Table 2 below indicates how the proposed development programme aligns with the themes. Table A1.1 (Appendix 1) provides greater detail.

Table 2: Strategic themes

Theme	Ferry contribution
Prioritise rapid high frequency public transport	Service frequency increased to RPTP levels Reliable bus-ferry connections provide a faster combined trip
Transform and elevate customer focus and experience	Increased frequency creates greater choice New and upgraded infrastructure improves customer experience
Build network optimisation and resilience	Ferry alternative increases overall regional resilience Direct ferry routes save travel time and enable optimal use of network resources
Ensure a sustainable funding model	Longer PTOM contracts produce lower contract costs and encourage operator investment and greater commerciality
Implement accelerated adaptive innovative solutions	Proposed investigations e.g. alternative fuels, vessel configurations

The four key steps to improve ferry services in Auckland are:

1. Increase existing ferry service and customer value

- Improve service frequencies on existing AT-contracted ferry routes to support the integrated public transport network as set out in the RPTP
- Encourage exempt ferry services to achieve the service levels set out in the RPTP
- Implement an integrated fare scheme to develop better fare parity between modes
- Roll-out the PTOM contract process to deliver better value, customer-focussed ferry services.

2. Ferry service integration and improvement

- Introduce timetables that ensure better connections between ferries and bus and rail services
- Improve frequencies or capacity on AT-contracted ferry routes where demand is growing beyond RPTP service level capacity
- Provide real time information at ferry terminals and on ferries

3. Modernise ferry facilities and fleet

- Upgrade the Downtown ferry terminal to meet the growing demand for ferry travel to the City centre and to provide more efficient connections with other public transport modes.
- Progressively upgrade other ferry terminals to improve safety and enable better connections with other modes, including improved park and ride and cycle connections
- AT Code of Practice will ensure best practice in the design and operation of ferry facilities and improve customer experience.
- Work with ferry operators to standardise vessel configurations to allow more efficient and effective design, operation and maintenance of ferry terminals and wharves

4. Expand services to provide for growth

- Progressive development of the ferry network to match growing (projected) demand, but based on RPTP service levels and defined trigger thresholds (e.g. patronage regularly above 85% of vessel capacity at peak times) and criteria
- Increase bus feeder connections to ferry facilities and wharves to improve customer access.
- Extend existing park and ride and provide new park and ride facilities to support the patronage of ferry services and reduce road congestion.

Given the costs of providing new infrastructure and the need to allocate available funding across the total public transport network, the first priority is to improve the existing ferry services by increasing frequency to at least the levels specified in the RPTP and ensuring that infrastructure is maintained and upgraded.

Ferry service levels

The service level improvements have been prepared with the initial aim of all services reaching the RPTP minimum service level specifications (30 minute frequency for peak services and 60 minutes for off peak services). If demand increases, additional trips or increased capacity may be added to a route if funding is available. As frequency and reliability are two of the most important service characteristics it is considered that the increased service levels will generate new demand, and contribute to patronage growth targets. The service periods and levels set out in Table 3 below have been used as a guide. They reflect the RPTP specifications with some modification based on observed usage. There is some flexibility around start and end times to allow for trip travel times and demand and later trips at weekends may be provided according to demand.

Table 3: Guidelines for Levels of Service

Period		Start	To	Hours (approx)	Trips	Frequency (minutes)
Weekdays						
AM peak		first trip (from 6.30 am)	arrive at DFT by 9.15	2.5	5	30
PM peak	depart DFT from	3.30	6.15	2.5	5	30
Interpeak	Between	9.15	3.15	6	6	60
Evening	from	6.30	last trip	3.5	4	60
Weekends and public holidays						
Saturday		7.00 am	7.00 pm	12	12	60
Sunday		7.00 am	7.00 pm	12	12	60

Frequent services at 15 minute all-day frequency – Devonport only

Factors influencing patronage growth include the implementation of the new bus network that will provide ferry connections and the introduction of integrated fares, especially when the ferry surcharge is eliminated. Terminal upgrades, additional Park and Ride provision and residential development such as that in progress at Pine Harbour Marina and Beachlands, Gulf Harbour and Hobsonville will also lead to increased patronage. This forward planning anticipates funding requirements should higher levels of service be required.

Service review triggers

High demand

Service reviews are triggered when capacity offered is regularly utilised more than 85% during a 15 minute period at peak times (or 60% of total capacity in the offpeak over one hour). On occasion, ferry customers have been left behind as the capacity limit has been reached and either increased frequency or more capacity is required to resolve the issue.

Selection of a preferred option will take into account the service travel and turn-around time and the availability and cost of procuring and crewing a larger vessel.

The proposed service improvements will be implemented based on passenger demand, operational capability and to the level of capacity that can be provided within the available funding.

Low demand

On a regular basis where less than 50% of seated capacity is being utilised over a 20 minute period in the peak (or less than 30% of seated capacity in the off peak), the service frequency will be reviewed.

Feasibility and funding of improvements

Ferry contracts are funded by Auckland Council rates and NZTA subsidies as well as passenger revenue. The cost is decided by a competitive tender process.

Additional funding streams will be explored, for example, where a terminal project will provide tourist access or where a service will increase the attractiveness of a new development. Commercial opportunities may be possible at some locations e.g. a new Park and Ride at Half Moon Bay could be provided in partnership with private interests.

Devonport is identified in the Auckland Plan as an integral part of the city fringe. The RPTP specifies a 15 minute all-day frequency; as this is an exempt service, achieving this level may have to be negotiated with operators.

Sector service reviews

Implementation of the new public transport network requires a review of services by all modes within a sector. These reviews will include provision for bus connections to ferry services. The sector service review programme is set out in Table 4. It is proposed that ferry contracts will be tendered during 2015.

Table 4: Sector service review programme

Sector	Review period	Ferry services in sector
Hibiscus Coast	mid 2014	Gulf Harbour ferry
West Auckland	2 nd half of 2014	Hobsonville and West Harbour ferries
East Auckland	2015	Half Moon Bay and Pine Harbour ferries
North Shore	2015	Bayswater, Birkenhead, Beach Haven, Northcote Point, and Devonport ferries

