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Department of State Growth

River Derwent Ferry Masterplan

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River Derwent Ferry Masterplan

Department of State Growth

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We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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Glossary

TERM	DEFINITION
Direct network	A point-to-point ferry network without intermediate stops (Brooke Street Pier to Bellerive is an example)
Stitched network	A network combining multiple stops into one service
Peak time	The AM peak is typically morning school and commuter peaks and the PM peak is typically the afternoon school and commuter peak
Off-peak time	Typically, time of less demand outside peak times. Generally relevant for recreational and leisure purposes and non-traditional work patterns
MCA	Multi Criteria Analysis
SWOT analysis	Strength, Weakness Opportunities Threat analysis
Functional specifications	Infrastructure elements required to create a safe, accessible, and comfortable journey and experience for a customer
DDA	Disability Discrimination Act 1992
DSAPT	Disability Standards for Accessible Public Transport 2002
IPART	Independent Pricing and Regulatory Tribunal of New South Wales
Landside infrastructure	Infrastructure elements on land – examples include shelters, seating, and fare machines
Waterside infrastructure	Infrastructure elements on water – examples include walkways, gangways, and pontoons
Placemaking	Creating spaces into places with a focus on transforming public spaces to strengthen the connections between people and the place
AT	Active Transport

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Executive summary

Currently Hobart's public transport network comprises bus services to/from the northern and southern suburbs, eastern shore, Hobart City, Rosny Park, and Glenorchy.

In 2021, as part of the Hobart City Deal, a 12-month River Derwent ferry trial was added to the public transport network to broaden Hobart's public transport offering and enhance the network's resilience. After the first year's success, the trial was extended for a second year.

The trial ferry service provides a cross-river connection between Hobart CBD (Brooke Street Pier) and Bellerive (Bellerive Pier), and currently runs 15 weekday services and 14 weekend services. One-way trips take about 15 minutes.

The popular trial created the impetus for a River Derwent Ferry Network Expansion masterplanning exercise.

This River Derwent Ferry Service Expansion Planning project is informing the Department of State Growth's masterplanning exercise. The project takes a multi-stage approach to evaluating potential wharf sites and assessing the viability of a network of ferry services, with indicative costings.

Stages 1 and 2 of the River Derwent Ferry Service Expansion Planning project evaluated 33 proposed wharf sites determined from past state and local government strategies and studies, parties with commercial interests, existing infrastructure, media commentary and local knowledge. A multi-criteria analysis (MCA) helped refine and prioritise the list to eight sites.

Stage 3 brought forward the top eight MCA results and added Kingston Beach and Geilston Bay – an extra two wharf sites identified and assessed in a concurrent project run by the four Greater Hobart councils. To assess all 10 sites on their individual merits, we conducted a detailed SWOT (Strength, Weakness, Opportunity, Threat) analysis, along with landside and waterside functional specifications.

In Stage 4, we reviewed all 10 wharf sites as part of a network planning exercise to evaluate how the locations complemented each other while still meeting the guiding principles. After applying qualitative criteria, we retired four sites: Sandy Bay (Rowing Club), Battery Point (Derwent Lane), Montagu Bay and Geilston Bay.

The six remaining sites were then put forward across two ferry network expansions to complement the existing Brooke Street Pier to Bellerive service: Regatta Point, Sandy Bay (Casino), Wilkinsons Point, Howrah Point, Lindisfarne and Kingston Beach. Two ferry network expansions were also put forward along with high-level costings.

In Stage 5, we expanded on the Stage 4 network designs' operational concepts and staging considerations, and:

- prioritised ferry routes that best align with Department of State Growth objectives and guiding principles
- considered how routes may vary between traditional commuter peak and off-peak periods to provide different network connections
- deliberated placemaking opportunities.

We canvassed eight ferry wharf locations (including Brooke Street Pier and Bellerive), and a two-stage ferry network expansion:

Expansion 1 focuses on improving commuters' CBD connectivity and on providing an alternative to the Tasman Bridge. It proposes local wharves at Lindisfarne and Howrah Point with separate direct CBD services providing an alternative to the Tasman Bridge.

Expansion 2 focuses less on direct CBD access. It broadens the network, introduces off-peak and events services, and proposes local wharves in Regatta Point, Wilkinsons Point, Sandy Bay (Casino) and Kingston Beach.

Figure ES.1 shows the proposed network for the current service, plus the two proposed expansions.

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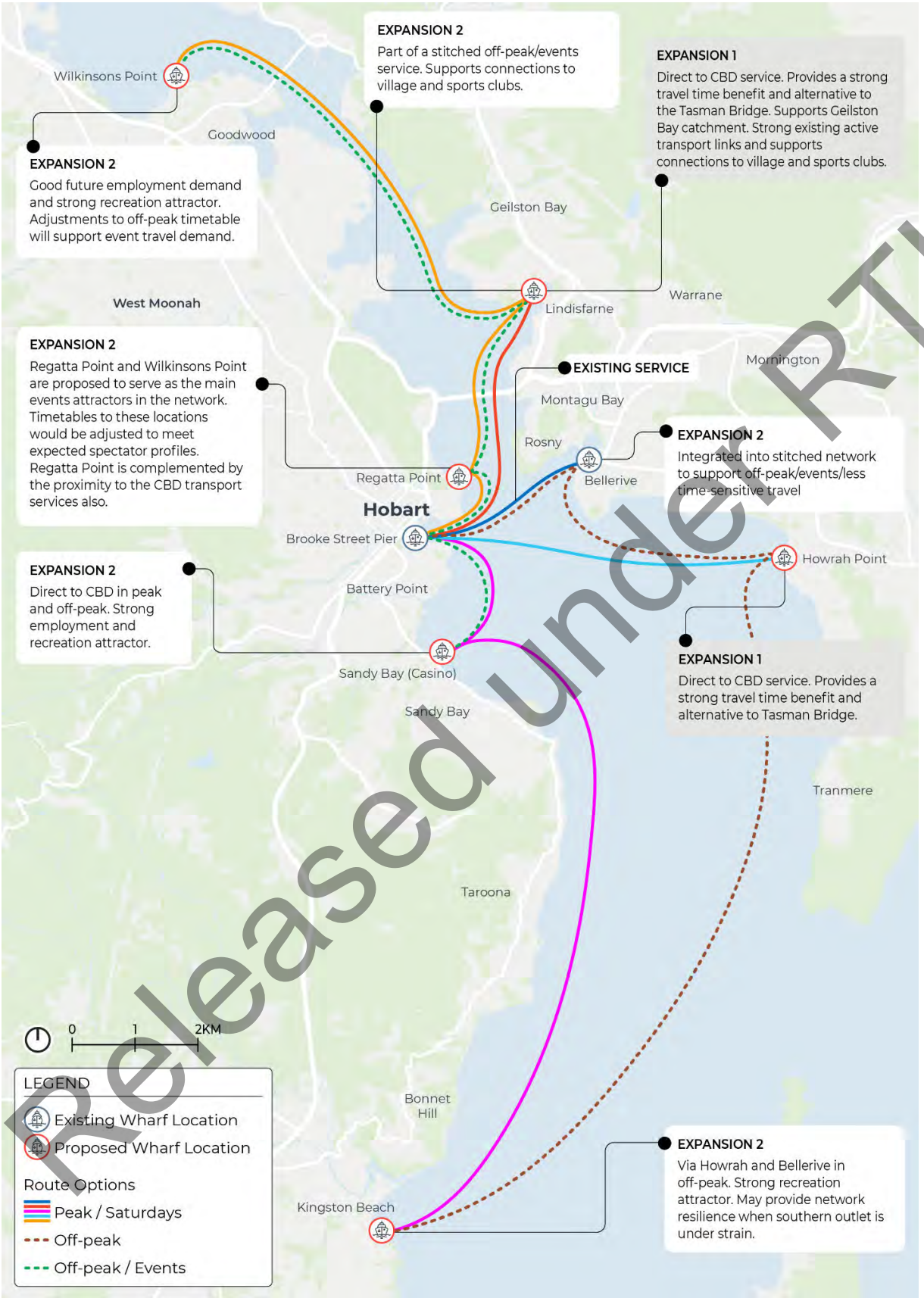


Figure ES.1 Proposed network map

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1 Project background

1.1 Public transport in Hobart

Currently, Hobart's public transport network comprises a mature bus network that services northern and southern suburbs and the eastern shore, with key CBD interchanges at Hobart CBD, Rosny Park, Glenorchy and Kingston.

The 2019 Hobart City Deal between the Australian Government, the Tasmanian Government and the local governments of Clarence, Glenorchy, Hobart and Kingborough. The City Deal was developed to progress the federal, state and local governments'10-year shared vision. As part of the City Deal, the Greater Hobart Transport vision stated:

> *We will deliver an integrated and collaborative approach to transport management…*

The City Deal highlighted key focus areas including the Derwent Ferry Services and infrastructure to improve access and enhance user experience.

To complement the existing local bus network, the Tasmanian government is currently investigating high frequency bus service improvements for Hobart, supported by bus priority measures on three corridors:

- Northern corridor between Claremont and Hobart
- Southern corridor between Blackmans Bay and Hobart
- Eastern corridor between Glebe Hill and Hobart

1.2 River Derwent ferry trial

In August 2021, as part of the Hobart City Deal, a 12-month River Derwent ferry trial started providing a cross river connection between Brooke Street Pier and Bellerive with an option to continue for a further year. The popular trial meant the ferry service received $19 million additional funding over four more years including funds for infrastructure upgrades at Bellerive.

The River Derwent ferry trial currently runs 15 weekday services and 14 weekend services connecting Hobart CBD (Brooke Street Pier) to Bellerive (Bellerive Pier). One-way trips take about 15 minutes. The ferry wharf at Bellerive is within walking distance of General Business-zoned land on Percy Street (Bellerive) and Central Business-zoned land on Bligh Street (Rosny Park), respectively. Brooke Street Pier is close to Hobart's CBD. These two ferry wharves were selected because they link two strong employment and tourist attractors within 400m of bus stops on Elizabeth Street (Hobart) and Cambridge Road (Bellerive) and have immediate proximity to good active transport facilities.

The ferry service uses a vessel called the Excella (see Figure 1.1 – a fully accessible ferry with a capacity of 107 passengers and 15 bicycles.

For seamless integration with the existing public transport network, the ferry service fares are linked to the Greencard system (smart card), and customers can also pay via cash, credit card or EFTPOS.



Figure 1.1 Excella operating as part of the trial (Source: https://www.transport.tas.gov.au/)

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2 The role of ferries in Hobart

2.1 Hobart's public transport network

Hobart has an extensive bus network comprising urban bus services broadly aligned with three key road corridors (north, east and south). This is supported by a network of urban fringe bus services that extend the public transport catchment by serving communities more distant from Hobart. The bus network is primarily focused on travel between the three corridors and the Hobart city centre, with a small number of bus routes that continue through the city centre.

Buses in the northern corridor use Main Road and the Brooker Highway to approach the city centre, while bus routes in the southern corridor use the Southern Outlet and Channel Highway as access routes. Eastern corridor bus routes are more dispersed to the east, north and south, as the city's east does not have the same topographical development constraints as the northern and southern corridors. However, almost all eastern bus routes converge to cross the River Derwent via the Tasman Bridge (two routes cross the Bowen Bridge).

Greater Hobart has three River Derwent road crossings – the Tasman Bridge, the Bowen Bridge near Glenorchy, and Bridgewater Bridge. The River Derwent is a substantial constraint to accessing the city from eastern suburbs south of the Bowen Bridge, and the Tasman Bridge is a recognised peak-period congestion bottleneck in the road network.

Before the former Hobart Bridge was constructed in the early 1940s, and later the Tasman Bridge, ferries had an important role in providing cross-river connections. Following the 1975 Tasman Bridge disaster, ferry services to the city centre were introduced from Lindisfarne and Bellerive until the bridge was reconstructed.

Presently, a weekday and Saturday ferry service operates between Bellerive and Brooke Street Pier. The service operates in morning and afternoon peak periods, using a vessel that is regularly used as a cruise vessel during the middle of the day on weekdays.

2.2 Tasmanian Government objectives and principles for a River Derwent ferry service

The government established objectives and guiding principles for the Hobart ferry network, summarised as follows.

Objectives of the future ferry services are to:

- reduce traffic congestion by providing peak-time commuters with an alternative way to get around the Greater Hobart area
- support travel to events in more locations.

Key principles for the ferry services are:

- Future ferry services will be provided through a state and local government partnership.
- Services should contribute to easing peak-period traffic congestion and/or enhancing event management.
- Services will not be aimed at the tourist or pleasure cruising markets and new passengers will not be drawn from existing public transport users.
- Passenger access should be via active modes, or buses where appropriate, and should not require additional park 'n' ride capacity.
- Wharves should be located in waters that are suitable for ferry operations.

To develop the draft masterplan and technical memos, we expanded the principles used in the original scope. Further to the principles already noted, potential also exists to:

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- include environmental and sustainability considerations, including reducing greenhouse gas emissions from transport
- provide more nuance in the objectives around reducing traffic congestion to recognise that off-peak and weekend services contribute to peak traffic reductions, and to include improved access to opportunity by public transport
- incorporate potential private sector proposals
- help deliver better network resilience
- ensure that ferry proposals consider the need for investment in additional supporting infrastructure and services
- provide a consistent approach for proponents to assess ferry wharf locations, including considering (and providing support for) placemaking opportunities.

More detail is provided in Appendix A (Stage 1 – Guiding Principles Review).

2.3 Other ferry networks

The objectives, principles, and frameworks for ferry networks overseas and in other Australian cities offered useful insights for a best-practice River Derwent ferry strategy. Considerations include different ferry customer markets, the role of ferry services in complementing surface transit modes and encouraging mode shift, transport strategy alignment, and the importance of placemaking and landside elements.

Ferry network practices in the following cities were reviewed:

- Sydney, Australia
- Brisbane, Australia
- Auckland, New Zealand
- New York, USA
- Hamburg, Germany
- London, England

2.3.1 Lessons in best practice

Key characteristics of best-practice ferry network planning and operations, as informed by this review, include:

- Ferry network objectives often aim to maximise the role of ferries in the public transport network, although the example cities have established ferry networks with existing practices, which are integrated with public transport modes.

  Maximising the role of ferries confronts their typically high cost relative to other public transport modes. Using all available ferry capacity is important to achieving the most efficient outcome by maximising farebox revenue.
- The role of ferries in providing network resilience, particularly where ferry travel offers customers travel-time and directness benefits compared with surface modes and provides an alternative to congested network squeeze points.

  Ferries will rarely offer a travel-time advantage over surface travel unless there are other topographical or road network constraints. One instance where this does occur, however, is between Manly and the city of Sydney, where the ferry offers a substantially more direct service, complemented by fast ferries.
- Most mature and successful ferry networks offer all-day and weekend services, recognising that commuter work trips may require travel outside peak periods (such as when a commuter leaves work earlier/later than usual), and that casual and part-time work is increasing in most cities.
- A tension exists between the role of ferries to support commuter demand and their use for recreational or leisure travel. In many cities with mature ferry networks, recreational travel is a major component of overall patronage and revenue. The commuter role of ferries for work travel is generally minor compared with other transit modes.

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In catering to recreational ferry travel such as accessing shopping or other activities, public transport agencies need to be mindful that cities with river or harbour proximity will also usually have a tourist ferry market whose peak is often during the middle of the day or at weekends (traditionally off-peak times). Subsidised public transport ferry services should be designed to minimise impacts on the commercial tourist ferry market.

Most ferry patrons come from walking distance of ferry wharves. Park 'n' ride access is discouraged, often as a result of high waterside land values. In addition, providing capacity for large amounts of parking will tend to limit placemaking opportunities in areas around ferry terminals and preclude other development that is friendly to the wider community. Car parks can amount to a barrier to waterfront access and amenity.

Newly emerging objectives relate to improving sustainability and reducing ferry operations' environmental impacts, including by replacing diesel fuelled vessels with zero-emission technology. Such opportunities need to be considered in conjunction with other benefits. For example, a move to zero-emission technology may create a requirement for charging facilities, which need to be considered alongside terminal amenity, capacity, and placemaking outcomes.

2.3.2 *Approaches to network design*

In terms of network design, ferry routes generally fall into two broad categories:

- Direct services, offering point-to-point travel between two locations (from an island/cross-harbour/river waterfront location to the city centre, with no stops between, like the current Bellerive to Hobart service).
- Stitched services, where the ferry stops at multiple wharves on its way to its destination (usually the city centre) (such as along a river like the Brisbane River).

A direct network refers to services provided directly between terminals without intermediate stops. This generally best suits peak-period commuter demand where the shortest journey time is the most valued. Direct ferry networks often have a higher fleet requirements, since separate services would operate from each of the origin wharves and require separate fleets to operate concurrently.

In a stitched network, ferries may stop at one or more intermediate wharves on the route between terminals. This may entail longer journey times for some customers; hence, these are better suited to leisure travel than commuting, but require fewer vessels to operate (depending on service frequency).

A ferry network can be primarily a direct service in weekday peak periods, and a stitched network off peak when travel time and directness may not be as important to its customers.

Conceptual examples of direct and stitched networks are shown in Figure 2.1.

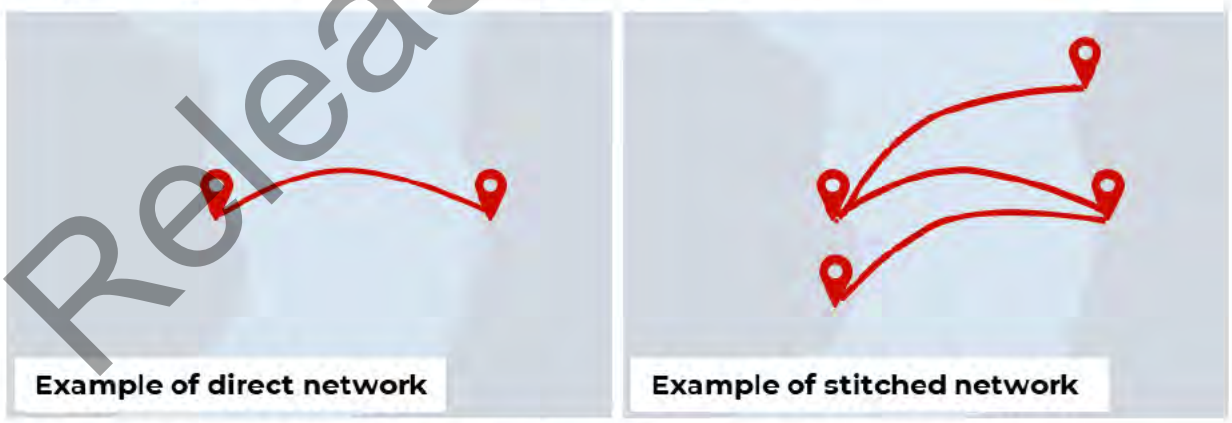


Figure 2.1 Example of direct and stitched networks

The ferry networks in Brisbane, Sydney and Auckland all have established guidelines and understand their customers. Figure 2.2 shows a high-level summary of these.

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Figure 2.2 Best-practice considerations

Tasmania's public transport network is dominated by buses that are relatively cost efficient and offer network flexibility. Buses are particularly suited to Tasmania's low population density and dispersed settlement pattern. However, there is an opportunity for new and innovative alternatives, such as ferries and park 'n' ride for buses, but new and innovative alternatives can have significant upfront and ongoing costs.

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3 Local and federal partners

The 2019 Hobart City Deal between the Australian Government, the Tasmanian Government and the local governments of Clarence, Glenorchy, Hobart and Kingborough, provides a combined vision and funding mechanism to "encourage investment to leverage Hobart's natural amenity…".

A River Derwent ferry service was proposed as part of the City Deal's aim to reduce congestion and improve transport across Hobart. The City Deal specifically mentions the ferry service.

While the federal government generally doesn't provide funding for public transport services or infrastructure, there are circumstances under targeted programs or guidance where funding can be sought. Examples include:

- Infrastructure Australia (IA) support for infrastructure funding. This may require a strategic business case that meets IA guidelines, requiring State Growth as a proponent (rather than setting a framework to support local government initiatives)
- Federal support for ferry-related shipbuilding in Hobart.

Local partners have been supportive of a ferry network to date. Councils also have a role in various activities that will impact any expansion of services, given their responsibility for certain planning and approvals. Additionally, councils will typically have oversight of surrounding infrastructure, such as active transport facilities, and would likely seek a significant role in surrounding placemaking, and in decisions around local supporting infrastructure.

At the 2021 federal election, the Australian Government committed $20 million for ferry infrastructure at Bellerive, Lindisfarne, Sandy Bay, and Wilkinson's Point. We understand this funding is likely to be directed to the four Greater Hobart councils.

A coordinating role would enable any infrastructure development pursued by councils to achieve alignment with the expanded River Derwent ferry services and ensure ferries complement the existing and future public transport network.

Other local partners may include private ferry operators (i.e., tourism companies) that State Growth may contract to provide services to make up the proposed network.

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4 Ferry network expansion planning

4.1 Other ferry investigations (Greater Hobart councils)

The Greater Hobart councils are undertaking a separate ferry investigation for the River Derwent which should be considered in the context of wharf selection and local government support.

4.2 Assessment of potential ferry wharf locations

State Growth commissioned this study of 33 potential ferry wharf locations, spanning New Norfolk (north-west of Hobart CBD), to Woodbridge (south of Hobart CBD), and Nubeena (south-east of Hobart CBD) located at Parsons Bay:

1 Austins Ferry (James Austin Park)
2 Battery Point (Derwent Lane)
3 Blackmans Bay (Illawarra Road)
4 Bridgewater
5 Cornelian Bay
6 Geilston Bay
7 Howrah Point
8 Kettering
9 Kingston Beach
10 Lindisfarne
11 Lindisfarne (rowing club)
12 Lower Sandy Bay (Long Beach)
13 Lower Sandy Bay (Nutgrove Beach)
14 Montagu Bay
15 Montrose
16 New Norfolk (New Norfolk Esplanade)
17 New Norfolk (Rocks Road)
18 New Town (Friends Rowing Sheds)
19 New Town (rowing centre)
20 Nubeena
21 Old Beach
22 Opossum Bay (Pier Road)
23 Prince of Wales Bay
24 Regatta Point
25 Sandy Bay (Casino)
26 Sandy Bay (Derwent Sailing)
27 Sandy Bay (Red Chapel Beach)
28 Sandy Bay (rowing club)
29 Sandy Bay (Waimea Ave)
30 South Arm
31 Taroona (Madges Park)
32 Wilkinsons Point
33 Woodbridge

Through a series of assessments these potential ferry wharf locations were narrowed down to 10 ferry wharf locations from which we derived the network options. The assessments are described in this section.

4.2.1 Rapid travel-time assessment

The rapid travel-time assessment considered the potential for travel-time benefits of a proposed ferry trip from the originating location to Hobart compared to a peak-period car trip, to highlight those sites which might offer a peak-period travel-time benefit and potentially encourage a mode change. Public transport services are most attractive and therefore most likely to motivate mode shift when there is a time advantage over private car travel.

The rapid travel-time assessment eliminated Kettering and Woodbridge where there was no realistic travel-time benefit for a ferry service. At the end of the rapid travel-time assessment, 31 sites were taken forward for a multi-criteria assessment (Stage 2 – Memo – MCA – River Derwent Ferry Service Expansion Planning).

4.2.2 Multi-criteria analysis

Assessment criteria were developed in collaboration with State Growth and included the following criteria outlined in Table 4.1. Further details on the MCA can be viewed in Appendix B (Stage 2 – Preliminary Wharf Location Assessment).

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Table 4.1 MCA criteria

CATEGORY	CRITERION
Marine suitability	Water depth
	Exposure to waves
	Potential conflict with other waterway users
	Ease of navigation (approach)
Environmental suitability	Protected areas
Demand[1]	Future demand – population (400m)
	Future demand – employment (400m)
	Future demand – population (2.5km)
	Future demand – employment (2.5km)
Accessibility & connectivity	Directness
	Distance
	Existing and proposed AT infrastructure
	Existing and proposed PT infrastructure
Land use	Proximity to key growth areas
	Attractors
Traffic performance	Congestion index – AM peak
	Congestion index – PM peak
Network integration	Public transport network integration

Marine suitability and environmental compatibility were identified as fundamental categories for the multi-criteria analysis. For example, a finding of inadequate water depth would prevent a ferry service to that location. Assessment of these criteria determines the degree of additional research and funding that may be needed to activate a potential location.

Demand is imperative to the analysis as it considers future population increases and the number of jobs for each proposed location. These criteria are future-focused, highlighting the importance of future demand as this aligns with the project vision of a strategic planning time horizon.

Current demand provided valuable context for each proposed location. However, it was not included as part of the analysis as the future demand proved to offer more relevant strategic inputs. Other criteria assessed include accessibility and connectivity, land use, traffic performance and network integration. Collectively, these criteria provided locational context and assessed customer use factors.

The MCA ranked each potential wharf location and categorised these into potential low-, medium-, and high-priority locations. Table 4.2 shows the score and rank results for each location and Figure 4.1 illustrates the potential wharf locations and categories. In Table 4.2, the shaded options highlight the high-priority sites, which included the eight top-scoring sites. Further, Kingston Beach and Geilston Bay were included as these locations are among those identified as of priority interest to the four Greater Hobart councils.

Table 4.2 MCA results

RANK	OPTION	SCORE
1	Regatta Point	4.16
2	Sandy Bay (rowing club)	3.99

RANK	OPTION	SCORE
16	Austins Ferry (James Austin Park)	3.23
17	Lower Sandy Bay (Nutgrove Beach)	3.18

[1] Demand criteria only focused on the future demand as this project planning horizon is more strategic than immediate. Current demand for population and employment are also important. However, this information will help inform the next project stages and contribute to the network design stage.

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3	Sandy Bay (Casino)	3.87
4	Wilkinsons Point	3.85
5	Battery Point (Derwent Lane)	3.78
6	Montagu Bay	3.77
7	Howrah Point	3.73
8	Lindisfarne	3.72
9	New Town (rowing centre)	3.56
10	Prince of Wales Bay	3.53
11	Sandy Bay (Derwent Sailing)	3.46
12	Cornelian Bay	3.44
13	New Town (Friends Rowing Sheds)	3.44
14	Montrose	3.36
15	Old Beach	3.27

17	Lindisfarne (rowing club)	3.18
19	Lower Sandy Bay (Long Beach)	3.15
20	Kingston Beach	3.12
21	Sandy Bay (Waimea Ave)	3.05
22	Geilston Bay	3.04
23	Taroona (Madges Park)	3.04
24	Nubeena	2.96
25	Sandy Bay (Red Chapel Beach)	2.95
26	Blackmans Bay (Illawarra Road)	2.88
27	Bridgewater	2.67
28	South Arm	2.49
29	Opossum Bay (Pier Road)	2.35
30	New Norfolk (New Norfolk Esplanade)	2.01
31	New Norfolk (Rocks Road)	1.98

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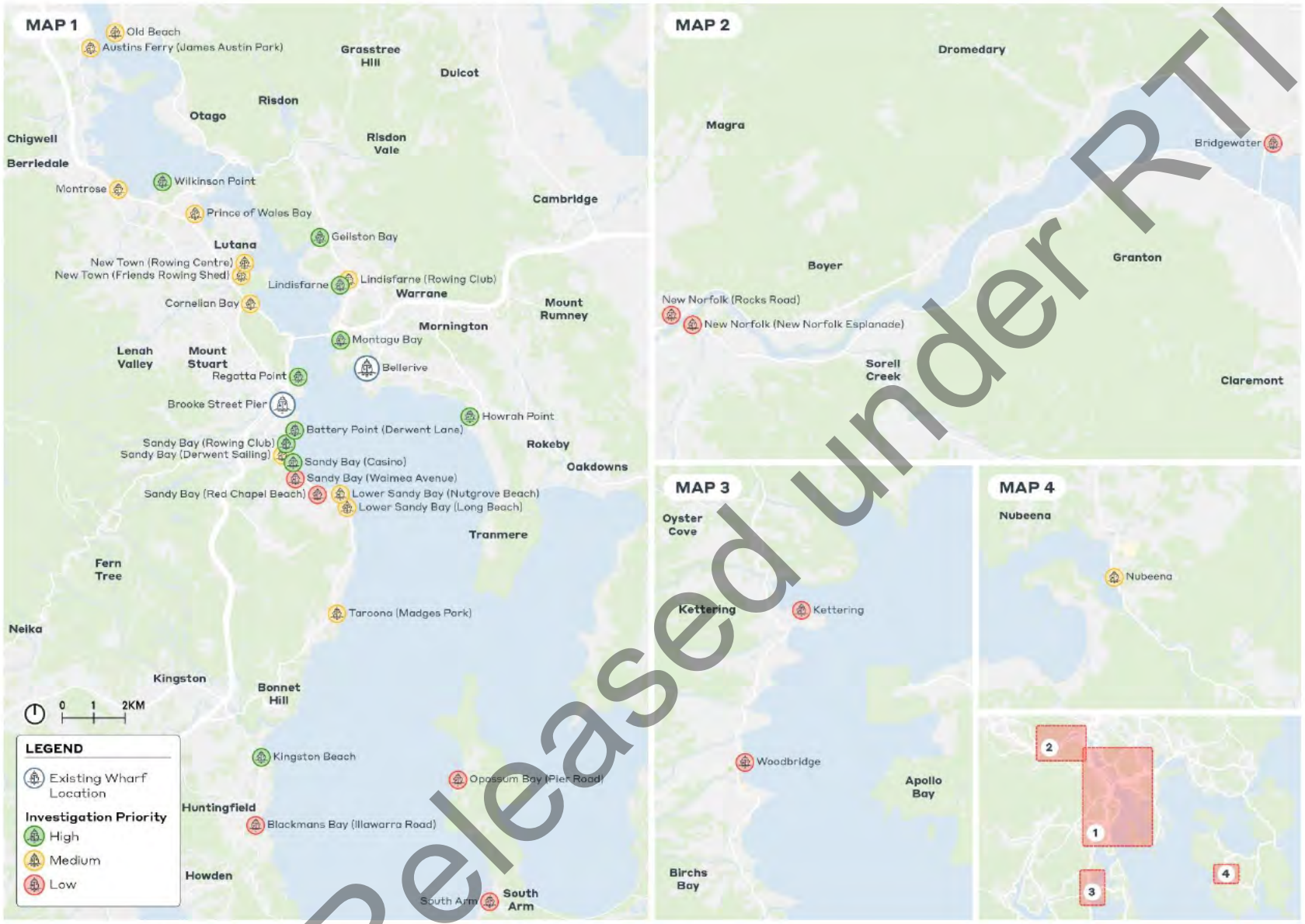


Figure 4.1 Map showing location and priority category of each potential wharf location

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4.2.3 SWOT analysis of shortlisted wharf locations

A desktop SWOT analysis was conducted for the eight priority sites, as well as Kingston Beach and Geilston Bay to align the council-identified sites. The SWOT analysis was based on the questions and definitions in Table 4.3, tailored for assessing the ferry wharves in Table 4.4.

Table 4.3 SWOT Definitions

Strength	Typically, an internal characteristic, or in this case something inherent with the site. What does this site do well? What does this site facilitate immediately? What positively separates this site from others?
Weakness	Typically, an internal characteristic, or in this case something inherent with the site. What does this site not do well? What does this site preclude? What needs to be improved for this site? What negatively separates this site from others?
Opportunity	Typically, an external characteristic that might bring future opportunity. What does this site allow for in the future?
Threat	Typically, an external characteristic that might harm future opportunity. Typically, an external characteristic that would threaten selection of a ferry wharf at this site.

The SWOT analysis purpose was to better inform the network design-phase process.

Please refer to Appendix C (Stage 3 – SWOT Analysis and Functional Specifications) for detailed results of the SWOT analysis.

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Table 4.4 SWOT analysis summary

Rank 1: Regatta Point

Strength	Weakness
Strong recreational attractors; adjacent future redevelopment of Macquarie Point; and near the proposed CBD UTAS campus upgrade. Journey is unlikely to be impacted by ocean swell. Good connection to Intercity Cycleway and Macquarie Point Cycleway.	Short travel distance between the existing Brooke St ferry wharf and Regatta Point – about a 20-minute walk to the city. Ferry may not be attractive option for such a short trip. More likely to be a destination.
Opportunity	**Threat**
Includes existing wharf structures that could be made use of in the future. Is close to existing key public transport corridors. Could act as a catalyst for later stages of Queens Domain Masterplan.	Unconstrained navigation access to Regatta Point. However, ferry services may conflict with current users of the existing jetty and maritime infrastructure. Establishing this location as a potential ferry wharf may increase city centre access/travel time from the south.

Rank 2: Sandy Bay (Rowing Club)

Strength	Weakness
Journey is unlikely to be impacted by ocean swell. Has good connection to existing path and cycle ways.	Attractors are present but are more local compared to other proposed sites. No existing waterside infrastructure. In very close proximity to the CBD.
Opportunity	**Threat**
Combines an origin and a destination – is surrounded by employment as well as residential zoned land. Potential to provide greater cross river connection benefits (Bellerive / Howrah Point). Potential for local shuttle or on-demand route (not currently planned or funded) to link wider catchment as per Guiding Principle 4.	**Site specific** Planning scheme notes 'prohibited use' of wharves. Navigation is constrained by private single-point moorings that could affect the journey speed. **PT Network:** Well serviced by multiple frequent bus routes and corridor to the CBD. Establishing this location as a potential ferry wharf may increase city centre access/travel time from the south.

Rank 3: Sandy Bay (Casino)

Strength	Weakness
The casino is a major tourist attractor and employer. Close to residential land and existing UTAS Sandy Bay campus. Journey is unlikely to be impacted by ocean swell.	The land is privately owned (Federal Group). This poses a high risk as owner may not want to risk ferry patrons using its carpark to 'park 'n' sail'. Access to active transport network is poor (disconnected pedestrian path).
Opportunity	**Threat**
Includes existing wharf structures that could be made use of in the future. Potential to provide more direct cross-river connections (Bellerive/ Howrah Point) rather than simply to/from CBD.	Private site owner may oppose ferry service due to its potential 'park 'n' sail' demand. Establishing this location as a potential ferry wharf may increase city centre access/travel time from the south. Unconstrained navigation. However, ferry services may conflict with current users of the existing jetty and maritime infrastructure. Multiple bus routes servicing the city, Sandy Bay and Kingston

Rank 4: Wilkinsons Point

Strength	Weakness
Strong recreational and event attractors. Journey is unlikely to be impacted by ocean swell. Access to good active transport network. Navigation access is not constrained.	Less direct than car. May be better as part of an off-peak ferry network. Modest residential catchment in walking distance. Low public transport integration opportunity as the adjacent feeder bus network service (Brooker Hwy/ Goodwood Rd) is lower frequency. Unlikely to be integrated with public transport – 850m to closest bus stop.
Opportunity	**Threat**
Includes existing wharf structures that could be made use of in the future. Plans for redevelopment. Potential for stronger leisure trips and higher numbers of commuter trips. Potential for park 'n' sail to My State Bank Arena. Potential for local shuttle or on-demand route (not currently planned or funded) to link wider catchment, as per Guiding Principle 4.	Strong bus corridor to city (Main Road). Private site operator may oppose ferry service due to potential park 'n' sail demand.

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Rank 5: Battery Point

Strength	Weakness
Journey is unlikely to be impacted by ocean swell.	Location is more of a local attractor than a trip origin. Disconnected active transport network. Short travel distance between Brooke St and Battery Point means ferry journey may not be attractive compared to walk, cycle and bus. Unlikely to be integrated with public transport – 700m to closest bus stop.
Opportunity	**Threat**
City of Hobart is planning to restart investigation of a coastal pathway from Battery Point to Sandy Bay. Includes existing wharf structures that could be made use of in the future. Potential to provide more direct cross river connections (Bellerive/ Howrah Point) rather than simply to/from CBD.	Ferry services may also conflict with current users of the existing jetty and maritime infrastructure.

Rank 6: Montagu Bay

Strength	Weakness
Has good connection to existing path and cycleways (Clarence Foreshore Trail).	No existing waterside infrastructure. Navigation access to Montagu Bay is constrained by single point moorings. Modest residential catchment in walking distance The existing bus route has a lower service frequency with passengers most likely to be inclined to walk rather than take the bus to the ferry wharf.
Opportunity	**Threat**
Location can provide good travel time benefit. Short travel-time by car, but can add resilience and reliability to the Tasman Bridge during peak times.	Likely to be exposed to ocean swell and cross currents.

Rank 7: Howrah Point

Strength	Weakness
Navigation access is not constrained. Access to a grid like footpath network and the Clarence Foreshore Trail. Access to an extensive residential catchment. Ferry would provide a more direct route for commuters and avoid congestion on the Tasman Bridge.	No existing ferry infrastructure. No local attractors located at the southern end of Howrah Beach and small village. Not a major destination.
Opportunity	**Threat**
Opportunity for a faster and more direct service by ferry compared with bus and car. Only 100m to nearest bus stop with opportunity for public transport integration. Clarence City Council Little Howrah Beach Masterplan considering changes to surrounding land use.	Future demographics demonstrate potential low population growth. Likely to be exposed to ocean swell and cross currents.

Rank 8: Lindisfarne

Strength	Weakness
Strong destination – attracts day trippers. Has good connection to existing path and cycle ways. Residential catchment within walking distance.	Navigation access to Lindisfarne is significantly constrained by single point moorings. Area has high concentration of sailing and associated activities.
Opportunity	**Threat**
Existing wharf structures could be used. Located across the river from CBD provides good travel time benefit. Provides alternative to Tasman Bridge with resilience and reliability benefits.	Journey will likely be exposed to ocean swell and cross currents.

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Rank 20: Kingston Beach

Strength	Weakness
Major recreational destination, especially during weekends. Has unconstrained navigation access and good connection to existing path and cycleways.	During the off-peak, would provide little-to-no travel time benefit compared with on-road transit.
Opportunity	**Threat**
There is existing infrastructure with plans for improvement. Under certain peak traffic conditions, the location can provide a travel-time benefit compared with buses. Has good potential for public transport integration with the bus network Ferry service may provide relief to Southern Outlet especially during construction of Transit Lane (depending on construction timing)	Potential conflict with boat ramp users and associated parking. Location across the river may experience swell. Would compete with existing Kingston Beach bus services to city via Southern Outlet.

Rank 22: Geilston Bay

Strength	Weakness
Has good connection to existing path and cycleways.	Existing private infrastructure is unlikely to be suitable for a service. Only a small residential catchment within walking distance. Navigation access to Geilston Bay is significantly constrained by single point moorings and existing waterway users.
Opportunity	**Threat**
Location can provide good directness and travel-time benefit compared with on-road route, including bus travel time. Avoids Tasman Bridge and Rosny Park. Future development for a subdivision at 240 Geilston Bay Road. This could benefit from the proposed ferry wharf.	Journey will likely be exposed to ocean swell and cross currents. Would compete with existing bus services to city via East Derwent Hwy.

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5 Functional specifications for ferry wharves

5.1 Accessibility considerations

Accessibility is a key objective of functional specifications. Effective since 2002, the national *Disability Standards for Accessible Public Transport 2002 (DSAPT)* set out minimum accessibility requirements that public transport providers and operators must meet to eliminate discrimination as per the *Disability Discrimination Act 1992 (Commonwealth)* (DDA). The Tasmanian government does not currently have accessibility guidelines for ferry wharves. However, State Growth's *Moving Towards Accessible Bus Stops* publication could be used as a guide for ferry wharves' accessibility.