4. Service development

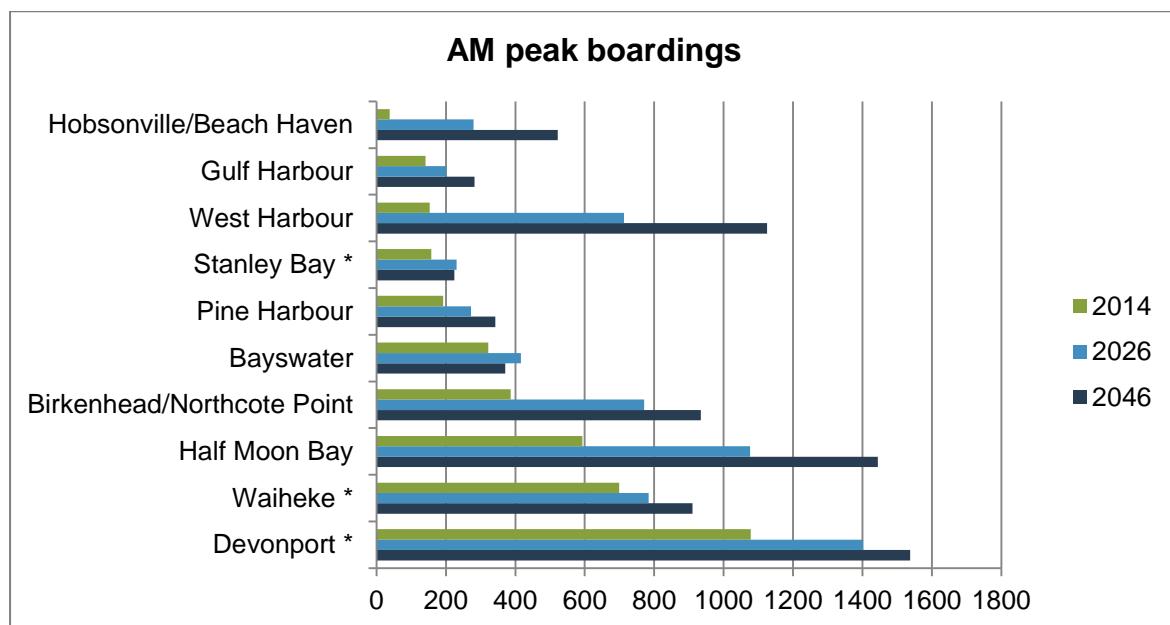
Demand

The modelled future demand is based on the Auckland Plan medium growth scenario and assumes that ferry service levels are increased in line with the RTPP and associated infrastructure improvements.

Potential patronage has been modelled assuming integrated fares with and without a ferry surcharge. A surcharge is necessary initially to maintain the affordability of ferry services and to avoid demand for unavailable capacity. In time, as patronage and capacity increase and costs are reduced, the surcharge will be reduced and eliminated.

Figure 4 below illustrates actual patronage (March 2014 cordon count) and modelled future demand, assuming integrated fares with no surcharge, for 2026 and 2046.

Figure 4: Current and future peak demand



*Exempt services

The low growth of patronage predicted for Bayswater and Stanley Bay may result from lack of residential intensification, an ageing population, or a switch to using the Devonport ferry with its higher frequency. Achieving the projected numbers will be assisted by ensuring that reliable bus and ferry connections are available and that park and ride is provided where space is available. Increased frequency and integrated fares should also trigger interpeak, evening and weekend growth especially in areas where development is planned, such as West Harbour and Hobsonville in the north-west.

Economic evaluation

An economic evaluation has been carried out on the proposed improvements to the Auckland ferry network. The overall purpose was to analyse the costs and benefits of the

improvements and produce a benefit: cost ratio (BCR) for each in order to indicate its value for money.

With the exception of the Downtown Ferry Terminal (DFT) the main source of benefits from the proposed improvements is the generation of new ferry patronage. The improvements at DFT provide benefits from better facilities and reliability.

Costs fall into three categories: capital costs, for example for new or upgraded infrastructure; increased operating costs, such as those due to a more frequent service; and additional ferry financing and operating costs.

For each route, two fare scenarios have been considered: with a fare surcharge, ranging from \$2 to \$4 per trip, and with no surcharge. All costs and benefits were calculated relative to the Do Minimum of retaining the existing ferry network and pattern of operation. The indicative BCR for existing services is outlined in Table 5.

Table 5 - BCR – service and infrastructure improvements

Route	BCR with surcharge	BCR no surcharge
Half Moon Bay	16.07	15.68
Devonport*	12.41	9.07
Gulf Harbour	1.20	8.82
Birkenhead/ Northcote Point	8.81	5.61
Downtown Ferry terminal (boarding)	3.50	4.20
West Harbour	4.19	5.09
Hobsonville/ Beach Haven	1.52	4.75
Pine Harbour	0.87	3.58
Bayswater	1.58	1.68
Waiheke Island*	0.40	2.50
Stanley Bay*	-	-
Rakino Island	-	-
Programme BCR	2.92	4.9

*Exempt services

The evaluation shows that the fare surcharge does not perform well in economic terms; for most terminals the reduced benefits due to lower forecast patronage are not offset by the reduction in costs due to the increase in revenue.

Looking at the BCR values without the surcharge, the routes and terminals fall into three categories:

- Those with a “high” BCR (i.e. 4 or over), comprising more than half the routes examined; particularly high BCRs occur where either there is a large forecast increase

in patronage (e.g. Half Moon Bay) or the benefit per passenger is high e.g. Gulf Harbour

- Those with a “medium” BCR between 2 and 4; e.g. Pine Harbour and Waiheke
- The “low” BCRs (below 2); such as Bayswater, Te Atatu, Takapuna and Browns Bay.

For the programme as a whole the BCR is just below 5.

Proposed service improvement programme

The proposed service improvements are set out in Table 6 below. These may change according to demand and in response to the trigger levels as described above (page 16).

Table 6 – Proposed service improvement programme

Route	Current return services daily		Additional return trips daily								
			2015-17		2018-20		2021-23		2023-25		
	Mon-Fri	Weekend	Mon - Fri	Weekend	Mon - Fri	Weekend	Mon - Fri	Weekend	Mon - Fri	Weekend	
Bayswater	21 M-Th 23 F	6 Sat 5 Sun	3	4 Sat, 5 Sun	5	2	3	0	add capacity	0	
Birkenhead / Northcote Pt	24 M-Th, 25 F	6 Sat 5 Sun	1	0	2 + add capacity	0	2	0	add capacity	0	
Half Moon Bay	11 M-Th 13 F	6 Sat 5 Sun	4	2	4	2	3 + add capacity	2	add capacity	0	
Gulf Harbour	6 M-F	0	1 + add capacity	0	3	0	2 + add capacity	0	add capacity	4	
Pine Harbour	15	0	1 + add capacity	4	4	2	2	2	0	1	
West Harbour	14	0	1	0	2	0	2	5	1 + add capacity	2	
Hobsonville / Beach Haven	5	0	4	4	3	1	2	0	add capacity	0	
Rakino Island	2 (1 F only)	2 (1 Sun only)	1 (one day only)	0	0	0	0	0	0	0	
Devonport (exempt)	35 M-Th, 41 F	37 Sat, 27 Sun	4	0	4	0	4	0	4	0	
Waiheke (exempt)	20	17 Sat, 14 Sun	0	0	2	0	1	0	0	0	
Stanley Bay (exempt)	11	0	1	0	1	0	0	0	0	0	

Assessment of proposals for new and improved services

Detailed criteria have been developed for use in assessing proposals for new and improved terminals and services including the physical suitability of a terminal site and ferry route, the overall benefit to the region and the potential patronage. The criteria are summarised in Table 7⁵. A fuller description is included in Appendix 2.

Table 7: Assessment criteria

Demand	Daily ridership including off-peak and tourist
Modal advantage	Alternatives available and time savings
Land use	Existing and planned land use and development densities in both the immediate terminal area, as well as the greater area surrounding the terminal
Operations & System Integration	In this category, the following factors are assessed: <ul style="list-style-type: none"> • Navigability of the waterways [and the physical suitability of the proposed terminal site] • Adequacy of connecting transit service and quality of bicycle and pedestrian connections and facilities • Availability of terminal area parking • The terminal community's perceived vulnerability to traffic impacts
Cost	<ul style="list-style-type: none"> • Capital, operational and on-going facility maintenance costs • Whether the presence of a ferry service could help defer or eliminate significant alternative transportation infrastructure investments that might otherwise be needed to meet demand.
Environment	Sensitivity to wake impacts generated by vessels on the route Alternative to driving on congested routes Impacts on coastal marine area and on public use of the water space.

These criteria can be used to establish feasibility before proceeding with the usual benefit/cost and business case assessments.

Ferry services and growth areas

A number of possible sites for new services have been investigated. Provision of new ferry infrastructure and services might be considered an option for some sites identified as Spatial Priority Areas or Special Housing Areas under the Housing Accord but most of these (to date) are not in coastal areas where conditions are favourable.