The Tasmanian Government has also published *Our Infrastructure Future, Tasmanian Urban Passenger Transport Framework;* and *Tasmanian Walking and Cycling for Active Transport Strategy.* The ferry network's implementation is consistent with these documents' aims and objectives, and is strategically aligned to State Growth's aim of expanding the public transport network.

5.2 Other examples

Other jurisdictions with mature ferry networks have published more-specific ferry design considerations and manuals. These include Queensland's *Public Transport Infrastructure Manual;* the New South Wales *Ferry Wharf Design Considerations;* Auckland's *Transport Ferry Terminal Design Manual;* and the London *Station public realm design guidance.* Functional specifications for the River Derwent ferry service were developed by reviewing manuals, considering State Growth's strategic goals (section 2.2), and the local Hobart context.

These functional specification recommendations include:

- **Modal integration** – project scopes for wharves should include required connections to walking, cycling and vehicle facilities, such as passenger drop off, to maximise wharves' catchments.
- **Placemaking** – ferry wharf project scopes should respond to their surrounding urban settings and include allowance for contributions to improved public domain, including providing space for commercial and community activity.
- **Environmental sustainability (infrastructure)** – consider embodied energy in design and materials used. Encourage electrification including provision for e-bike charging at wharves, inclusion of solar photovoltaics and storage to support wharf lighting, e-ink (low power changeable sign faces) information displays, and the like.
- **Environmental sustainability (natural habitat)** – use site-specific baseline studies to identify conservation-significant or sensitive species/habitats present and develop appropriate steps to improve immediate environments.
- **Accessibility and safety** – while meeting or exceeding DDA and DSAPT standards, there should be an emphasis on supporting and encouraging access to the ferry wharves and watersides.
- **Quality** – provide high-quality passenger waiting facilities to meet State Growth's desire to "enrich waiting environments" as noted in the 30-Year Infrastructure Strategy.
- **Communications** – provide high-quality customer information and wayfinding, including static and digital (real-time tracking and route information, wharf name visible from land and water) information incorporating e-ink.

5.3 Functional specifications

Two categories of ferry wharf are recommended for the River Derwent ferry wharves – local wharf, and city centre wharf. These were selected after a best practice review of ferry wharf design guidelines and functional specifications in Australian and overseas cities (refer to Appendix D – Stage 4 Ferry Network Designs), and after considering the Hobart setting. The main differences are that the city centre wharf may be staffed, have ticket sales, and have multiple loading

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areas. It could also have greater integration with commercial activities. The city centre wharf would therefore be larger than local wharves to cater for multiple ferries using the wharf at the same time. This is not a representation of the current functional specifications of the Brooke Street Pier, but rather recommendations for a wharf that is central to a ferry network. Table 5.1 summarises recommended and optional elements of a local wharf and city centre wharf. Symbols are used to denote requirements:

Table 5.1 Recommended and optional wharf criteria

SPECIFICATIONS	LOCAL	CITY CENTRE
Landside		
DDA and DSAPT compliance* (or exceeding)	✔	✔
Wharf name visible from land and water	✔	✔
Ferry terminal specific information (Passenger Information Display) – schedule for ferries and connecting services	✔	✔
Network information and mapping	✔	✔
Local wayfinding map	✔	✔
Tactile Ground Surface Indicators (TGSI's)	✔	✔
Ramp access	✔	✔
Allocated disability parking space	✔	✔
Shelter	✔	✔
Seating and leaning rails	✔	✔
Bin	O	O
Fare machine (Top-up machine)	O	✔
Off-board tap on terminal	✔	✔
Ticket window / customer service / information kiosks	X	O
Lighting	✔	✔
Safety and security measures	✔	✔
Toilet	X	O
Parenting / carer facilities	X	O
Provision for commercial (e.g., vending machines, advertising panels, retail)	O	✔
Community elements (information, support service information)	✔	✔
Staff facilities (office, toilet)	X	O
Hard & soft landscaping	✔	✔
Artistic and cultural elements	✔	✔
Active access paths to/from broader precinct	✔	✔
Bicycle/Micro-mobility device parking	✔	✔
Flexible kerb space to cater for potential bus stops, passenger drop off/pick up and taxi facilities	✔	O
Solar photovoltaics	✔	✔
e-bike charging	✔	✔
Barriers and handrails	✔	✔
Waterside		
Walkway	✔	✔
Gangway	✔	✔
Pontoon	✔	✔
Gangplank bridge (if required)	O	O
Piles	O	O
Marine environment improvements	✔	✔

✔ = Recommended O = Optional X = Not required * Legislated requirement

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6 Placemaking

Besides delivering the ferry network, State Growth, local government, proponents and other stakeholders should be encouraged to maximise travel opportunities on the network by enhancing the ferry wharf locations' place functions and by activating the waterfronts.

The ferry network can be a catalyst for placemaking opportunities. Selecting the wharf locations in the proposed ferry networks involved evidence-based assessments to ensure wharf locations offer the best fit in terms of marine and environmental suitability, future demand, accessibility and connectivity, land use, traffic performance, and network integration. However, given ferries' propensity to attract leisure customers as well as commuters, ferry wharf locations can present opportunities to contribute to urban renewal while they help support commercial, community, or cultural activities that contribute to local communities' feelings of connection and belonging.

While the Department of State Growth's principles for ferry network development exclude providing specifically for the tourism market, there are good reasons for a River Derwent ferry network to embrace leisure travel. Demand that supports off-peak ferry travel can help provide travel options for commuters who may need to travel at different times (travel to the city in the morning peak period, but back home in the evening or middle of the day). Hence, supporting leisure travel can also support peak commuter needs. Recreational ferry travel can also promote ferries as an attractive commuting option for irregular public transport users.

State Growth should work closely with local government and other agencies to initiate/facilitate developments or activities that can support leisure travel to ferry wharves and capitalise on ferry services' potential to trigger passenger engagement with the mode and environment in a way that road transport typically cannot. Well-chosen associated developments and activities bring opportunities to enhance the public realm and community contribution.

These can include:

- broader public domain quality improvements through ferry wharf development
- cafes and restaurants
- recreational activities such as sporting facilities, cycle trails, and the like
- cultural and community activities such as sculpture and other art activities, markets and pop-up food vendors, festivals, events, and other expressions of cultural diversity.

Activities and developments such as these can help make ferry wharves themselves into trip attractors. They can encourage origin and destination trips to increase revenue and offset ferry operating costs (although we note that ferries are a high-cost mode, and worldwide there are very few examples of public transport ferries that generate revenue even approaching the cost of operations).

A further placemaking component is creating space for people to belong. This is another reason to discourage waterfront car parking (park 'n' sail/ride) either at surface level or multi-storey, as it creates barriers between places and the expanse of the water's edge.

6.1.1 Placemaking in the Hobart context

Placemaking would not lead the ferry network; rather, the ferry network would create placemaking opportunities that offer community benefits as well as transport benefits. The wharves identified are still considered the best fit in terms of marine and environmental suitability, future demand, accessibility and connectivity, land use, traffic performance, and network integration – without the placemaking element.

To maximise patronage, State Growth, local government, proponents and other stakeholders should be encouraged to enhance ferry wharf locations' place functions and to activate the waterfront. Enhancing a wharf location's place element will increase the ferry network's attraction and use outside peak times.

Localised engagement is needed to formulate placemaking strategies relevant to each wharf and community. The placemaking strategy may run as a program, but the outcomes for each wharf should be specific to its local area and community. This will require dedicated community engagement for each wharf.

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7 Transition to zero-emission technology

There are currently relatively few zero-emission passenger ferries on the market. However, indications are that early models could cost substantially more than their diesel equivalents. Zero-emission ferries generally comprise battery-electric versions, or hydrogen fuel cell, or hydrogen combustion versions. Some conventionally designed ferries are being redesigned for conversion to zero-emission propulsion and some vessels already in service are being considered for conversion. Battery-electric and hydrogen fuel cell ferries can be expected to be available on the market for potential use in Hobart, although the lifecycle cost remains to be seen. However, a public transport ferry's primary contribution to reducing emissions will be by shifting travel modes away from private cars.

As zero-emission technology is slowly being adopted across the public transport industry, many Australian states are planning to adapt their service models to accept responsibility for funding zero-emission bus procurement, power grid costs, and providing and/or modifying bus infrastructure. However, the current technology for zero-emission buses is more advanced than that of ferries.

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8 Risks

Throughout the course of the project, we captured several risks and challenges. These are summarised in Table 8.1 with possible mitigations.

Table 8.1 Risks and challenges

RISKS AND CHALLENGES	MITIGATIONS
Implementing a ferry wharf encounters conflict with current users of the existing jetty and maritime infrastructure	Consult and engage with existing users through clubs and associations
Travel time(s) increase compared with on-road or active transport options	Ferries provide another travel alternative but will not replace existing services. But ferries are most likely to have reliable travel times
Existing waterside infrastructure constrains navigation.	Ensure detailed navigation planning Potential to relocate existing waterside infrastructure where feasible
Ferries compete with the existing public transport network	Network design considered this and aims to deprioritise wharf locations that could generate competition with existing bus networks.
Private owners in surrounding area oppose ferry service due to formal park 'n' sail impacts, or parking demand in local streets for informal park 'n' sail use	Engage and consult with local communities. Enhance localised placemaking aspects to build support for wharves Maximise active transport to ferry wharves Work with local government to ensure appropriate parking controls in nearby streets
Journey(s) are exposed to ocean swell and cross currents	This risk remains. Wave modelling could generate more detailed understanding
Special interest groups advocate for alternative sites	The long list assessment of 33 sites was quite comprehensive. Encourage proponents to consider how their preferred locations enhance the public transport network, *not* how the wharf can enhance the location
Ferries more prone to extreme weather conditions result in more cancellations than alternative public transport options	Possible need for bus replacement standby contract/s
Service provision may not make direct fiscal sense: high cost of provision, or cost to provide, is higher than the benefit(s)	Additional arm of public transport network provides resilience and makes use of a currently underused asset. Consider pricing approaches to assist cost recovery, e.g., NSW prices public transport ferries at a higher premium than bus fares
Views differ on priority between state and local	Proposed wharf locations will need extensive engagement with all partners
Potential impacts on commercial tourist/leisure water services	Engage early with commercial operators with advanced notice of timings for new public ferry services
Private operator introduces commercial ferry service in competition with subsidised public ferry services	Engage early with commercial operators with advanced notice of timings for new public ferry services

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9 Ferry network options

To establish the initial, conceptual network expansions, we considered a range of factors. It is not simply the case that a location with strong future demographics and existing infrastructure, for example, will fit into a sustainable or operable network. Nor is it the case that top ranked sites from the MCA process are guaranteed to be included in the network. The evolving guiding principles, demographics, recreation attractors, cross-river connections, travel-time benefits, network operability, and ability to support future expansion have all been considered to determine the initial proposed network expansions.

9.1.1 Easing congestion in ferry Expansion 1

Ferry network Expansion 1 is the highest priority for additional ferry network connections in terms of its ability to achieve outcomes consistent with the guiding principles. Expansion 1 focuses on providing ferry connections to the CBD from the east side of the river at both Lindisfarne and Howrah Point, and it aims to replicate the Bellerive trial's success from other origins. Ferry network Expansion 1 provides an alternative connection across the river. By offering a faster and more reliable public transport alternative to road links to the city via the Tasman Bridge, it would best deliver a ferry service that can help reduce the bridge's peak-hour traffic congestion and its recognised bottleneck with upstream approach consequences. Its locations also offer mitigation potential in the event of a major incident on the bridge.

Future ferry network options are driven by a network planning approach that aims to best meet the guiding principles while being operationally efficient. All the principles are important. However, Principle #2, easing of congestion, is ferry Expansion 1's primary focus.

Geilston Bay, Lindisfarne and Howrah Point are the shortlisted ferry wharf locations that would best deliver this benefit. Since Geilston Bay and Lindisfarne are close together, WSP determined that, rather than providing services to both locations, its more favourable population and potential recreational attractors make Lindisfarne the most suitable site for this area.

Direct ferry services to the city would provide the shortest travel time – a key consideration for private vehicle commuters. Accordingly, ferry network Expansion 1 is proposed to provide direct peak-time ferry links to the city from Lindisfarne and Howrah Point.

Ferry network Expansion 1 also assumes the Bellerive ferry service would continue.

9.1.2 Building connectivity in ferry Expansion 2

Ferry network Expansion 2 builds on Expansion 1, layering up the network over time. In off-peak times when travel time isn't as sensitive and a greater number of recreational and leisure customers will likely use the ferry services, a stitched network is best to maximise connectivity. Off-peak networks can be more encompassing and less time critical. Locations put forward for network expansion 2, such as Regatta Point, Sandy Bay (Casino) and Wilkinsons Point, are suitable with strong recreational attractors.

Kingston Beach is also included in Expansion 2, but for different reasons. Including Kingston Beach in a ferry network has the potential to relieve the Southern Outlet demands, particularly during planned construction works should the timing align. It will not detract from bus patronage due to its quicker bus travel time. Kingston Beach is not put forward in Expansion 1 as the travel time to/from the CBD would likely not appeal to commuters.

Expansion 2 does not preclude future network expansions.

Location inclusion summaries are noted in Table 9.1.

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Table 9.1 Wharves included in expanded ferry network

WHARF LOCATION	MCA RANK	WHARF INCLUSION IN EXPANDED FERRY NETWORK?	RATIONALE
Regatta Point	1	**Yes - 2**	Macquarie Point has attracted funding commitments and there is a planning pathway for development. It will act as a strong recreational and event destination that will warrant inclusion of a Regatta Point wharf in the proposed ferry network.
Sandy Bay (Rowing Club)	2	No	One wharf in the Sandy Bay area is considered suitable for an initial expansion. Sandy Bay (Rowing Club) has fewer attractors and workforce than Sandy Bay (Casino) and is therefore excluded from Expansion 1 & 2.
Sandy Bay (Casino)	3	**Yes – 2**	Strong employment catchment, recreation attractor, and citybound trip origin.
Wilkinsons Point	4	**Yes - 2**	Lower priority as part of an off-peak or event overlay, or if employment demographics change. Good future employment demand and strong recreation attractor, though lower public transport benefit, as existing bus connections to the city are strong.
Battery Point (Derwent Lane)	5	No	The location on the western side of the river close to the CBD is not likely to provide strong travel-time benefit over walking and cycling.
Howrah Point	6	**Yes - 1**	The location on the eastern side of the river will provide strong travel-time benefit and support for public transport benefits. Directly aligns with the principle to reduce peak traffic congestion as this location provides an alternative route to road connections via the Tasman Bridge. No competition with potential rapid bus services
Montagu Bay	7	No	The potential wharf location on the eastern side of the river is too close to Tasman bridge to provide travel-time or directness benefit. The catchment size is also constrained.
Lindisfarne	8	**Yes – 1**	Lindisfarne has a strong sporting, parks and recreation attractor and will be a citybound trip origin. Also, there is a potential public transport benefit from a more reliable and direct service on the water.
Kingston Beach	20	**Yes - 2**	**Lower priority** as part of an off-peak or event overlay, or if employment demographics change. Kingston Beach has a strong recreation attractor, citybound trip origin, and potential to relieve Southern Outlet demands particularly during planned construction works (depending on construction timing and methodology). Otherwise limited public transport benefit because of the strong bus connections to the city along the Southern Outlet, which will be further improved with the transit lane's creation.
Geilston Bay	22	No	Geilston Bay is close to Lindisfarne, but Geilston Bay's demographic demand and recreational attraction is lower than Lindisfarne's. This would also place two terminals in close proximity.

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9.1.3 Network expansion proposals

A network staging plan will build on each previous network stage with the aim of providing a coherent plan for delivering a River Derwent ferry network that maximises customer benefits, is consistent with State Growth's objectives and principles, and avoids redundant investment.

Table 9.2 summarises the proposed network in Expansion 1 and Expansion 2 and includes indicative network map line colours, as shown in Figure 9.1 and Figure 9.2.

Table 9.2 Ferry network expansion staging plan

EXPANSION STAGE	WEEK DAYS/ WEEKENDS	DIRECT/ STITCHED	PEAK/ OFF-PEAK EVENTS	ORIGIN	LOCAL WHARF	LOCAL WHARF	LOCAL WHARF	LOCAL WHARF	NOMINAL SERVICE LINE
Current Network	Weekdays	Direct	Peak	Brooke St Pier	Bellerive	-	-	-	Blue Line
	Saturdays	Direct	Off-peak	Brooke St Pier	Bellerive	-	-	-	Blue Line
Ferry Network Expansion 1	Weekday	Direct	Peak and Off-peak	Brooke St Pier	Howrah Point	-	-	-	Yellow Line
	Weekday	Direct	Peak and Off-peak	Brooke St Pier	Lindisfarne	-	-	-	Red Line
Ferry Network Expansion 2	Weekday	Stitched	Peak	Brooke St Pier	Sandy Bay (Casino)	Kingston Beach	-	-	Pink Line
	Weekday	Stitched	Peak	Brooke St Pier	Regatta Point	Lindisfarne	Wilkinsons Point		Orange Line
	Weekdays outside peak hours and weekends	Stitched	Off-peak/ Events*	Wilkinsons Point	Lindisfarne	Regatta Point	Brooke St Pier	Sandy Bay (Casino)	Green Line
	Weekdays outside peak hours and weekends	Stitched	Off-peak/ Events*	Brooke St Pier	Bellerive	Howrah Point	Kingston Beach	-	Brown Line

* The event wharf locations are included in the suggested off-peak networks. The 'events' services would be timetable adjustments to those off-peak services to meet event travel demands.

9.1.4 Timetable considerations

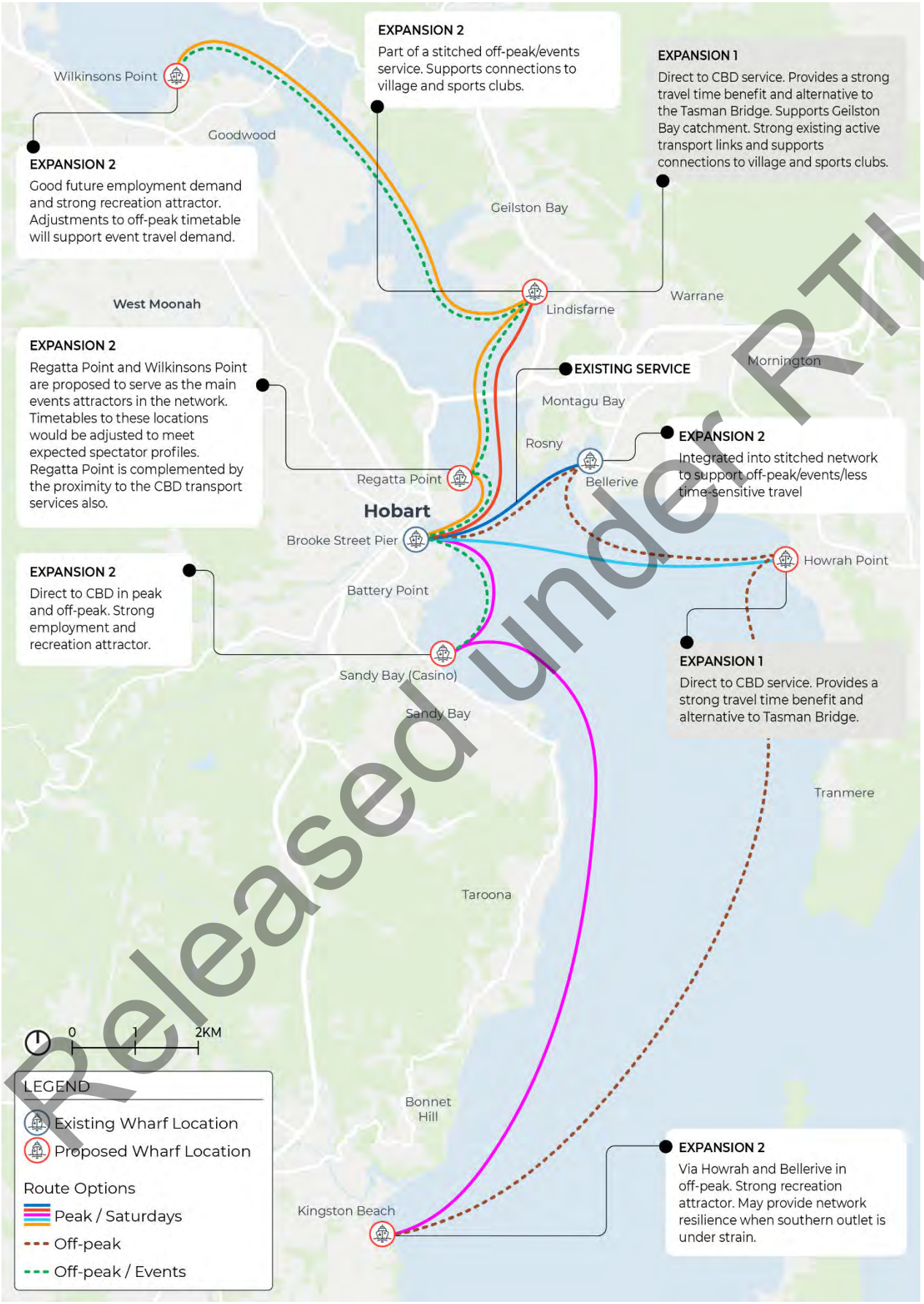
Google maps data includes live traffic congestion levels and shows periods of serious on-road congestion. An assessment of this data showed that congestion is short and intense on the three main surface corridors, with on-road congestion worst at 7:45am and 8:45am am and 5:00pm and 5:30pm (time slices available for analysis rather than time periods). Hence, to best relieve peak-time on-road traffic congestion, ferry services would need to be available as an alternative for private vehicle users, particularly in those peak times.

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Figure 9.1 Ferry network Expansion 1

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Figure 9.2 Ferry network Expansion 2

10 High-level costings

High-level costs are based on benchmarks from local and national ferry projects, adjusted for 2022 values (latest available inflation adjustments) and for a Hobart ferry network's likely scope.

In general, in franchised ferry service arrangements, the service provider would provide the ferry, the supporting staff, administration, and repairs/maintenance facilities. The payment model would cover operating costs and overheads, as well as depreciation for the vessels. The State would generally be responsible for the wharf infrastructure and any supporting works that may be necessary for ferry navigation.

Capital costs for ferry wharves will vary depending on the project's scope (i.e., whether the ferry wharf is new or an upgraded existing facility, the extent of landside and waterside works, and site constraints). Under the River Derwent Ferry Service Engagement Strategy's revised principles and framework, it is recommended that ferry wharf proposals include substantial landside components that may not be included in typical ferry wharf projects, such as active transport links, bus stops where network integration is appropriate, and more.

The New South Wales Government operates ferries and buses under the same type of private franchise model, with the State providing wharf and bus infrastructure. Costs and operations are reviewed by the NSW Independent Pricing and Regulatory Tribunal (IPART), and this framework has been used to inform this assessment. In 2022, ferry operating costs for services of the scale likely to be provided in Hobart are in the order of $225.00 per service hour. Operating costs for conventional bus services in Australia are in the order of $100 per hour.

We used the Reserve Bank of Australia Inflation Calculator (https://www.rba.gov.au/calculator/) to update a previous State Growth consultant's 2009 cost estimates for new and upgraded wharves, to 2022 costs. Additional bus and active transport links' allowances have been included (sourced from Greater Hobart Bus Rapid Transit Feasibility Study) to arrive at indicative wharf costs (for shortlisted wharves): Lindisfarne – $2.0 million; and Howrah – $1.9 million.

However, recent ferry wharf projects in Australia show substantial variations in costs, strongly suggesting a greater capital allowance is needed. We compared other examples: Brisbane's Bulimba CityCat ferry terminal and Sydney's Kamay Ferry wharf proposal, which provided a range of $1.9 million to $12.15 million for a wharf.

Given post-Covid procurement and supply challenges, unknown environmental challenges in other jurisdictions, and aged costings, there is little certainty to be gained from this range of costs. We recommend seeking a cost estimator's professional estimates.

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11 Next steps

This study is still in the pre-planning and concept stage. The next steps are deliberately set at a high level to help guide the way forward. The planning and implementation activities outlined in Table 11.1 are high-level tasks around which a program and targeted projects can be built.

Table 11.1 Next steps

PLANNING	CONSULTATION REQUIRED	IMPLEMENTATION
Patronage modelling		Establish data needs for level of service, service performance monitoring and evaluation
Revenue forecasting		
Environmental impact studies		Mitigate impacts and improve local environmental conditions
Maritime impact studies; Wave and Fetch Analysis	✔	Mitigate impacts and improve local environmental conditions Finalise course of ferry services
Market sounding and consultation Existing operators TasPorts Stakeholder engagement across agencies/local government to agree on the ferry network's intent	✔	Confirm infrastructure staging, timing and prioritisation Establish commissioning process
Confirm funding mechanism		Establish tendering and evaluation process Determine vessel and fuel type
Landside infrastructure concepts	✔	Construct/reconstruct infrastructure including auxiliary requirements such as moorings, fuelling and sullage
Waterside infrastructure concepts	✔	
Liaison with energy providers*	✔	
Wharf delivery strategies	✔	
Identify local supporting or enabling projects identified through strategic planning or budgeting exercises, or funded projects such as active transport links and new or relocated bus stops.	✔	Deliver supporting or enabling projects such as active transport links and new or relocated bus stops

* Subject to policy decision on fuel type

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STAGE 4 – FERRY NETWORK DESIGNS

TO:	out of scope, Department of State Growth
FROM:	out of scope
REVIEWED BY:	out of scope
SUBJECT:	Stage 4 – Ferry Network Design
OUR REF:	PS132034-WSP-PAM-MEM-005 RevE Stage 4 Memo
DATE:	24 July 2023

1. Introduction

1.1 Introduction

Stages 1 and 2 of the River Derwent Ferry Service Expansion Planning project evaluated 33 proposed wharf sites. The 33 sites were determined based on past State and Local Government strategies and studies, existing infrastructure and local knowledge, and commentary in the media from elected members, councils and parties with commercial interests. Using a multi-criteria analysis (MCA), this list was refined to eight sites in priority order.

In Stage 3, the top eight sites were brought forward, and two extra sites, Kingston Beach and Geilston Bay, were added for further analysis as they had been assessed in a concurrent project run by the four Greater Hobart councils. We conducted a detailed SWOT (strength, weakness, opportunity, threat) analysis for the 10 high priority listed sites along with landside and waterside functional specifications.

In this Stage 4, proposed ferry network designs are forwarded, along with high-level costings (building blocks for indicative operational costings depending on the number of ferries needed for service and network choices).

2. Network design options

2.1 Best practice analysis

After analysing ferry network and service responses from multi-modal transit cities with similarities to the Hobart setting, we identified best practice approaches to network design. These included considering different ferry customer markets, the role of ferry services in complementing surface transit modes and encouraging mode shift, transport strategy alignment, and the importance of placemaking and landside elements. Best practice was identified in:

- Sydney, Australia
- Brisbane, Australia
- Auckland, New Zealand
- New York, USA
- Hamburg, Germany
- London, England

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Best practice ferry network design approaches provide direct services or networks, stitched services or networks, or a mix of the two. Basic examples of the two network types are shown in Figure 2.1.

Figure 2.1 Example of direct and stitched networks



A direct network refers to services provided directly between terminals without intermediate stops. This best suits peak-period commuter demand where the shortest journey time is valued. Providing direct ferry networks often requires a larger fleet, since separate services would operate from origin wharves and require separate fleets to operate concurrently.

In a stitched network, ferries may stop at one or more intermediate wharves on the route between terminals. This may entail longer journey times for some customers, and hence are better suited to leisure travel than commuting, or for low-demand periods such as the interpeak or weekends. Stitched services require fewer vessels to operate (depending on service frequency).

These network design options formed the foundations of the network design approach.

2.2 Network designs

2.2.1 Approach

WSP used the Derwent River Ferry Service Engagement Strategy's refined guiding principles (with WSP-suggested updates) to identify the key characteristics of a compliant ferry network response as it relates to the shortlisted ferry wharf locations. This serves as a sense check against the guiding principles reviewed in Stage 1.

Table 2.1 summarises the process for considering network responses, and the role of candidate wharf locations to meet State Growth's guiding principles.

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Table 2.1 Guiding principles and network responses applied to wharf locations

SUBJECT MATTER	Network (Peak or Off-peak /Event)	Network Response	Regatta Point	Sandy Bay (Rowing Club)	Sandy Bay (Casino)	Wilkinsons Point	Battery Point	Montagu Bay	Howrah Point	Lindisfarne	Kingston Beach*	Geilston Bay*
Principle #1 Ferry services involving State funding will be a partnership between the Tasmanian Government and the Clarence, Glenorchy, Hobart and Kingborough councils respectively.												
Principle #1 not relevant to network design concepts												
Principle #2 New routes must contribute to the easing of traffic congestion and/or event management; the improvement of Greater Hobart accessibility; and the encouragement of public transport use												
Peak period traffic congestion	Peak	Alternative routes avoiding network squeeze points (bridges, congested corridors). Serve peak period destination - city centre. Serve established or growing areas with sufficient size to provide traffic congestion relief. Preference locations with a good active transport catchment							✓	✓		✓
Off peak / event management trips	Off-peak / Event	Access to event locations – Regatta Point/Grounds, Wilkinsons Point, City (eastern and western river bank, north and south of the CBD	✓		✓	✓			✓	✓	✓	✓
Encouraging public transport use	Both	Provide benefits over private vehicles (i.e. directness, reliability, travel time). Not competing with bus							✓	✓		✓
Principle #3 To mitigate congestion, new ferry routes and timetables should consider the changing nature of travel patterns, such as off-peak commuter travel, pleasure cruising to the CBD or to locations outside of the city; increase mode choice to areas that are not or infrequently serviced by public transport; and utilise the existing bus network with minimal changes to the existing services												
Non-peak work trips, non work trips	Both	Extensive span of hours, peak and off-peak & weekend services should be provided	✓		✓	✓			✓	✓	✓	
Prioritise ferry services to areas not well served by bus	Off-peak / Event	This may include off-peak links between areas where bus use would require a transfer or a long, indirect trip. Consider future rapid bus routes that ferry may compete with							✓	✓		✓
Avoidance of diverting trunk bus routes	Both	Feeder bus services to ferry wharves should not divert trunk bus routes. New bus feeders required.							✓	✓		
Principle #4 New route should promote active transport and integration with existing bus services												
Integration with active transport	Both	Improved active transport connectivity in vicinity of wharves	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Principle #5 To ensure service operating reliability, the origin point must have suitable waters for a ferry terminal to be established												
Water suitability	Both	Avoid exposed locations where possible	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Principle #6 Council support through the provision of land, infrastructure, infrastructure management or funding for services will be taken into consideration. However, the provision of land or infrastructure must be suitable for the case for a ferry to be advanced.												
Principle #6 requires engagement with local government in future stages of work to understand levels of support in different areas (land, infrastructure management, funding etc)												
Principle #7 Where a routes is established, timetabling will be developed with the aim of mitigating traffic congestion, improving accessibility by public transport within Greater Hobart												
Off-peak and weekend services needed to support peak transport benefits	Off-peak / Event	Service response - extensive span of hours, peak and off-peak & weekend services should be provided	✓		✓	✓			✓	✓	✓	✓
New Principle To assist with reducing the environmental impact of public transport and ensuring a resilient network, the origin point and routes must consider impacts on coastal zones, which may include opportunities to improve the coastal zone, consider opportunities to reduce greenhouse gas emissions through mode shift and/or provision of zero emission vessels and associated infrastructure and consider exposure to flooding impacts.												
At the current stage of planning, all locations provide an opportunity to improve environmental factors.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Framework Ensuring resilience to flood events and network resilience												
Provide alternatives to access by squeeze points	Peak	Prioritise ferry connections from east side of river to city. Consider relief for southern and northern corridors.							✓	✓	✓	✓

** Did not score in the top 10 of the multi-criteria analysis but added into the SWOT process as preferred sites for local government.*

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2.3 Future ferry network options

To establish the initial, conceptual, network expansions, we considered a range of factors. It is not simply the case that a location with strong future demographics and existing infrastructure, for example, will fit into a sustainable or operable network. Nor is it the case that the top ranked sites from the MCA process are guaranteed to be included in the network. To determine the initial proposed network expansions, the results of the guiding principles review in Table 2.1 were considered in relation to demographics, recreation attractors, cross-river connections, travel-time benefits, network operability, and ability to support future expansion.

2.3.1 Easing congestion in ferry Expansion 1

Ferry network Expansion 1 is the highest priority for additional ferry network connections, given its ability to achieve outcomes consistent with the guiding principles. Expansion 1 focuses on providing ferry connections to the CBD from the east side of the river and aims to replicate the Bellerive trial's success from other origins. By providing an alternative cross-river connection, ferry network Expansion 1 would best deliver a ferry service that can help reduce peak times' traffic congestion by offering a faster and more reliable public transport alternative to road links to the city via the Tasman Bridge.

The future ferry network options are driven by a network planning approach that aims to best meet the principles summarised in Table 2.1, while being operationally efficient. All the principles are important. However, Principle #2, easing congestion is the primary principle for ferry Expansion 1.

The shortlisted ferry wharf locations of Geilston Bay, Lindisfarne and Howrah Point would best deliver this benefit. Geilston Bay and Lindisfarne are close together and WSP determined that, rather than providing services to both locations, Lindisfarne was the most suitable site for this area, given its larger population and potential recreational attractors.

Direct ferry services to the city would provide the shortest travel time, a key consideration for private vehicle commuters. Accordingly, ferry network Expansion 1 is proposed to provide direct ferry links in peak times to the city from Lindisfarne and Howrah Point.

Ferry network Expansion 1 assumes the Bellerive ferry service would continue.

2.3.2 Building connectivity in ferry Expansion 2

Ferry network Expansion 2 builds on Expansion 1, layering up the network over time. In off peak times when travel time isn't as sensitive and a greater number of recreational and leisure customers are likely to use the ferry services, a stitched network is best to maximise connectivity. Off peak networks can be more encompassing and less time critical. Locations such as Regatta Point, Sandy Bay (Casino) and Wilkinsons Point are suitable locations with strong recreational attractors, Hence, they are put forward for network Expansion 2.

However, Kingston Beach is also included in Expansion 2, but for different reasons. Including Kingston Beach in a ferry network has the potential to relieve the Southern Outlet demands particularly during planned construction works. It will not detract from bus patronage because the bus travel time is quicker. Kingston Beach is not put forward in Expansion 1 as the travel time to/from the CBD would likely not appeal to commuters.

Expansion 2 does not preclude future network expansions.

Location inclusion summaries are noted in Table 2.2.

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Table 2.2 Wharf inclusion rationale

WHARF LOCATION	MCA RANK	INCL. IN EXPANSION 1 OR 2	RATIONALE
Regatta Point	1	**Yes – 2**	Macquarie Point has confirmed funding and planning for development. It will act as a strong recreational and event destination, which will warrant including a Regatta Point wharf in the proposed ferry network.
Sandy Bay (Rowing Club)	2	No	One wharf in the Sandy Bay area is considered suitable for an initial expansion. Sandy Bay (Rowing Club) has fewer attractors and workforce than Sandy Bay (Casino). Hence, its exclusion from Expansion 1 & 2.
Sandy Bay (Casino)	3	**Yes – 2**	Strong employment catchment, recreation attractor, and citybound trip origin.
Wilkinsons Point	4	**Yes – 2**	Lower priority as part of an off-peak or event overlay, or if employment demographics change. Good future employment demand and strong recreation attractor, though lower public transport benefit, as existing bus connections to the city are strong.
Battery Point (Derwent Lane)	5	No	The location on the western side of the river close to the CBD is not likely to provide a strong travel-time benefit over walking and cycling.
Howrah Point	6	**Yes – 1**	The location on the eastern side of the river will provide strong travel time benefit and support for public transport benefits. Directly aligns with the principle to reduce peak traffic congestion as this location provides an alternative route to road connections via the Tasman Bridge. No competition with potential rapid bus services.
Montagu Bay	7	No	The potential wharf location on the eastern side of the river is too close to Tasman bridge to provide travel-time or directness benefits. The catchment size is also constrained.
Lindisfarne	8	**Yes - 1**	Lindisfarne has strong sporting, parks and recreation attractors and will be a citybound trip origin. Additionally, there is a potential public transport benefit via a more reliable and direct service on the water.
Kingston Beach	20	**Yes - 2**	**Lower priority** as part of an off-peak or event overlay, or if employment demographics change. Kingston Beach has a strong recreation attractor, citybound trip origin, and potential to relieve Southern Outlet demands particularly during planned construction works (depending on construction timing and methodology). Otherwise limited public transport benefit because of the strong bus connections to the city along the Southern Outlet.
Geilston Bay	22	No	Geilston Bay is close to Lindisfarne, but Geilston Bay's demographic demand and recreational attractors are lower than Lindisfarne's. This would also place two terminals in close proximity.

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2.4 Network and service line suggestions

Table 2.3 demonstrates how the proposed wharves combine into a network. Nominal colour coded service lines are proposed.

These network options are illustrated in Figure 2.2 and Figure 2.3. Figure 2.3 includes event services, proposed as timetable adjustments to the off-peak services to meet event travel demands.

Table 2.3 Network Suggestions

EXPANSION STAGE	WEEKDAYS OR WEEKENDS	DIRECT OR STITCHED	PEAK OR OFF-PEAK / EVENTS	ORIGIN	LOCAL WHARF	LOCAL WHARF	LOCAL WHARF	LOCAL WHARF	NOMINAL SERVICE LINE
Current Network	Weekdays	Direct	Peak	Brooke Street Pier	Bellerive	-	-	-	Blue Line
	Saturdays	Direct	Off-peak	Brooke Street Pier	Bellerive	-	-	-	Blue Line
Ferry Network Expansion 1	Weekday	Direct	Peak and Off-peak	Brooke Street Pier	Howrah Point	-	-	-	Yellow Line
	Weekday	Direct	Peak and Off-peak	Brooke Street Pier	Lindisfarne	-	-	-	Red Line
Ferry Network Expansion 2	Weekday	Stitched	Peak	Brooke Street Pier	Sandy Bay (Casino)	Kingston Beach	-	-	Pink Line
	Weekday	Stitched	Peak	Brooke Street Pier	Regatta Point	Lindisfarne	Wilkinsons Point		Orange Line
	Weekdays outside peak hours and weekends	Stitched	Off-peak / Events*	Wilkinsons Point to	Lindisfarne	Regatta Point	Brooke Street Pier	Sandy Bay (Casino)	Green Line
	Weekdays outside peak hours and weekends	Stitched	Off-peak / Events*	Brooke Street Pier	Bellerive	Howrah Point	Kingston Beach	-	Brown Line

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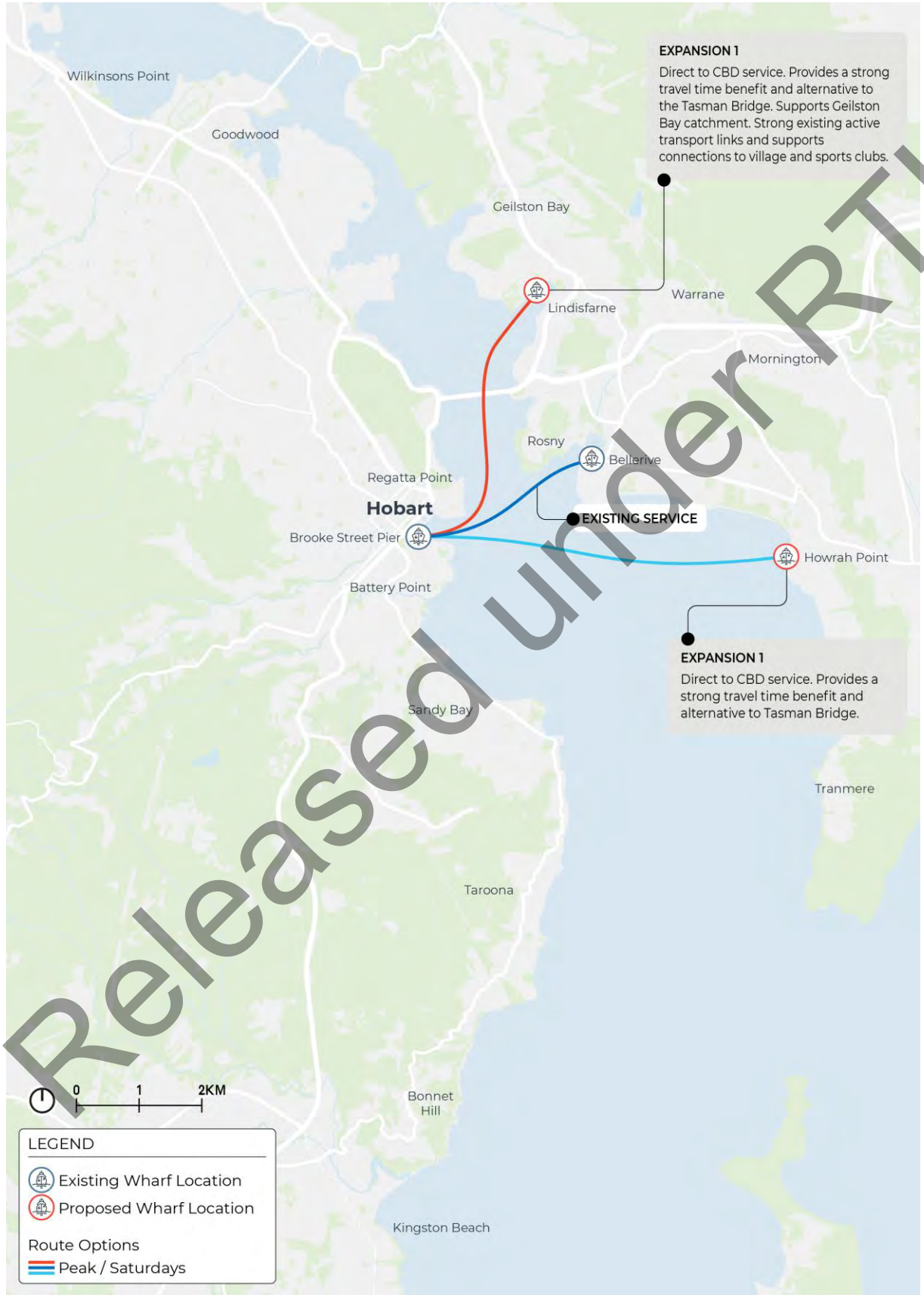


Figure 2.2 Ferry network Expansion 1

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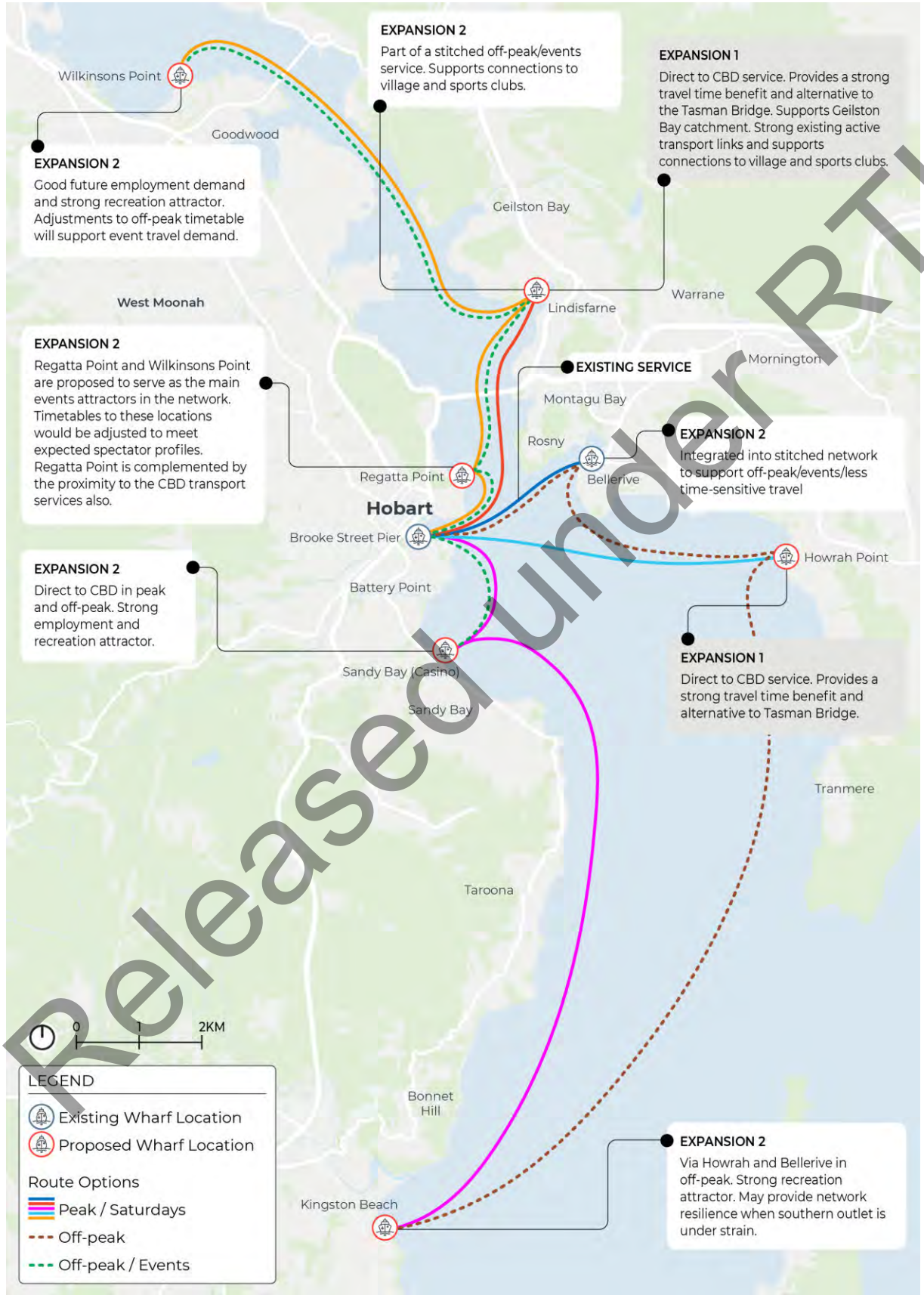


Figure 2.3 Ferry network Expansion 2

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3. Considerations affecting service levels

The ferry service provided, in terms of its frequency and span, is a key factor in the potential for the ferry network to meet transport planning objectives outlined in State Growth's River Derwent Ferry Service Engagement Strategy, as revised by WSP.

The following service-related considerations are relevant:

- Reducing peak-period traffic congestion requires ferry services to be available weekday peak times to provide an alternative to private-vehicle trips. Hobart's peak congestion periods are 7am–8:59am and 3pm–5:59pm as per Project 2018, General Access Service Standards. However, there are intense peaks within these windows. Using Google traffic data, we found these intense peaks are focussed around 8am–9am and 5pm–5.45pm.
  - Therefore, to be effective, ferry services need to operate around those times but with targeted departure times to meet the peak of the peak. While earlier and later services are important for best meeting customers' often flexible travel needs, providing weekday peak-period services in those narrow timeframes will be particularly important.
  - Because the Hobart peak periods are relatively short, and direct ferry travel times from some wharf locations may be more than 20 minutes one-way, a single vessel will have limited opportunities to provide more than one inbound (to the CBD) service during the abbreviated peak periods.
- To be an effective alternative to driving, weekday peak periods will likely require frequencies of at least two departures per hour (the Bellerive ferry operates every 40 minutes during peak times and generally hourly on Saturdays).
  - Therefore, to provide a service that can help reduce peak period traffic congestion, it is likely that most direct ferry services from nominated wharves would require at least two vessels at weekday peak times.
- Off-peak services (weekdays middle of the day and night; weekends and public holidays) are also required to support flexible work hours and the travel needs of casual and part-time workers, as well as event patrons. Service frequencies may be lower in these time periods (and travel times to the city terminal may be longer) possibly allowing an hourly frequency, depending on demand. However, a consistent service level of two departures per hour would provide a legible service offer for customers.
- The Bellerive ferry takes some 15 minutes to travel the 3 km distance to the Brooke Street pier, indicating an average speed of less than 10 knots (around 13 kph). To provide a time-competitive service and to be attractive to customers from wharf locations with an alternative road route, higher ferry operating speeds (around 20 knots, or 37 km/h) will be required.
  - Note: wake restrictions[1] make higher average operating speeds difficult in some situations, but a higher average speed would broaden the customer appeal by reducing travel time.

4. High-level costings

4.1.1 Approach

The scope of WSP's engagement did not include a comprehensive costing of a future ferry network. Instead, we identified the key cost components for introducing a ferry network. These may fall to the proponent, or to the State and or Local Government.

High-level costs are based on benchmarks from local and national ferry projects, adjusted for 2022 values (latest inflation adjustments available) and for the likely scope of a Hobart ferry network.

[1] The 'wake' is created by a boat's movement—its hull displaces the water that it travels through, leaving a 'wake' in its path. The soft banks and beds of many Tasmanian waterways are vulnerable to damage from boat wake and prop wash.

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The New South Wales government operates ferries under the same type of private franchise model that is used for bus service contracts, with wharf infrastructure provided by the State. Costs and operations are reviewed by the Independent Pricing and Regulatory Tribunal of New South Wales (IPART). We used this framework to inform this assessment.

In general, in franchised ferry service arrangements, the service provider provides the ferry, the supporting staff, administration and repairs/maintenance facilities. The payment model would cover operating costs and overheads, as well as the vessels' depreciation. The State would generally be responsible for the wharf infrastructure and any supporting works that may be necessary for ferry navigation.

4.1.2 Vessels and fleet

The capital and operating costs of suitable ferries for a River Derwent service would depend on:

- the service plan
- the appropriately sized vessel for the river conditions
- the appropriately sized vessel for passenger carrying capacity

The current vessel used on the Bellerive trial service has a 107-passenger capacity and a likely 20 knots-or-more top speed (the larger Mona ferries can carry 240 passengers with a top speed just under 25 knots). The Peppermint Bay ferry used on the trial (Peppermint Bay II) can carry 167 passengers and has a 26 knots service speed. A larger vessel may be more appropriate for a more comprehensive service. Some interstate and international vessel examples are:

- Sydney inner-harbour ferries with a passenger capacity of some 400 people
- Hamburg ferry capacity varies from 114 to 250 passengers
- New York ferry capacity is 350 passengers
- Brisbane CityCat ferries have a passenger capacity of 170

The ideal ferry size would typically be determined by the ferry service proponent, based on their estimates of patronage demand. But they should also have sufficient passenger capacity to help reduce traffic congestion (such as by diverting private vehicle trips across the Tasman Bridge to ferry trips).

Vessel Cost

Assuming a ferry size of >150 passengers (such as the Brisbane CityCat ferries), we can assume a capital cost of $4.1 million ($3.7 million in 2019) for a conventionally fuelled ferry (and >$8 million for a battery electric ferry).

4.1.3 Implications of zero emission ferries

As service providers start adopting zero emission ferries to reduce greenhouse gas emissions, their substantially higher capital costs (and lower operating costs) may require changes to how they apportion costs (and allowance of additional costs such as electrical power distribution) in a franchised operation. In the zero emission bus transition, many Australian states are planning to accept responsibility for funding zero emission bus procurement, power grid costs, and modifying and/or providing bus infrastructure.

There are currently relatively few zero emission passenger ferries on the market. However, indications are that early models could cost substantially more than their diesel equivalents. New Zealand's Ika Rere 132-passenger battery electric ferry, introduced in 2022 in Wellington with a ±30 km range between charges, cost NZ $8.5 million, compared with NZ $3 million for a diesel version. It also required fast chargers to be fitted at the Queen's Wharf ferry terminal. Other electric passenger and vehicle ferries have similarly high costs, but reduced fuel costs by 80% or more. In the case of the Ika Rere, the vessel's 22km round trip between Wellington city and Day's Bay, costs less than $NZ30 in electricity – an 80% saving on the diesel fuel cost.

Zero emission ferries are generally battery-electric versions, or hydrogen fuel cell, or hydrogen combustion versions. Some conventionally fuelled ferries are being designed for conversion to zero emission propulsion, or established vessels are being

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considered for conversion. Battery electric and hydrogen fuel cell ferries can be expected to be available on the market for potential use in Hobart.

4.1.4 Operating costs for ferry services

As IPART's 2018 report into private ferry services outlines, there are several elements of operating costs, including:

- mooring fees at wharves
- vessels' maintenance and repairs
- crew costs, varying by vessel size and number of crew required
- fuel costs – higher for high-speed ferries
- insurance other than vessel insurance
- operator margin (assumed 6%)
- other costs (ticketing, revenue collection, offices, advertising, and the like)
- vessel insurance
- onshore staff costs (administration and maintenance staff)
- other mooring fees (such as overnight mooring)

In 2022, ferry operating costs for services of the scale likely to be provided in Hobart are in the order of $225.00 per service hour. Operating costs for conventional bus services in Australia are in the order of $100 per hour.

Note: the overall operating costs for battery electric ferries (the zero emission ferry technology that most data are available for) may reduce by some 25–35%.

4.1.5 Capital costs for ferry wharves

Capital costs for ferry wharves will vary depending on the scope of the project (i.e. whether the ferry wharf is new or an upgrade of an existing facility, the extent of landside and waterside works and site constraints).

Under the revised principles and framework in the River Derwent Ferry Service Engagement Strategy, it is recommended that ferry wharf proposals include substantial landside components that may not be included in typical ferry wharf projects such as bus stops, active transport links and more.

Previous DSG consultant 2009 cost estimates for new and upgraded wharves have been updated to 2022 costs using the Reserve Bank of Australia Inflation Calculator (https://www.rba.gov.au/calculator/). Additional bus and active transport links allowances have been included (sourced from Greater Hobart Bus Rapid Transit Feasibility Study) to arrive at indicative wharf costs (for shortlisted wharves) as follows:

- Lindisfarne - $2.0 million
- Howrah - $1.9 million

However, recent ferry wharf projects in Australia show substantial costs variations, strongly suggesting a greater capital allowance is needed.

In Brisbane, the Bulimba CityCat ferry terminal was upgraded in 2014 to include increased seating capacity, a new dual-berth pontoon, and moorings, for a $6.96 million capital budget in 2022 dollars. Also in the Brisbane region, four new wharf terminals have recently been commissioned in the Redland Bay area for $48.6 million (average $12.15 million each).

In Sydney, the Kamay Ferry wharf proposal, featuring 180m-long wharves to access sufficient water depth, have a $17 million budget for two wharves (approximately $8.5 million each) and a scope that includes substantial landside elements.

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These sources proffer a range of $1.9–$12.15 million for a wharf. Given procurement and supply challenges since Covid, unknown environmental challenges in other jurisdictions, and aged costings, there is little certainty to be gained from this range of costs. We recommend seeking cost estimates from a cost estimator.

4.1.6 Other considerations

River Derwent ferries would likely require fuelling (if diesel) or recharging (if battery electric). Sufficient hydrogen supplies may be available depending on hydrogen fuel cell bus trials planned in Hobart. Fuelling of a multi-vessel fleet risks environmental impacts if spillage occurs. Hence, fuelling should occur away from the city. Tasports' Selfs Point facilities would be an option for ferry fleet fuelling.

Similarly, sullage (bilge and other water) and sewage from ferry toilets if provided can be pumped out and treated at the Self's Point facility.

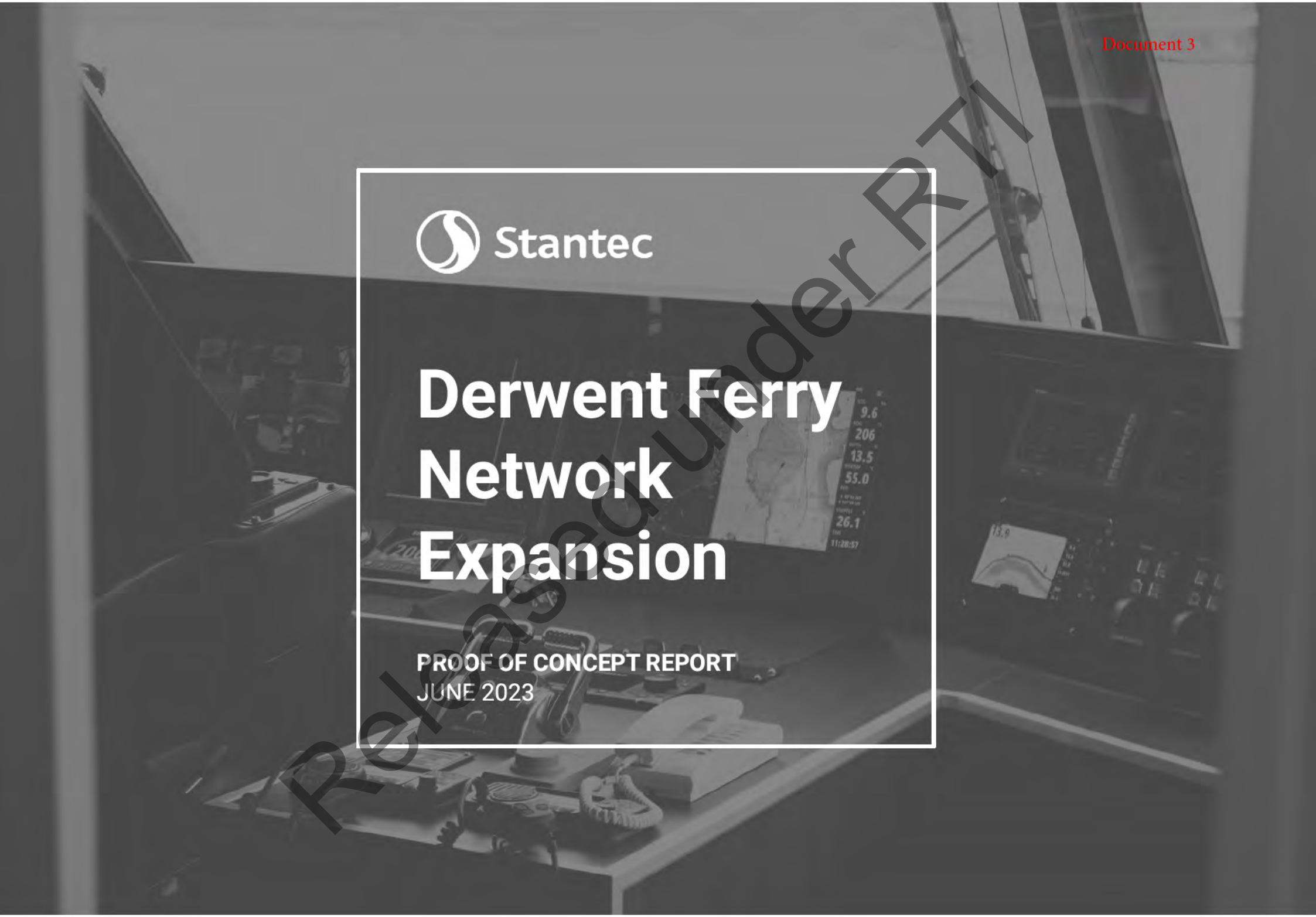
Figure 4.1 Selfs Point, New Town



5. Next steps

The next stage focuses on an Expanded Ferry Network's operations and staging.

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Derwent Ferry Network Expansion

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Derwent Ferry Network Expansion



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In recognition of the deep history and culture of this Island, Stantec would like to acknowledge the Muwinina and Moomairremener people, the traditional owners of the Land upon which we work.

We acknowledge and lament the loss of the Muwinina people in Hobart as well as the strong impacts of colonisation on all of Aboriginal Tasmania.

We acknowledge the determination and resilience of the Palawa people of lutruwita/Tasmania who have survived invasion and dispossession and continue to maintain their identity, culture and rights.

Hobart, Tasmania



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Executive Summary

Greater Hobart is seeing rapid population, employment, and tourism growth that is increasing the demand for space and placing pressure on existing transport infrastructure. There is a need to support this demand, but in a manner that supports high quality of life and prosperity.

For centuries, the Derwent has played a key role in supporting the City and wider regions growth. Passenger ferry services have been recorded as early as 1818 and continue to this day through the Derwent Ferry service between Bellerive and Hobart CBD.

Naturally, however, growth has been limited by the availability, reliability, and scale of ferry related infrastructure across the Derwent. As such, this proof-of-concept study explores the feasibility of an expanded ferry network, one that both supports the regions rapid growth and acts as a catalyst for moving towards transport sustainability.

The study has been commissioned by the Greater Hobart Councils and guided by a Steering Committee made up of representation from Hobart City Council, Clarence City Council, Glenorchy City Council, and Kingborough Council.

Building on the success of the existing ferry service and previous studies investigating an expanded Derwent ferry network, the Steering Committee identified the following prospective locations for new additional terminals:

- Lindisfarne
- Sandy Bay (Wrest Point)
- Wilkinsons Point / MyState Bank Arena

During the study opportunities to further expand the network across the following locations were identified:

- Geilston Bay
- Regatta Ground
- Kingston Beach

Waterside: Capability to support ferry access widely differs across each location. Sandy Bay and Wilkinson's point have existing jetties and access infrastructure that could support an expanded ferry network almost immediately. While Lindisfarne, Geilston Bay, and Kingston Beach lack sufficient waterside infrastructure to enable passenger ferry access. Respectively, each location has varying waterside infrastructure needs that this study identifies.

Landside: Similarly, access and landside infrastructure at each location differs significantly. Wilkinson's Point, while subject to a masterplan for significant leisure and tourism related development, would benefit as a 'park & sail' location owing to its potential ability to attract private car commuters presently using the Brooker Highway to access the City.

The park and sail principle also applies to Geilston Bay and its ability to capture commuters along the East Derwent Highway. On the other hand, Sandy Bay, Lindisfarne, and Kingston Beach are prime locations for supporting walking, cycling, and public transport access.

This study has shown that progressive implementation of sites would stimulate a 'reference case' demand for approximately 1,100-1,200 commuter boardings per day from these locations. With the inclusion of Travel Demand Management measures this increases to 1,650 commuter boardings per day. This is comparable to the existing Bellerive – Hobart CBD route, that has successfully attracted over 140,000 passengers in the past year.

While commuter focused, the system should be designed to maximise tourism and economic development opportunities through vessel design, route design and terminal location. It is expected that this would drive even greater demand than noted above.

An expanded ferry network should enable and encourage both direct and multi-modal connections. Importantly it should, as the existing service does, be integrated into active travel routes and bus networks.

When delivered, Greater Hobart will be connected by high quality, reliable, and sustainable public transport services that meets the needs of a rapidly growing City. Communities across the Derwent will have increased access to a highly activated waterfront, and employment, education, and leisure opportunities – the connectivity that it offers will be accessible to all.

In summary, this study shows that the locations identified will attract sufficient demand to be successful. It is expected that the $20 million Federal Government commitment would be sufficient to enable establishment of the three locations (Sandy Bay, Lindisfarne, and Wilkinsons Point). Additional expansion and investment would be required to further develop the network. Accounting for further in-depth feasibility studies, procurement, and construction, it is anticipated that the locations can become operational by Q4-Q1 2024/25.

Next Steps

It is recommended that more in-depth technical studies are undertaken to determine the condition of existing infrastructure. It is expected that wave climate, nautical, and shoreline specific studies would be commissioned to determine the environmental constraints that will influence the design of associated infrastructure. Further stakeholder engagement should also be carried out as the locations progress through business case and planning stages.

Its vital that waterside and landside infrastructure are coordinated. This requires a close working relationship between local, state and national Governments with clearly identified roles and funding responsibilities. This collaborative arrangement should then identify additional funding for the furth expansion of the network.

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Introduction

This document presents the 'proof of concept' work undertaken for the Derwent Ferry Expansion.

Critically, it sets out the following:

- Overview of the Derwent River, its geography, history of navigation, and socioeconomic profile.
- Overview of the existing ferry network.
- Exemplar national and international ferry network case studies.
- Proposed ferry terminal locations.
- Proposed terminal designs
- Marine civil opportunities, risks, and constraints.
- Proposed routes and navigation considerations.
- Patronage assessment
- Vessel analysis.
- Transport integration.
- Potential land use change.
- Stakeholder engagement.



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01
RIVER DERWENT

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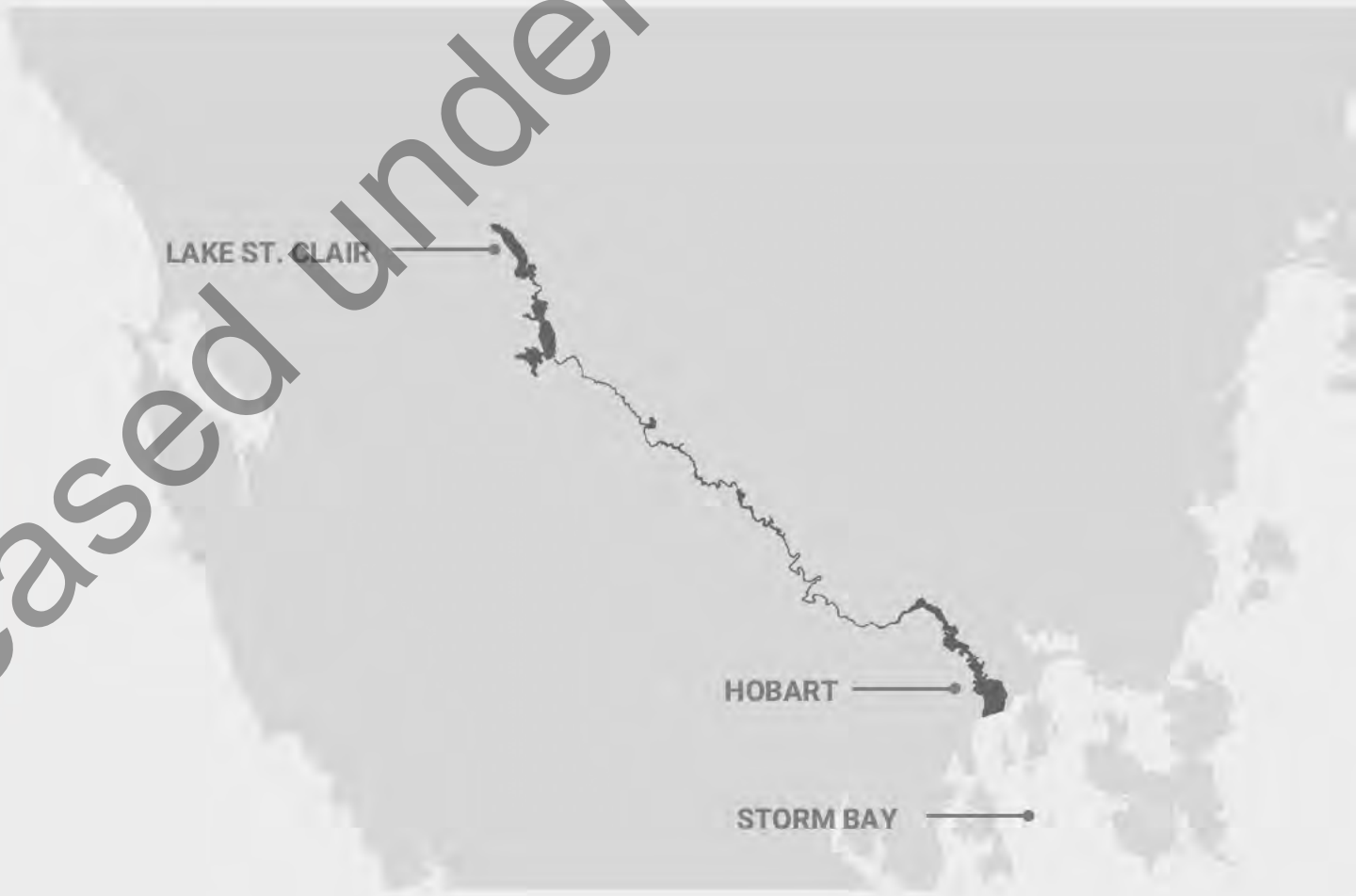
Timtumili Minanya (the River Derwent)

The River Derwent flows generally southeast for more than 200 kilometres and drops more than 700 metres from its origin in the Cradle Mountain-Lake St. Clair National Park.

It is formed by the collision of the Narcissus and Cuvier Rivers at Lake St. Clair and flows with the power of 50 to 140 m^3 per second.

It pours into a large estuary (Storm Bay) and the deepest sheltered harbour in the Southern Hemisphere at the City of Hobart.

The Derwent Estuary Program (DEP) has established a vision for the Derwent – that is adopted for this project - as *'an estuary with a healthy and diverse ecosystem that supports a wide range of recreational and commercial uses and is a source of community pride and enjoyment.'*



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Human settlement on the Derwent

Aboriginal Tasmanians lived around the Derwent estuary for thousands of years, with the river being a major route for Palawa / Pakana people between the coast and hinterland. [i]

Hobart is now known by many Aboriginal and non-Aboriginal people as nipaluna (Nibberloonne). This place was home to the Muwinina and Moomairrermener people of the South-East Nation.

The Muwinina people thrived on this Country and were strongly connected to important places such as kunanyi, the rivulets and timtumili minanya.

Tasmanian Aborigines consider geographical features all part of country , and the surrounding nipaluna includes timtumili minanya (River Derwent). This integrated view of the country and river should be adopted for ferry concepts by having services that seamless connect to the places they service.

It is recommended that any future expansion of the ferry network connects to country and consults Aboriginal heritage, Aboriginal Heritage Tasmania and Tasmanian Aboriginals as part of planning for each location.

Hobart was founded in 1804. Over time, as the city has grown, the geographical constraints on the settlement have resulted in the demand for passenger ferry services.

The earliest recorded local passenger service along the Derwent is 1818, when James Austin and John Earl (released convicts from England) established a ferry service from Austin's Ferry to Old Beach.

By 1821, inns had been built at both ferry landings, a historic hint to the land development enabled by water transport.

The service remained as the critical link between Hobart Town and Launceston until completion of the Bridgewater causeway in 1838 and the Bridgewater Bridge in 1949. [ii]

In more recent history, steam ferries operated along the Derwent between Bellerive and Lindisfarne.

Later ferries were the larger Derwent (1905) and Rosny (1913). In 1926 the government's vehicular ferry Lurgurena was put in place.

The construction of the Hobart Bridge of 1943 terminated the Lindisfarne ferry and the Bellerive vehicular ferry, but Derwent and Rosny served Bellerive until 1963. [iii]



Emmalisa – Bellerive to Hobart August 1986
Source: Mercury Historic Ferry Back. Anne Mather.



Queue for Trans-Derwent Ferry at Hobart Wharves (1975)
Source: David H Jones/Courtesy of Tasmanian Archives PH30/1/1655

[i] History of the Derwent Estuary. Available at: https://www.derwentestuary.org.au/history-of-the-derwent/
[ii] Austins Ferry History. Available at: https://www.ourtasmania.com.au/hobart/austins-ferry.html
[iii] Companion to Tasmanian History. Available at: https://www.utas.edu.au/tasmanian-companion/biogs/E000365b.htm

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The Tasman Bridge Disaster of 1975

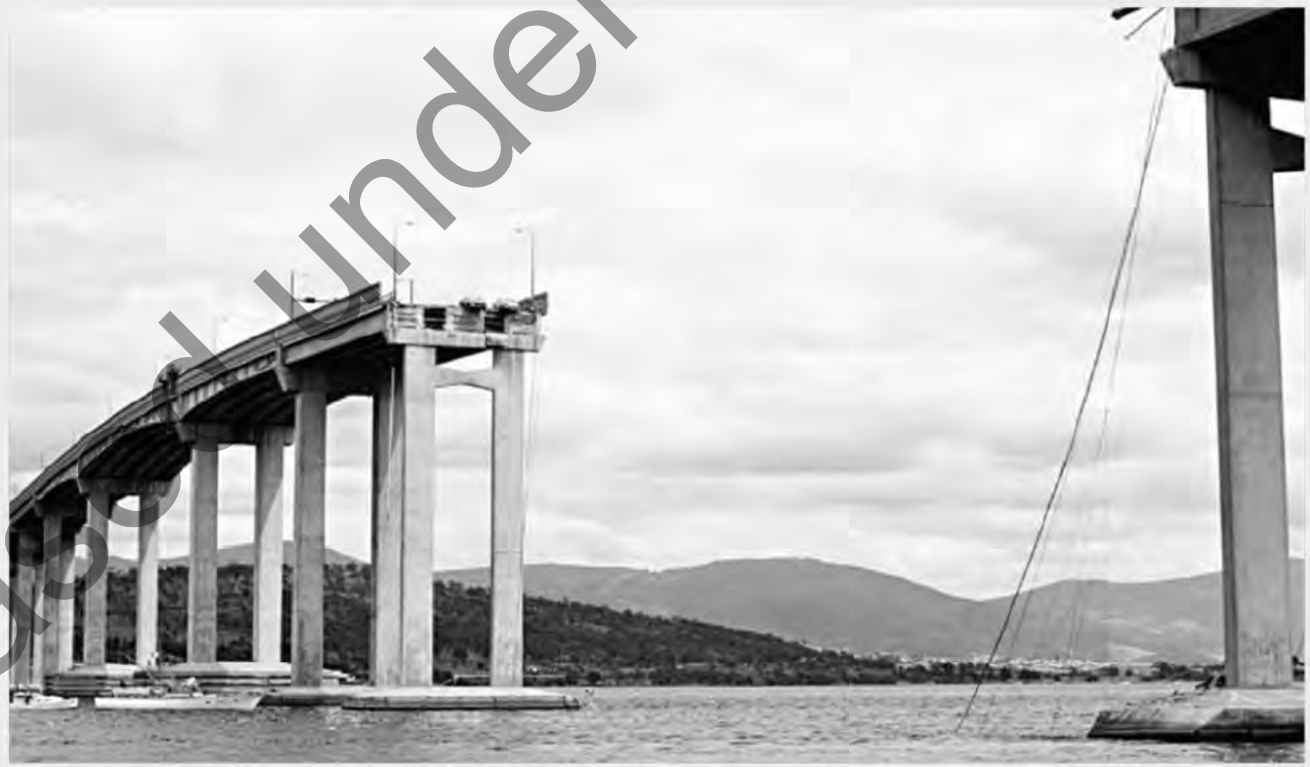
In 1975 a large ship collided with the Taman Bridge causing large sections to collapse. The incident left Hobart split in two, with residents on the eastern shore cut off from the main part of the city, including most of Hobart's hospitals, schools, and government services. Large numbers of people needed to cross the bridge daily to get to work. Communities on the eastern shore quickly became isolated. However, this was also a driving factor in developing more services on the eastern shore which has since driven further population growth.

City resilience through ferries

Ferry services were immediately put in place. Incat, which evolved from other bot building companies including Sullivans Cove Ferry Company, a major Tasmanian shipbuilding firm, began running their vessels within an hour of the bridge collapse and continued the service throughout the night of the disaster.

Ferry services to the City were introduced to Bellerive and Lindisfarne, using vessels ranging from two Sydney Harbour ferries to smaller cruisers. While not providing the same level of service, ferries provided an essential service until a temporary bridge was built the following December.

The highly visible incident remains in the psyche of the region. The incident also highlighted the need for resilience and redundancy in the system – hence the building of the Bowen Bridge. Any future ferry network should incorporate the resilient benefits that additional crossings deliver given the reliance on a single crossing.



Tasman Bridge Disaster
Source: National Archives of Australia

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Characteristics of Derwent River

The Derwent Estuary bisects the city of Hobart and is the largest estuary in south-eastern Tasmania, covering an area of nearly 200km^2.

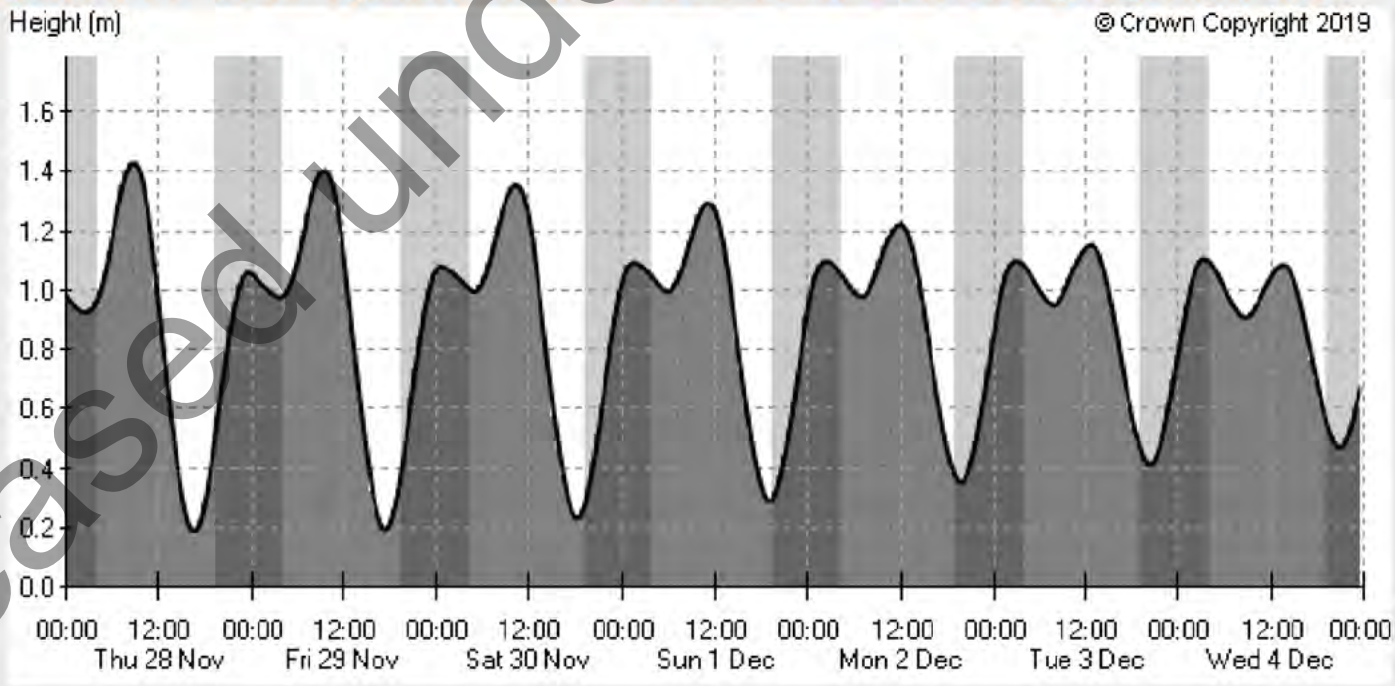
It is relatively deep, owing to the Derwent Glacier that was estimated to be up to 500m thick.[i] The river is highly stratified in its narrow upper reaches, and well-mixed in its broad, lower reaches.