Development in the north-west, in particular at Hobsonville and Scott Point will be served by existing ferry services at Hobsonville and West Harbour (Westpark Marina). At Pine Harbour and Beachlands and at Gulf Harbour, development in progress in response to

⁵ Based on *Puget Sound Regional Passenger-Only Ferry Study: Puget Sound Regional Council, July 2008* and *Auckland Ferry Service report, McCormick Rankin Cagney 2005*

earlier plan changes will be served by the existing ferry services. Figure 5 below shows SHAs and Spatial Priority areas in relation to existing and suggested ferry routes.

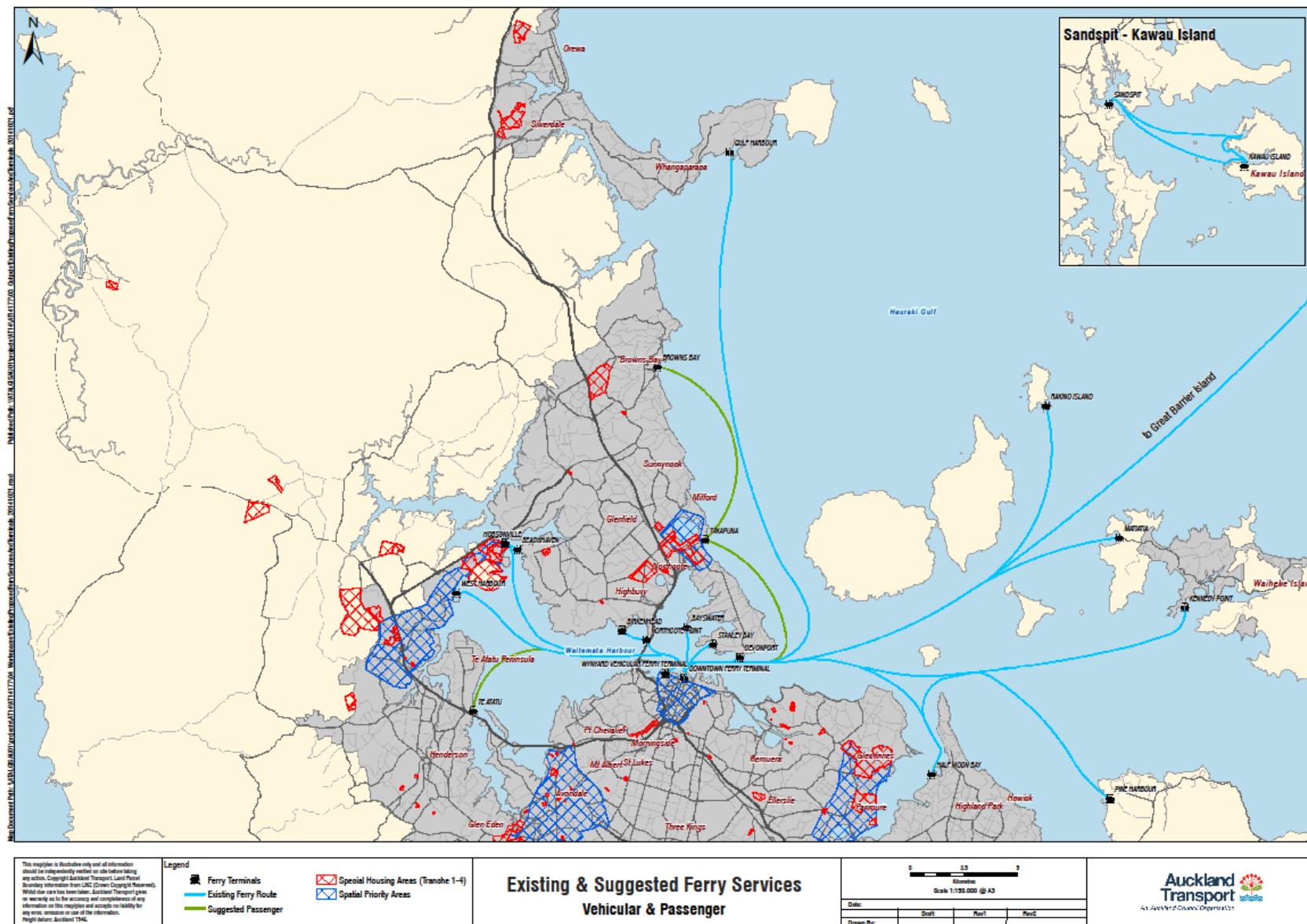
Suggested new services

Suggested sites for new services include Te Atatu, Takapuna and Browns Bay but the cost of infrastructure and the low forecast patronage do not justify their development during the 10 year period of this plan, as indicated in Table 8. As shown in Figure 2, there is little or no travel time advantage over road-based modes from these sites.

Table 8: Suggested new ferry services

Ferry route	Distance to City Centre (km)		Modelled AM peak demand (no surcharge)		Infrastructure Cost	BCR Without surcharge
	Ferry	Road	2026	2046		
Te Atatu	14.5	14.8	18	110	\$15M	0.4
Takapuna	11.8	10.5	94	96	\$10M	0.3 Takapuna only
Browns Bay to City via Takapuna	21.2	20	61	55	\$15M	0.8 combined Browns Bay & Takapuna

Figure 5: SHA and Spatial Priority Areas



Manukau Harbour

Ferries on the Manukau Harbour are not considered feasible for provision of regular public transport services as the assessment criteria (Table 7) cannot be met. The low density residential development in coastal catchment areas would not generate sufficient demand. There are few sites with sufficient water depth to allow operation of an all-tides service without costly dredging and on-going maintenance dredging.

There are no identified destinations that are expected to attract enough patronage to justify a service and where infrastructure could be provided. The wharf at Onehunga is cut off by the SH 20 motorway and is a considerable walking distance from the business district, the station and the transport centre. The Airport is inaccessible from the harbour with perimeter restrictions and surrounding shallow water and access to the business area is cut off by the runways.