In other words, the rise and fall of the tide generates strong turbulence in the estuary and causes partial mixing between the fresh water above and the salt water below. [ii]

The Derwent estuary is micro-tidal – ranging around 1 m – and extends approximately 60 km from the seaward end to the head of the estuary. [iii] Most of Tasmania experiences semi-diurnal tides - i.e., two tides a day.

The pattern is asymmetric, with one tide bigger than the other (except in the Bass Strait). This is called diurnal inequality and it is more pronounced at Springs than at Neaps, as can be seen in one week's tidal height prediction for Hobart. [iv]

A neap tide follows seven days after a spring tide. Like the spring tide, it's connected to the lunar phases and takes place after the first and third quarters of the moon. This is when the moon and sun are at right-angles to each other.



Hobart Tidal Range Example
'Won and Lost' in the Derwent – Tech Tide Marine Data

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[i] JOUR. Kiernan, Kevin. 1991/06/01. 157 EP – 166. Glacial history of the upper Derwent Valley, Tasmania. New Zealand Journal of Geology and Geophysics - N Z J GEOL GEOPHYS. Available at: https://www.researchgate.net/figure/age-of-the-phases-of-glaciation-in-the-Derwent-River-Valley_tbl1_248910782
[ii] Britannica, The Editors of Encyclopaedia. "estuary". Encyclopedia Britannica, 8 Aug. 2019, Available at: https://www.britannica.com/science/estuary Accessed 25 August 2022.
[iii] Derwent: Hydrodynamics and Sediments. Herzfeld, M., Parslow, J., Margvelashvili, N., Andrewartha, J., Sakov, P. (2005) Numerical hydrodynamic modelling of the Derwent Estuary. CSIRO Marine Research. 91p. Available at: https://research.csiro.au/cem/projects/completed-projects/tasmania/derwent/derwent-hydrodynamics-sediments/
[iv] 'Won and Lost' in the Derwent. Posted by Penny Haire on 6 December 2019. Available at: https://www.tidetechmarinedata.com/news/won-and-lost-in-the-derwent

The environment characteristics of the River Derwent

The sheltered waters of the estuary support unique habitat and species specifically adapted to life in this environment.

The recent 'State of the Derwent Estuary' Report Card (2021) highlighted several environmental issues affecting the Derwent estuary, including heavy metals and excessive nutrients.

The Derwent Estuary Program (DEP) is a partnership between state and local government and industry to make the Derwent a world class asset.

Stakeholder discussions with the DEP have indicated that they are particularly interested in the effects of new terminals and linkspans on the marine environment, ferry propulsion methods (e.g., diesel, hydrogen, electric) that have the potential to pollute the river, and the effects of wake on the shoreline environment (see Stakeholder Engagement). [1]



State of the Derwent Report Card 2021, Derwent Estuary Program

[1] State of the Derwent Report Card 2021. Available at: https://reportcard.derwentestuary.org.au/2021/

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02
EXISTING FERRY NETWORK

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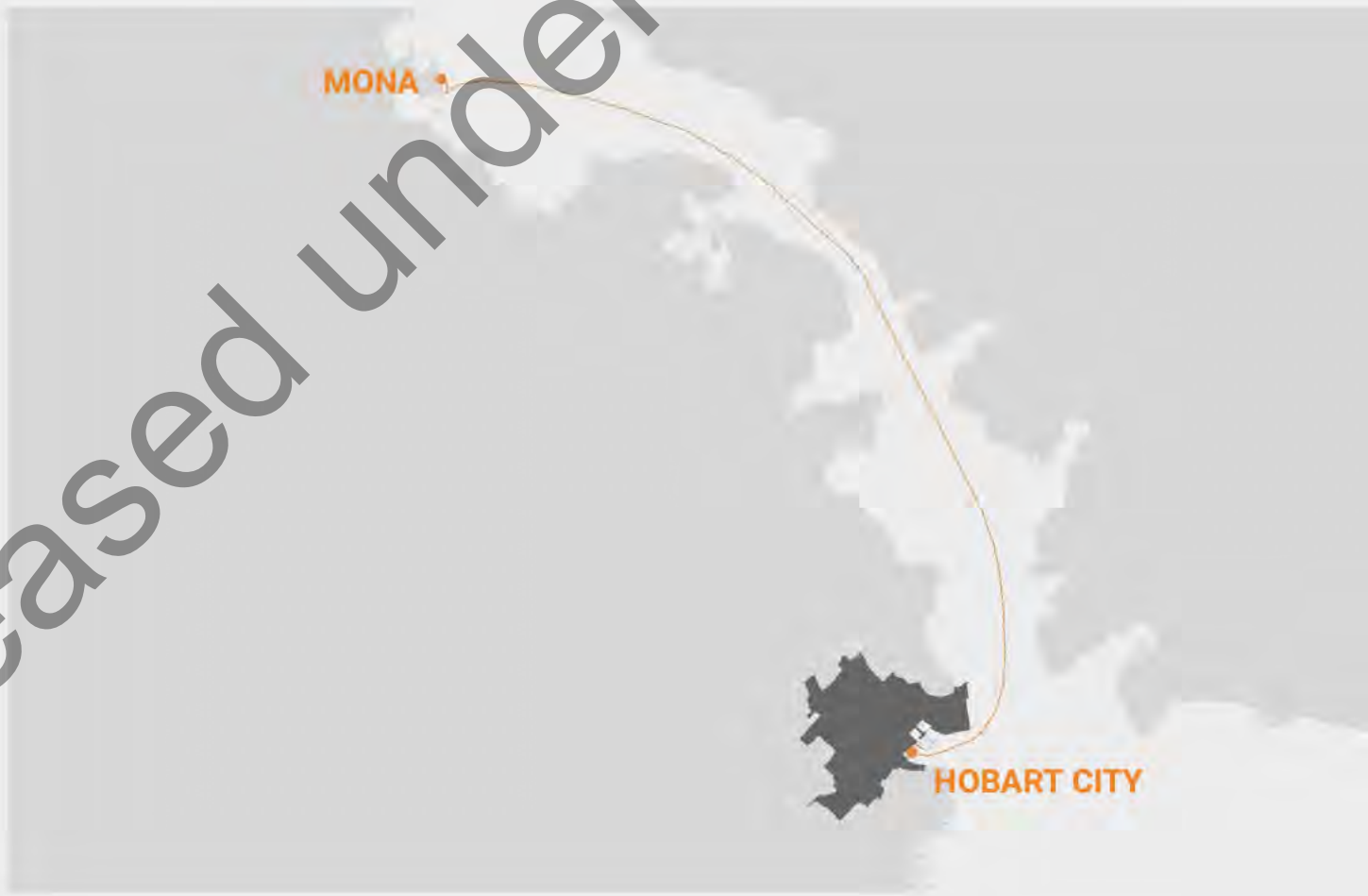
Museum of Old and New Art (MONA) Ferry

There are two main ferry services in Hobart, the privately owned and leisure-orientated CBD to Museum of Old and New Art (MONA), and the commuter-orientated Derwent Ferries from Bellerive to Central Business District (CBD).

The MONA Ferry
The MONA is located 11km north of Hobart. Two high-speed catamarans sail between Hobart's Brooke Street Pier and MONA, taking approximately 25 minutes each way.

A local operator of modern vessels
The service is operated by the Roche Brothers (Navigators). The company, under a variety of business names, has the longest history in Hobart of providing water-based commercial and tourist services having operated from Brooke Street Pier for 70 years.

Navigators deliver the service using the specially designed MONA ROMA 1 (MR-I). The 33.7 m catamaran is constructed in aluminum and runs two resiliently mounted engines. It carries 240 passengers at a service speed of 24.9 knots – noting that this leisure service has dining. The service also runs a second (MR-II), slightly smaller vessel (29 m).



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Museum of Old and New Art (MONA) Ferry

FARES AND TIMETABLE
A return ticket is $25 per person. A luxury 'Posh Pitt' service is also offered with complimentary food and drinks at $60 per person. Alternatively, a privately operated bus is offered from Brooke Street Pier at $17 one way or return.

MONA is open four days a week, Fridays to Mondays, 10am–5pm. The commensurate ferry departure times are shown in the table below.

There are 99 steps upon arrival at MONA, rendering the jetty inaccessible to mobility aids (wheelchairs, walking frames, scooters) or prams. However, a new tunnel under construction will connect MONA's basement entrance to the ferry terminal, eliminating the need to climb stairs for those with mobility issues. Buses to MONA presently provide that accessibility.

Departs Brooke Street Pier	Departs MONA
9:15 AM	9:45 AM
10:15 AM	10:45 AM
11:15 AM	11:45 AM
12:15 PM	12:45 PM
1:15 PM	1:45 PM
2:15 PM	3:00 PM
3:15 PM	4:00 PM
3:30 PM	5:00 PM
5:30 PM*	6:00 PM

*Summer/peak season only



Getting to MONA, MONA

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Bellerive to Hobart Commuter Service

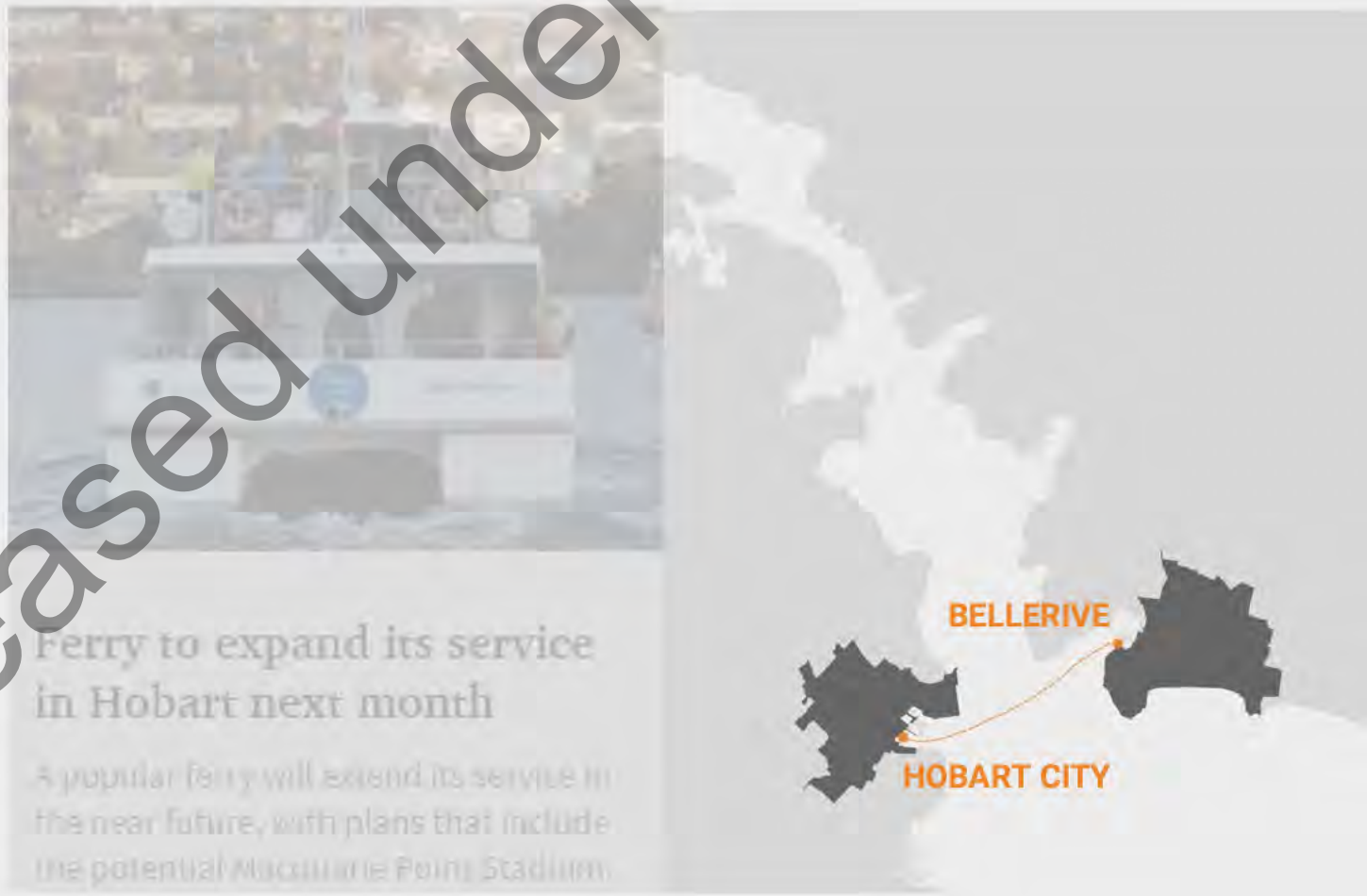
The Bellerive to Hobart commuter service has been in operation since 9 August 2021. Eight services run each weekday morning and seven in the evening. Saturday services have been running since end of October 2022

TIMETABLE

Morning services commence at 6:20am from Bellerive Pier with five runs to the city, the last arriving at 9:15am, with outward runs from Brooke Street Pier commencing from 7:20am. Each crossing takes around 15 minutes.

Monday – Friday	
Departs Bellerive Pier	Departs Brooke Street Pier
6:20 AM	7:20 AM
7:00 AM	8:00 AM
7:40 AM	8:40 AM
8:20 AM	3:50 PM
9:00 AM	4:30 PM
4:10 PM	5:10 PM
4:50 PM	5:50 PM

Saturday	
Departs Bellerive Pier	Departs Brooke Street Pier
9:30 AM	9:00 AM
10:30 AM	10:00 AM
11:30 AM	11:00 AM
12:30 PM	12:00 PM
2:00 PM	1:30 PM
3:00 PM	2:30 PM
4:00 PM	3:30 PM



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Bellerive to Hobart Commuter Service

PROMOTING SUSTAINABLE TRAVEL TO REDUCE TRAFFIC

The trial service was free for the first year to encourage uptake. The one-way fares are $3.50 for adults, $2.40 for concession and $1.80 for children and students. Using a Metro Greencard reduces the fare by 20%. Children under-5 travel for free and there are no extra charges for bikes or e-scooters.

The service seeks to attract primary patronage from passengers who choose to walk, cycle, or be dropped off at the pier.

New cycle path the 'missing link' for Derwent River ferry commuters

Commuters have flocked to a new cross-Derwent ferry service in its first week of operation, resulting in an immediate reduction in the number of cars on the city's streets (Mercury, 2021)

Two key ferry access routes are promoted:

Foreshore Trail–Rosny Hill Road
Distance: 4.23km
Time: 10-20 mins

Bellerive–Bastick Street–Foreshore Trail–Lindisfarne
Distance: 4.90km
Time: 15-25 mins

PROJECT SUCCESS

Services initially commenced as a one-year trial to establish demand. To date, over 140,000 passengers have used the service, with around 10,000 passengers using it during the February 2022 Ashes Test alone.

Due to the high uptake of this trial service, a second vessel was deployed from the end of November 2021 to run additional services, catering for an additional 400 passengers a day.

Given the popularity of the trial, the State Government has extended the service into its second year and committed an additional $19 million over four years to deliver an ongoing service between Hobart and Bellerive and provide appropriate infrastructure to support ferry operations.

In December 2021, a limited trial of Saturday services commenced to support summer access to the Hobart CBD. This was commissioned by the State Government and subsidised by the Hobart City Council. The additional service carrying an average of over 700 visitors each Saturday has since been re-introduced permanently from October 2022.



All you need to know about Hobart's new passenger ferry service, ABC

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Tourist services

There are numerous tourist ferry services/options operating out of Hobart.

This includes, but isn't limited to:

- Bruny Island Cruises
- Bruny Island Traveller
- Iron Pot Cruises
- Tasman Island Cruises
- Tasmanian Seafood Seduction
- Wineglass Bay Cruises

Several private charter boats are also available from Hobart, Bellerive, and Lindisfarne.

Passenger ferries support the use of these services. They promote visitors having a 'zero-car' holiday, while allowing both locals and visitors to see the Greater City from a different perspective. This in turn is likely to drive complimentary demand for other, alternative forms of accessing the water and the benefits that it can offer.

While unlikely a major risk, consultation and engagement with operators is essential to ensure any concerns are addressed.



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Rationale for Further Network Expansion

BUILDING ON PROJECT SUCCESS

Hobart commuter ferry services commenced as a one-year trial to establish demand. To date, over 185,000 passengers have used the service, with around 10,000 passengers using it during the Ashes Test alone. The State Government has committed to extend the trial to August 2023 and is in the process off extending the service into more areas.

DELIVERING PLACE BENEFITS

Greater Hobart is seeing rapid population, employment, and tourism growth which is increasing the demand for space and placing pressure on existing transport infrastructure. There is a need to support this demand, but in a manner that supports high quality of life and prosperity.

Like a metro system, ferries 'inject' life into a place by dropping passengers at a particular point. They help to create a cross-river network that can allow a more effective transport system that supports economic development and community integration.

CROSS-RIVER TRANSPORT RESILIENCE

Ferries provide a travel option directly into the city centre and between communities, creating an additional 'option' for commuters, especially in the case of a shock event.

ALIGNMENT WITH POLICY

Supporting more sustainable modes of travel is engrained in national, state, regional, and local strategy and policy documents. The Hobart City Deal commits the region to reducing congestion through establishing a Derwent Ferry Service.

CONNECTION TO COUNTRY

Tasmanian Aborigines consider geographical features all part of country, and the surrounding country nipaluna includes timtumili minanya (River Derwent).

In preparing the study, car has been taken to ensure that an expanded service is designed to respond to the surrounding city; transport and land use is integrated.

REDUCING ROAD CONGESTION

Ferries are competitive against other modes of transport where they provide a clear journey time advantage. Across Greater Hobart, a ferry network can assist in reducing road traffic congestion. Travel Demand Management are included in the project to further promote non-car travel. The Hobart City Deal targets a:

- 12.6 percentage point reduction in single occupant drivers on a regular commute
- 3.6 percentage point increase in people commuting via public transport.

CREATING A NETWORK EFFECT

International evidence is clear that public transport is most successful when it caters for all people partaking in a wide range of societal activities. A connected multi modal network providing connections – directly and via interaction – is critical to achieving this. In Hobart's case a modern ferry network fills a gap in public transport provision.

SUPPORTING DIVERSE TOURISM & EVENTS ACTIVATION

While not a core objective, additional public transport allows visitors to access more parts of Hobart easily. The additional services ran on Saturdays from October 2022, carrying an average of over 700 visitors each Saturday.

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03
EXPANDING THE NETWORK

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Hobart: A city with choic s to make

Hobart is in transition from being a slow growth city to one receiving the benefits of, and grappling with the challenges of, significant growth. While some of this is laid at the door of the pandemic effects and 'MONA effect' – which has definitely put Hobart on many travellers' bucket lists – the effect of this growth is felt far and wide across the Hobart metropolitan area and beyond.

The way we travel has the most significant impact – for good or otherwise – on climate change. In an era of raised climate change consciousness, any big moves in a growing city can and do have big benefits but also big potential climate impacts. A city in transition needs bold moves to steer it in a new direction.

An expanded ferry network is a catalyst for moving towards transport sustainability. The opportunity presented by the Greater Hobart City Deal, associated infrastructure upgrades, Macquarie Point redevelopment, and UTAS relocation, will help propel Greater Hobart in a more positive direction and actively promote more sustainable travel choices.

Hobart is the single largest travel generator in the region, delivering an expanded ferry service will achieve economies of scale and viability for public and active transport infrastructure and services, thereby creating a virtuous circle for the entire region.

With increasing global competition for both foreign direct investment (FDI) and visitors, promotion of highly accessible transport networks are becoming increasingly important in city branding strategies.

With that in mind, it is critical that the management, operation, and promotion of an expanded ferry network is designed to enhance the transport network, but also to maximise economic development and tourism opportunities

As boldly demonstrated by MONA, high-profile and highly-visible vessels can pay a pivotal role in promoting place. While an expanded ferry network on the Derwent should be focused on substance, style should not be ignored.

In Brisbane, for example, the CityCat catamarans are designed to provide a comfortable on-board experience. Large external decks create a viewing platform for the City's waterfront, while quality customer service is offered by on-board staff.

In London, branding and marketing is kept consistent, drawing on the imagery and iconography of the City's famous underground and busses. This not only allows consistency of travel between modes but promotes a unified and recognisable brand internationally.

Building on this mind-set, the following section presents a summary of international case studies, highlighting how places across the world deliver successful ferry services across their waterways. It draws upon our project-based knowledge of other ferry networks around the world combined with a web-based review of urban ferry networks.

The following case studies are summarised:

- Caledonian MacBrayne ('CalMac'), Clyde & Hebrides, Scotland, United Kingdom
- Transport for London, London, England, United Kingdom
- Hornblower, New York, United States of America
- Transdev, Sydney, Australia
- BC Ferries, British Columbia, Canada
- Mersey Ferries, Liverpool, England, United Kingdom
- HADAG, Hamburg, Germany

The following themes are considered within each case study:

- Business Proposition
- Procurement and Funding Approach
- Vessels
- Landside Infrastructure
- Fares
- Branding
- Public Transport Integration.

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Ferry operating model: a nearly universal move towards integrating ferries into a regions public transport network

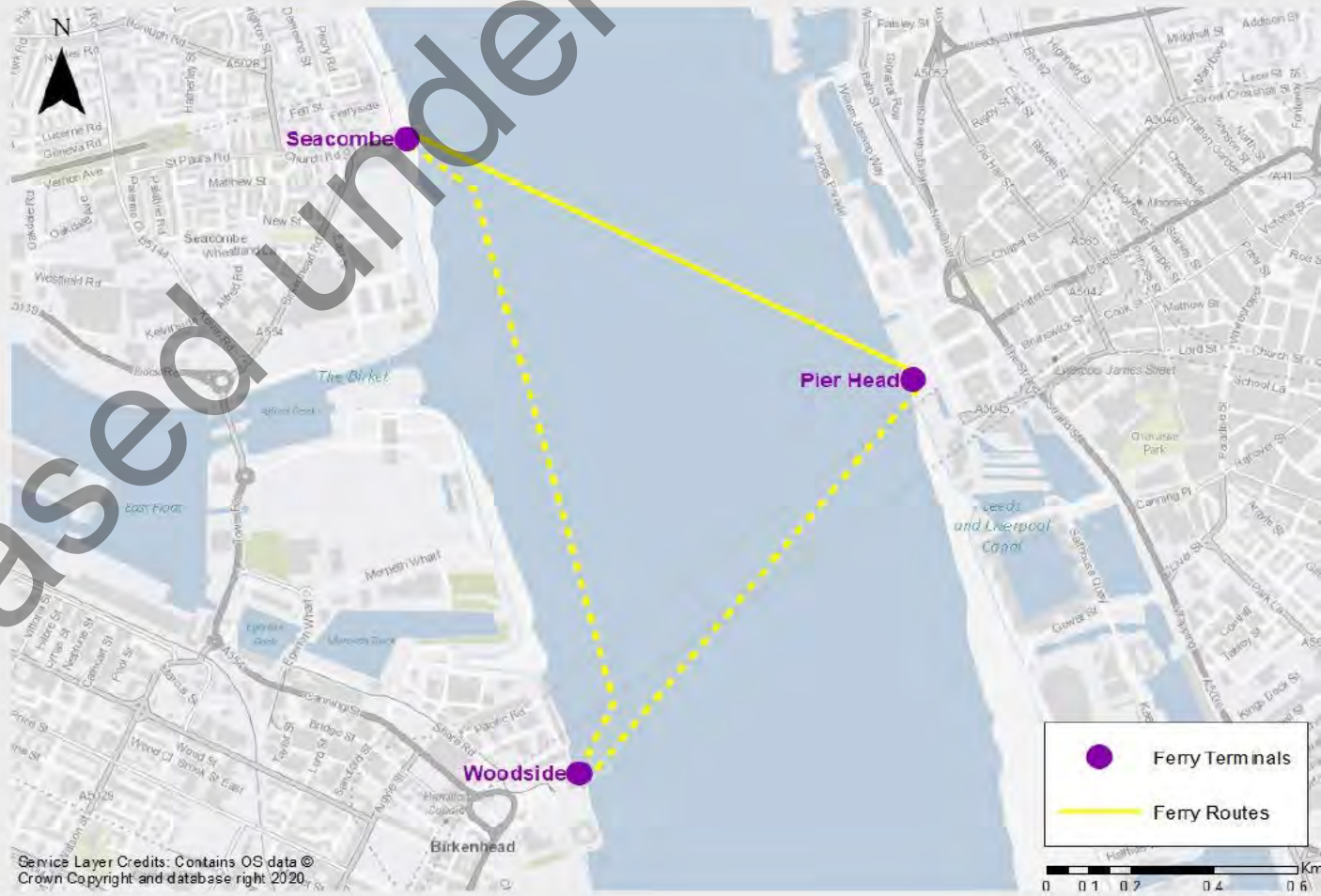
Across almost all case studies, the business proposition is generally limited to the carriage of passengers - and on 'roll on – roll off' (Ro-Ro) routes vehicles and freight - from quay-to-quay in line with a set timetable.

Whilst several operators previously had highly vertically integrated models (for example providing onward bus transport or freight haulage), this is uncommon in the present day and has been replaced with commercial, contracted or publicly provided services.

Several operators use under-utilised vessels at off-peak periods to provide commercial and non-scheduled tourist services.

Mersey Ferries (Liverpool, UK) is an exception to the above. Whilst their core transport function is the carriage of foot passengers between Seacombe and Pier Head in Liverpool, the ferry service is part of a wider tourism product, where tourist 'River Explorer' cruises are part of the operating day, whilst the company directly runs a tourist attraction and sells combined ferry and city attraction tickets.

This has been highly beneficial in supporting and developing the tourism market in Liverpool.



Mersey Ferries Route Map

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Procurement, Funding and Delivery Approach

Even in large and densely populated cities such as London, New York and Sydney, the public sector plays a major role in specifying, procuring, managing and, in some cases, delivering ferry services. There are several reasons for this.

In many cases, historic ferry networks had retrenched or disappeared altogether as a result of improved land-based transport, and in particular the provision of bridges and tunnels (e.g., London, New York and Liverpool).

In such cases, the restoration of ferry services has generally been driven by a policy initiative, with local / regional / national government having to establish a procurement & regulatory framework, provide seed capital and, in some cases, facilitate integration within a wider public transport network.

The public sector may wish to limit the number of operators in the market, allowing one or a small number of firms to become established and focused on quality & price rather than just price.

In most cases, ferry services require a subsidy and, for this to be delivered, the public sector either must directly operate services (e.g., Liverpool) or establish a contractual framework within which a private sector provider will operate a specified service for a specified fee (e.g., New York).

Where a ferry service is set-up to or operates within an urban or regional transport network, the public sector will frequently intervene to ensure consistent branding, marketing, ticketing integration (e.g., London) and, in some cases, to set fares (e.g., Hamburg, New York and Sydney).

With a few exceptions, a common theme across almost all the case studies is that urban ferry networks generally require to be subsidised.

There are various reasons for this, and they vary by network, but these include:

- limited markets;
- fares set at a commercial level would be uncompetitive with other mass transit modes;
- fares are determined by the public sector and set below market rates to achieve wider societal or economic objectives;
- the use of fuel intensive high-speed vessels to ensure journey time competitiveness; and / or
- seasonality.

An expanded ferry network across the Greater Hobart City area should help create an accessible network that enables and encourages both direct and multi-modal connections. Importantly it should, as the existing service does, be integrated into active travel routes and bus networks.

While the Department of State Growth ultimately controls the bus, existing ferry network, and any future expansion of either, operational synergies between the modes should be explored in-depth to ensure that communities (and customers) receive the best possible service. This should include, but not be limited to:

- Route design
- Timetabling
- Pricing
- Ticket integration
- Staffing
- Procurement
- Back-office functions; and
- Branding.

With this in mind, it may be appropriate for a single operator to manage the entire network and its integration. It is recommended that this approach, and other operational methods, are quantitatively, qualitatively, and objectively scored as part of a business case for the expanded network.

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Vessels: several options for meeting demand requirements

There is a global trend across the ferry industry to work towards vessel standardisation as far as is reasonably possible. This reduces design fees (and thus vessel build costs) and offers a range of synergies in terms of crewing, operation and maintenance.

Standardisation will either be across the fleet or classes within a fleet. Crucially, it also ensures that consistent landside infrastructure can be built and maintained. Bespoke vessels are only typically procured where there is no other reasonable alternative, the Small Isles in Scotland for example.

Where services are tendered, the examples reviewed in this study suggest that it is common for the public sector to retain control of the vessels and lease them to the operator. This can either entail direct ownership (TfNSW in Sydney), ownership by an agency (Caledonian Maritime Assets Ltd in Scotland) or an end-of-contract transfer of assets clause for a privately owned fleet (New York).

The latter approach does however typically require an exemption, for example in Europe, as it is considered to restrict competition through not allowing operators to bring or build their own vessels.

There are a wide range of procurement and funding approaches used to purchase new vessels. These range from direct public sector funding to operating, finance and shipbuilder leases.

Larger operators will typically contract out drydocking and maintenance, CalMac Ferries for example. However, the case study evidence suggests that urban ferry operators or their procuring body may secure their own maintenance facility. This may in part be because the vessels are not certified for operation outside their home waters and thus choice becomes limited.

In London, Thames Clippers has recently completed construction of an in-house maintenance facility at Tilbury; in New York, NYC Ferries has a maintenance facility at Brooklyn Navy Yard; and in Sydney, TfNSW continues to own the Balmain shipyard facility, which is leased to the operator of the day.

On the existing trial service, the Navigators own the vessel and are contracted by DSG. At the time of this study (Q3 2022), procurement is underway to select a permanent future operator for the Bellerive to CBD service. Again, operators will be expected to bring vessel(s) from an existing fleet to service this route and any expansion of the service across the Derwent.

This study contains an analysis of potential vessels in the following sections that could service an expanded ferry network across the Derwent, building on the success of the Excella (pictured).



Derwent River ferry trial, Tasmanian Government

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Landside Infrastructure: critical infrastructure and an opportunity to create a legible public transport network

Whilst the approach to vessel ownership in publicly supported services varies, landside infrastructure is in almost all cases owned by either the contracting authority (e.g., New York, Sydney, Liverpool etc.), a third party such as a port authority to which commercial dues are paid (e.g., Hamburg) or a combination of the two (e.g., Clyde & Hebrides and London).

This prevents a single dominant operator creating a barrier to entry and facilitates competition. Agreements are typically established to safeguard the interests of a scheduled operator where there are multiple users of a pier.

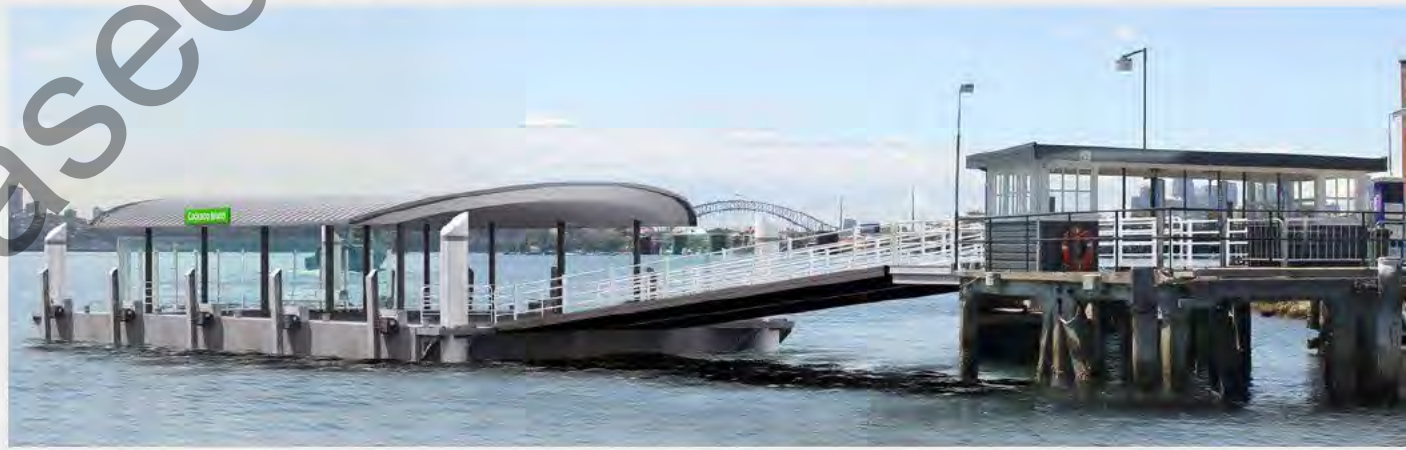
The one exception to the above is in British Columbia, where the ferry service operates as a single integrated operation. However, this is done under contract and controlled by a regulator, ensuring that there are no anti-competitive practices.

As with vessels, there has been a concerted effort to standardise landside infrastructure. In urban ferry networks such as London, New York, Sydney and Hamburg, this typically consists of a floating terminal arrangement with a connecting footbridge to shore. Access to the ferry is via gangway.

In most cases, the operation of a network by a single operator – contracted or otherwise – allows the schedule to be carefully planned to avoid berth conflicts. Hub points like Circular Quay in Sydney are clearly laid out with allocated berths for specific routes.

The issue of berth congestion was not widely reported in the other case studies, although Sydney has a high-volume terminus point at Circular Quay. It was however noted in various case studies that it is the process of berthing, disembarking, embarking and departure that places a cap on ferry operations as dwell times are significantly greater than for a train or bus for example.

Workarounds have included double-deck gangways (Sydney) and operating with vessels that do not need to tie-up when embarking and disembarking passengers (Hamburg). However, such solutions come at a cost and are also dependent on the operating regulations with which the operator must comply.



Cockatoo Island Wharf Upgrade

Coordination between Councils (landside infrastructure) and DSG (vessels) is highly recommended to avoid any operational service risk.

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Setting fares that align to policy to reduce congestion and promote mode shift

The approach to setting fares and their absolute level is a policy matter, and thus the case studies identified a wide range of fares systems being used. These fare systems generally reflect the objectives of the public authority and their rationale for intervening in the ferry market in the first place.

At one end of the scale, fares are set to reflect the cost of operation and are typically higher than bus, rail, metro etc. fares for an equivalent distance.

Ferries typically have a lower capacity and frequency compared to other mass transit modes, whilst the requirement in many cases to use fast catamaran style vessels and pay commercial berthing dues means that water-borne transport is rarely cost-competitive with land-based public transport.

Fares can be set to reflect the wider public transport, social and economic aspirations of a contracting authority.

On the Clyde & Hebrides network in Scotland, the government has moved away from a model focused on partial cost recovery to a road equivalent tariff (RET) system, equating the cost of travel by ferry to the equivalent cost of travelling the same distance by road (albeit there is a 'flat' component to the fare aimed at cost recovery).

This model has significantly grown patronage but has also significantly increased the subsidy. The RET model was popularised in Scandinavia and in some countries, Sweden for example, certain ferry services are viewed as an extension of the road network and are thus free of charge (funded through general transport taxation).

In summary fares for ferries are moving towards reflecting the wider public transport network rather than covering cost of infrastructure.

Fare structure designed to support mode shift

It is recommended that an expanded network considers **offering free fares but charge for parking** to help induce demand, reduce traffic congestion, and meet regional climate objectives. As noted earlier in the study, the Derwent Ferry initially operated as a free service before fares, comparable to bus fares, were introduced. Charging for parking at the same rate as a ferry enables cost recovery but also reduces demand for parking and promotes walking / cycling to terminals.

While detailed patronage figures for the existing service have not been made available for this study, data for Sydney shows that fare-free ferry services drove a 123% increase in mid-week demand and a 202% increase in weekend demand.



GreenCard, MetroTAS

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Branding: creates a memorable impression and allows people to know what o expect

A key finding across all studies is that the branding and marketing of ferry services is important in attracting casual users / tourists.

In many cases, the public sector / contracting authority will establish a common logo and branding for ferry services. For example, in London, the largely commercial Thames Clippers services is promoted under the brand of London River Services, which uses the same iconography as all other London modes of transport.

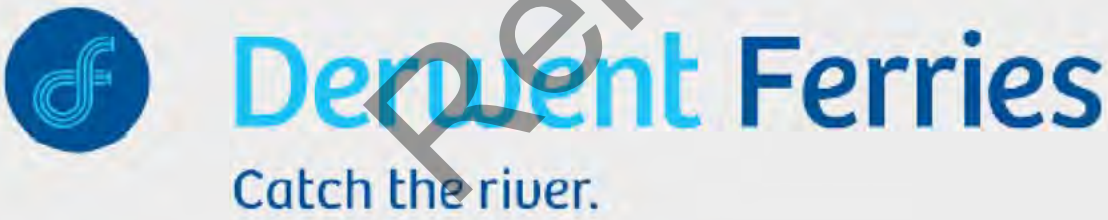
This branding approach is also used in Sydney and Hamburg.

This common branding is extended through the incorporation of ferry services in city transport maps, journey planners, websites etc. The most integrated example identified is in Hamburg, where the ferry service is an integral component of the public transport network.

A strong and well-established brand is also essential in creating customer confidence and attracting visitors to the ferry service.

An obvious example of this is the famous Mersey Ferries in Liverpool, but also the requirement to use the Caledonian MacBrayne brand name on ferries in the Clyde & Hebrides services, irrespective of the company actually in possession of the contract.

There are opportunities to raise revenue through selling the sponsorship rights for ferry services. From the case studies, the most obvious example of this is Thames Clippers, which has gone through several iterations of rights sales and is currently branded as Uber Boat by Thames Clippers.





Characteristic branding in London, with iconic roundels and clear, common branding across public transport modes. Transport for London.

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Public Transport Integration is critical

As noted in the branding section above, the public sector is increasingly integrating ferry services into wider urban transport networks through their inclusion on mapping, journey planners etc.

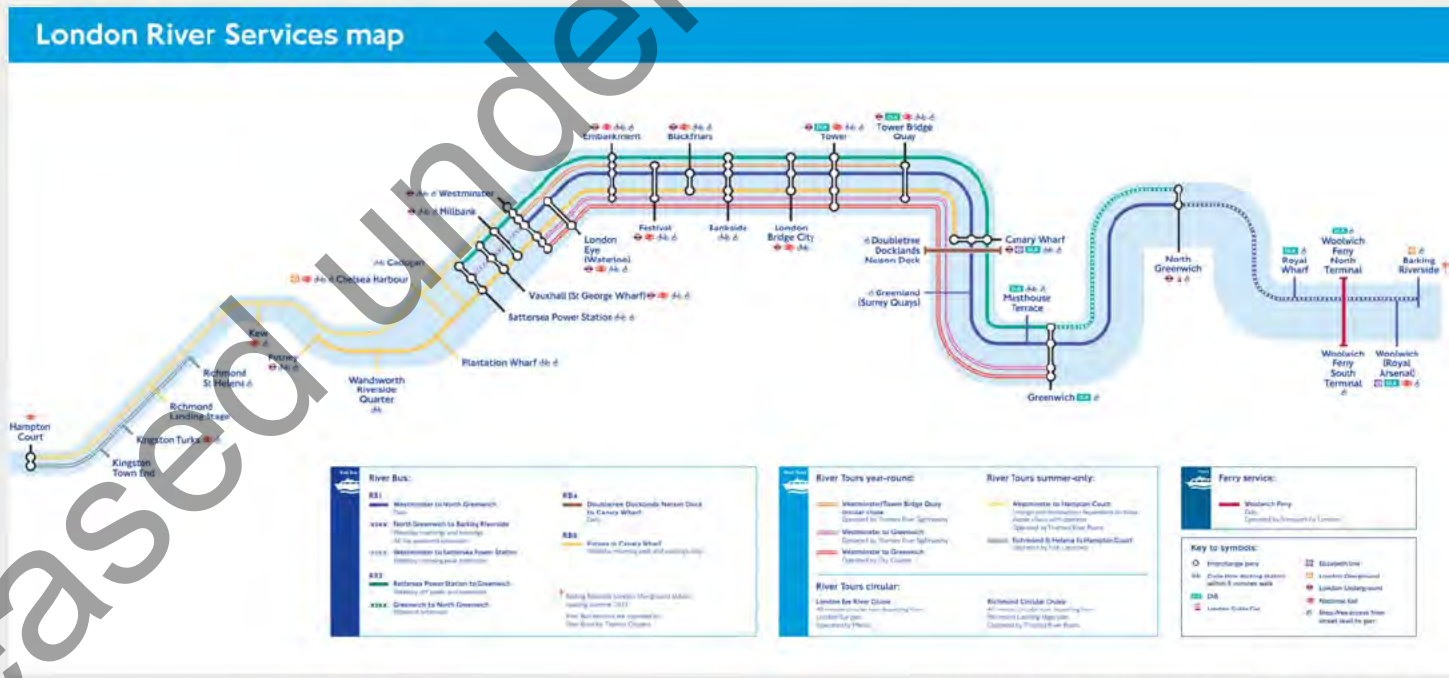
This is particularly the case in London, Sydney and Hamburg where the ferry service is presented as an integral component of the public transport network.

These networks have however moved beyond branding and have worked towards achieving integrated ticketing.

This ranges from ticket acceptance with discounts (London) through to fully integrated ticketing with 'complex capping' , such as with the Opal Card in Sydney.

The most highly integrated example identified is in Hamburg, where there is actually no discrete ferry fare, rather it is part of the citywide zonal fare structure.

Whilst several of the identified ferry operators have their own fares and ticketing system, many also participate in city / area wide ticketing schemes. These include daily, weekly, monthly and annual inter-modal tickets for one or more zones / areas within a city.



London River Services map, showing integration with nearby public transport, Transport for London

To create an attractive network and meet the objectives set, a fare and ticketing structure (if any) should be simple and integrated with other services. It is therefore recommended that this is explored further a part of an expanded network.

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03
PROPOSED LOCATIONS

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Possible Commuter Ferry Markets

Existing ferry terminals are located at:

- Hobart CBD
- Bellerive

The Greater Hobart Councils have identified the following prospective locations for new terminals, in addition to the existing terminals:

- Wilkinsons Point / MyState Bank Arena
- Lindisfarne
- Sandy Bay (Wrest Point)
- Regatta Ground (see further detail at right)

There are also options to extend services to:

- Geilston Bay
- Kingston Beach

This study considers the rationale and evidence base behind each of these proposed locations nominated by Councils.

Proposed Arts, Entertainment and Sports Precinct (Regatta Ground)

The Tasmanian Government recently announced Macquarie Point as the preferred location for a new Arts, Entertainment and Sports Precinct in Hobart, the centrepiece of which will be a new multi-purpose stadium. The Government is also considering how the adjacent Regatta Point fits into this broader precinct plan.

This creates the opportunity for possible terminal location at the Regatta Grounds to service the site (c. 1km away).

As further details about this proposal are progressed, it will be important to consider how the ferry network can be integrated with this precinct to deliver optimal benefits for commuters (see Stakeholder Engagement).

The following section considers each location in greater detail.



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Possible Commuter Ferry Markets













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Lindisfarne

An alternative to the bridge

- **Location:** Situated on the eastern shores, Lindisfarne is well placed to be serviced by a ferry network as it provides an alternative to people travelling by car over the Tasman bridge. **Any mode shift decreases bridge congestion.**
- **Berthing Location(s)^:** The western side of the bay (pictured) has two key locations that could support a new terminal with adapted infrastructure:
    - Lindisfarne Sailing Club
    - Motor Yacht Club of Tasmania.
- **Maritime:** The proximity of the proposed location would allow a quick entrance/exit. There are several moorings that would require relocation / reshuffling.
- **Public Transport:** There are four bus routes that operate along the adjacent East Derwent Highway (800-900m away), stopping at two bus stops located within 4-5 min of walking distance of the location. Lindisfarne is likely to be a local, active travel, and drop off location, as its unlikely that passengers would disembark from a bus en-route to the City to use the service.
- **Active Modes:** It is well served by the existing networks as well as the shared use path along the Esplanade and Ford Parade.
- **Demand:** Lindisfarne compliments Geilston Bay as people that want to park should drive to Geilston Bay and not Lindisfarne. Designated drop-off zones should be provided at Lindisfarne but no parking.
- **Integration with land use:** A stop here supports the objective for Lindisfarne to retain its traditional strip shopping centre function*

Connection into town



A small number of mooring need to be moved



Current facilities could be upgraded to active spaces



Engagement with businesses required with a view to working towards a 'win-win' outcome



Clarence City Council, Nearmap, and project photos

^Note, no consultation has occurred with these organisations yet.
*Tasmanian Planning Scheme – Clarence LPS : CLA-S18.3.1 Local Area Objectives

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Sandy Bay (Wrest Point)

Enabling local connections

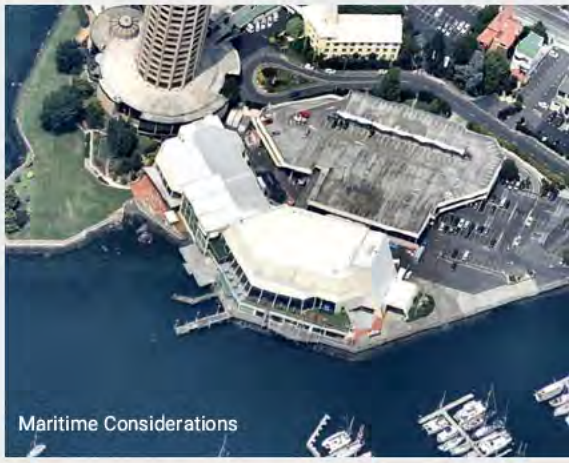
- **Location:** Sandy Bay is located immediately south of the CBD and Battery Point. While it is only a 10-minute drive or 17-minute bus ride into the CBD, a ferry service would take just 6 minutes and minimise local traffic congestion heading into the CBD. It also offers attractive access to a key leisure destination.
- **Berthing Location:** Wrest Point Casino at Sandy Bay is positioned to support berthing through use of the existing foreshore walkway and the Wrest Point jetty. Both the jetty and foreshore are on reclaimed land owned by the crown on a long lease to the Federal Group (see Stakeholder Engagement).
- **Maritime:** The water between Macquarie Point (edge of the CBD) and Sandy Bay is highly active. Marinas, jetties and associated sailing clubs host a range of water activities from training to racing that a new ferry route would have to managed (see Stakeholder Engagement).
- **Active Travel:** The location is well served by the existing on-road footpath network as well as the shared use path along Sandy Bay Road. The closest pedestrian crossing facilities are c.250m from the jetty, as the Sandy Bay Road / Drysdale Avenue / Nelson Road intersection.
- **Public Transport:** There are six bus routes that operate along Sandy Bay Road adjacent to the location, stopping at two bus stops located on Sandy Bay Road within 5-7 min of walking distance. Wrest Point is likely to be a local, active travel, and drop off location, as its unlikely that passengers would disembark from a bus en-route to the City to use the service.
- **Demand:** Sandy Bay is currently home to the University of Tasmania (UTAS). However, the University is proposing to move their campus to a spread of five precincts across the CBD. Mixed-use residential led redevelopment of the site will stimulate a change in travel patterns between Sandy Bay and the CBD, with the UTAS advocating for ferries as part of its connectivity vision. There are other local facilities including The Hutchins School, Mt Carmel College , and a large nearby residential catchment.



Commuter and Visitor Destination



Maritime Considerations



Maritime Considerations

Hobart City Council, Tasmania

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Sandy Bay (UTAS)

Enabling local connections

Sandy Bay is a relatively affluent suburb in Hobart, located immediately south of the CBD and Battery Point. The suburb is only a 10-minute drive or 17-minute bus ride into the CBD.

Sandy Bay is home to the University of Tasmania (UTAS). However, the University is proposing to move their campus to a spread of five precincts across the CBD as shown adjacent.

Original plans for redevelopment of the existing Sandy Bay Campus describe a new neighbourhood of 2,700 homes, a hotel, and retail and community facilities. However, this is subject to change.

Should the University move, and redevelopment of the exiting site take place, there is expected to be a change in travel patterns between Sandy Bay and the CBD.

City Campus: To mitigate the impact of many students and staff travelling into the CBD by private car, the City's public transport system needs to be fast, reliable, and affordable. This in turn opens the opportunity for alternative means of public transport such as an expanded ferry service.

Sandy Bay: Redevelopment of the existing campus for mixed-use residential would see a related population growth that could drive further demand for access to good public transport services.

As part of the University's vision for the redevelopment they have committed to the following objective:

"Prioritise the use of sustainable transport modes such as biking, walking, buses, ferries, and micro-transport (e-bikes and e-scooters), considering both movement within the Site and connections beyond, including the CBD."

The objective provides a clear indication of the University's intention to explore an expanded ferry network that would support their redevelopment vision (See Consultation).





UTAS City Centre Precinct Plan
Source: UTAS



UTAS Sandy Bay Redevelopment
Source: Tasmanian Times 22 July 2021

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Regatta Ground

Multi-modal access to events

- **Location:** The Hobart Regatta Grounds is a sporting and events venue located in the Queens Domain, Hobart. The Grounds were established in 1827, making them the oldest sporting venue in Tasmania. The first regatta was held on the Derwent River on 12 February 1827, and the event has been held annually ever since.
- **Macquarie Point Stadium:** A new 23,000-seat multi-purpose stadium is proposed at Macquarie Point. The stadium is being built as part of a wider urban renewal project at Macquarie Point, which is also set to include a new convention center, a hotel, and several residential and commercial developments. The new stadium is scheduled to be completed in 2025 and will be the home of the Tasmanian AFL team. The stadium will also be used for a variety of other events, including concerts, rugby union matches, and soccer matches. A new ferry terminal would help to manage event-based travel demand while providing greater access options to Macquarie Point.
- **Berthing Location:** There are two jetties and a boat ramp used for mooring boats and for providing access to the water for events. There is the Domain Jetty, a concrete jetty would a lower landing platform. The maritime conditions around the Regatta Ground are generally calm.
- **Active Travel:** The grounds are located on the banks of the Derwent River and are easily accessible by bike or on foot. The main cycle network that connects to the Regatta Grounds is the Tasman Peninsula Cycleway. The most popular walking path is the Queens Domain Walking Track. The Queens Domain Walking Track is a 2.5-kilometer walking track that runs through the Queens Domain, a large park that is located next to the Regatta Grounds.
- **Demand:** Demand for using this location is generally limited to events associated with planned stadium. There may be some demand from the planned commercial activity at Macquarie Point.

Existing jetty infrastructure



Historical function







Hobart City Council, Nearmap, and project photos

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Wilkinsons Point

Staged development with a park and sail option

- **Location:** As a significant events destination with planned retail development and a sizeable driving catchment, Wilkinsons Point / MyState Bank Arena is well placed to become part of the Derwent ferry network. There are existing Council owned buildings on the tip of the site, including toilets and the Glenorchy Art and Sculpture Park (GASP) platform.
- **Berthing Location(s):** Three potential berthing locations in the form of three existing jetties protrude out of the point. The most easterly jetty (circled and pictured) is the most modern, useable and thus likely berthing location.
- **Maritime:** Depth alongside is around 5-6ft which could be an issue at low tide. There are no moorings at Wilkinsons Point minimizing the cost of opening the location.
- **Public Transport:** The location is not well served by the bus network. There are no bus stops within <1km.
- **Active Travel:** The Montrose Boardwalk along the western coast of the peninsula provides the only existing dedicated walking and cycling infrastructure (pictured).
- **Demand:** The location offers a significant opportunity for the wider Glenorchy area and beyond. While the site should prioritise access via active travel modes, the Brooker Highway could enable a larger catchment area while the brownfield land offers the potential for car-parking, possibly through hardstand in the short-term (see Stakeholder Engagement). As such, a 'park & sail' option could be considered at the site for those traversing the Highway and not wanting to take their car to the city.

Park and Sail: Driving from Montrose (main population centre) to the CBD at peak hour takes up to 25 minutes with parking costs of up to $29 per day. A ferry service would take 27 minutes to reach CBD and could be free of charge inclusive of parking at Wilkinsons Point. (see p.44)

Prime Development Potential



Existing Infrastructure



Accessible Waterfront



Maritime Considerations



Glenorchy City Council, Tasmania

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Longer term: Geilston Bay

Opportunity for development with a park & sail option

- **Location:** Geilston Bay is a natural haven to the north of Lindisfarne near the East Derwent Highway. It is bounded by a large housing scheme to the south, playing fields to the east, and a small collection of houses and the East Risdon Reserve to the north.
- **Berthing Location(s):** It is serviced very well regarding existing infrastructure that could house a ferry service. Three potential berthing locations exist, a small wharf and two small jetties (pictured) (see Marine Civil).
- **Maritime:** Significant number of swing moorings with indefinite leases would require relocation and reconfiguration to enable safe ferry operation. The bay is shallow, with a range of around 6-7ft in depth and speed would be restricted to 5 knots in the bay, impacting travel time.
- **Active Travel:** Accessible via the Clarence Foreshore Trail, but limited footpath provision and the East Derwent Highway act as active travel barriers.
- **Demand:** The location offers a significant opportunity for the eastern shores. The East Derwent Highway enables a large drive catchment area, while a large car park under the management of Clarence City Council, is adjacent to berthing location. While the location should prioritise and cater for active travel users, it could be possible to consider a 'park & sail', capturing potential users that don't want to take their cars to the city.

Park and Sail: Driving from Risdon Vale (main population centre) to the CBD at peak hour takes up to 25 minutes with parking costs of up to $29 per day. A ferry service would take 26 minutes to reach the CBD and could be free of charge inclusive of parking at Geilston Bay (see p.44)

Park and Sail Consideration



Maritime Considerations



Existing Infrastructure



Potential Mobility Hub



Clarence City Council, Nearmap

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Longer term: Kingston Beach

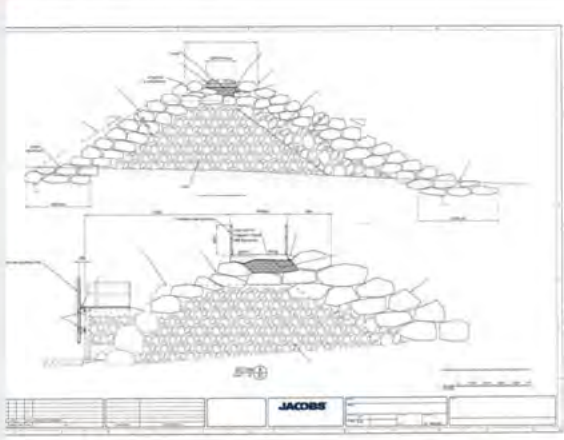
Creating a public transport solution

- **Location:** Kingston Beach is 13.5km south by road from Hobart CBD. The beach itself is 2.0km from Kingston town. While the area is well connected to the CBD, planned Southern Outlet works reducing traffic to one lane northbound in early 2023, is likely to cause significant congestion for several years. A ferry service would help to alleviate congestion issues.
- **Berthing Location:** The southern breakwater at the Kingston Beach Sailing Club is a prime berthing location for a ferry service. Kingborough Council, in partnership with Marine and Safety Tasmania (MAST), have plans to reinforce the breakwater and provide an accessible walkway on top (see drawings adjacent). The work is expected to commence in the next 6-12 months.
- **Public Transport:** there is the ppossibility of public transport connections to Kingston Beach i.e., Roslyn Avenue / Mount Royal Road / Beach Road when travelling from Blackman's Bay.
- **Maritime:** There are no moorings affecting the berthing location. A key issue will be the type of vessel that is sufficient to handle the wave climate and prevailing winds along the route (see Vessels). A wave climate study conducted to support this research indicates that there would have to be a significantly larger breakwater, than currently planned, to support a terminal at this location (see Maritime Civil).
- **Demand:** The location has a significant walking, cycling, and driving catchment. Planned Southern Outlet will be supported by park and ride facilities at Kingborough and Huntingfield. However, the works are likely to require further supporting modes, such as a ferry service, to supplement commuter journeys to and from Hobart CBD. The park and ride facilities may support the planned works and compliment a future ferry service at Kingston Beach.

Commuter and Visitor Destination



Maritime Considerations







Kingborough Council, Tasmania

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04
DEMAND AND ROUTE ASSESSMENT

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Routes: creating an integrated network

Whilst ferry services can be time-competitive against land-based transport, a combination of high infrastructure & operational costs; low passenger capacity when compared to other mass transit modes; limited catchments in which they are competitive against other modes; and, in some instances, seasonality means that urban ferry services are rarely provided without significant subsidies.

Beyond leisure journeys, ferries are competitive against other modes of transport where they provide a clear journey time advantage, particularly when they are generally more expensive.

Whilst there are some examples such as on the River Thames in London (where public transport is congested and fares are a premium), public intervention has still typically been required to (re)establish a ferry network and provide kickstart funding for routes.

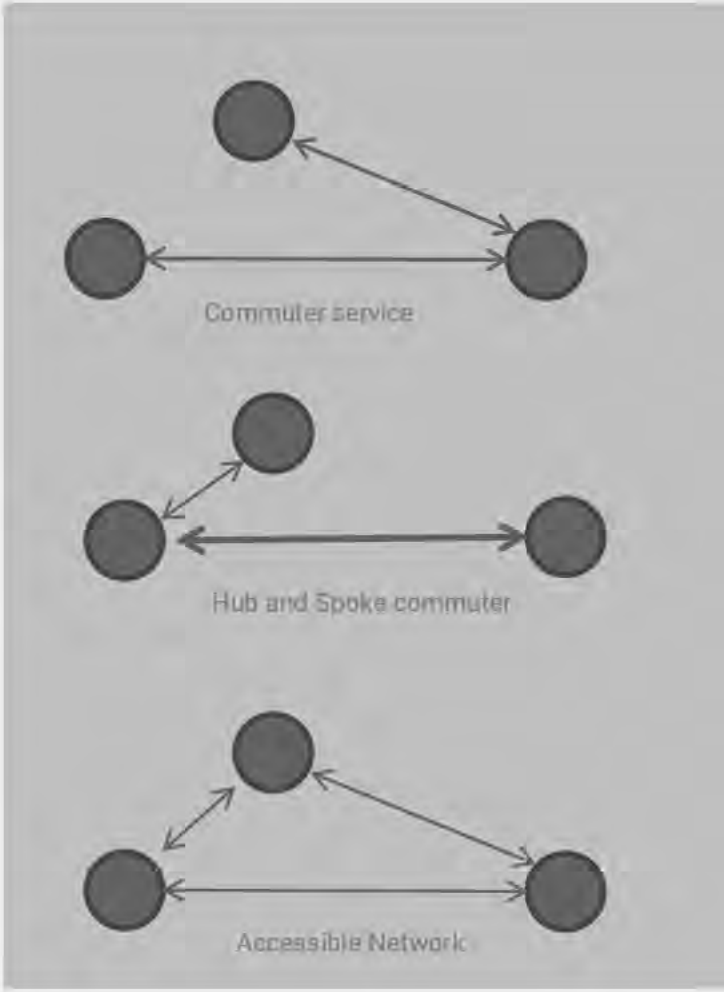
Ferries are generally more spacious / comfortable than other forms of public transport, but little evidence suggests that this alone is enough to attract ridership.

Point-to-point services are preferred by users to multi-stop services, but there is a trade-off for the operator in terms of lost demand and revenue.

In peak periods, some operators will:

- offer shorter versions of their main routes to focus on key areas of demand;
- omit stops where there is no demand for boarding / alighting; and / or
- contract separate fast ferry services using high-speed catamaran vessels – for example, the Manly fast ferry in Sydney is contracted by Transport for New South Wales (TfNSW) – albeit it runs without subsidy – and runs alongside the subsidised Sydney Ferries service from Manly also contracted by TfNSW.

On the Clyde & Hebrides network (and elsewhere in Scotland) a handful of sailings that are typically low demand are 'request only' and will not operate unless booked.



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Underling Principles: Applying network theory in public transport

Creating the Network Effect

Ferries should be considered as playing a role in an integrated mass transport system, rather than standalone services.

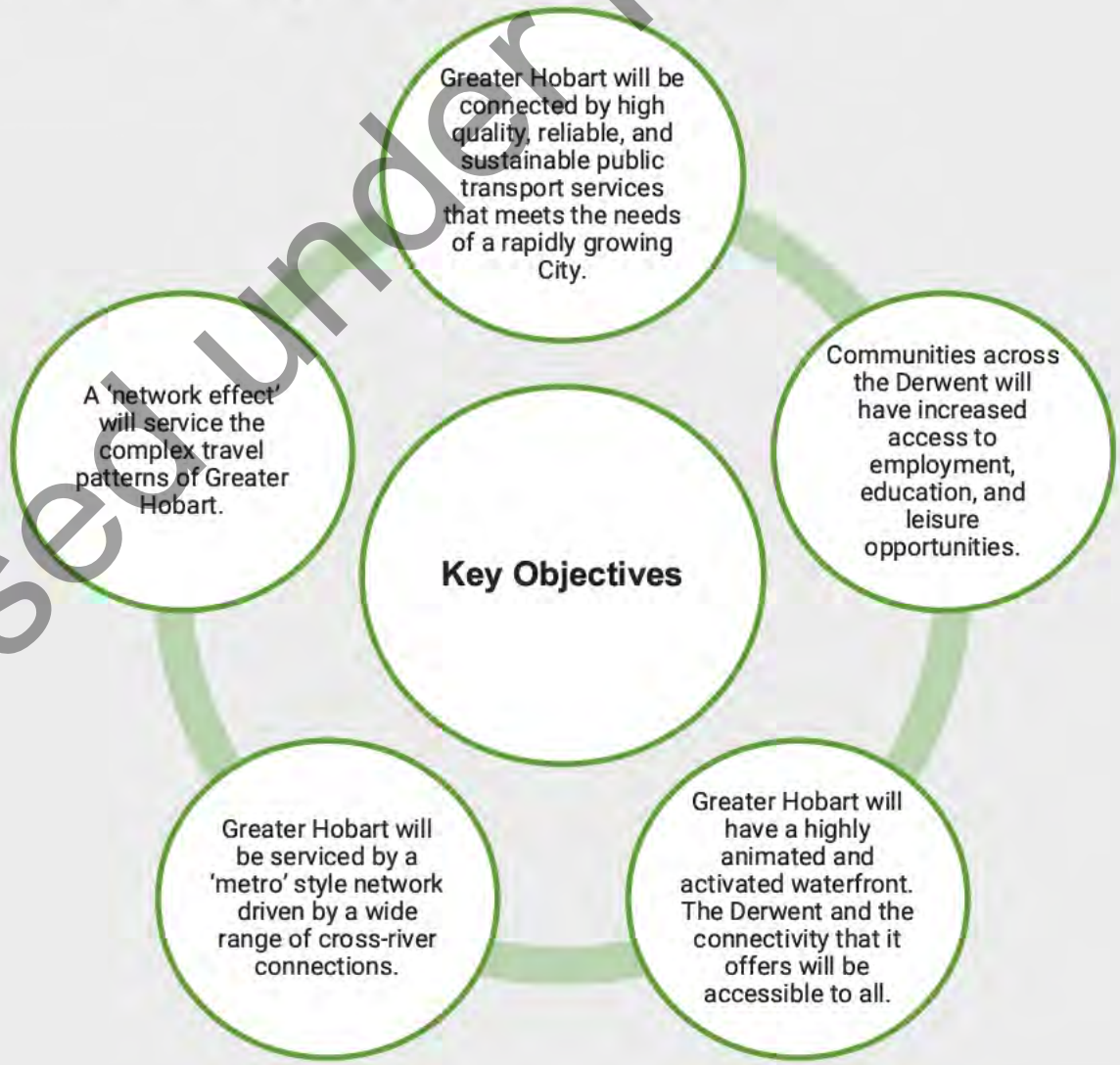
Most cities around the world are investing significantly in achieving an integrated outcome for public transport users, with a view towards encouraging people to consider shifting from private vehicles to public transport.

Many reform design approaches to public transport across cities are not seeking to compete with other public transport modes, but instead seek to complement existing public transport networks to create an integrated mass transport system.

Greater Interconnection, Connection and Resilience

In the case of Greater Hobart, ferries should stop at multiple destinations in a linear route configuration using high speed, mid-high-capacity vessels operating on a scheduled timetable, thereby adding to, and complementing existing public transport systems.

The system should be designed to maximise transport, tourism and economic development opportunities through vessel design, route design and terminal location.



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High-level commuter demand estimates - method

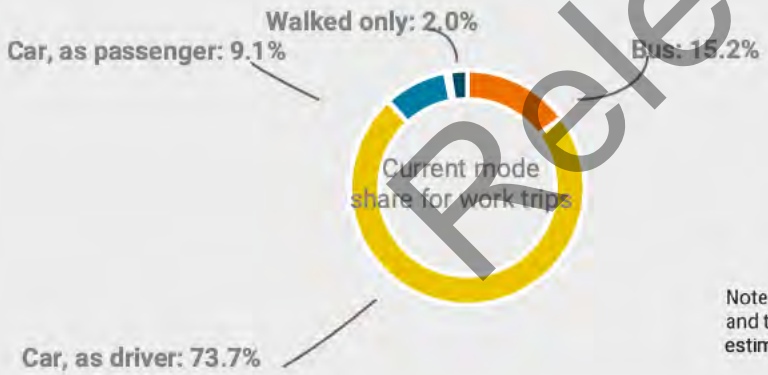
For the purposes of this high-level proof of concept, this study focusses on commuters as potential ferry users. Note ferries are likely to have a wider range of users in addition, such as for education and tourism, and demand may also vary based on other factors, such as major events or transport network disruption (e.g. Tasman Bridge).

Ferry terminals have been assumed at the locations shown at right. For each terminal, an 'origin' catchment and 'destination' catchment was defined. The population with a residence and workplace within any of these catchments was taken as the potential commuter base of a ferry service.

An indicative factor was then applied to estimate a conversion from other modes of travel to the ferry. This factor was based on existing mode of travel, competitiveness of the ferry (travel time, reliability) and other general considerations.

For the 'longer-term' scenario, the weighted average is an assumed 10% to 11% conversion from other modes to ferry, which is aspirational, but not implausible. 76% of this potential ferry demand is assumed to have been converted from private vehicles (driver or passenger), while 23% are assumed to have converted from bus and a nominal amount from other modes. Further detail on the method and limitations is outlined in the technical appendix.

A recent survey found 81% of Derwent Ferry passengers would be driving across the Tasman Bridge in peak hours if it weren't for the Bellerive to Hobart service (*Premier of Tasmania, 27th September 2022*).



Note: these figures are based on 2016 census data and therefore represents a highly conservative estimate.



[1] Bellerive calculated based on operational days taken to reach 100k passengers, noting events and free travel will impact results.

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Markets Serviced by Network Expansion

As described further in this report, it is expected that there would be a phased approach to delivering the planned terminals. As such, the demand and route assessment focusses on an initial range of possible stops, with a view to delivering a wider range of stops in the long term.

Commuter Short-Term ('initial scenario')

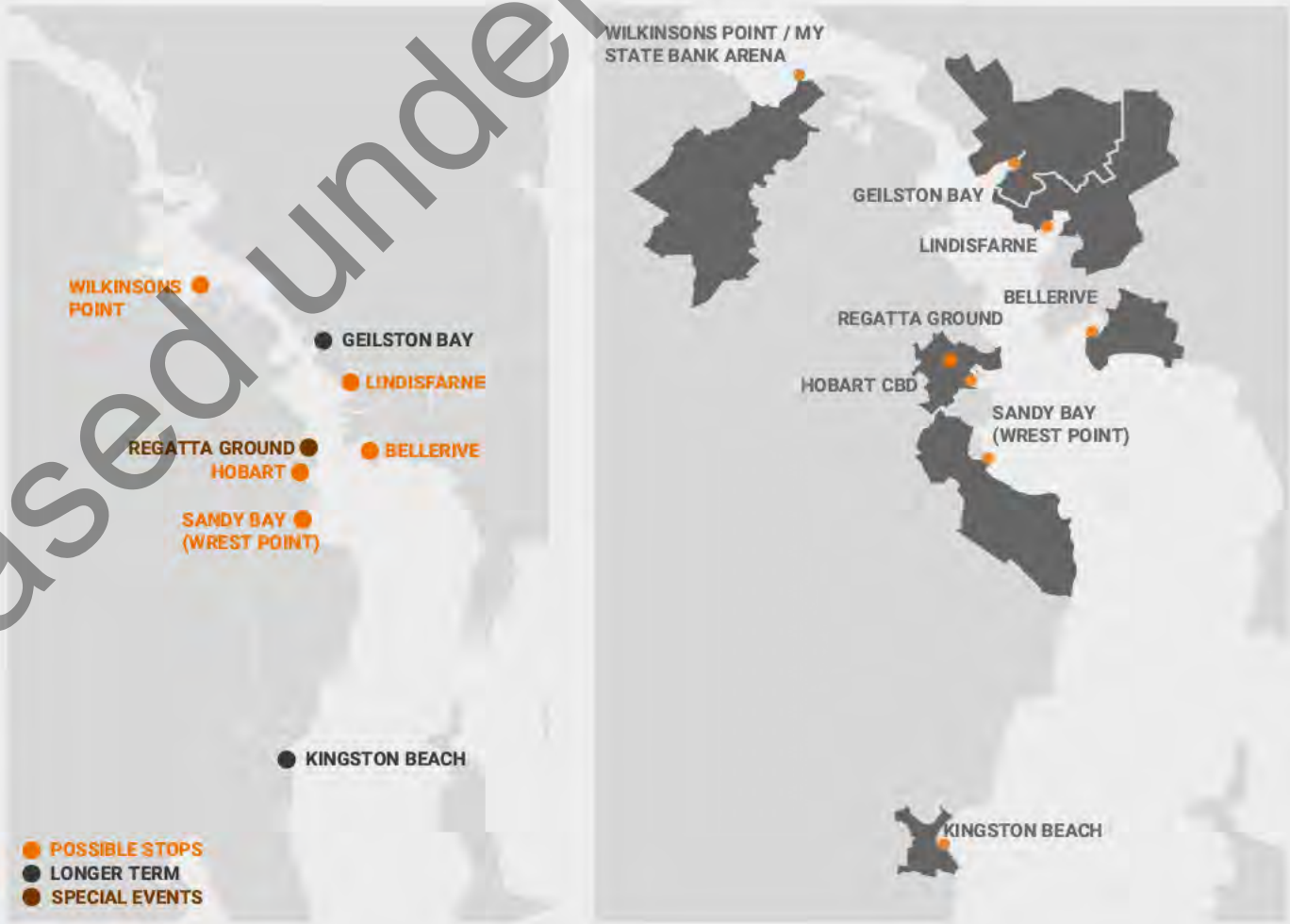
- Lindisfarne
- Sandy Bay (Wrest Point)
- Wilkinsons Point / My State Bank Arena

Commuter Long-Term ('longer-term scenario')

- Geilston Bay
- Kingston Beach

Special Events

- Regatta Ground



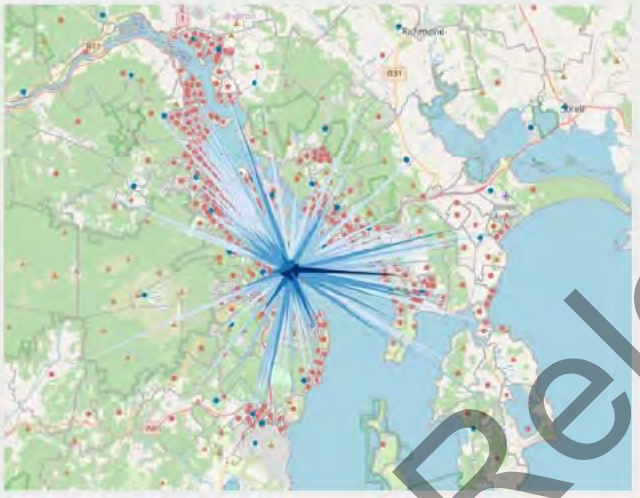
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High-level commuter demand estimates (cont'd)

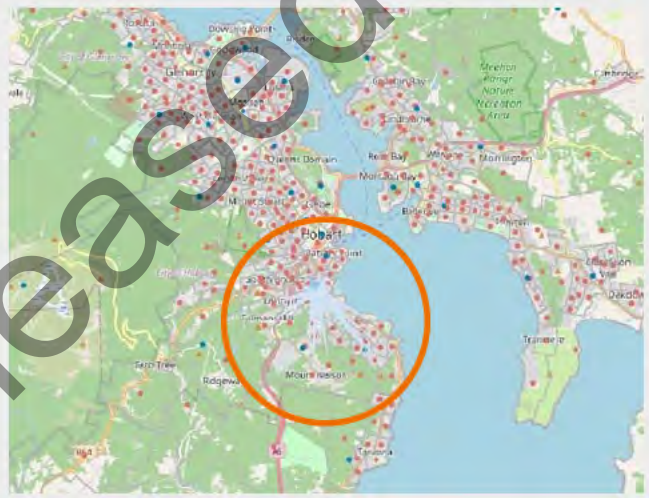
Travel to work data shows that, as expected, the highest levels of commuter demand are for trips to Hobart CBD. Demand for trips to the CBD commence from a wide range of origins, including from the north and south of Hobart and across the Derwent.

For work purposes, commuter movements are assumed to be tidal during work peak periods, originating from suburban ferry terminals and travelling to Hobart CBD in the mornings and returning in the opposite direction in the evenings. Outside of these periods, terminals may play a role in supporting tourism, education (e.g. UTAS) and other movements across the city.

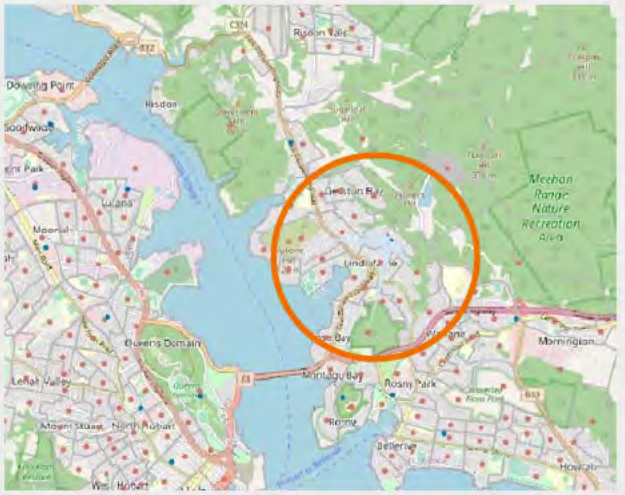
Further, it is expected that there would be a degree of induced demand (i.e., not currently captured in this assessment), as seen by the existing Bellerive – CBD route.



Higher volume and range of origins for trips to CBD



Lower volume, more localised trips to Sandy Bay for work



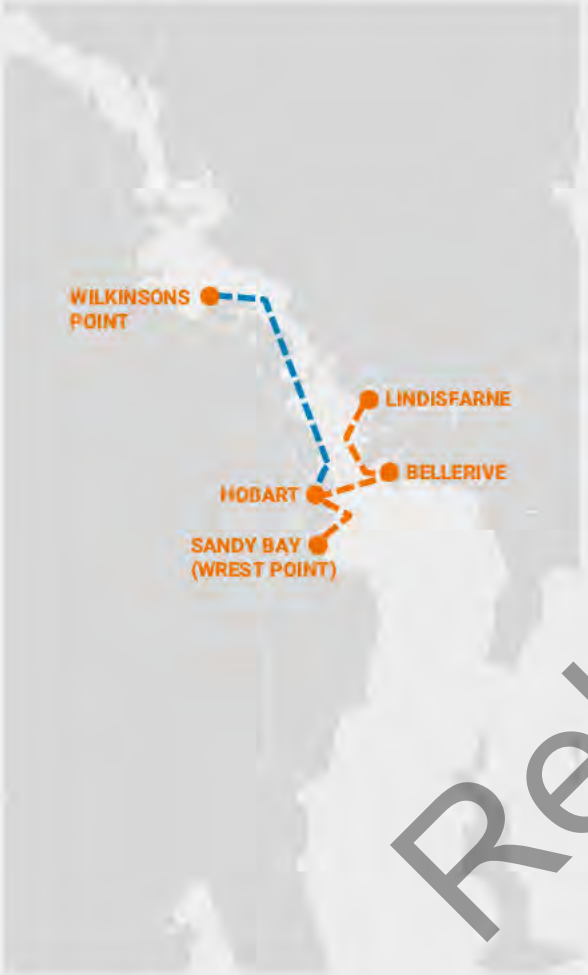
Lower volume, more localised trips to Lindisfarne for work

ABS Journey to Work 2016 – origin zones (SA1) to nearest destination zone (DZN)

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Initial route configuration example

COMMUTER



OFF-PEAK



Based on the proposed terminal locations and commuter demand estimates, two high-level route options have been explored to understand the feasibility and potential of the services.

These routes are intended for strategic planning purposes only and should be refined at later stages.

Commuter

- There is demand for Wilkinsons Point to Hobart, largely due to potential for a 'park & sail' option, facilitating suburbs further to the north. However, the ferry service would likely need to be direct (e.g. without intermediate stops) to compete with driving travel times.
- This means a second ferry would be required to service the remaining stops – e.g. potentially as an extension to the existing Bellerive-Hobart service. Demand for the Bellerive to Hobart connection likely exceeds demand for other stop connections, and so should be direct.

Off-peak

- In off-peak periods, where the objective is to 'sweat the asset' and provide coverage rather than travel time competitiveness, a linear route would be efficient and clear for users to understand.
- The second ferry could be used to improve headway between services.

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Initial route configuration example (cont'd)

Off-peak use would be subject to demand, particularly to Wilkinsons Point given the additional distance and limited activation in the surrounding land use across the day. Routes could be trialled and evaluated to understand cost vs benefit.

There are several sources of potential demand for off-peak services, including:

- **UTAS Students:** Engagement with University has indicated that some 80%+ of students on the eastern shores would make use of a ferry service.
- **Shift Employment:** Transport networks are typically designed around peak hours to support the majority of travel demand. However, 36.8% of the Greater Hobart population work part-time, indicating that there would be significant off-peak demand driven by a range of working patterns (*ABS Census Data, 2021*). There is also a high-proportion of essential workers (particularly health care) on the eastern shores that would benefit from an off-peak service.
- **Visitors:** While the existing and expanded network is primarily targeted at commuters, significant demand will be driven by the 623,000 plus visitors to Greater Hobart each year (*Tourism Tasmania, June 2022*).

The cross-river route may also provide resilience for the Tasman Bridge Pathways Upgrade - bridge strengthening and a new 3.5 m pathway on both sides of the bridge for enhanced cyclist and pedestrian access. Construction start is planned for early 2023 and is expected to be completed in late 2025. Additional cross-river ferry services will create resilience on the network and help minimise congestion over the bridge.

It may be logical to start with two ferries to test demand and iron out any issues, with a view to adding further fleet if service times and/or demand warrants.