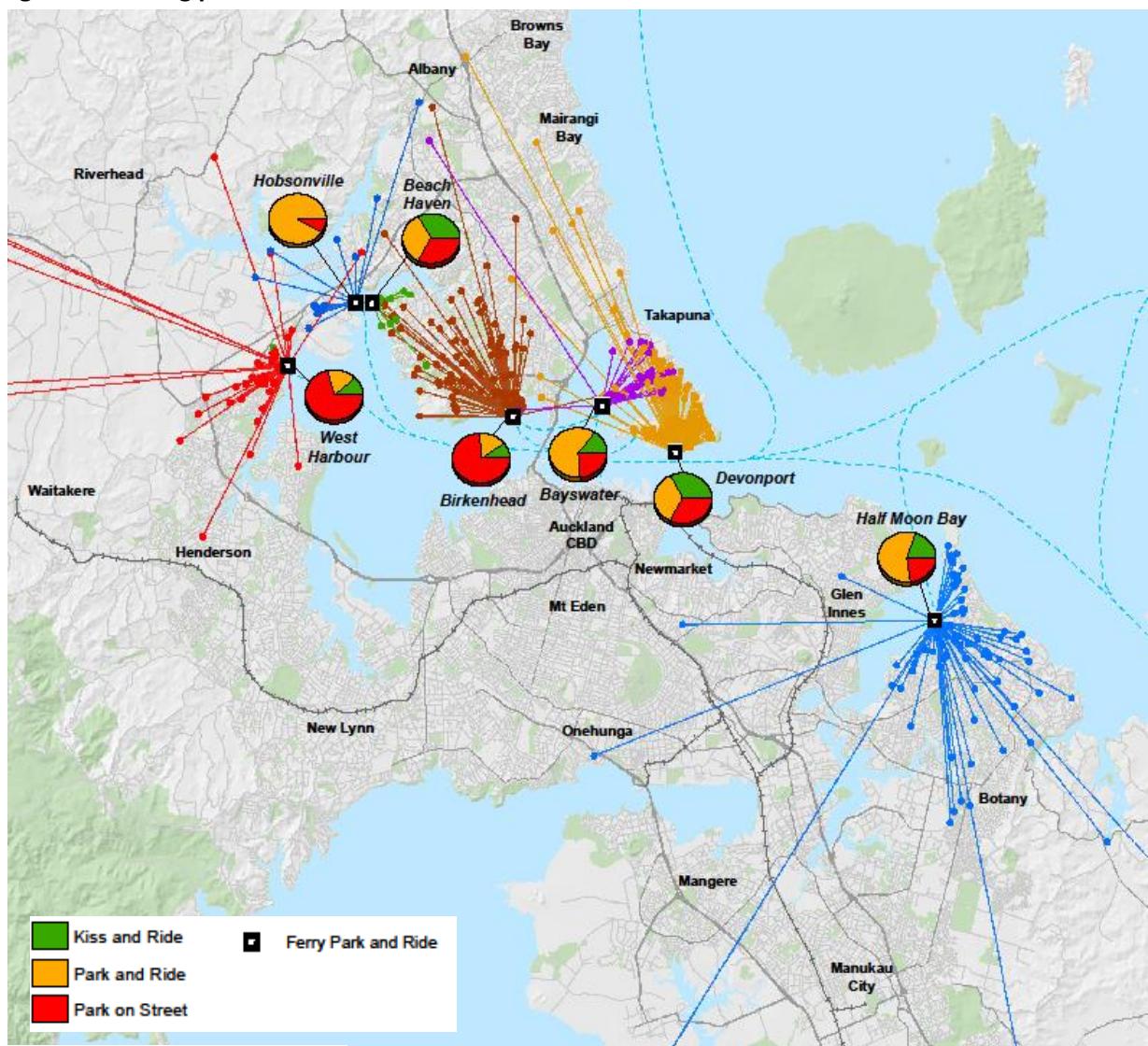
From the northern coastal areas, travel would mostly be by road toward Isthmus area employment while from the south e.g. Papakura and Weymouth, train travel would be faster. Tourist and day-trip ferry ventures may be provided commercially but these are not an AT priority. Growth and development in the south may prompt a review of the feasibility of Manukau Harbour services in future.

5. Infrastructure

Park and Ride

Park and Ride facilities enlarge ferry catchments as shown in the Park and Ride catchment map and are an important contributor to ferry patronage growth. Figure 6 indicates the park and ride catchments for Auckland ferry services.

Many ferry passengers are willing to drive short distances to park and ride sites, while a smaller percentage are willing drive distances greater than 20km.

Figure 6: Existing park and ride catchments

The proposed park and ride programme is set out in Table 9. Other sites may be investigated later e.g. Pine Harbour and Beach Haven. Development will depend on funding and the priority assessed for the project within the overall transport programme.

Table 9: Proposed park and ride projects for ferry terminals

Location	Year	Estimated cost	Existing spaces	New spaces
Bayswater	2015 – 2025	New site (\$1.68M)	196	Replace 196 (depend on terminal location decision)
West Harbour	2015-2025	\$0.429M	38	50
Hobsonville extension	2015/16	\$0.859M	31	100
Half Moon Bay	2018/19	New project	305	305 - replace existing

	onwards	(est 2 levels) \$6.0M		parking; potential public-private partnership
Birkenhead	2018/19	New project (\$0.429M)	150	50 additional spaces depending on feasibility

Ferry terminal upgrades

Customer satisfaction surveys have shown that ferry passengers are generally very content with most aspects of ferry services except for terminals which often had low ratings.

Upgrading or replacing inadequate infrastructure is important in improving customer satisfaction and thus retaining and growing patronage.

Proposed infrastructure upgrades include the Downtown Ferry Terminal (DFT) redevelopment, a new terminal at Bayswater, improvements to the Half Moon Bay passenger terminal, and Hauraki Gulf Island terminals upgrades.

If facilities are not improved at Half Moon Bay and Bayswater, the target patronage for these ferry services will not be achieved. The Half Moon Bay pontoon in use now requires upgrading to accommodate greater numbers of passengers and to allow use by larger vessels. Providing a new passenger ferry terminal will also save AT the annual lease cost paid currently. The Bayswater terminal is also leased and an upgrade is required; this could best be accomplished by providing a new terminal on publicly owned land where it would be more visible and would allow connections from feeder buses to be made more easily.

Ferry berthing at Northcote Point is cancelled from time to time due to adverse wind and tide and weather conditions. With recent frequent storms (winter 2014) this terminal has been closed for up to 30% of sailings or 5-6 days in some months. If the proposed Skypath on the harbour bridge is constructed it is anticipated that demand for travel as a return trip option from this terminal will increase. It is recommended that an investigation is carried out to determine whether modifications could be made to improve the facility and thus the reliability of services.

The proposed capital and renewal expenditure programme for ferry terminals is set out in Table 10. Implementation will depend on the outcome of the LTP to 2025.

Table 10: Proposed capital and renewal projects

Passenger ferry terminals	Proposed Capital work	Programmed renewals 2014 onward (totals)	Longer term projects - upgrades and new terminals
Birkenhead		\$278,750	
*Bayswater (old)		\$1,162,500	\$12,500,000 – Recommend bring forward funding for new terminal Park & Ride proposed
Northcote Point		\$985,625	\$960,500 – Recommend investigate options for terminal upgrade and review renewals
Devonport		\$1,560,125	Wharf upgrade as part of Devonport Transformation project – in progress
Half Moon Bay (Passenger terminal upgrade stage 1) Renewals cover passenger & vehicular facilities)	\$1,800,000	\$1,277,825	\$5,600,000 – New passenger terminal only, Phase 2 - physical works \$11.4 million +- Master Plan including vehicular ferry terminal – no date
Matiatia (Waiheke)		\$675,751	
Sandy Bay (Rakino)		\$36,250	
*Pine Harbour			
*West Harbour			Park & Ride proposed
Hobsonville			Park & Ride proposed
Beach Haven		\$100,325	
*Gulf Harbour		\$28,125	
Stanley Bay			
Downtown Ferry Terminal	\$15,000,000	\$1,183,750	DFT development - Proposed by City Centre Integration as part of a co-ordinated redevelopment of the downtown waterfront area
Downtown Ferry Terminal (Piers 3 & 4)	\$700,000	\$250,000	
Other wharves			
Kawau & Sandspit		\$402,375	
Great Barrier Island		\$860,625	
Waiheke (other than Matiatia)		\$178,750	

* These services operate from privately owned marinas

Downtown Ferry Terminal (DFT)

All passenger ferry services terminate at the DFT, making it the most important ferry terminal in the region. Its proximity to the Britomart Transport Centre allows connections

to other modes and services so that ferry passengers have a wide choice of destination options. Key factors in considering the redevelopment of the waterfront are that the DFT should remain in its current location and that redevelopment should allow for expansion of the DFT to meet future passenger transport needs for peak capacity and increased passenger movements as service frequency is increased.

The downtown waterfront area is due to undergo significant redevelopment with planned projects all surrounding the DFT all due to commence in the next few years. These projects include the Seawall upgrade, Quay St upgrade, Queens Wharf Redevelopment, CRL and Downtown Shopping Centre site redevelopment.