Again, it is reiterated that this exercise is only intended to support high-level proof of concept and more detailed, robust modelling should be taken to account for the limitations outlined in the technical appendix.

Regatta Grounds & MyStateBank Arena Events

Supplementing bus services, terminals and associated services at these locations would provide another public transport mode to transfer the major demand. New ferry terminals would provide a fast and convenient way to get to the stadium helping to reduce traffic congestion across Greater Hobart during events.

However, limited park & ride (sail) facilities at the current Bellerive Pier would limit its capacity to only serving patrons living locally to the ferry terminal. As such, other locations across the Derwent would provide greater access and resilience. Further, while the focus of locations should be to encourage active travel access, offering 'park & sail' as an option at certain locations would help to alleviate congestion during major events.

For example, a 'park & sail' option at Wilkinson's Point would help to alleviate congestion along the Brooker Highway during events at the planned Stadium. Similarly, a 'park & sail' option at Geilston Bay (if delivered in the future), would help to alleviate bridge congestion during events at both the planned stadium and MyStateBank Arena.

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Initial route configuration example (cont'd) – feasibility of timetable

A high-level timetable has been developed to understand the likely travel times and headways between services to inform the likely number of ferries required. See technical appendix for limitations.

Given tidal nature of movements, ferry services may return direct to the starting point during commuter peaks, but follow the same route in reverse during off-peak.

Commuter peaks:
- three departures from Wilkinsons Point
- three departures from Lindisfarne

arriving prior to, and close to, 9am in Hobart.

Off-peak, a full lap would take approximately 1.5 hours. This excludes any required stopping time for breaks or refuelling. A similar but reversed program is assumed in the PM peak.

High-level demand estimates are summarised below. Further investigation on longer term routes (e.g., Kingston Beach) can be found at Appendix A.

Wilkinsons Pt to CBD	Arrives	Departs
Wilkinsons Pt		6:00
CBD	6:27	
Wilkinsons Pt		7:10
CBD	7:37	
Wilkinsons Pt		8:20
CBD	8:47	

Off-peak	Arrives	Departs
Sandy Bay	8:58	9:05
CBD	9:11	9:18
Bellerive	9:25	9:32
Lindisfarne	9:43	9:50
Bellerive	10:01	10:08
CBD	10:15	10:22
Sandy Bay	10:28	10:35

Lindisfarne-Sandy Bay	Arrives	Departs
Lindisfarne		6:00
Bellerive	6:11	6:18
CBD	6:25	6:32
Sandy Bay	6:38	
Lindisfarne		7:10
Bellerive	7:21	7:28
CBD	7:35	7:42
Sandy Bay	7:48	
Lindisfarne	8:10	8:20
Bellerive	8:31	8:38
CBD		8:52
Sandy Bay	8:58	

Potential alternative for service to return from Sandy Bay to Hobart before repositioning to enable a Sandy Bay to Hobart connection in the morning peak (+ ~25 passengers)

Start and end of route

'Repositioning' trip inc. passengers.

Route	End-to-end run time	Departures / pk	Demand early service (6:00 dep.)	Demand mid service (7:10 dep.)	Demand late service (8:20 dep)
Wilkinsons Point - CBD	~27 minutes	3 departures	~10 passengers	~30 passengers	~60 passengers
Lindisfarne – Bellerive – CBD – Sandy Bay	~38 minutes	3 departures	-	~5 passengers*	~5 passengers*

** Excludes demand for existing Bellerive to Hobart connection*

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06
MARITIME CIVIL

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Engineering Conditions

Wave Climate

Wave climate includes assessment of wave amplitude and wave period. Waves for both "Operational" (e.g., daily and up to 1 in 5-year events – that is maximum serviceability conditions); and "Survival" conditions (1 in 500-year event) from various wind and wave directions. The wave period provides an indication of the likely wavelength impinging on the terminal. This is critical as it is essential to have a terminal dimension that is not resonant with the incident wave frequency.

Wave climate also includes various categories of vessel wash. However, vessel wash is not expected to affect the selection of terminal size or orientation because of the short duration of wave trains from vessel wash.

Wind waves, as opposed to swell waves from remotely generated seas, are waves generated at the site by windstorms blowing across the fetch to the target location.

The amplitude and wavelength (function of wave period) are determined by the length of the effective fetch; the duration of the wind event; wind strength (i.e., wind speed); and the depth of water in the generating fetch.

There are other less influential factors such as relative air and water temperatures; water density; and the shape of the fetch (i.e., weather wide waterway area, or a long narrow fetches).

Site Specific Wave Climate

Wind waves, as opposed to swell waves from remotely generated seas, are waves generated at the site by windstorms blowing across the fetch to the target location. The amplitude and wave-length (function of wave period) are determined by the length of the effective fetch; the duration of the wind event; wind strength (i.e., wind speed); and the depth of water in the generating fetch.

While site visits have informed the outputs of this study, the exact wave climate at each of the sites is unknown at this stage. It is therefore recommended that a wave climate study is completed in order to develop the concept and associated terminal dimensions.

Water Depth

Water depth at the sites should provide safe berthing and mooring. Adequate water depth at all terminal berth pockets is required to ensure appropriate vessel underkeel clearance (UKC).

Water depth at the sites will also need to consider siltation, and the operational wave climate. Depending on the available depth, and proximity to other assets (marinas and or wet berths), then dedicated channels to the terminals (and possible dredging) may also need to be considered. Tide levels have been sourced from Admiralty chart AUS172. The applicable tide levels are as noted in the table below.

Tides	
Highest Astronomical Tide (HAT)	1.7 m
Mean High High Water (MHHW)	1.5 m
Mean Low High Water (MLHW)	1.0 m
Mean Sea Level (MSL)	0.8 m
Mean High Low Water (MHLW)	0.7 m
Mean Low Low Water (MLLW)	0.2 m

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Terminals

Terminal Dimensions

The minimum terminal dimensions need to take due cognisance of sea keeping criteria (terminal movement, stability, and acceleration criteria).

Although the wind wave climate at the sites are presently unknown, it is estimated that wave heights of 0.5m and maximum wind periods of 2 seconds, would require a minimum terminal size of:

- 25m long; by
- 12m beam; by
- 2.5m moulded depth; with
- 1.0m freeboard

Depending on the wave climate results, extra moulded depth and ballasting may be required. The terminals may be bigger in plan, depending on user requirements.

Terminal Orientation

Consideration will need to be given to terminal orientation to maximise berth efficiency and construction costs (minimum possible dredging etc.).

The terminals are to be positioned parallel to the shoreline. The option to have touch-and-go berthing faces, (i.e., for quick boarding and alighting) will require occupying a length of waterfront that will be determined by the vessel operations/maneuverability.

Navigational study

A site-specific navigation study should be completed. This study would consider (in more detail) existing marina infrastructure, floating moorings and any other obstacles that may inhibit the intended line of travel for the proposed ferries. Additionally, the navigational study would consider the design vessel's maneuverability at the berth and the need for potential navaids.

Proposed Ferry Operations

The orientation and location of the terminal will be influenced by the ferry operations and proximity of the terminals to adjacent or near obstacles (existing ferry services, marinas, floating moorings, etc.). As noted earlier, engagement between Councils (landside) and DSG (vessels) is highly recommended.

In general, a berthing face which allows a ferry to sweep into the berth and depart without needing to head-in and back-out is preferred (backing and filling or "three-point turn" maneuvers would reduce efficiency of ferry operations).

Vessel Storage

Vessel storage may or may not be required at the new terminals e.g., for ferry layovers overnight. If this is required, then additional services (3 phase power etc.) may need to be considered.

Terminal Facilities

Section 07 sets out the design process for the ferry terminals in more detail. Functionally, the terminals should be:

Weather Protected: providing protection for passangers from the wind, rain and sun.

Accessible to all: complying with the Disability Discrimination Act 1992 (DDA), enabling access for mobility impaired customers, customers with prams, and offer features for sight and hearing-impaired customers.

Safe and Secure: in addition to ensuring accessibility for all customers, effective lighting, help points, clear safety screens, and close circuit television (CCTV).

Future Proof: dual berthing to provide quick and efficient operations should there be further expansion of the network.

These features are likely to require appropriate service outlets.

Onshore Facilities

Section 08 and 09 set out in further detail the need for onshore facilities to support each terminal. Functionally, the terminals and jetties should be easily accessible for those cycling (and using other modes such as scooters) with appropriate storage and locks provided.

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Lindisfarne

Lindisfarne Bay is populated with existing infrastructure. The bay's entrance and eastern shoreline features a marina (the Lindisfarne Sailing Club and the Motor Yacht Club of Tasmania) with a number of small-scale jetties immediately north of the marina. The western shoreline is relatively free of infrastructure.

The bay also features floating moorings that may either belong to the marina or may be private. The general site is shown in the top figure opposite.

The northern end of the bay offers some opportunities for the location of a new Terminal. However, other infrastructure such as the Lindisfarne Rowing Club would need to be considered.

This location has an existing car park for the use of the rowing club and is located next to a public reserve. The premises are located on crown land and are leased to the Lindisfarne Rowing Club.

Previous reports noted that this location has been previously considered as the best opportunity for the development of ferry services. However, a review of water depths from readily available sources indicate that there may be a need for dredging at this site – likely a prohibitive activity given the issues with stirring up sediment pollution.

From available bathymetry (see page 51) the target 2m depth is some 120m from the shoreline (figure) which would mean a long access jetty (including gangway) to reach the terminal (for a case of nil dredging) or the dredging of a channel to reach the terminal.

If the latter is to be adopted, then a minimum channel width (~15m) and turning circle (~40m) would need to be considered.

For these reasons, it is considered that the site adjacent to the marina would be a better terminal location.

Note that the channel width and turning circle would need to be reviewed and confirmed through a navigational study that would consider basic manoeuvring lane widths, winds, currents etc.. Care would need to taken to ensure that infrastructure does not negatively impact on either club.



Lindisfarne, (for context of shoreline only)
Land Tasmania Open Data

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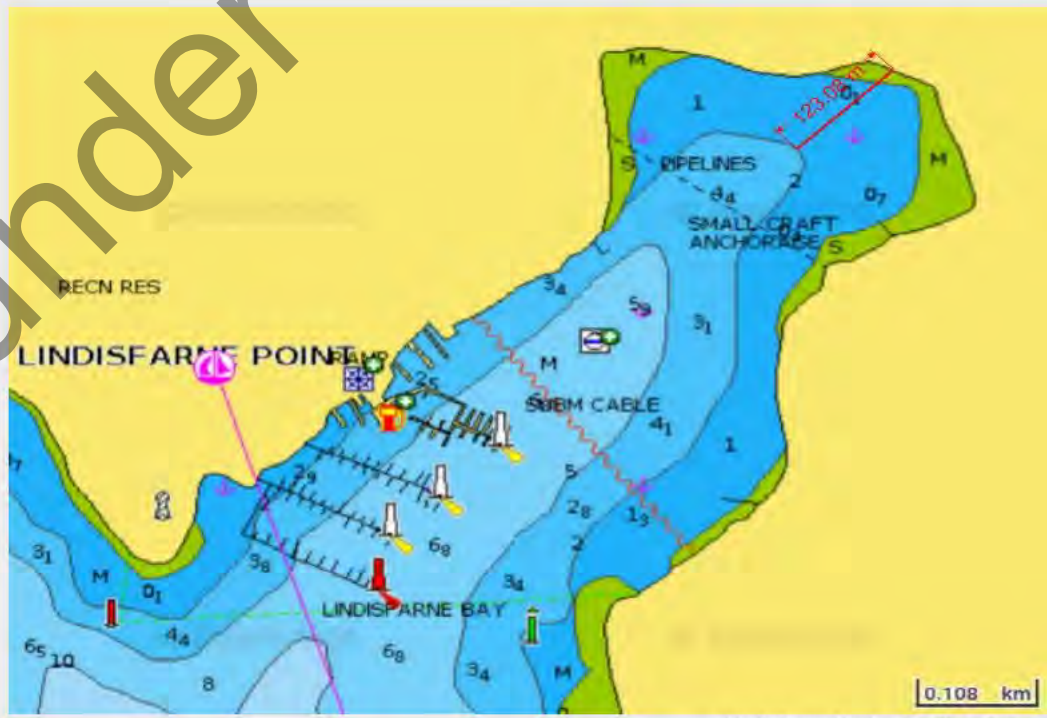
Lindisfarne

Key Opportunities

- Water Depth: a target depth of 2m has been assumed based on design vessel draught, underkeel clearance requirements (assuming soft marine sediments), possible siltation and assumed wave climate. A lower target depth may be achieved if the vessel draught, and wave climate are less than assumed. A lower depth target will translate in reduced access length requirements.
- Existing infrastructure: despite some off-ramps for launching boats, there is no existing jetty infrastructure that may be relied upon for the development of a new terminal in Lindisfarne.

Key Constraints:

- Existing Infrastructure: the existing Lindisfarne Rowing Club infrastructure will need to be considered. The ferry's orientation will need to consider the proximity of the Rowing Club facilities.
- Water Depth: the proposed site is located in shallow waters. Shallow waters offer limited vessel access and may be overcome by the installation of a long access jetty or dredging for shorter access. If the latter is to be applied, then a channel and ferry turning circle would be required
- Disability Standards for Accessible Public Transport (DSAPT): compliance requires gangway grades to be maintained at 1V:14H for at least 80% of the high tides and low tides. Given the tidal levels as noted, then it is expected that gangways could be up to 18m in length which could lead to further design complications and issues with DDA compliment access.
- Navigation: a dedicated ferry lane may be required. Floating moorings are likely to require relocation (see Stakeholder Engagement).



Lindisfarne, Navigation Open Data

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Sandy Bay / Wrest Point

The Sandy Bay terminal is to be located in the vicinity of the West Point Casino. The site is located south of the Royal yacht club of Tasmania marina and the Derwent Sailing Squadron Marina.

There are floating moorings immediately north of the site (marina owned or private).

It is understood that the Sandy Bay Casino has 2 existing timber jetties (approx. 25m long and 4 m wide) that could be used for ferry services but are presently being utilised by Hobart Yellow Water Taxis and tourism-based ferries.

The facilities are understood to be used by 'a range of vessel types' , though the vessel parameters of these are unknown.

However, given the bathymetry at the site, it is possible that the larger ferries in use may use these facilities.

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The site is exposed with a 2km fetch in the East -South-East direction. A wave climate study is required to determine effect of wind generated waves under operation and worst-case operational conditions.

It is expected that a terminal as described above would be appropriate at the site. However, this may need to be of deeper draft (and increased ballast) to meet seakeeping criteria requirements.

It is noted that the proposed location could offer a readily available site that has adequate depth without the need for long jetty access.

Given the proximity to the marinas and floating moorings, then a navigational study would be required



Sandy Bay / Wrest Point (for context of shoreline only)
Land Tasmania Open Data

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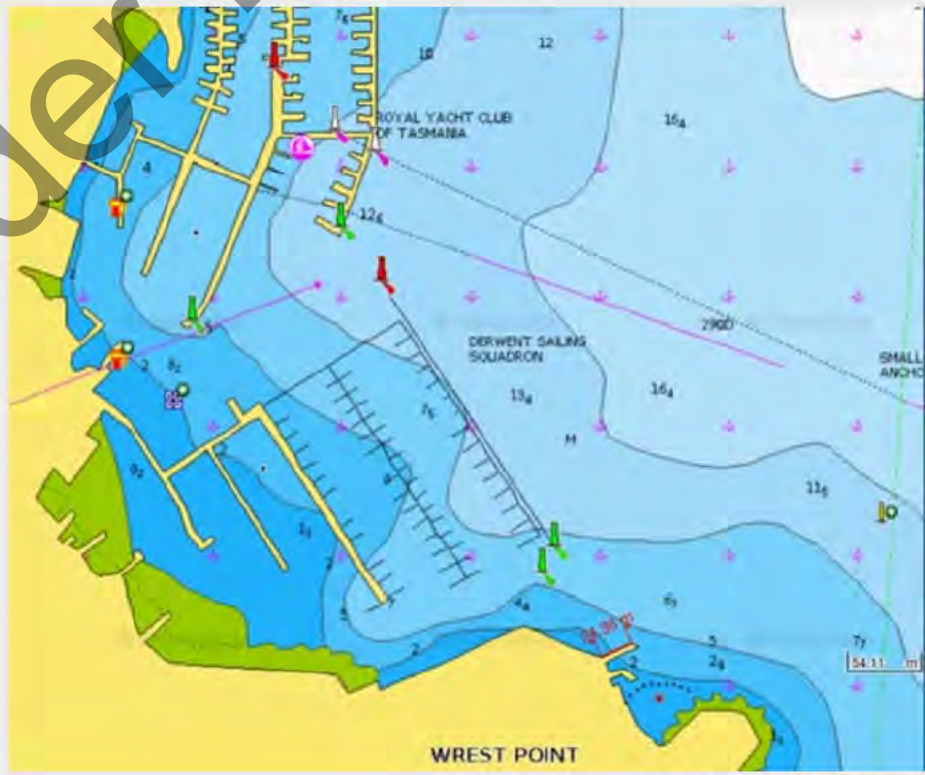
Sandy Bay / Wrest Point

Key Opportunities

- Water Depth: a target depth of 2m has been assumed based on design vessel draught, underkeel clearance requirements (assuming soft marine sediments), possible siltation and assumed wave climate. A lower target depth may be achieved if the vessel draught, and wave climate are less than assumed. A lower depth target will translate in reduced access length requirements.
- Existing Infrastructure: there is existing infrastructure, but it is unknown if it may be relied upon for the development of the terminal. The terminal may require fixed landside infrastructure (to support an access jetty). The reliance on landside assets needs to be confirmed through a condition assessment however it should be considered as an opportunity.
- Navigation: the site appears away from existing channels and fixed infrastructure.

Key Constraints:

- DSAPT Compliance: DSAPT compliance requires gangway grades to be maintained at 1V:14H for at least 80% of the high tides and low tides. Given the tidal levels as noted, then it is expected that gangways could be up to 18m in length.
- Exposure: the site is relatively exposed. A wave climate study is required to confirm terminal sizing and if wave attenuation may be required
- Ownership: the jetty is on a long lease by the Federal Group from the Crown and access to it will have to be agreed. Further, access through the Casino owned land to the pier (i.e., through the private property) will need to also be considered and agreed.



Sandy Bay / Wrest Point, Navigation Open Data

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Regatta Ground

The Regatta Ground is populated with existing infrastructure. Existing jetties are used for a variety of purposes, including loading and unloading boats, providing access to the water for events, and mooring boats.

It appears that the twin jetties possibly replace of what was formally known as the 'Cattle Jetties', first built in the 1850s and demolished in 1970. For many years the existing jetties were used to unload cattle being transported to the former abattoirs on Macquarie Point. To accommodate an operational ferry service for events, its likely that the jetties would have to be upgraded.

There are no floating moorings in the area that would require relocating if a ferry lane was introduced. The general site is shown in the top figure opposite.

This location has an existing car park for the use.

Key Opportunities

- Water Depth: a target depth of 2m has been assumed based on design vessel draught, underkeel clearance requirements (assuming soft marine sediments), possible siltation and assumed wave climate. A lower target depth may be achieved if the vessel draught, and wave climate are less than assumed. A lower depth target will translate in reduced access length requirements. It appears as thought there would be sufficient depth available at the Regatta Ground jetties, pending further investigation.
- **Key Constraints:**
- Existing Infrastructure: The robustness and quality of the existing jetties haven't been assessed as part of this review.
- Disability Standards for Accessible Public Transport (DSAPT): compliance requires that the existing jetties can be accessed appropriately. It appears that they can be, as they are (relatively) flush with the Domain.
- Navigation: there are no moorings present in the area. As such, navigation for a ferry would be clear.



Regatta Ground, Navigation Open Data

Released under RTI

Wilkinsons Point /MyState Bank Arena

The site at Wilkinsons point is a small peninsula in which the Glenorchy Art and Sculpture Park (GASP) is situated. The peninsula features 3 existing structures that include:

- GASP Jetty, 20m long with a 23m berthing face (4 mooring piles)
- Timber jetty, 45 m long, 2.8 m wide (35m long mooring face)
- Timber jetty, 45 m long, 3 m wide (35m long mooring face)

The condition of the existing infrastructure is unknown. Given the shallow water, it is assumed that low draught vessels (small power boats) are the only vessels that use the existing jetties.

From the available bathymetry (refer to figure opposite), it appears that the existing jetties can only cater for small draught vessels (under 1m). (See page 53.)

The proposed location offers a readily available site. However, a review of water depths notes that in order to reach a target 2m depth, then an access trestle would need to be built and this would need to be either 173m if the jetty is to be aligned East-West (as per the existing jetties), or only 16m if aligned in a North South direction.

If the East-West direction were to be preferred, then dredging would be required, with a channel and turning circle (as per Lindisfarne Bay).

The site is exposed to a North North East fetch (3km). A wave climate study is required to determine the effect of wind generated waves under operation and worst-case operational conditions. However, it is expected that a terminal as described above would be appropriate at the site.



Wilkinsons Point, for context of shoreline only)
Land Tasmania Open Data

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Wilkinsons Point /MyState Bank Arena

Key Opportunities

- Water Depth: a target depth of 2m has been assumed based on design vessel draught, underkeel clearance requirements (assuming soft marine sediments), possible siltation and assumed wave climate. A lower target depth may be achieved if the vessel draught, and wave climate are less than assumed. A lower depth target will translate in reduced access length requirements.
- Existing Infrastructure: there is existing infrastructure, but it is unknown if it may be relied upon for the development of the terminal. The terminal may require fixed landside infrastructure (to support an access jetty). The reliance on landside assets needs to be confirmed through a condition assessment. However, it should be considered as an opportunity.
- Navigation: the site appears away from existing channels and fixed infrastructure.

Key Constraints:

- Existing infrastructure: if the terminal is to be oriented and parallel to the existing jetties, then the proximity of these as well as the access to the same will need to be considered.
- Water Depth: the proposed site is located in shallow waters. Shallow waters offer limited vessel access and may be overcome by the installation of a long access jetty or dredging for shorter access. If the latter is to be applied, then a channel and ferry turning circle would be required.
- DSAPT Compliance: DSAPT compliance requires gangway grades to be maintained at 1V:14H for at least 80% of the high tides and low tides. Given the tidal levels as noted opposite, then it is expected that gangways could be up to 18m in length which could lead to further design complications and issues with DDA compliment access.



Wilkinsons Point, Navigation Open Data

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Geilston Bay

The Geilston Bay terminal is to be located in the vicinity of the existing jetties. The site is located west of the Geilston Bay Boat Club.

There are floating moorings immediately west of the site that cover the entirety of the bay – this has been flagged as a constraint in the location analysis above.

The facilities are understood to be used by 'a range of vessel types' , though the vessel parameters of these are unknown.

However, given the bathymetry in the bay (see figure on page 57) typically smaller leisure craft dock.

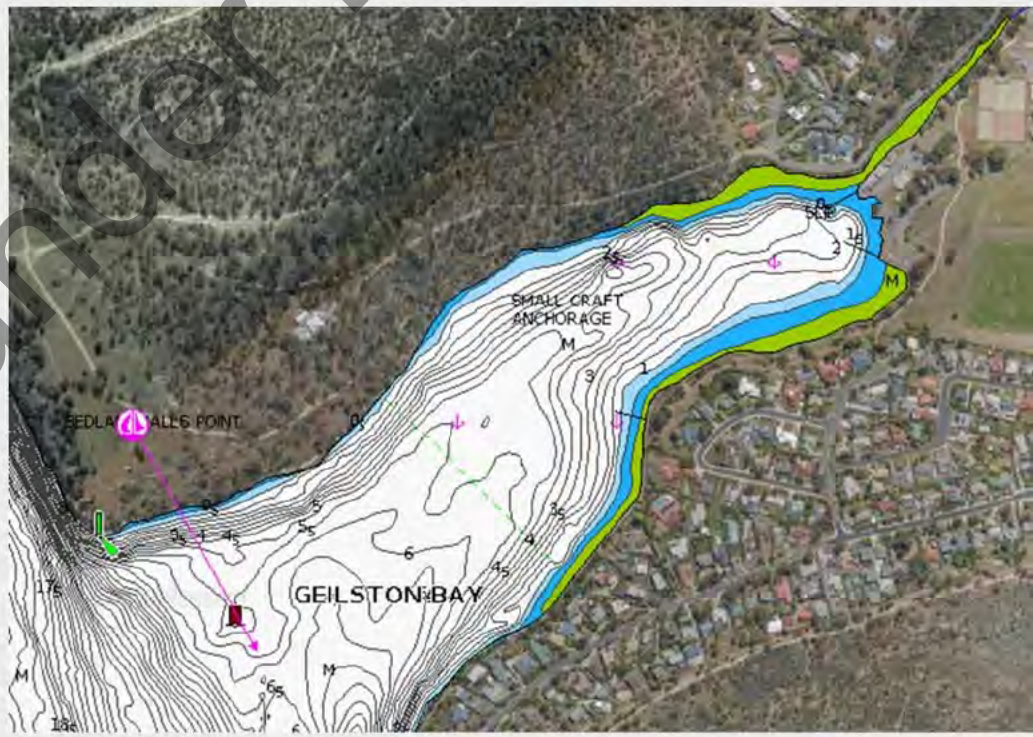
The site is exposed with a 6km fetch in the West -South-West direction. A wave climate study is required to determine effect of wind generated waves under operation and worst-case operational conditions.

Further it is recommended (as noted by the Derwent Estuary program) that a baseline study is undertaken to understand the effects of wake (from a future ferry service) would be on the shoreline.

It is expected that a terminal as described above would be appropriate at the site. However, this may need to be of deeper draft (and increased ballast) to meet seakeeping criteria requirements.

While there are existing jetties, it is noted that the proposed location is unlikely to offer a readily available site that has adequate depth without the need for more modern and perhaps long jetty access.

Given the proximity to the marinas and floating moorings, then a navigational study would be required



Geilston Bay, MAST GIS

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Geilston Bay

Key Opportunities

- Water Depth: a target depth of 2m has been assumed based on design vessel draught, underkeel clearance requirements (assuming soft marine sediments), possible siltation and assumed wave climate. A lower target depth may be achieved if the vessel draught, and wave climate are less than assumed. A lower depth target will translate in reduced access length requirements.
- Existing Infrastructure: it is unlikely that existing infrastructure could be relied upon for the development of the terminal.

Key Constraints:

- Water Depth: the proposed site is located in shallow waters. Shallow waters offer limited vessel access and may be overcome by the installation of a long access jetty or dredging for shorter access. If the latter is to be applied, then a channel and ferry turning circle would be required
- DSAPT Compliance: DSAPT compliance requires gangway grades to be maintained at 1V:14H for at least 80% of the high tides and low tides. Given the tidal levels as noted in Table 2, then it is expected that gangways could be up to 18m in length.
- Navigation: a dedicated ferry lane may be required. Floating moorings will need to be relocated.
- It should be made clear that most if not all the existing infrastructure in Geilston Bay is not fit for use to support a ferry, nor is some of it even safe anymore.



Geilston Bay, Navigation Open Data

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Kingston Beach

The Kingston Beach terminal is to be located at the breakwater protruding out of the southern end the beach. The site is located north of the Kingston Beach Sailing Club. A review of water depths (see figure on page 58) shows that the water depth increases quickly off the beach but are relatively

As noted previously, the breakwater is subject to a planned upgrade that will reinforce it and provide an accessible footpath on top.

The site is highly exposed with a significant fetch in the East -South-East direction. While the breakwater would provide some protection from wave energy when (dis)embarking passengers, it may face some difficult swells / wind when manoeuvring in and out of the terminal.

Given the potential for this location to take pressure off the planned southern outlet works, a wave climate study was conducted to assess conditions and what would be required to bring the location forward.

Modelling indicates that without any wave protection the proposed ferry wharf may be subject to approximately 20% of downtime due to waves at the wharf. This is predominantly due to sea waves (~16%) that approach the site from directions between north-east and south-east. However, swell waves do exceed 0.3m relatively frequently

The potential breakwater option developed would not be sufficient to mitigate the estimated downtime.

Due to the sea wave directions, it would require an approximate 100m long extension of the existing breakwater to provide shelter at the site from the predominant sea wave directions.

Modelling of the wave climate with this breakwater extension indicates that the wharf would not incur any downtime due to wave conditions. Given that there are no marinas and floating moorings it is unlikely that a navigational study would be required.



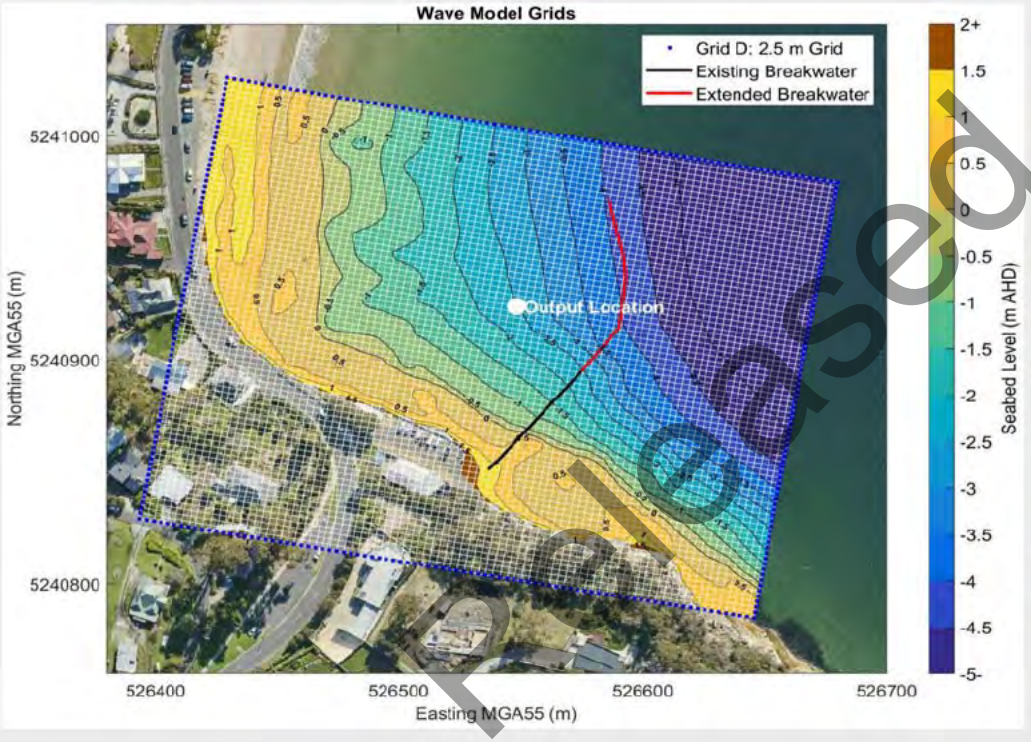
Kingston Beach, MAST GIS

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Kingston Beach

The figure adjacent presents the suggested breakwater layout . This includes an approximately 100m extension to the existing breakwater, extending out to the approximate -4m AHD contour level. This layout was assessed under sea wave conditions. Given the substantial protection from swell waves (which approach from the east), it is expected that swell waves at the output location would be less than 0.3m.

A terminal and associated jetty / access could be designed and constructed in conjunction. DSAPT compliance requires gangway grades to be maintained at 1V:14H for at least 80% of the high tides and low tides. Given the tidal, then it is expected that gangways could be up to 18m in length.





Kingston Beach, Stantec

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07
TERMINAL DESIGN

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Overview

Architecture collective Terroir has developed concepts for design of the ferry terminals.

The design of the terminals is intended to:

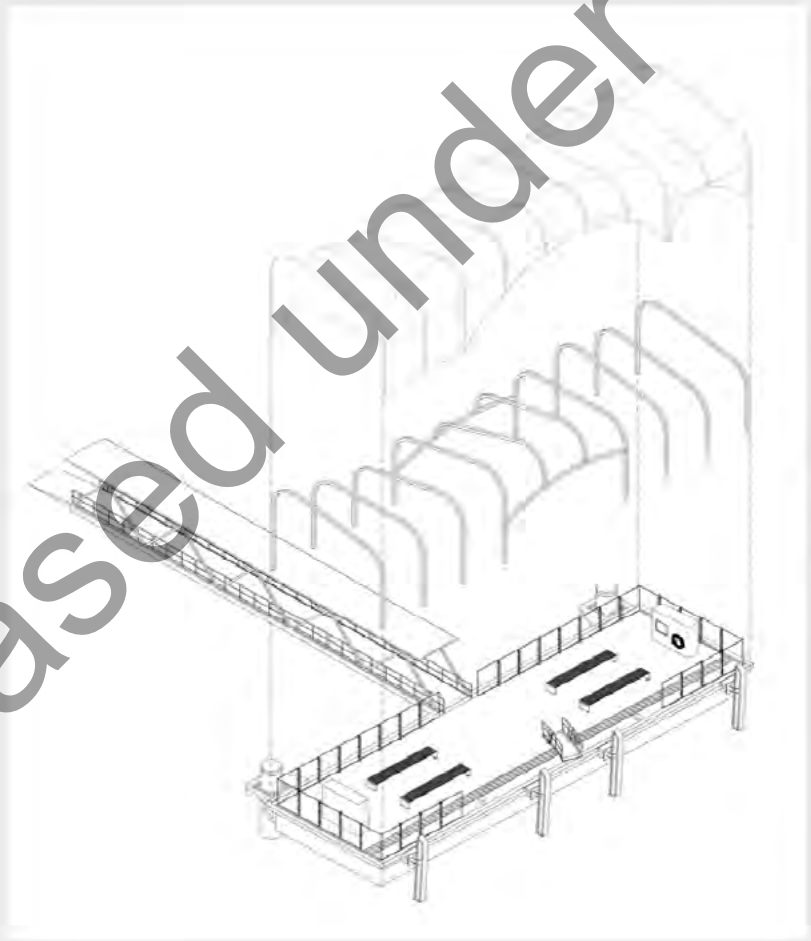
- Be accessible, safe and weather-protected
- Offer a distinctive identity for the ferry network
- Reflect the undulating mountains and topography surrounding Hobart

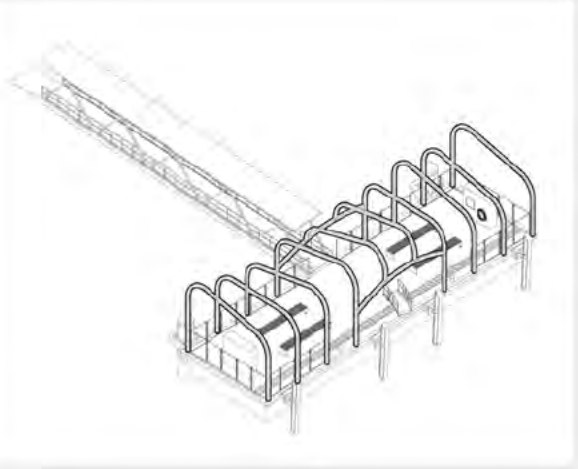
The proposed design is for a floating terminal, held in place by pile, with gangway access.

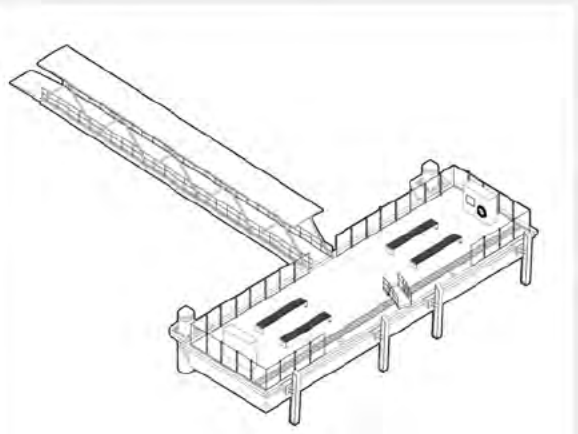
Weather protection and identity would be provided through a sail-like enclosure, taut over an adaptable portal structure.

The design would be standard across all sites, with incorporated services, ticket machines (at ends) and seating. The design would also seek to minimise the opportunity for vandalism.

The following slides demonstrate the concept in practice, including adaptability in structure and renders in various local contexts.







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Multiple potential configurations



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WILKINSONS POINT



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TERROIR Stantec

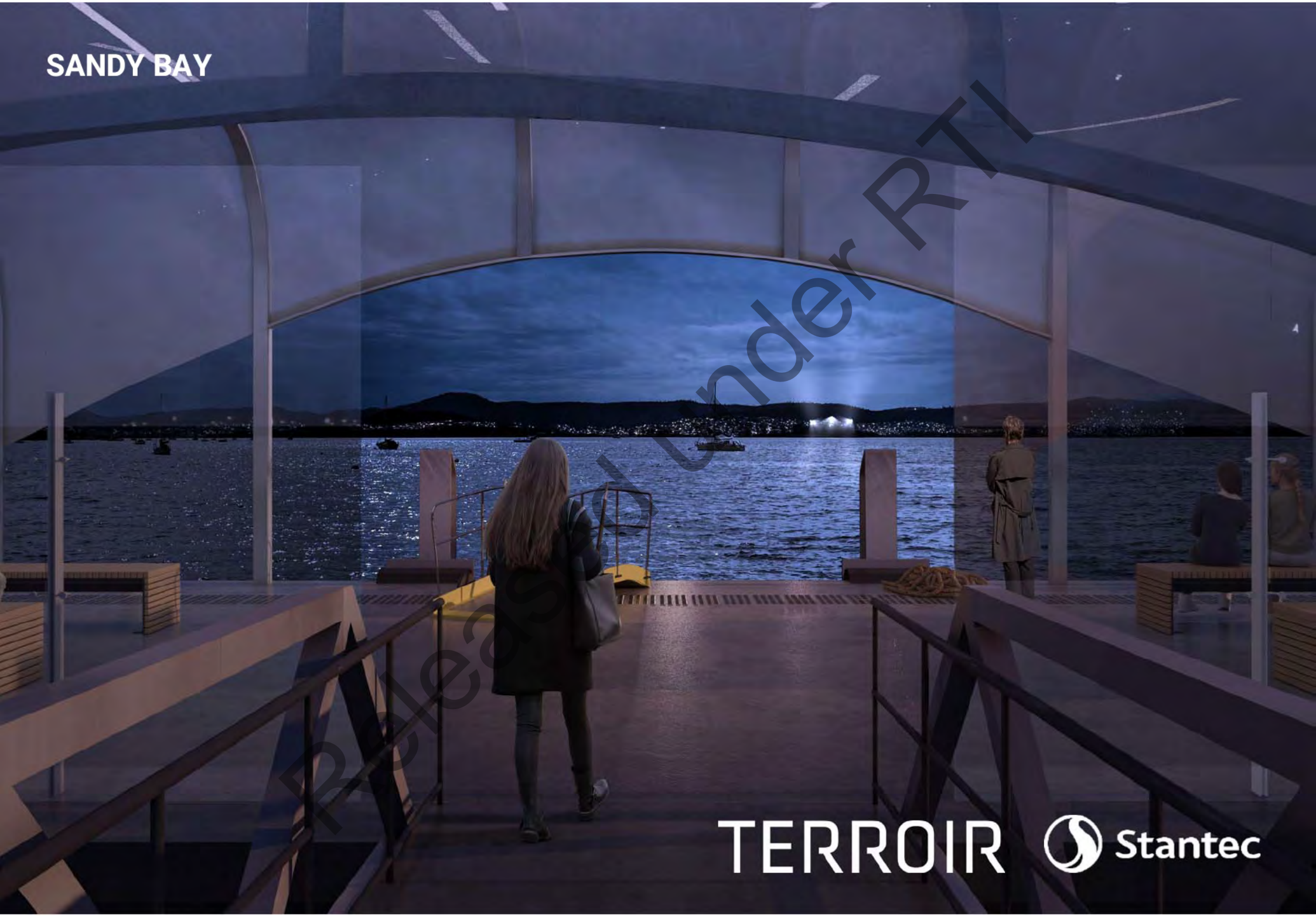
LINDISFARNE



TERROIR Stantec

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SANDY BAY



Released Under RTI

TERROIR Stantec

08
VESSELS ASSESSMENT

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Ferry Propulsion

Despite marine diesel propulsion systems being the most common ferry propulsion systems, they do tend to outweigh the carbon footprint (per km travelled) of most other forms of motorised public and private travel. However, in recent years, alternative forms of propulsion are being used more and more.