City Centre Integration (CCI) is developing a Central Wharves Strategy which will provide a long term plan for the Central Wharves and a vessel berthing strategy for the waterspace from the Harbour Bridge to Bledisloe Wharf. The Central Wharves represent a resource that is highly valued and constrained both by its existing and potential berthing functions and landside waterfront users and opportunities. The area is key to balancing the aspirations for public access to the Waitemata Harbour, managing movement, providing a gateway for residents and visitors, and accommodating the growing requirements for vessel berthing, waterspace and landside infrastructure. For the Central Wharves, the Auckland Visitor Plan, the Cruise Industry Action Plan, the Ferry Strategy and the Port Development Strategy are referenced in considering the potential mix and configuration of uses, the spatial layout of the area and the progressive improvements and infrastructure investments that are needed.

Earlier work by CCI prepared master-plan level options for re-configuring the ferry basin and terminal and AT identified its two preferred options; these both retained ferry operations in the present basin, considered a priority for retaining patronage.

The DFT master planning consultants recommended that a shift to end loading vessels would provide operational efficiency benefits and therefore options developed assumed the use of end-loading ferries. It was considered that the transition to end loading vessels would take place over a considerable period as a transition period would be needed to accommodate different vessel types. In this case, additional funding would be required to convert the outer terminals (if required) including those within privately-owned marinas and those used by tourist services e.g. AT wharves at Orapiu and Sandspit and DoC wharves at Rangitoto and Motutapu. The cost, in addition to procuring new vessels or, if possible, converting existing ones, has not yet been estimated.

Ferry terminal operations

AT manages the ferry terminals it owns or leases. The DFT has been managed and operated by Fullers Group Limited under agreement with AT, through an arrangement developed by Auckland Regional Transport Network Limited (ARTNL). With the expiry of this agreement, AT is considering options for the on-going operation and management of the terminal but, in line with its policy, prefers to own and manage public transport infrastructure. Where

services operate from privately-owned marinas, AT's preference is to own the leases of these berths to facilitate competition for contracts.

Terminal operations and maintenance are funded in part by access fees. These fees do not cover the entire cost and AT will carry out regular reviews of charges with a view to fully recovering the costs.

6. Hauraki Gulf Islands services

Ferries provide the main transport link with the Hauraki Gulf Islands, for passengers, freight and vehicles and play an important role in Auckland's tourist industry. They are deemed exempt services and the connections they provide are essential to the islands they serve. AT owns and manages terminals used by these services on Great Barrier, Waiheke, Rakino and Kawau Islands and at Sandspit and Half Moon Bay.

If any of the exempt service arrangements were to be withdrawn by the ferry operator, AT would review the need to provide ferry services and where necessary take measures to ensure that cost-effective services are provided as they are essential connections, for both people and goods, to the mainland. In the procurement/delivery of service provision to the Gulf Islands AT:

- Encourages and prioritises commercial services over publicly subsidised contracted services
- Owns or leases access to wharves to facilitate services
- May subsidise services through contracts as a last resort to provide appropriate connections to the islands.

The level of service that should be provided will depend on an assessment based on a number of factors including (but not limited to):

- Population size
- Access and mobility needs
- Value for money – including fare revenues and cost
- Availability of funding – including NZTA support, Auckland Council rates levied on the area and Council funding.

7. Partnership and collaboration

Under the LTMA, AT may specify ferry service policy, guidelines, standards and specifications. Excluding exempt services, the relationship with ferry operators in the provision of ferry services to achieve these specifications will be defined by performance-based (PTOM) service contracts as described in the RPTP (section 6.8). It is envisaged that, depending on performance, contracts will be for a term of 12 years.

The LTMA provides that AT may not make exempt services subject to the objectives and policies in the RPTP. AT will enter into negotiations with operators of exempt services identified as integral to the Auckland PT network to identify areas where co-operation will benefit ferry customers, while providing a return for the operator and for AT and a formal document will be executed once agreement is reached.

Other parties

In accordance with the LTMA, AT contracts ferry services and works in partnership with operators to procure services and ensure they are delivered. AT is also responsible for infrastructure including terminals, park and ride, and for bus service integration and accessibility. Other interested parties include: Auckland Council, Maritime NZ, Waterfront Auckland, NZTA, Local Boards, ferry users and the general public.

Performance monitoring and review

As described in section 8 of the RPTP 2013, AT will work with operators to review performance and to respond to changes in demand. Monthly reporting is required on contracted services including missed trips, late trips, cancellations and any incidents. Service delivery and customer service is regularly checked by mystery traveller surveys, with ferries generally achieving a high score. The monitoring results are analysed and reviewed in regular meetings between AT and individual contactors.

PTOM contracts will include performance standards to be met. They will include incentives for continued performance and a contract payment retention provision for missed trips or poor performance (see RPTP).

Consultation

This plan has been prepared following consultation with ferry operators. Their submissions to the draft RPTP (2013) were also taken into account. The proposed ferry service development and infrastructure programme is incorporated into the draft ITP and will be incorporated into the review of the RPTP in 2015.

8. Emerging issues

Emerging Issues that may affect successful delivery of the Ferry Development Plan include:

- A rapid response to increased demand where capacity is not readily available; the lead time for ordering and building new vessels or to acquire and modify suitable second hand vessels (that may not be readily available) may take up to 12 months or longer
- Ferry Terminal redevelopment: maintaining services during transition, between-trip layover space, access from Quay St, ability to manage increased passenger numbers, berthing provision for increased levels of service and providing for everyday operational requirements such as vessel refuelling, sullage pumping and rubbish disposal

- Adapting vessels to end loading if required for a redeveloped ferry terminal or obtaining new conforming vessels, cost, possible ownership issues and adapting AT-owned wharves at suburban service origins
- Cruise ship facility upgrades and potential to affect ferry operations and passenger access
- Constrained funding limits terminal upgrades and Park and Ride provision and inhibits patronage growth
- Adequacy of revenue from access charges to meet terminal operation and maintenance costs
- Investigation of options for improving reliability of berthing at Northcote Point wharf
- Interaction and inter-dependence of exempt services and tourism with contracted services
- Fleet configuration, the feasibility of standardisation, given the Auckland operating conditions and different vessel needs for different routes
- Shortage of slipways and associated vessel servicing facilities within the region. Ferries must often be sent to Tauranga or Whangarei for survey and other work due to the unavailability of slipping in Auckland. The added cost will be reflected in contract prices
- Proposals for alternative ferry vessels and propulsion e.g. minimum wake-wash vessels the feasibility of hovercraft, alternative fuels.

Appendices

Appendix 1 – Context and background

Appendix 2 – Assessment criteria and constraints

Appendix 3 - History

Glossary

All day network	The network of rapid, frequent, connector services that operate at the minimum stated frequency throughout the day. The target all day operating period for frequent services is between 6am and 9pm, seven days a week (with lower frequencies outside these times). This will be phased in as funding and demand allow, with an initial target by 2016 of 7am to 7pm on weekdays, and specific time coverage at weekends subject to service demand.
Auckland Plan	A comprehensive long-term strategy, required by legislation, that directs Auckland's growth and development up to 2040. It includes social, economic, environmental, and cultural goals and identifies existing and future locations of critical infrastructure facilities, including transport. It was adopted by Auckland Council in May 2012.
AT HOP card	A stored value smartcard that can be used to pay fares on buses, trains, and ferries participating in Auckland Transport's integrated ticketing system.
City Rail Link	A proposed 3.5 km double-track underground rail tunnel beneath the city centre from Britomart to the Western Line near Eden Terrace, with three city centre underground stations.
Connector Network	Bus and ferry corridors with some priority measures connecting with activity centres, town centres and metropolitan centres. Provides access to more frequent services.
Exempt service	A public transport service that is exempt under section 130 (2) of the LTMA or deemed exempt under section 153(2) of the LTMA. Exempt services are not provided under contract to Auckland Transport and, unless specified otherwise, are not subject to the objectives and policies in this Plan.
Farebox recovery	A policy that provides for public transport operating costs to be shared equitably between users and funders, to reflect the private and public benefits received, having regard to the objectives and circumstances of their region.
Frequent Network	A network of major bus and ferry corridors connecting the city centre, metropolitan centres and other major centres, providing at least a 15-minute service all day (initially from 7am-7pm), with significant priority measures
Government Policy Statement	A document that highlights the Government's outcomes and priorities for the land transport sector, and sets out its broad transport funding allocations over the next decade.
Integrated Transport Programme	A plan produced by Auckland Transport and NZTA with the support of Auckland Council. It co-ordinates, prioritises, and sequences the strategic activities of Auckland's transport network providers, over the next 30 years, that are required to deliver the spatial development needs set out in the <i>Auckland Plan</i> .
Partnering Agreement	A mid-level contract document between Auckland Transport and operators, specific to each operator. It contains the key deliverables associated with working in a PTOM environment and has more detail than the <i>Regional Agreement</i> .
Public Transport Operating Model	A framework for building a long-term public-private partnership between regional councils and public transport operators with two overarching objectives: to grow the commerciality of public transport services and create incentives for services to become fully commercial, and to grow confidence that services are priced efficiently and that competitors have access to public transport markets.
Real Time Passenger Information System	An electronic system linked to automatic vehicle location devices on public transport vehicles that provides real time arrival information on electronic displays at transport interchanges and stops.
Regional Land Transport Plan	A statutory plan that will be prepared by Auckland Transport under the LTMA, which sets out the region's land transport objectives, policies, and measures for at least 10 years; includes a statement of priorities, and provides a financial forecast of anticipated revenue and expenditure on activities. The plan forms the basis of Auckland Transport's request for funding allocations in the <i>National Land Transport Programme</i> . It replaces the previous Regional Land Transport Programme.
Regional Public Transport Plan 2013	A statutory document describing how Auckland Transport will give effect to the public transport components of the 2010 Auckland <i>Regional Land Transport Strategy</i> . It also specifies the public transport services proposed for the region, and the policies which apply to those services.

SuperGold card	A national identification card that provides free off-peak travel on bus, rail, and ferry services to people aged 65 or older.
Unitary Plan	A Resource Management plan that will replace District Plans, setting out rules and regulations controlling all planning activities and development in Auckland that will give effect to the strategic direction of the <i>Auckland Plan</i> .
Vessel standards for ferries	AT requirements for ferries to be used on contracted services

Acronyms

AT	Auckland Transport
ATCoP	AT Code of Practice
CRL	City Rail Link
DFT	Downtown Ferry Terminal
GPS	Government Policy Statement
ITP	Integrated Transport Programme
LTMA	Land Transport Management Act 2003
MNZ	Maritime New Zealand
NZTA	New Zealand Transport Agency
PTOM	Public Transport Operating Model
RPTP	Regional Public Transport Plan (2013)
P&R	Park and Ride
SHA	Special Housing Area
VSF	Vessel standards for ferries

Appendix 1 - Context and Background

Legislation and plans

Strategic direction and strategic themes

Background - Ferry operators, ferry fleet

Relevant Documents

- Land Transport Management Act 2013 (LTMA),
- Government Policy Statement 2012 (GPS)
- The Auckland Plan
- Integrated Transport Programme (ITP)
- Auckland Regional Public Transport Plan (RPTP)
- Regional Land Transport Plan (RLTP)
- The Proposed Auckland Unitary Plan (PAUP)

A more complete list and description can be found in the RPTP. The key implications of these statutes and strategic documents for the current development of ferry policy can be summarised as follows:

LTMA

Section 5 of the LTMA 2013 includes a set of principles applying to public transport that include reducing the need for subsidy and increasing the commerciality of public transport services. It also sets out the PTOM contracting framework which AT will use in procuring public transport services and includes the definition of exempt services and the conditions that apply to them.

GPS

The GPS 2012 signals a stronger focus on the need to obtain value for money in transport with emphasis on the economic efficiency of individual projects and on issues that lead to reduction in congestion.

The Auckland Plan

The Auckland Plan sets the direction for growth in the region over the next 30 years and calls for a transformational shift in public transport. It sets a target of doubling the number of public transport passenger trips over the next 10 years, on the path to achieving a 2040 goal of 100 annual public transport trips per capita. A priority is to integrate all transport components, using a single system approach and to manage Auckland's transport as a single system.

ITP

The ITP co-ordinates, prioritises, and sequences all transport investments over the next 30 years to give effect to the *Auckland Plan*. It includes a four stage intervention process for prioritisation and emphasises the need to maximise the use of current facilities and assets, and to establish a more connective network. The One System approach will result in:

- Better use of the existing transport networks
- Better alignment of transport provision with changing patterns of land use and demand
- A safer, more resilient national and regional network, where a greater range of resources and options is available to deal with unexpected events or future changes
- Better alignment of effort between network providers and elimination of overlap and duplication

The ITP includes a 30-year programme for transport development including the base case for ferry service development

RPTP

In accordance with the LTMA, AT has produced an RPTP that sets out AT's objectives and policies for all public transport modes. There are 10 key objectives.

Objective	Description
1. Network structure	A permanent network of connected frequent services that supports Auckland's future growth
2. Integrated service network	Simple integrated services that connect people with where they want to go
3. Infrastructure	A high standard of public transport infrastructure that supports service provision and enhances customer experience
4. Service quality	A convenient and reliable public transport system using modern vehicles
5. Fares and ticketing	A fares and ticketing system that attracts and retains customers, while balancing user contributions against public funding
6. Customer interface	Simple, visible and intuitive customer information and service
7. Assist the transport disadvantaged	Improved access for communities and groups whose needs are not met by the regular public transport system
8. Procurement and exempt services	A procurement system that supports the efficient delivery of public transport services
9. Funding and prioritisation	Effective and efficient allocation of public transport funding
10. Monitoring and review	A system of monitoring and review that supports continuous improvement

A major review of public transport identified that significant changes are needed to provide a simple, connected network that can deliver better levels of service and better connections.

The RPTP introduces an integrated public transport network that will offer more frequent and reliable services over a longer time span, seven days a week, and easier access to more destinations. It describes the new integrated network, the services to be provided, and the PTOM service contracting model that will be employed.

RLTP

The RLTP is a plan demonstrating how transport providers intend to respond to growth and other challenges facing Auckland over the next ten years. It includes a ten year prioritised delivery programme of transport services and activities for Auckland, and is the combined transport programmes of the New Zealand Transport Agency (NZTA), AT and KiwiRail.

The draft RLTP allocates anticipated funding from Auckland Council and revenue from transport services (such as parking and public transport fares), and forms the prioritisation process for seeking funds from the National Land Transport Fund.

PAUP (in process)

The Proposed Auckland Unitary Plan sets the land use rules for Auckland's growth and development. It identifies areas where intensification can occur and classifies coastal areas and will affect the availability and potential use of coastal sites and influence development in ferry catchments and therefore potential patronage. It identifies Ferry Terminal zones (with existing ferry functions) and Marina zones noting those where ferry services are provided.