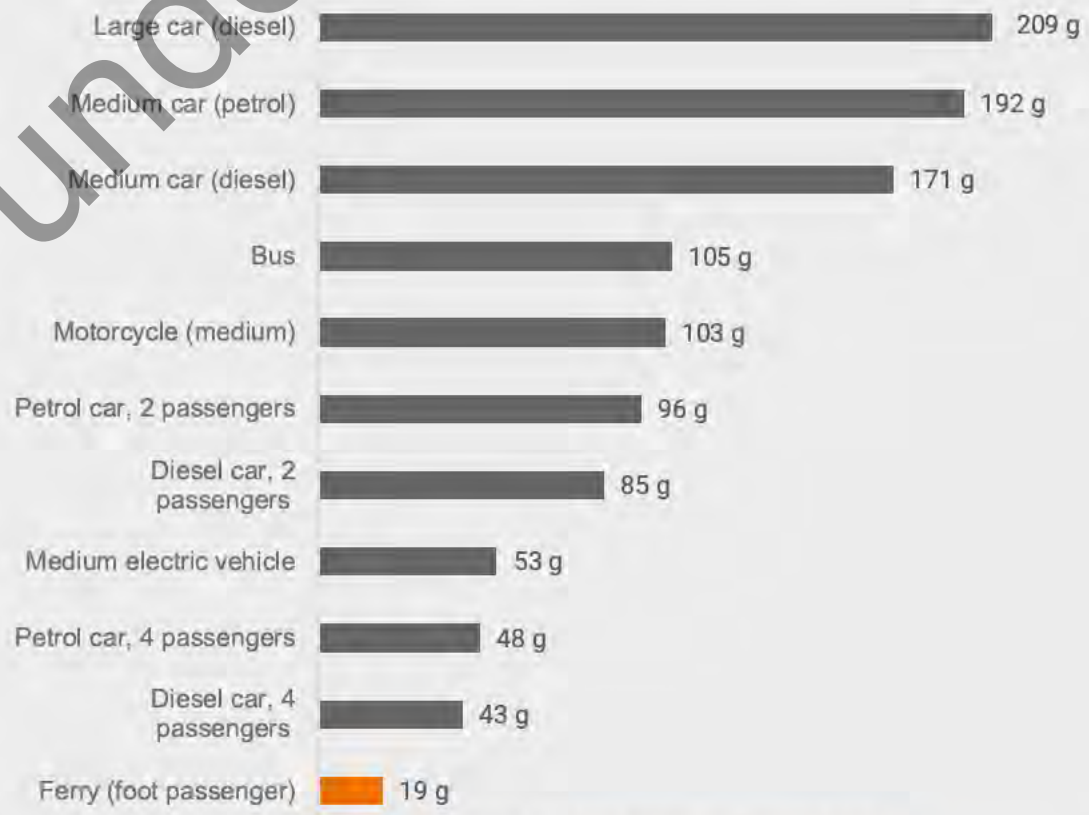
Electric: Electrically propelled ferries are typically more practical for smaller (and slower) vessels due to the power needed to push a larger number of passengers across water. Furthermore, connections to an appropriate supply both in terms of proximity to the water and capacity can pose significant up-front costs to supporting an electric ferry service. However, significant advances are being made in marine battery technology and there are several examples (see Vessel Options: International) that are in operation or under construction across the world. It is recommended that any future business case for an expanded network considers the proximity and capacity of appropriate supplies as well as the related up-front costs.

Hydrogen: Hydrogen can be used to generate electricity using several hydrogen fuel cells, that in turn can power ferries. Hydrogen can also be mixed with other fuels and burned directly in an internal combustion engine, emitting far smaller quantities of CO_2. Some hydrogen ferries are already operation, such as the San Francisco 'Sea Change' that has capacity for up to 75 passengers. While hydrogen fuel cells are cleaner than other carbon-cutting methods as they only emit water and heat, the high cost and bulky fuel cell systems have limited the use of the technology and associated land side infrastructure.

Ammonia: Green ammonia can be sustainably produced from water, air and renewable energy and stored efficiently as a liquid by compressing or cooling it., a space and weight advantage over hydrogen. It does, like hydrogen, come with hi-upfront infrastructure (land and vessel) costs due to the development stage of the technology. However, as advances are made by large shipping companies (e.g., DFDS) and other industries, the price of ammonia and associated infrastructure is likely to come down.

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Carbon footprint of travel per kilometer, 2018



Source: UK Department for Business, Energy & Industrial Strategy. Greenhouse gas reporting: conversion factors 2019. Note: Data is based on official conversion factors used in UK reporting. These factors may vary slightly depending on the country and assumed occupancy of public transport such as buses and trains. https://ourworldindata.org/travel-carbon-footprint

Key Design Considerations

Maritime Conditions: There are varying maritime conditions present within the Derwent. While the northern and cross-river routes proposed are relatively sheltered from the effects of significant swell and fetch, conditions can be harsher heading south towards Kingborough. This in turn affects the type of ferry vessels that can operate on this route, as larger vessels are
required to operate in open (more exposed) waters, whilst smaller vessels can operate further up the estuary.

Punctuality and Reliability: Ferry service reliability is a key contributor to customer level of service as delayed and cancelled ferry services contribute to the reduced attractiveness of ferries. Reliability and punctuality of the ferry services are generally affected by weather conditions, low tides and ferry breakdowns which delays or prevents ferries from operating. Typically, operating standards will be baked into a contract for an operator.

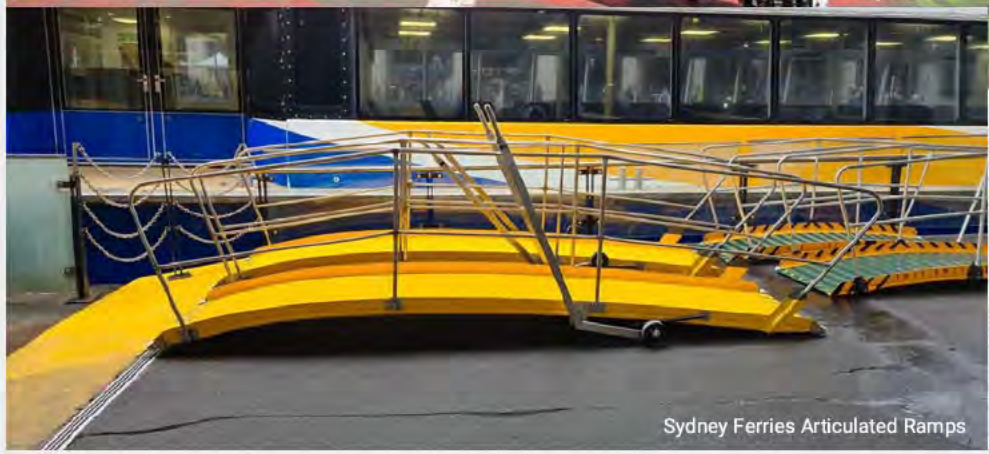
Accessibility: Accessibility of the ferries (and terminals) is critical. Key consideration should be given to disability access, particularly any gradients associated with access during high and low tides (see Marine Civil). Several networks around the world (e.g., Sydney and NYC) operate using articulated ramps that crews connect to the landside infrastructure. While they allow crews to minimise turn around times they offer poor quality accessibility, particularly for those with mobility issues.

Active Travel: Being able to store several bicycles safely and securely will be a key determinant of demand for an expanded network. Making it easy for bikes of all types (e.g., heavier electric bikes) to access the ferry and be stored is critical

It should be noted that previous studies considered a range of vessel types suitable for the expansion of commuter ferry services on the Derwent. They resulted in the planning monohull and the conventional catamaran being chosen as the most suitable vessel types.



Amsterdam Ferry Access


Sydney Ferries Articulated Ramps

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Existing Vessel: The Exella

Passengers: 107
Crew: 2
Wheelchairs: Fully Accessible
Bicycles 15
Constructed: Tasmania, 2001

The Exella presently operates on the Hobart to Bellerive service.

While it operates over a relatively calm section of the Derwent, the high-speed catamaran would be capable of servicing ferry terminals in the lower Derwent (e.g., to Kingston). Due to its design, with two hulls set wide apart, the fast ferry has stability under way. Unlike a monohull that can roll when powered, catamarans stay level, which makes them safer and easier for people to maneuver on the flat deck.

As noted in the stakeholder consultation section, the current operators have noted that one of the biggest challenges is maneuvering the ferry behind the breakwater at Bellerive and around adjacent moored craft (maintaining speed at less than 5 knots) whilst keeping to a tight timeframe to optimise passenger experience.

Further, the current operators have suggested that an optimum vessel capacity for an expanded route would be 250 passengers, indicating that this design wouldn't meet the requirements. However, its likely that it could remain as a fast option on the network to meet growing demand and improve network resilience.



★★★★★
'Fast, smooth, a lovely catamaran run by efficient & cheerful staff - beautiful scenery, what an uplifting way to start the day! Highly recommend it.'

★★★★★
'Great trip from Bellerive to Hobart wharf.'

★★★★★
'Great little ride from Clarence to Hobart of a morning and afternoon. I wish they ran more like 1 to sth arm opossum Bay be perfect way to travel' (sic)

★★★★
'Pretty decent clean and comfortable'

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Vessel Options: National



Emerald Gen 2

- **Passengers:** 400
- **Crew:** 3
- **Wheelchairs:** Good Accessibly
- **Bicycles** 17
- **Operation:** Sydney

This vessel operates across Sydney Harbour and is specifically designed to deal with the harbour head swell conditions that effect the Manly to Circular Quay route. This would make it a suitable option for both the upper and lower Derwent routes.

It offers access through two boarding gates on each side of the main deck, creating flexibility in terms of terminal access.

The vessel capacity exceeds what is presently projected for the Derwent. However, future demand generated along the lower Derwent on the east and west could potentially require a vessel of commensurate size.



Ocean Surfer

- **Passengers:** 375
- **Crew:** 4
- **Wheelchairs:** Poor accessibility
- **Bicycles** 12
- **Operation:** Sydney

Branded the 'Manly East Ferry', this vessel is more agile than the Emerald Gen 2 and can deal with the harbour head swell conditions making it a suitable option for both the upper and lower Derwent Routes.

Passenger access is via two double gangways at the main passenger level, but wheelchair accessibility is poor.

Both its speed and a bar on the lower deck mean that the service is a more attractive, albeit more expensive journey than the Emerald Gen 2.

A similar capacity vessel may be appropriate for the Kingborough (F7) route.



River Class

- **Passengers:** 200
- **Crew:** 3
- **Wheelchairs:** Good Accessibility
- **Bicycles 12**
- **Operation:** Sydney

The vessels have floor to ceiling windows and offer level boarding access. They are typically used for traversing the paramatta river and inner Sydney Harbour.

Given the low profile of this type of vessel it is unlikely that it would be sufficient to handle the swell and fetch that effects the lower Derwent (e.g., Kingborough F7). It may, however, be appropriate for servicing the upper Derwent (e.g., Wilkinsons Point F2).

The capacity of the vessel may be appropriate for the upper Derwent routes (e.g., F2 and F3).

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Vessel Options: International



NYC Ferry Happy Hauler

- **Passengers:** 150 - 350
- **Crew:** 3
- **Wheelchairs:** Good Accessibly
- **Bicycles:** 8-10
- **Operation:** New York City (NYC)

There are effectively two classes of commuter vessels in NYC, reflecting the different waters in which they operate, "open water" Rockaway route vessel and "river" vessel.

The catamaran-style vessels are the same in almost every respect (e.g., circa 26m length overall and 8m beam), but the Rockaway service vessels have a slightly deeper draught, higher freeboard, larger engines (facilitating a higher service speed) and additional fuel capacity for the longer journey in more open waters (shown above).

These type of vessels would be suitable for most expanded routes across the Derwent (e.g., Kingston).



East by West

- **Passengers:** 135
- **Crew:** 3
- **Wheelchairs:** Good accessibility
- **Bicycles:** 10
- **Operation:** Wellington, New Zealand

The Southern Hemisphere's first all-electric high performance passenger ferry. Built by WEBBCo, the energy-efficient electric carbon-fibre catamaran operates on the Queen's Wharf to Days Bay route across Wellington Harbour.

It is capable of an ultra-fast charging time of 15 mins and a return distance between charges of 25km, with zero operating emissions and significantly lower operating and maintenance costs than standard diesel ferries of the same size and speed.

This vessel would be appropriate for most expanded routes on the Derwent and would help mitigate operational carbon emissions.



River Class

- **Passengers:** 250
- **Crew:** 2
- **Wheelchairs:** Good Accessibility
- **Bicycles:** 6
- **Operation:** Hamburg, Germany

In August 2022 Hamburg transport company HADAG ordered three hydrogen propulsion ferries from SET GmbH.

The vessels are designed to accommodate an urban riverbus service and are intended to facilitate stops at terminals without the deployment of mooring lines, that slows down turnaround times; safe access from terminals to the vessel at all states of the tide; and high maneuverability.

Typically, single hull vessels are slower than catamarans. However, the hydrogen propulsion system highlights an alternative option for the expanded Derwent service.

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09
TRANSPORT INTEGRATION ASSESSMENT

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Bellerive

Bellerive has an existing ferry terminal, with services providing connections to Hobart CBD.

Active Modes
Bellerive ferry terminal is well served by the existing on-road footpath network as well as the Clarence Foreshore Trail. Most nearby roads have footpath facilities. However, formal pedestrian crossing facilities are typically only provided at major intersections.

Streets in the immediate vicinity of the ferry terminal are relatively minor in function but can be wide in parts – narrowing, build-outs and/or median islands may assist with crossing. Cambridge Road is a major four-lane arterial with limited crossing opportunities, introducing severance.

Improved legibility and width of paths (e.g. for persons using wheelchairs) through the car park and on approaches may assist with navigation and access to the terminal.

Tactile ground surface indicators and ramps are not consistently provided at all intersections.

Aside from the Clarence Foreshore Trail, there are few cycling facilities in the area – most cycling would occur in a shared environment with vehicles. Opportunities to slow vehicles or reduce traffic may reduce cycling stress.

Public Transport
The Bellerive ferry terminal is located within a five-minute walk to a Shoreline to Hobart City 'turn-up-and-go' stop on Victoria Esplanade, which combines routes to provide a 10-minute frequency service to Hobart CBD on Monday to Friday, 7am to 7pm.

In the other direction, services provide access to a range of onward destinations, including Tranmere, Rokeby, South Arm, Lauderdale, Oakdowns and Clarendon Vale.

However, bus stop facilities are minimal, with no seating, shelter, lighting or clear bus stop marking currently provided.

Driving
Bellerive ferry terminal can be accessed by vehicle via Victoria Esplanade. A public car park is provided at the ferry terminal with approximately 37 parking spaces. Given the small car park, it is expected that most service users access via other means (walking, cycling, public transport). It should also be noted that Clarence City Council has had to actively manage car parking in the Bellerive precinct as a result of the existing ferry service.

The ferry is time competitive with driving – with a typical inbound morning peak hour trip taking 10-20 minutes, compared to 15 minutes by ferry.

Ferry Terminal Infrastructure
At present, Bellerive ferry terminal includes a relatively small pier that can cater for one vessel. A sheltered seating area is provided at the pier. However, this area provides limited protection against wind for passengers.

Future Developments
Kangaroo Bay Urban Design Strategy proposed redevelopment of surroundings. The site immediately north of the pier is currently vacant and was previously proposed as a hotel and hospitality training facility. The future land use is currently being negotiated.

Clarence City Council has also prepared a draft master plan for Victoria Esplanade and Queen Street in Bellerive. It has been prepared following community consultation in 2019 which identified a strong desire from the community improve the landscape and streetscape in the area to better celebrate the connection with and views across the River Derwent, provide better shared pathways and connections, improve traffic and parking, and generally activate the area to encourage people to stay longer.

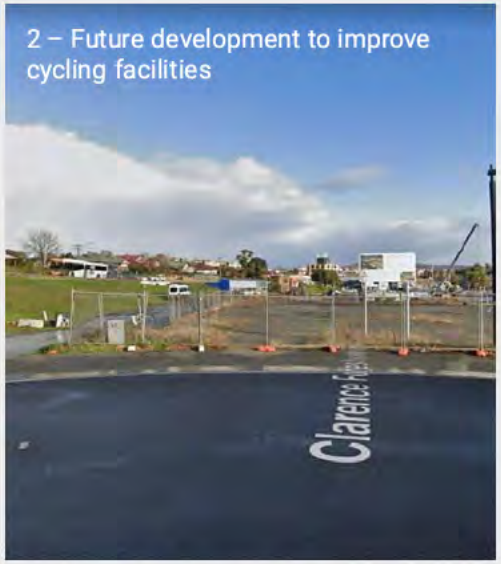
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Bellerive

Recommendations

1. Improve pedestrian and cycling access to/from ferry terminal, such as easing crossings of wide streets (e.g. median islands, kerb build-outs) and reducing traffic volumes and speeds.
2. Ensure future development caters for walk and cycle access to/from the north and provide cycle parking at ferry terminal.
3. Improve bus stop infrastructure at nearby stops and wayfinding to terminal.
4. Improve passenger waiting area at the ferry terminal, and access through car park (directness, legibility, accessibility and width).







3 – Limited bus stop facilities



4 – Main pedestrian access path narrow and indirect

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Lindisfarne

Recommendations

1. Improve connection to Lindisfarne town centre via Wellington Road.
2. Explore management of nearby car parking to ensure that walking, riding and, drop-off is encouraged. Note, this is not a suggested park and sail site.
3. Deliver terminal and passenger waiting area.
4. Enhance accessibility and environs around terminal precinct.

1 – Improve connections to Lindisfarne town



2 – Parking in surrounding area





3 – Need for terminal and waiting facilities



4 – Limited accessibility and permeability in surrounds

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Sandy Bay / Wrest Point

Sandy Bay does not currently have a public transport ferry service – it is assumed that the terminal would be located at Wrest Point.

Active Modes
Most streets in the vicinity of Wrest Point have a sealed footpath on both sides of the road. A footpath provides access to/from Sandy Bay Road to the terminal on the north-west side.

There is a signalised crossing at the Sandy Bay Road / Drysdale Avenue / Nelson Road intersection. However, elsewhere Sandy Bay Road is up to four lanes wide and introduces severance for communities on the south side.

A shared use path runs along the north side of Sandy Bay Road in both directions for a short distance. There are also unprotected on-road bike lanes to the south. However, the facilities are intermittent and often in the 'open door' zone of parked vehicles.

Public Transport
The terminal location is reasonably well served by the current bus network.

There are six bus routes that operate along Sandy Bay Road adjacent the terminal location, stopping at two bus stops located on Sandy bay Road within 5-7 min of walking distance of the location. These bus routes operate with a collective frequency of 5-6 times per hour during peak periods.

These stops provide access to Battery Point, Hobart CBD, Lower Sandy Bay, Taroona and Kingston Beach.

Bus stop facilities are relatively limited, with a shelter on the inbound side only.

Driving
The terminal location can be accessed by vehicle via Drysdale Avenue and Drysdale Place. A number of carparks with ample parking provision is available in the vicinity. However, use would be subject to agreement with the private operators i.e., the Federal Group.

Ferry Terminal Infrastructure
There are two small existing piers at Wrest Point. Further infrastructure is likely required to provide for a public ferry service.

Future Developments
UTAS relocation to city and subsequent re-development likely to increase residential catchment.

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Sandy Bay / Wrest Point

Recommendations

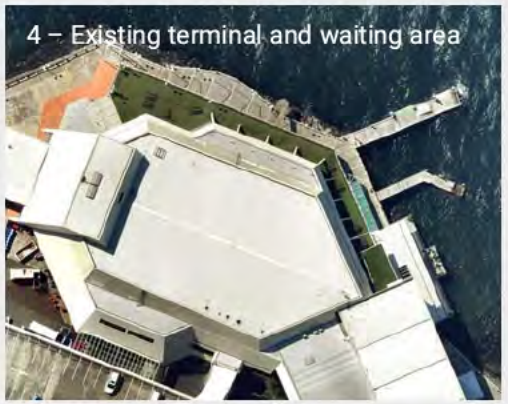
1. Improve pedestrian (including wheelchair and visually impaired users) crossing facilities leading to the ferry terminal location and along key walking routes/ intersections (e.g. car park access and crossings along Sandy Bay Road). Develop a continuous separated walking and cycling facility to the terminal.
2. Provide cycling parking and access to the proposed terminal location.
3. Improve bus stop infrastructure at the closest stops on Sandy Bay Road.
4. Improve passenger waiting area + access at the ferry terminal.


1 – Walking facility terminates near car park



2 – Existing cycling infrastructure


3 – Existing bus stop on Sandy Bay Road - NB


4 – Existing terminal and waiting area

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Regatta Ground

The Regatta Ground does not currently have a public transport ferry service – it is assumed that the terminal would be located at one of the existing jetties.

Active Modes
The Hobart Regatta Grounds is a popular destination for active travel. The grounds are located on the banks of the Derwent River and take about 20 minutes to walk to from the City, and about 10 minutes to cycle.

There are several cycle networks and walking paths that connect the Regatta Grounds to other parts of Hobart.

The main cycle network that connects to the Regatta Grounds is the Tasman Peninsula Cycleway. The Tasman Peninsula Cycleway is a 50-kilometer cycleway that runs from Hobart to the Tasman Peninsula. The cycleway is mostly flat and paved, making it a popular destination for cyclists of all levels.

There are also several walking paths that connect to the Regatta Grounds. The most popular walking path is the Queens Domain Walking Track. The Queens Domain Walking Track is a 2.5-kilometer walking track that runs through the Queens Domain, a large park that is located next to the Regatta Grounds. The walking track is mostly flat and paved, making it a popular destination for walkers of all levels.

Public Transport
There are several bus routes that stop near the Regatta Ground, including the 44, 45, and 46. The buses run frequently and are a convenient way to get to the ground.

- Route 44: Stops at the Regatta Ground on its way from Sandy Bay to the CBD.
- Route 45: Stops at the Regatta Ground on its way from Claremont to the CBD.
- Route 46: Stops at the Regatta Ground on its way from Bridgewater to the CBD.

Driving
The terminal location can be accessed by vehicle via McVilly Drive. There is a parking lot at the Regatta Grounds, but it can fill up quickly on event days.

Hobart City Council operates a free park and ride service between the Regatta Grounds and the City throughout the Christmas period.

The park and ride is located at the Cenotaph and Regatta Grounds Car Park on Davey Street. The park and ride is a convenient way to get to the Regatta Grounds, and it helps to reduce traffic congestion.

There is also street parking available around the Regatta Grounds. The street parking is free, but it can be limited on event days.

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Wilkinsons Point

Wilkinsons Point does not currently have a ferry terminal – it is assumed a new terminal would be located at Glenorchy Art & Sculpture Park (GASP). Specifically, it would be located at the northern tip of Wilkinsons Point, adjacent to the glass structure.

Active Modes
The Montrose Boardwalk along the western coast of the peninsula provides the only dedicated walking and cycling infrastructure linking the location to the rest of the transport network.

There is no direct sealed footway providing access to residential areas to the east or to Elwick Racecourse. Minor footpath connections are provided to MyState Bank Arena.

Formal pedestrian crossing facilities are only provided at the Brooker Highway / Loyd Road, Brooker Highway / Goodwood Road, and Goodwood Road / Centre Road / Howard Road intersections, each located more than 1km from the proposed terminal location. All intersections feature pedestrian crossing facilities but lack crossings across the slip lanes.

Aside from these crossings, the major highway introduces substantial severance and barrier to access from communities to the south.

Public Transport
There are no existing bus stops within walking distance (800m) of the proposed terminal location.

The nearest bus services operate approx. 850-900m away on Goodwood Road and Brooker Highway, providing connections to northern suburbs (Claremont, Berriedale), eastern shore (Risdon, Rosny Park, Otago, Old Beach, Bridgewater), and south to Hobart City Centre.

Bus stops generally lack key infrastructure such as seating, shelter, lighting, tactile pavers or clear bus stop marking. Bus stops on Goodwood Road currently do not feature any paved hardstand or footpath access.

Driving
Loyd Road is the only road in the vicinity of the proposed terminal location. Beyond MyState Bank Arena, Loyd Road has a very minor function, with poor surface condition in parts and no footpaths. Some level of improvement is likely required to provide pick-up/drop-off and emergency vehicle access, including connection to the terminal location.

Ferry Terminal Infrastructure
At present there are three small piers at the location. No sheltered seating area is provided at the piers.

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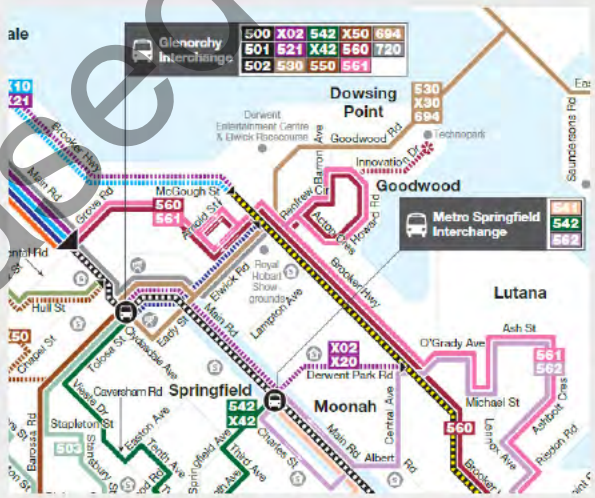
Wilkinsons Point

Recommendations

1. Improvements to Loyd Road likely required, including access to the proposed terminal location. Noting that there are some remedial works underway.
2. Make use of stadium car parking to provide 'park and sail' functionality. Engagement has been undertaken with the site owners who have shown a keen interest in seeing a ferry terminal at the site.
3. Consider routing of buses to more closely connect to ferry terminal (see Stakeholder Engagement).
4. Provide ferry terminal infrastructure, including waiting area







3 – Existing bus network


4 – Existing piers

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Lindisfarne

Lindisfarne does not have an existing ferry terminal – it is assumed that a new terminal would be located near the Lindisfarne Sailing Club.

Active Modes
Key streets in the local area have a footpath on at least one side – in many cases on both sides. Streets are local in nature and are expected to be lower-traffic and volume.

There is opportunity to better connect the proposed terminal location to Lindisfarne town centre via streetscape and crossing improvements around Wellington Road.

The shared use path along Ford Parade and the Esplanade provides a walking and cycle link along the coast linking to Rose Bay and Geilston Bay to the south and north respectively.

Aside from this path, there are few cycling facilities in the area – most cycling would occur in a shared environment with vehicles.

Public Transport
The proposed terminal location is relatively remote from existing public transport services.

Only local bus routes 684 and 685 operate within walking distance (800m), which operate at an hourly frequency across the day and half hourly during peak periods.

Further routes operate along the East Derwent Highway, approx. 1.2km from the terminal location

Driving
There are several car parks in the vicinity of the proposed terminal location, including at the Anzac Park precinct, Lindisfarne Tennis Club, Lindisfarne Cricket Club and within the Motor Yacht Club of Tasmania.

An access strategy and management measures should be put in place to preserve the desired function of these car parks – it is proposed that access to the ferry is largely walk-up from the local catchment, drop-off or by bicycle.

Ferry Terminal Infrastructure
There is no existing ferry terminal – a suitable location and infrastructure should be provided, including relevant discussions around land ownership.

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Geilston Bay

Geilston Bay currently has no dedicated ferry terminal – it is assumed that a new ferry terminal would be located near Geilston Bay Boat Club. Note that no consultation has been undertaken at this stage with the Club.

Active Modes
The Clarence Foreshore Trail provides access from nearby residential pockets to the south and north (via bridge) by foot and bicycle.

Primary access to the large residential catchment to the east is via Debomfords Lane, which does not have any established footpath facilities. There is a fence along the median making mid-block crossing of the East Derwent Highway difficult. There is no direct connection between the new shared path on the western side into Debomfords Lane. There is a possible pedestrian path along Geilston Creek from the Dumbarton Drive – the existing track is poorly maintained but could be upgrade for improved access for all. The new signals at Dumbarton Drive provide for pedestrian crossing (on two of the four legs).

People cycling from the east would share the roadway with vehicle traffic, which is expected to be relatively low. Measures that reduce vehicle speed may improve safety and reduce cycling stress.

The East Derwent Highway forms a substantial barrier to access from the east. However, a median island may assist with crossing approximately 50m north of Debomfords Lane.

Public Transport
Four bus routes operate along East Derwent Highway stopping at the bus stop pair north of Debomfords Lane, and on Derwent Avenue. Both bus stop pairs are located within 7 min walking distance of the terminal location and operate with a collective frequency of 6-7 buses per hour during peak periods.

However, there is a lack of key bus stop infrastructure at these stops, as no seating or shelter provided at three of the four stops and all lacking suitable lighting or clear bus stop markings.

Driving
The terminal location can be accessed via Dumbarton Drive leading to the Geilston Bay Boat Club and car park.

Given the distance to nearby land uses, it is expected that Geilston Bay would have a higher function as a park-and-sail site compared to other locations. There is a small amount of existing car parking associated with the Boat Club and boat ramp, with further parking a short distance away at the recreational fields.

Ferry Terminal Infrastructure
Geilston Bay has two relatively small jetties. There are some shelter and seating provisions outside the Boat Club building, but no provisions are available near the planned terminal.

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Geilston Bay

Recommendations

1. Assess opportunities to improve parking configurations and capacity to support a 'park and sail'.
2. Provide pedestrian facilities along Debomfords Lane to bus stops on the East Derwent Highway.
3. Consider measures to reduce traffic speeds on Debomfords Lane to reduce cycling stress.
4. Improve bus stop infrastructure at the closest stops on the East Derwent Highway and Derwent Avenue.
5. Improve passenger waiting area + access at the ferry terminal.

1 – Car park areas



2 – – East Derwent Highway Upgrades





3 – East Derwent Highway Upgrades



4 – Boat Club waiting area

Note, updated street level images were not available for the final updated report. Images sourced from AW Construction.

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Kingston Beach

Kingston Beach does not have an existing ferry service – it is assumed that a new terminal would be located near Kingston Beach Sailing Club.

Active Modes
Residential pockets near the proposed terminal location typically have footpaths on both sides of the street, with some exceptions. The path narrows significantly on the southern side of Mount Royal Road and would be impassable for some users.

Given the sharp bend, pedestrian facilities would need to be carefully designed to ensure users cross Mount Royal Road safely and with sufficient visibility.

Topography is also relevant in this area, with Mount Royal Road ascending steeply from the Sailing Club southwards. Given there are no dedicated facilities, people cycling may face increased stress ascending the hill while sharing the road environment with motorized traffic.

The path along Osborne Esplanade provides access along the waterfront and would be the key access corridor from Kingston and Kingston Beach shops.

People cycling currently need to share the road environment with traffic, which is likely higher in volume and speed on Beach Road and Osborne Esplanade.

Public Transport
The terminal location is reasonably well served by the current bus network.

There are three bus routes that operate along Osborne Esplanade – Mount Royal Road adjacent the terminal location, stopping at bus stops located within 2 min of walking distance of the location. These bus routes operate with a collective frequency of 3-4 times per hour during peak periods connecting to Blackmans Bay and Howden to the south, and Hobart to the north. These routes also provide connections to jobs and services at Kingston Central.

However, there is a lack of key bus stop infrastructure particularly at the closest bus stops on Osborne Esplanade, as no seating, shelter, lighting, tactile pavers or clear bus stop marking is provided.

Driving
The terminal location can be accessed by vehicle via Osborne Esplanade. There are 14 car parks at the sailing club with additional on-road parking provisions along Osborne Esplanade and an off-road facility on Mount Royal Road adjacent to the site.

However, these car parks are relatively small, so bus and walking connections would require support.

Ferry Terminal Infrastructure
At present the sailing club has a short breakwater that is subject to planned upgrades that will reinforce and extend it while creating a footpath on top.

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Kingston Beach

Recommendations

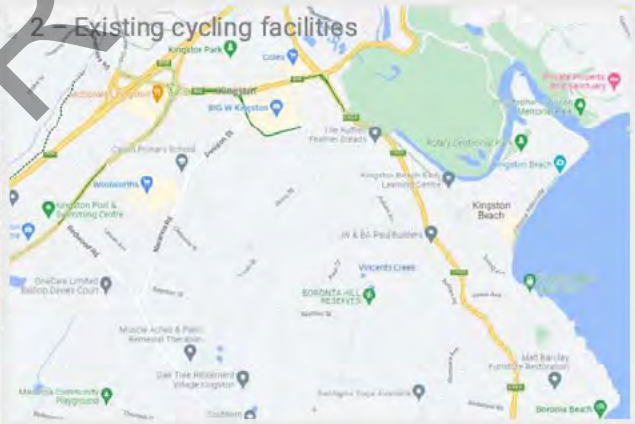
1. Improve pedestrian (including wheelchair and visually impaired users) crossing facilities at the access location and along Osborne Esplanade – Mount Royal Road and along key walking routes/ intersections.

2. Explore opportunities to improve cycling access, particularly from Kingston Central to the terminal (e.g., shared path along waterfront to Beach Road).

3. Redevelop area around site access to promote slower speeds for travel around the curve and safe crossing and/or wider footpaths in the vicinity of the terminal.

4. Improve bus stop infrastructure at the closest stops on Osborne Esplanade.









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10
LAND USE ASSESSMENT

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Introduction

The following section sets out the land use redevelopment potential of the following terminal locations:

- Hobart CBD
- Lindisfarne
- Geilston Bay
- Wilkinsons Point / MyState Bank Arena

It does so by concept mapping key development opportunities drawn as blocks (i.e., nodes), that are structured hierarchically and are connected by means of arrows or lines.

It should be stressed that these are concept plans only, building on the anticipated footfall and activity that an expanded ferry service would create. They have been informed by engagement with key stakeholders across the Derwent, but also driven by what type of development would generate the greatest value – both in terms of economic value and community value.

There is limited opportunity to redevelop the land at Kingston Beach. Wrest Point is also constrained by the existing casino, hotel and associated car park. While the latter could potentially be redeveloped in the long-run, the Federal Group have indicted no immediate plans to do so.

The Kingston Beach terminal is already fronted by the Kingston Beach Sailing Club and some limited car parking spaces. It is unlikely to see significant, if any, redevelopment as the result of a ferry terminal. However, greater levels of footfall may stimulate interest from small hospitality traders (e.g., coffee carts) that would service a commuter market.

Networks and Land Use

There is a synergistic and complimentary relationship between greater connectivity, particularly in a waterfront setting, and land development. In the case of Wilkinsons Point, greater connectivity in the form of a ferry service is likely to stimulate interest in the site, demand for space, and the related value of it. In turn, a greater number of people on the site, enabled by new development, will create demand for greater connectivity and more sustainable public transport services.

Similarly, while Sandy Bay (Wrest Point) is not considered in this exercise, it is recognised that redevelopment of the UTAS Sandy Bay campus will stimulate additional demand for a ferry service. In turn, an accessible ferry service offering connectivity across the Derwent will stimulate demand in both the residential and commercial components of the redevelopment.

In respect to Hobart's waterfront, an expected significant increase in footfall stemming from multiple commuter routes feeding into Brooke Street Pier is likely to raise the value of the open waterfront space and surrounding area. In turn, an opportunity exists to positively redevelop waterfront car parking spaces to create a more attractive, safe, and accessible waterfront public realm.

On the eastern shore terminals, Clarence Council have indicated that there are already plans to manage the car parking and public space in front of the Bellerive terminal, while the Geilston Bay area would need to be subject to a masterplan process to ensure all activities and services are properly integrated.

There is no planned development for the suggested Lindisfarne terminal. The site is occupied by the Lindisfarne Motor Yacht Club and various storage sheds. However, key routes to the town centre open the opportunity for an enhanced waterfront destination (see the Jetty Project – Stakeholders).

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Hobart Waterfront

Potential to animate the waterfront through higher footfall and activity

- **Activated Waterfront:** The suggestion here is to build on the significant increase in footfall generated by the ferry by redeveloping the Franklin Wharf car parking for open space public realm, seating, planting, and recreation. This would enhance the valuable waterfront space and further promote Hobart as a growing waterfront City.
- **Multi-model:** Safe drop-off zones could be created alongside safe bike storage to support 'last-mile' trips. A mobility hub would allow connections to onward journeys by bus.

ENTERTAINMENT

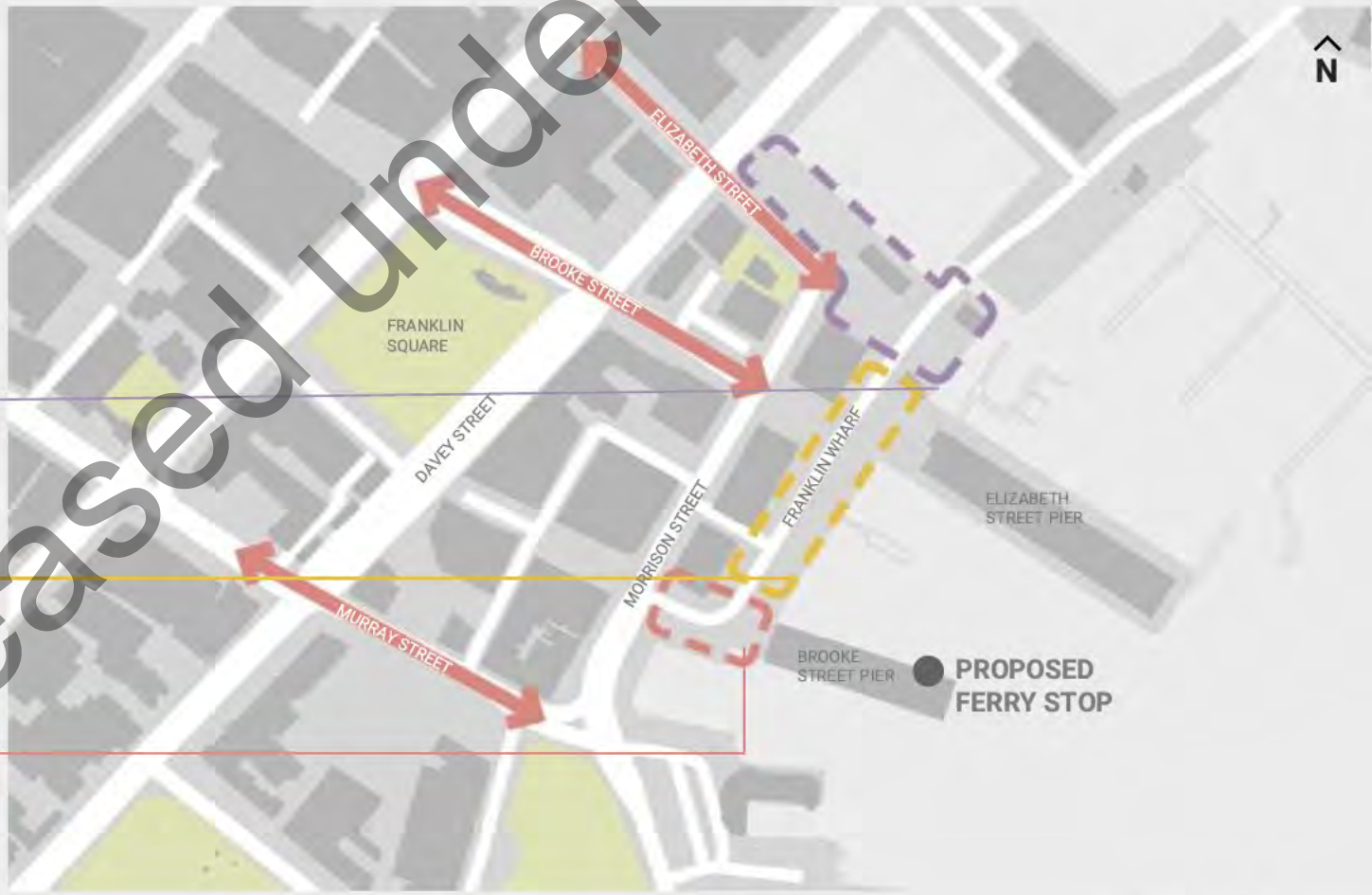
Alfresco dining
Amphitheatre
Events space

RECREATION

Activation spaces
Shared pedestrian / cycling spaces
Creating a 'honeypot' destination

MOBILITY

Drop off zone
Bus interchange
Bike parking



Conceptual only

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Lindisfarne

Potential to create a 'walk-up' connection to the local community

- **Activated Waterfront:** An active travel corridor between the town centre and an activated waterfront. The area would benefit from a masterplan to improve connections with township and engage the local community in the activation of Wellington Rd
- **Space for People:** Existing car parking and hard standing on the waters edge could be redeveloped into an accessible recreation area. Early engagement with boat yard recommended to integrate and improve operations
- **Multi-model:** Safe drop-off zones could be created, capturing 9% of commuter car passengers. Safe bike storage would support 'last-mile' trips.