Strategic direction and strategic themes

The Ferry Development Plan will contribute to AT's strategic goals. Table A1.1 below aligns the Plan's strategic direction with AT's strategic themes based on the Auckland Plan transport priorities and the GPS objectives.

Table A1.1: Strategic direction and strategic themes

Strategic themes	Ferry development plan strategic direction				
		Increase existing ferry service and customer value	Ferry service integration and improvement	Modernise ferry facilities and fleet	Expand services to provide for growth
	Prioritise rapid high frequency public transport	Increase Devonport services to FTN level; increase Half Moon Bay frequency to Connector level, provide other services to RTPT specification levels	Interchange with bus, rail, park & ride will provide overall faster travel times to city centre	DFT improvements reduce ferry turn-around time and allow more efficient use of ferries	Direct reliable ferry services replace slower indirect trips on congested roads
	Transform and elevate customer focus and experience	Ferry services provide a popular, pleasant travel option that attracts and retains patronage; additional interpeak and evening trips provide return travel options to encourage all-day patronage	Reliable connections between ferry and bus will increase customer confidence. Integrated ticketing is in place for most services and integrated fares are proposed	The DFT development (CCI project) and Devonport Transformation and the proposed new passenger terminals at Half Moon Bay and Bayswater will improve customer facilities and access	Customers in new areas are provided with an alternative to road travel
	Build network optimisation and resilience	Direct ferry services provide city centre links and travel time savings in place of indirect land-based trips. Availability of ferry option increases overall regional resilience	Improved bus, cycle and walking connections to ferry network and additional park & ride spaces enlarge ferry catchments and enable more efficient use of network resources	Terminal renewals and upgrades ensure on-going safe operation, maintain customer comfort and safety; vessel standards ensure a high level of customer safety and comfort	Increase existing services at Pine Harbour, Gulf Harbour, West Harbour, and Hobsonville as SHA and other development proceeds as alternatives to congested roads and inefficient land-based modes
	Ensure a sustainable funding model	Longer term PTOM contracts reduce contract costs and encourage operator investment and greater commerciality; patronage and revenue increase as services are improved. Partnering with exempt services. Access charges for facility use cover AT operations and maintenance costs	Direct ferry services replace or complement land-based modes with some saving in bus provision (Devonport, Bayswater, Pine Harbour)	Commercial opportunities at some terminals. Potential car park PPP at Half Moon Bay; costs reduced as leased facilities are replaced by new AT terminals at Half Moon Bay and Bayswater.	Developer contributions may assist the provision of additional trips or infrastructure improvements where services support development areas
Estimated impact	Strong	moderate	minor	Limited	

Background

Ferry Operators (as at 1 March 2015)

Private sector ferry operators will continue to provide passenger ferry services through contractual partnering arrangements with AT or through exempt service registrations registered under the Land Transport Management Act 2008 (LTMA). Current ferry service operators providing scheduled services are described in Table A1.2.

Table A1.2: Ferry operators in Auckland (July 2014)

Fullers Group Limited	Scheduled passenger services between Downtown and Birkenhead, Northcote Point, Bayswater, and Half Moon Bay Exempt scheduled services to Stanley Bay, Devonport, Waiheke Island Tourist services and charters, holiday period passenger services to Great Barrier Island.
360 Discovery Cruises	Scheduled passenger services between Downtown and Gulf Harbour, Hobsonville and Beach Haven and Downtown Tourist services and charters Inter-regional service to Coromandel via Orapiu
Belaire Ferries Limited	Scheduled passenger services between Downtown and West Harbour Marina Scheduled service to Rakino Island Charters
Sea Link Pine Harbour Limited	Scheduled passenger services between Downtown and Pine Harbour Marina
Sea Link Travel Group	Exempt scheduled vehicular and foot passenger ferry service between Half Moon Bay and Kennedy Point (Waiheke Island); passenger, freight and vehicular ferry services between Wynyard Quarter and Great Barrier Island and weekend services between Wynyard Quarter and Kennedy Point; charters
Explore Group Limited	Exempt scheduled services between Downtown and Waiheke Island (Matiatia) Tourist services including weekend sailings to Motutapu Island (summer only)

Ferry fleet

Operations and safety

Maritime NZ (MNZ) rules and requirements are designed to ensure an overall standard of safety in passenger vessel operation. All vessels and operators must comply with Maritime New Zealand requirements, including holding a Safe Ship Management Certificate (or the replacement Maritime Operator Safety System (MOSS) from 1 July 2014).

The AT Vessel standards for ferries (VSF) sets a minimum standard for ferries to be used on

contracted services to enhance the attractiveness of public transport and encourage increased usage, with particular emphasis being placed on suitability for a proposed route, safety, schedule reliability, accessibility, facilities and passenger amenity. Standards for environmental performance are also included.

As ferries may be used for both contracted and exempt passenger ferry services the AT vessel requirements are carried over across all services.

The Harbourmaster sets rules for operation in the Waitemata Harbour and Hauraki Gulf which are observed in ferry operations. AT consults the Harbourmaster if issues related to navigation safety arise from ferry operations or proposals for new ferry services or terminals.

Fleet configuration

Reducing the number of different vessel configurations would allow for more efficient and effective design, operation and maintenance of ferry infrastructure through greater standardisation. This is not entirely practical, however, as sea conditions vary from route to route and a vessel suitable for short inner harbour trips may not be acceptable for use outside the harbour. There must also be flexibility to provide substitutes for ferries that are out of service for survey or regular maintenance while still maintaining efficient fleet use. High capacity vessels are needed for heavily patronised peak trips but smaller vessels may be sufficient for new start-up services and inter-peak trips.

AT will investigate options for ferry fleet renewal and possible future ownership scenarios and will work with operators to determine fleet requirements, especially if future re-development of the Downtown ferry terminal requires changes in vessel configuration.

Ferry terminal design will, as far as possible, accommodate a range of vessel characteristics but berthing and boarding profiles for new vessels need to conform to the wharf layouts already in place as AT does not wish to be in the position of having to modify berths from time to time to suit a new vessel.

Appendix 2 – Assessment Criteria and Constraints

Assessment of proposals for new services

In assessing a proposal for a new ferry terminal and service, a primary consideration is the physical suitability of a proposed terminal site and ferry route.

Although the Auckland waterways appear suited to ferry transport, there are constraints to growing the network. The most efficient and effective sites are being used and investigations have shown that there are disadvantages to many other locations. These may be physical or related to the potential patronage catchment. Overcoming them may be possible, but at a cost. The extract below sums up some of the natural constraints.

“The Waitemata Harbour is best termed a tidal estuary with the sea floor sloping gently out into deep water. In comparison to Sydney, there are few locations that are naturally suitable or available to build a ferry terminal close to shore with good water depth. To access suitable locations, channels are narrow requiring reduced speed to avoid foreshore damage. This impacts on passage time and reduces ferry attractiveness to commuters.

“Auckland experiences many windy days which create difficult weather conditions affecting ferry operations and passenger comfort. Exposed east coast locations are subject to wind and wind-generated waves so that breakwaters would be required to ensure uninterrupted operations.”⁶

If a suitable site is identified, a number of other criteria must be satisfied. These relate to overall benefit to the region and to the likely viability of a service and are described in the following sections. Planners must also be satisfied that a ferry service is the best and most efficient PT option to meet the needs of the locality.

1 Guidelines⁷

The following Guidelines were identified by the Transportation Research Board, (Washington DC) for use in considering ferry service implementation and continuation:

- Ability to increase capacity of the local, regional or national transportation network
- Potential to reduce travel congestion
- Degree of potential environmental mitigation
- Potential effect on local and regional economies
- Procedures for measuring cost effectiveness
- Ability to contribute to disaster/emergency preparedness

⁶ Ferry Services and the 2011 Rugby World Cup - AmZ Limited – April 2010

⁵ TCRP report 152 – Guidelines for Ferry services; Transportation Research Board, Washington DC, 2012

These guidelines, together with the success factors below, provide a practical framework for the initial assessment of proposals for ferry services. The success factors may also be used to assess existing services and terminals as a guide to improvements that will enhance the service.

2 Ferry service success factors⁸

Two investigations have been carried out to explore the potential for ferry operations in Auckland. The first, in 1999/2000 was undertaken by Pak Poy and Kneebone (PPK) and the second, in 2005, by McCormick Rankin and Cagney (MRC).

The success factors listed below (in no particular order) were identified in the PPK report (2000) based on interviews with a number of international ferry operators.

- Travel time (and hence travel speed) and competitive fare
- Market development (i.e. associated land uses to attract patronage)
- Convenience and accessibility of service
- Frequency of services
- Reliability of services
- Passenger comfort and pleasantness of journey
- Quality of infrastructure
- Integration with other transport modes
- No alternative mode is available.

While the lack of an alternative mode will make a successful service possible, the market may not support competition by providers.

The MRC report⁹ supported the PPK findings and also noted:

“As the scope for ferries to serve the travel market is limited to specific coastal communities, there is a need for land use initiatives to be targeted to these sites in a transit friendly manner. This will often include the provision of Park & Ride facilities adjacent to the terminal thus enlarging the potential catchment area.

“Other site specific factors may apply to services and terminal construction in certain locations. Passenger safety and minimisation of environmental damage are crucial for service sustainability and growth. The locations that can be served by ferries may be influenced by the ability to mitigate potential environmental impacts, primarily caused by high energy wakes”.

⁸ PPK draft ferry strategy 2000

⁹ MRC draft final report 2005

Potential conflict with other (often recreational) users of the water space and adjoining land area must also be taken into account, to ensure safe ferry operation while minimising restrictions and impacts on general use by the public.

3 Criteria

A set of very detailed criteria was developed in the MRC study that can also be used for further assessment of terminal sites and ferry routes. These can be summarised under the following headings based on a Puget Sound Regional Council report on an investigation into the feasibility of passenger-only-ferry (POF) services¹⁰:

Demand

- Daily ridership including off-peak and tourist

Modal advantage

- Alternatives available and time savings

Land use

- Existing and planned land use and development densities in both the immediate terminal area, as well as the greater area surrounding the terminal

Operations & System Integration – In this category, the following factors are assessed:

- Navigability of the waterways [and the physical suitability of the proposed terminal site]
- Adequacy of connecting transit service
- Quality of bicycle and pedestrian connections and facilities
- Availability of terminal area parking
- The terminal community's perceived vulnerability to traffic impacts

Added for AT purposes

- Availability of space at DFT

Cost

- This set of criteria looked at capital costs associated with implementing a service (including the cost of providing the terminal and associated facilities) and on-going operating cost per passenger mile [KM], and whether the presence of a ferry service could help defer or eliminate significant alternative transportation infrastructure investments that might otherwise be needed to meet demand. The cost of continued infrastructure maintenance must also be taken into account.

¹⁰ *Puget Sound Regional Passenger-Only Ferry Study: Puget Sound Regional Council, July 2008*

Environment

- This final set of criteria assessed the sensitivity to wake impacts generated by vessels on the route, and to what degree the ferry service would allow users to avoid driving on heavily congested roadways. Other environmental factors and potential impacts on the coastal marine area must also be considered. For Auckland, consideration is also needed of the potential impact on public use of the water space and land area adjacent to ferry terminals and routes.

These criteria would establish feasibility before proceeding with the usual benefit/cost and business case assessments.

4 Land use note

Maximising the catchment by increasing residential density and introducing mixed use to attract trips will increase patronage and improve the viability of a service. Existing ferry terminals are often located in older suburbs that generally have relatively high real estate values and long-established communities. Where the Proposed Auckland Unitary Plan does not provide for intensification or mixed use to a level that would provide sufficient support for a new ferry service there will be, in general, no justification for providing new ferry infrastructure or services.

Provision of new ferry infrastructure and services might be considered to be an option for some sites identified as growth areas or special housing areas (SHA) under the Housing Accord but most of these (to date) are not in coastal areas where conditions are favourable. The Whenuapai and Riverhead areas are bordered by the Upper Waitemata Harbour but the harbour here is shallow, with dry banks at low tides, and narrow channels that constrain use at all-tides, especially if high frequency two-way traffic should be required in future. In places speed may be limited to 5 knots reducing or removing potential travel time advantage. The cost of providing infrastructure may be high if a long wharf is needed to reach sufficient water depth for all-tide operation. Dredging may improve ferry access but this can add significantly to costs, both initially and for on-going maintenance dredging.

The Hobsonville and West Harbour ferries should be sufficient to accommodate increased demand from the Upper Harbour areas - Hobsonville and the future Scott Point development - with increased frequency and capacity as necessary.

Appendix 3 - History

Table A4.1 below provides a brief timeline for Auckland ferry services. From early European settlement, ferries serviced coastal communities on the North Shore so that the historic pattern of growth focused on the ferry terminals at Devonport, Birkenhead and Bayswater. As private motor vehicle use spread, vehicle ferries to these terminals facilitated growth further inland. With the opening of the Auckland Harbour Bridge on 30 May 1959, all ferry services, vehicle and passenger, were terminated except for the Devonport, Stanley Bay and Waiheke passenger services. The bridge, its associated motorway and the growth of the local road network led to an explosion of growth and the built-up North Shore area of today. As increasing traffic congestion and travel time to the CBD generated demand for a more reliable, faster option, ferry services have been restored and new ones added, not only from the historic North Shore suburbs but also from new developments in other areas.

Table A4.1: Ferry service history¹¹

Ferry terminal	Description
Bayswater	operated 1910 - 1959, recommenced as contract August 1997
Devonport	1855 (Flagstaff), 1873 from Victoria Wharf
Stanley Bay	1900
Birkenhead	pre 1883 - 1959; recommenced under contract 1991
Northcote Point	pre 1864 - 1959; recommenced as part of Birkenhead contract 1991
Downtown Ferry Terminal	opened 1907, replacing older ferry tees
Waiheke Island	Matiatia wharf - building commenced 1923, regular commuter service commenced 1946
Half Moon Bay	Passenger ferry started as a trial May 1999; was operated commercially for a short period but continued under contract when commercial service was withdrawn.
Gulf Harbour and Pine Harbour	Originally operated commercially by the developers from about 1997 but were taken over in 2005 by the (then) ARC under emergency contracts when the developer withdrew and were later tendered and contracted as regular services.
West Harbour	Contract with (then) ARC in 2004.
Rakino Island	ARTA contract 2007 on demise of commercial service
Hobsonville and Beach Haven	New contracted service commenced February 2013.
Wharves at St Heliers Bay, Takapuna (1892) and Browns Bay were used mostly for excursions and some freight. The last ferry left Takapuna in 1915, having been superseded by the steam tram to the ferry at Bayswater. ¹	

¹¹ Sources: *Balderston D, The Harbour Ferries of Auckland, Grantham House, 1986;*
Baragwanath L, The Waiheke project, School of Environment, University of Auckland, May 2010