MOBILITY

Drop off zone
Disability parking only
Bike parking

RECREATION

Removal of car parking spaces
Shared pedestrian / cycling spaces
Creating a 'honeypot' destination

Conceptual only

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Regatta Ground

Potential to create a well-connected waterfront events and leisure destination

- **Arts, Sports and Entertainment Precinct:** Federal and state governments are progressing planning for a new stadium at Macquarie Point, potentially serving as a catalyst for further development.
- **Antarctic and Science Precinct**: Tasmanian Government supports development of a new innovation precinct to establish Hobart as the 'Gateway of Choice' for the Antarctic.
- **Medium-density housing** has been proposed on the riverfront.

DEVELOPMENT

Opportunities for housing, Antarctic and Science precinct, commercial and retail

ENTERTAINMENT

Proposed new stadium precinct at Macquarie Point for sports, entertainment, arts and business events

MOBILITY

Proximity to commercial and transport hubs in Hobart CBD



Based on ABC News, ABC News, Tasmanian Government Strategic Business Case, Tasmanian Polar Network

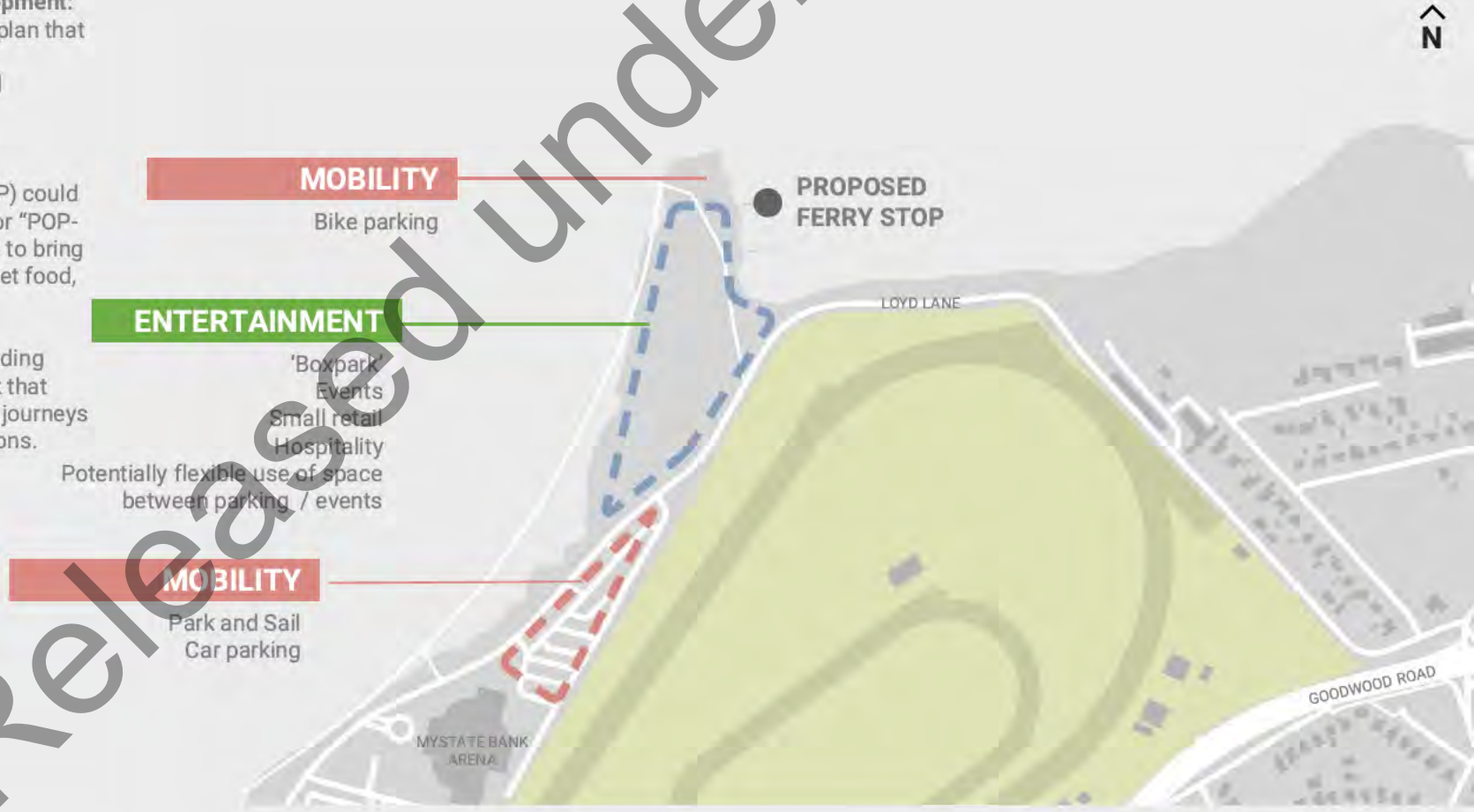
Conceptual only

Released under RTI

Wilkinsons Point / MyState Bank Arena

Potential to create a well-connected waterfront events and leisure destination

- **Sporting, Retail, and Hospitality Development:** Wilkinsons Point is subject to a masterplan that has allocated space to resort style accommodation, hospitality, sports and entertainment facilities.
- **Entertainment:** Higher footfall through Glenorchy Art and Sculpture Park (GASP) could create an opportunity for a 'BOXPARK' or "POP-UP' style development, offering a space to bring communities together by providing street food, drinks and entertainment.
- **Park & Sail:** In the short-term, hard standing could be delivered to support a car park that would help capture some of the 84% of journeys made by car to other Derwent destinations.



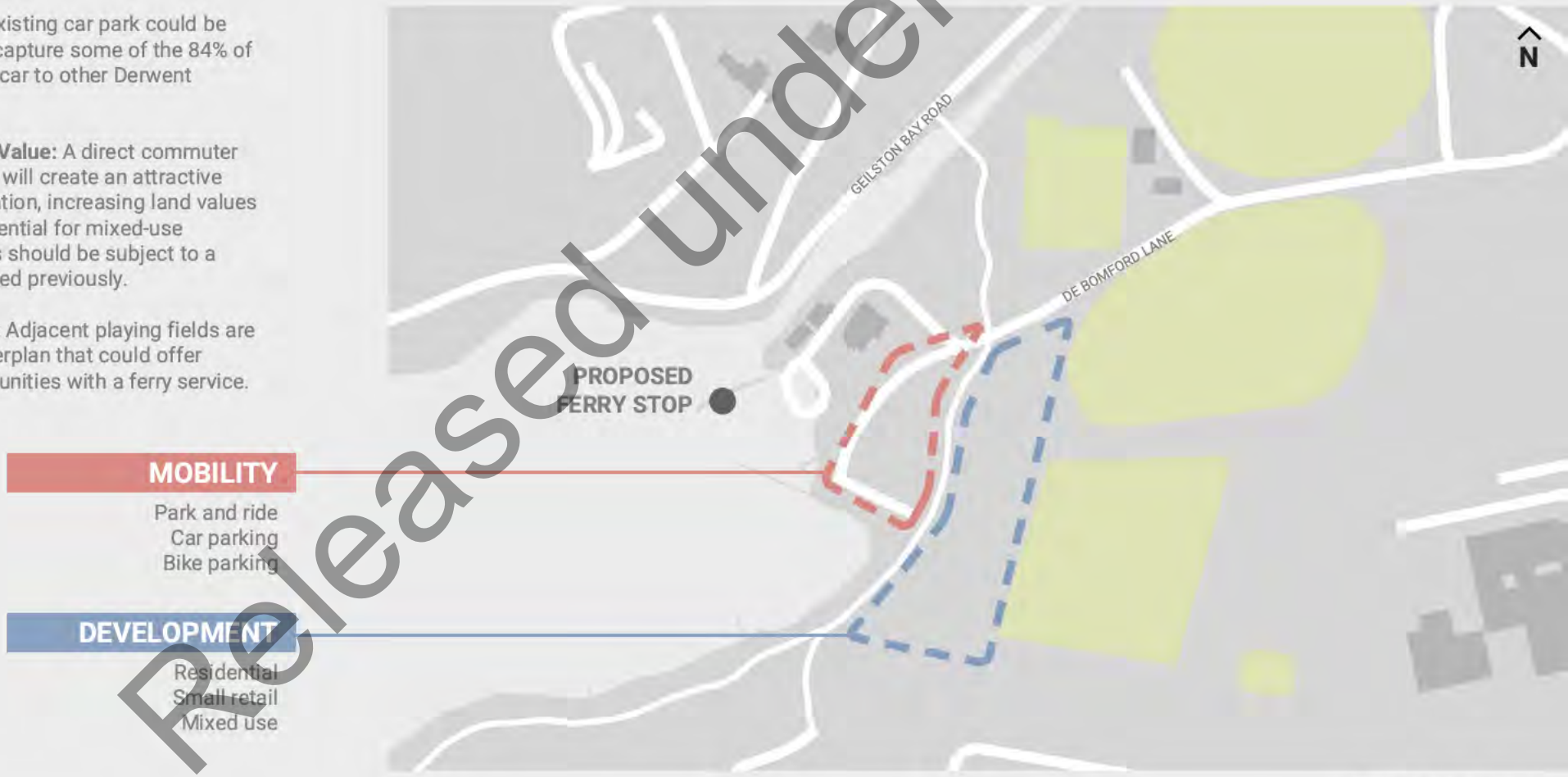
Conceptual only

Released under RTI

Geilston Bay

Potential to deliver a network effect through 'Park & Sail'

- **Park & Sail:** The existing car park could be upgraded to help capture some of the 84% of journeys made by car to other Derwent destinations.
- **Maximising Land Value:** A direct commuter service to the City will create an attractive waterfront destination, increasing land values will create the potential for mixed-use development. This should be subject to a masterplan as noted previously.
- **Sporting Precinct:** Adjacent playing fields are subject to a masterplan that could offer synergistic opportunities with a ferry service.



Conceptual only

Released under RTI

11
STAKEHOLDER ENGAGMENT

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Stakeholder Overview

Over the course of the study, a total of 18 stakeholders were engaged, including:

- Hobart City Council
- Clarence City Council
- Glenorchy City Council
- Kingborough Council
- Metro Tasmania
- Marine and Safety Tasmania (MAST)
- Tas Ports
- University of Tasmania (UTAS)
- Roche Brothers / Navigators
- Cycling South and Bicycle Network
- Ursula Taylor Derwent Estuary
- Larry Kestelman Group
- The Jetty Project

out of scope



Derwent. The following section provides a summary of key external stakeholder consultations.

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12
Costs

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Project Investment and Return: Aligning to Greater Hobart City Objectives



- Landside Infrastructure
- Waterside Infrastructure
- Design



- Lindisfarne
- Wilkinsons Point
- Sandy Bay

On 25th October 2022, the Federal Government announced a budget allocation of $20 million for expansion of ferry services along the Derwent. The capital funding has been used as an indicative guide for delivering both landside and waterside infrastructure.

Assumptions

Working on the assumption that locations such as Sandy Bay and Wilkinsons Point have existing jetties, a lower percentage (%) of the funding is expected to be allocated to each of these locations. Whereas in Lindisfarne, significant infrastructure upgrades are expected to be required to enable an expanded ferry service.

Further information on cost assumptions, including an indicative breakdown of operating costs for the expanded service can be found in the appendixes.

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Note: all prices and estimates for strategic planning purposes only.

13
Next Steps

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Project Return: Aligning to Greater Hobart City Objectives

TACKLING TRAFFIC CONGESTION

'High quality, reliable, and sustainable public transport services'

- Ferries will reduce pressure on the network through taking an estimated 2,400 commuter trips off the road network .
- Reliable commuter journey times, creating a more efficient economy.
- Carbon generated from private vehicles will be offset by usage of ferries.

DELIVERING RELIANCE

"Communities across the Derwent will have increased access to employment, education, and leisure opportunities'.

- Much of Hobart relies on a single crossing for all traffic and public transport, a ferry network provides an alternative.
- Road networks are susceptible to shocks that block them and cause delays. Alternative routes provide resilience.

ENABLING PLACE

'The Derwent cannot be considered separate to the Greater City, the plan recognises this place-value and responds to it at different scales.'

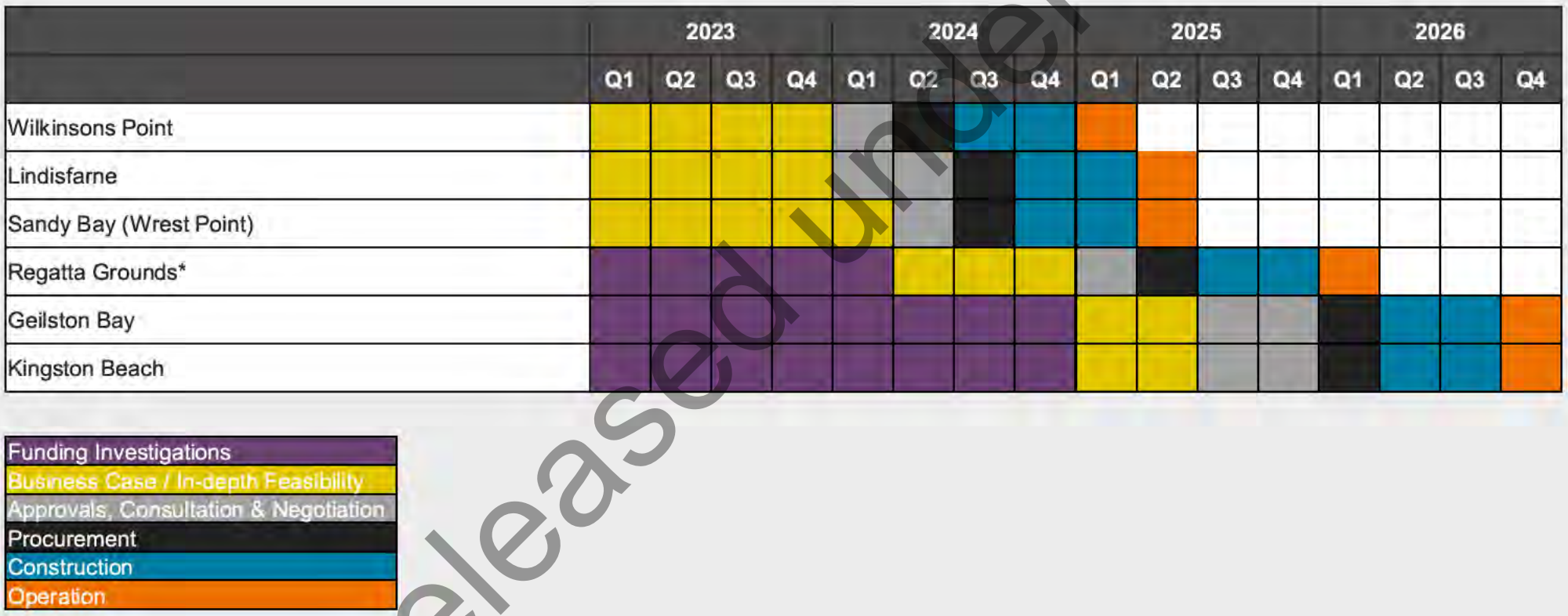
- Locations respond to local places, including development opportunities
- Public ferries allow people to see their communities from a different angle, stimulating civic pride in place.
- Concept includes Travel Demand Management measures to address how the entire public transit system works to support movement across Greater Hobart.

Recommendations for Greater Hobart Councils, in partnership with the State Government

- **Jetty Structure Condition Assessment:** A detailed investigation into the suitability of using the existing jetty infrastructure at Wilkinsons Point and Sandy Bay. This should clearly define the condition of these assets and their suitability for hosting an expanded ferry service and the associated implications.
- **Wave Climate Studies:** Similar to the Kingston Beach study, a report at each location to determine, in more detail, the effects of fetch and sell on terminal infrastructure.
- **Nautical Studies, further MAST and Habour Master Engagement:** at each location to determine the operating rules for an expanded ferry service.
- **Shoreline Baseline Assessment:** Aligned to the comments made by the Derwent Estuary Program, it is recommended that a baseline condition of the shoreline at each location is undertaken. This will allow for a future analysis of ferry wake on the shoreline environment.
- **Progress Terminal Design and Costing:** Building on the designs presented in this study, develop further detail designs for each terminal location.
- **Stakeholder Engagement:** At each location engaging with community groups on the interest, options and potential effects of an expanded ferry service and related terminals. Critical to this is progressing close engagement with the State Government and future operators of the service.

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Indicative Project Programme



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*Indicative programme progressed by others as part of the proposed stadium.

A
TECHNICAL APPENDIX

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High-level commuter demand estimates

For each proposed stop, an 'origin' catchment and 'destination' catchment was defined.

SA1 = ABS Statistical Area 1 (link)
DZN = ABS Destination Zones (link)

'Origins' were assumed as:

- **Hobart CBD, Bellerive, Sandy Bay, Lindisfarne**: SA1 areas within an approximately 800m radius of the proposed ferry stop, reflecting likely local catchment, higher propensity for access by non-car modes and opportunities for local activation. An 800m radius is considered a standard rule-of-thumb for public transport catchments.
- **Geilston Bay:** SA1 areas within approximately 800m radius from the proposed ferry stop, plus those within a 10-minute drive from the north (e.g., Risdon, Risdon Vale), reflecting likely broader catchment and distance from surrounding land uses.
- **Wilkinsons Point:** SA1 areas within approximately 10-minute cycle from the proposed ferry stop, plus those within 10 min drive from the north (e.g., Montrose, Rosetta, Berriedale), reflecting likely broader catchment and distance from surrounding land uses.
- **Kingston Beach:** SA1 areas within an approximately 10-minute drive from the proposed ferry terminal, reflecting likely broader catchment and distance from surrounding land uses.

'Destinations' were assumed as:

- **Geilston Bay, Sandy Bay, Lindisfarne:** Single DZN zone in which the proposed ferry terminal sits, given the larger size of the zone.
- **Hobart, Wilkinsons Point, Bellerive:** 2-3 DZN zones closest to the ferry terminal, given the smaller size of the zones and/or distance to nearby land uses.
- **Kingston:** Single DZN in which the proposed ferry terminal sits, plus the DZN in which Kingston township sits to capture the likely density of workplaces.

'Destinations' are typically comparable or smaller than origin zones, reflecting more limited travel options between the ferry and workplace (compared to home to the ferry).

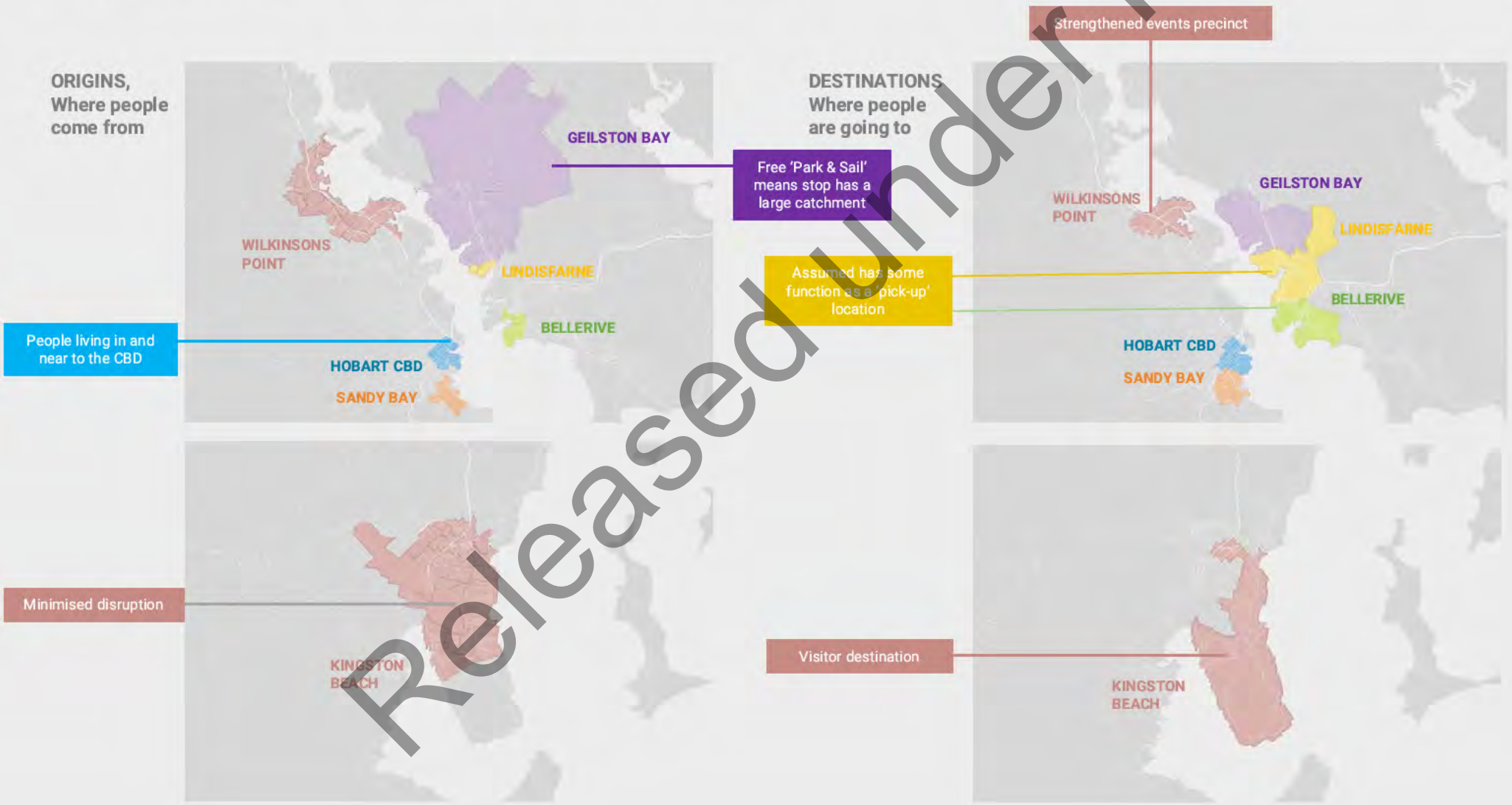
Maps showing the resulting catchments are shown over the page.

Data sourced from, or based on Australian Bureau of Statistics under a Creative Commons Attribution 4.0 International licence (CC BY 4.0), https://creativecommons.org/licenses/by/4.0/, copyright Commonwealth of Australia administered by the ABS.

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High-level commuter demand estimates



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High-level demand estimates

People with a residence **and** workplace within any of these catchments were considered to be potential users of a ferry service. The number of people currently travelling between each origin and destination pair by mode was derived from ABS Census 2016 data (as 2021 data for Method of Travel to Work was not yet released at the time of writing).

A factor of between 0 to 25% was then applied to estimate the approximate mode shift potential to ferry service. The factor was broadly based on:

- Basic travel time competitiveness and reliability compared to other modes (considering the likely route alignment in the 'initial' scenario, but more indicative comparison for 'longer-term' scenario)
- General consideration of other factors which may be relevant (e.g., car passenger may be more likely to use ferry than car driver, person cycling may not change to ferry for short trip due to need to pay/exercise benefits).

This gives a broad estimate of demand for each origin-destination pair by ferry. Origin-destination pairs with a very low existing demand (<20 persons) were excluded.

It is emphasised that the exercise is intended only for high-level strategic planning, and actual demand will also depend on factors not captured here, such as:

- Land use changes, including landside improvements around new ferry terminals
- Wider transport planning, such as integration with bus timetables, cycle/car parking facilities, quality of interchange
- Individual journey characteristics and tolerance, e.g., willingness to transfer between modes, willingness to pay, engrained habits, cultural factors
- Ultimate design and 'attractiveness' of ferry service, including comfort, convenience, service times, hours of operation, stop patterns, travel times (incl. speed limits), awareness, marketing and promotion
- Induced demand e.g., people that previously did not work, or worked from home, that now travel by ferry
- Seasonal factors, such as weather or holiday periods.

This assessment is also limited to commuters on Census day in 2016, and does not capture:

- Wider users, such as university students, school students, tourists and event patrons.
- Any changes in travel patterns (incl. working from home) or population changes since 2016.

Updated data and more robust modelling is recommended to validate the findings.

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Initial Estimated Daily Operating Costs

Code	Operating Cost	Assimption	Notes
A	Crew	3	Marine and Safety Tasmania (see Marine and Safety (Safe Operation) Regulations, 2003 – clause 29
B	Wage	$45	Average Transport Sector Wage
C	Peak Operating Hours	11	5.5 hours AM and PM Peak
D	Daily Crew Costs	$1,485	D = A * B * C
E	Litres per Hour	45	Original Derwent Ferry Study (vessel manufacturer quote)
F	Cost per Litre	$2.30	Average Diesel Price: https://www.fuelcheck.tas.gov.au/app
G	Daily Fuel Costs	$1,139	G = E * F
H	Maintenance Cost per Hour	$18.31	Average cost per service hour
I	Daily Maintenance Cost	$201.36	I = C * H
J	Insurance Costs per Annum	$6,800	Original Derwent Ferry Study (quote from an Insurance Brokers)
K	Daily Insurance Costs	$18.9	K = J * 360 (assuming some downtime)
L	Total Costs Per Ferry	$2,844	L = D + G + I + K
M	Ferries	1	
N	Total Cost of Daily Operation	$2,844	N = L * M

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Long Term Estimated Daily Operating Costs

Code	Operating Cost	Assimption	Notes
A	Crew	3	Marine and Safety Tasmania (see Marine and Safety (Safe Operation) Regulations, 2003 – clause 29
B	Wage	$45	Average Transport Sector Wage
C	Peak Operating Hours	11	5.5 hours AM and PM Peak
D	Daily Crew Costs	$1,485	D = A * B * C
E	Litres per Hour	45	Original Derwent Ferry Study (vessel manufacturer quote)
F	Cost per Litre	$2.30	Average Diesel Price: https://www.fuelcheck.tas.gov.au/app
G	Daily Fuel Costs	$1,139	G = E * F
H	Maintenance Cost per Hour	$18.31	Average cost per service hour
I	Daily Maintenance Cost	$201.36	I = C * H
J	Insurance Costs per Annum	$6,800	Original Derwent Ferry Study (quote from an Insurance Brokers)
K	Daily Insurance Costs	$18.9	K = J * 360 (assuming some downtime)
L	Total Costs Per Ferry	$2,844	L = D + G + I + K
M	Ferries	3	
N	Total Cost of Daily Operation	$8,531	N = L * M

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Longer-term route configuration examples and high-level commuter demand

Ferry Routes

Options analysis considered six potential routes (in addition to Bellerive – CBD as F1)

Serviced by three peak new ferries, routes being:
- F2: Kingston – Sandy Bay – CBD
- F3: Geilston Bay – Lindisfarne – CBD
- F4: Wilkinsons Point – CBD

Commuter Demand Analysis

This study focussed on commuters as the potential users of a ferry service, with an aim of reducing traffic congestion and increasing resilience. High-level estimates indicate overall commuter ferry demand for approx. 550-600 people per day. This is comparable to the 400 people per day travelling on the existing Hobart – Bellerive route.[1]

These are conservative estimates. This analysis does not include the following trips:
- Tourism
- Education (e.g., Taroona Public School, Privates Schools or UTAS)
- Off-peak travel (e.g., elderly market, non-employment, shift employment, etc...)

Assuming commuters make return trips, this equates to overall 'reference case' demand for approximately 1,100-1,200 boardings per day. With the inclusion of Travel Demand Management measures this increases to 1,650 boardings per day.

F5, F6, and F7 operate as off-peak services that will sweat the assets and service a growing visitor market across Greater Hobart



[1] Bellerive calculated based on operational days taken to reach 100k passengers, noting events and free travel will impact results.

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Longer-term route configuration examples – feasibility of timetable

A high-level timetable has been developed to understand the likely travel times and headways between services to inform the likely number of ferries required. See pg. 110 for assumptions.

Peak option 1 (running three ferries – F2, F3, F4) could likely achieve:
- two departures from Kingston to the CBD
- three departures from Geilston Bay
- three departures from Wilkinsons Point

Peak option 2 (running two ferries – F5, F6) could likely achieve:
- two departures from Kingston to the CBD
- two departures from Wilkinsons Point via Geilston Bay

Given one-way nature of demand in peak hours, it is assumed that at the end of the route, the ferry would travel directly back to the start of the route without visiting intervening stops for efficiency.

Off-peak, one ferry running the southern loop would take approximately 2 hours per loop and the northern loop 1.5 hours. This excludes any required stopping time for breaks or refuelling.

A similar but reversed program is assumed in the PM peak.

F2 / F5	Arrives	Departs
CBD		5:59
Kingston	6:23	6:30
Sandy Bay	6:58	7:05
CBD	7:11	7:18
Kingston	7:51	8:00
Sandy Bay	8:28	8:35
CBD	8:41	

	Arrives	Departs
CBD		6:08
Geilston Bay	6:23	6:30
Lindisfarne	6:38	6:45
CBD	6:56	7:03
Geilston Bay	7:18	7:25
Lindisfarne	7:33	7:40
CBD	7:51	7:58
Geilston Bay	8:13	8:20
Lindisfarne	8:28	8:35
CBD	8:46	

F4	Arrives	Departs
CBD		
Wilkinsons Pt		6:00
CBD	6:27	6:34
Wilkinsons Pt	7:01	7:10
CBD	7:37	7:44
Wilkinsons Pt	8:11	8:20
CBD	8:47	

F6	Arrives	Departs
CBD		5:56
Wilkinsons Pt	6:23	6:30
Geilston Bay	6:46	6:53
Lindisfarne	7:01	7:08
CBD	7:19	7:26
Wilkinsons Pt	7:53	8:00
Geilston Bay	8:16	8:23
Lindisfarne	8:31	8:38
CBD	8:49	

F7 (example loop)	Arrives	Departs
		...
CBD	8:41	8:48
Sandy Bay	8:54	9:01
Kingston	9:29	9:36
Sandy Bay	10:04	10:11
CBD	10:17	10:24
Bellerive	10:31	10:38
CBD	10:45	...

F8 (example loop)	Arrives	Departs
		...
CBD	8:49	8:56
Wilkinsons Pt	9:23	9:30
Geilston Bay	9:46	9:53
Lindisfarne	10:01	10:08
CBD	10:19	...

Start and end of route

'Repositioning' trip inc. passangers.

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Two versus three ferries

- While two ferries would incur smaller cost outlays on vessels and operations (staff, maintenance, storage etc.), it would limit the flexibility and resilience of an expanded network, limiting its ability to reduce road congestion and respond to peak demands.
- Two ferries would drive higher utilisation per ferry, assuming that demand is constant, and passengers are flexible in departure time (e.g., people wanting to travel at 7:00am can travel at 6:30am or 8:00am instead – see table below). However, the demand estimates presented in this report are based on commuter data only and are therefore conservative. It is expected that significant demand will be driven by bridge & road network upgrades, students, and visitors.
- It may be logical to start with two ferries to test demand and iron out any issues, with a view to adding further fleet if service times and/or demand warrants. Again, it is reiterated that this exercise is only intended to support high-level proof of concept and more detailed, robust modelling should be taken to account for the limitations outlined in the technical appendix.

Three Ferries

Strengths

- Greater flexibility for users in terms of commuter time.
- A more resilient network than can cope with spikes in demand.
- Better level of service in the off-peak periods, with shorter headway.

Weaknesses

- Higher up-front capital cost in procuring three ferries.
- Lindisfarne demand appears low, but it is likely due to the larger Geilston Bay catchment

Opportunities

- A more direct route will expedite movements for the higher-demand Wilkinsons Point to CBD passengers.
- Additional ferries would support peaks in demand driven by events.

Threats

- Higher operation and maintenance costs.
- Managing ferry congestion around Sullivans Cove and the passages underneath the Tasman Bridge.

Route	End-to-end run time	Departures / pk	Demand early service (6:00 / 6:30 dep.)	Demand mid service (7:00 / 7:15 dep.)	Demand late service (8:00 / 8:20 dep)
F2 – Kingston – Sandy Bay - CBD	~41 minutes	2 departures	45 passengers	-	190 passengers
F3 – Geilston Bay – Lindisfarne – CBD	~26 minutes	3 departures	10 passengers	30 passengers	60 passengers
F4 – Wilkinsons Point – CBD	~27 minutes	3 departures	10 passengers	35 passengers	70 passengers
F5 – Kingston – Sandy Bay – CBD	~41 minutes	2 departures	45 passengers	-	190 passengers
F6 – Wilkinsons Point – Geilston Bay – Lindisfarne – CBD	~49 minutes	2 departures	45 passengers	-	185 passengers

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Longer Term Individual route maps

Peak Option 1 – three ferries
F2: Kingston – Sandy Bay – CBD
F3: Geilston Bay – Lindisfarne – CBD
F4: Wilkinsons Point – CBD

Peak Option 2 – two ferries
F5: Kingston – Sandy Bay – CBD
F6: Wilkinsons Point – Geilston Bay – Lindisfarne – CBD

Off-peak option – two ferries (third can add additional level of service)
F7: CBD – Sandy Bay – Kingston – Sandy Bay – CBD – Bellerive – CBD
F8: CBD – Wilkinsons Point – Geilston Bay – Lindisfarne – CBD

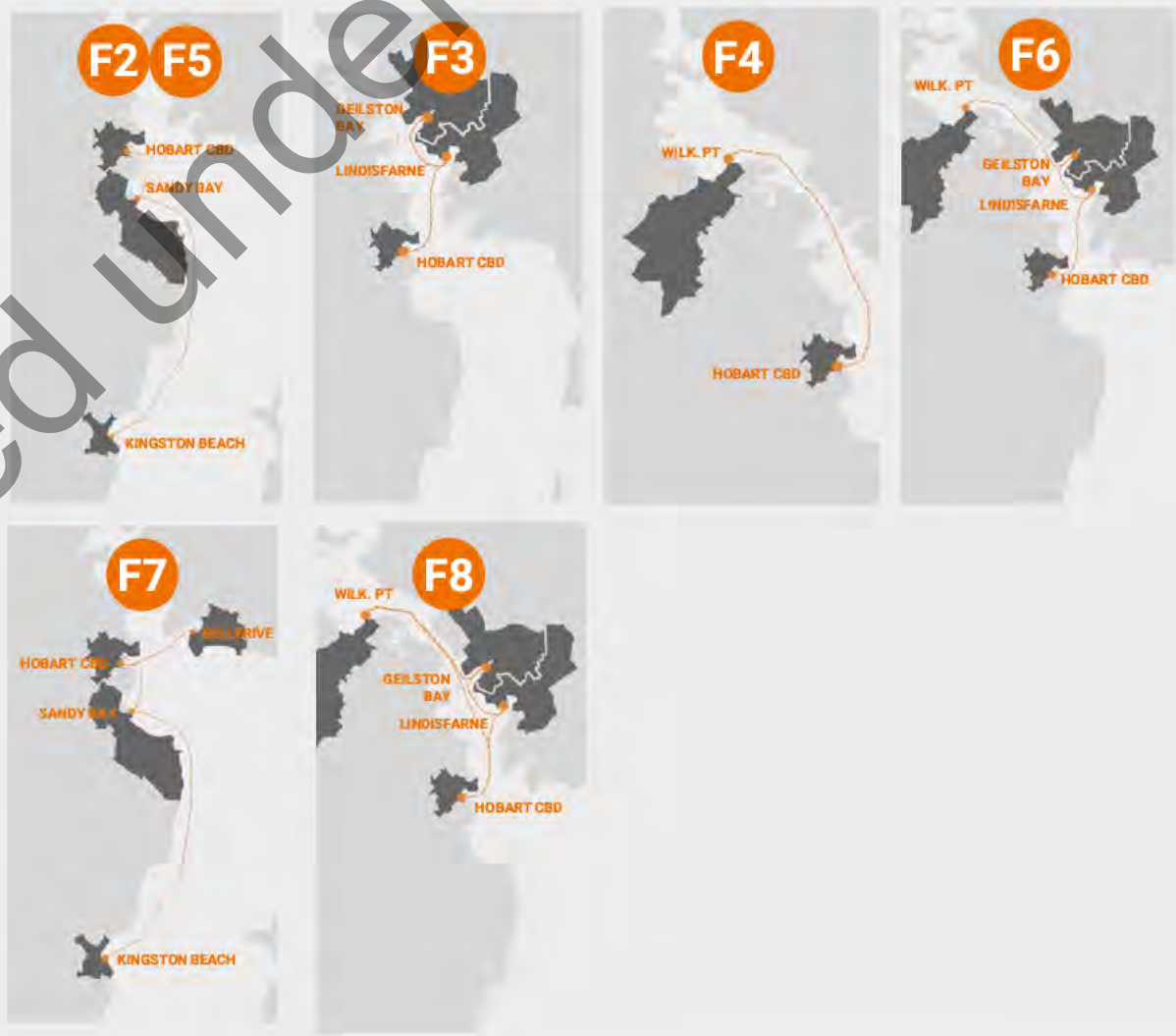
Timetabling assumptions

Dwell time (7 mins) and travel time (0.4km/min or 24km(12.9 knots)/hr) are based on comparisons and averages of other ferry services in Australia. Factors such as sea conditions, navigating moorings and other infrastructure has not been considered.

Starting time is assumed to be 6:00 to 6:30am, comparable to the Bellerive ferry. Timetables have been developed to arrive in the CBD prior to 8:50am to provide time for onward travel to destination.

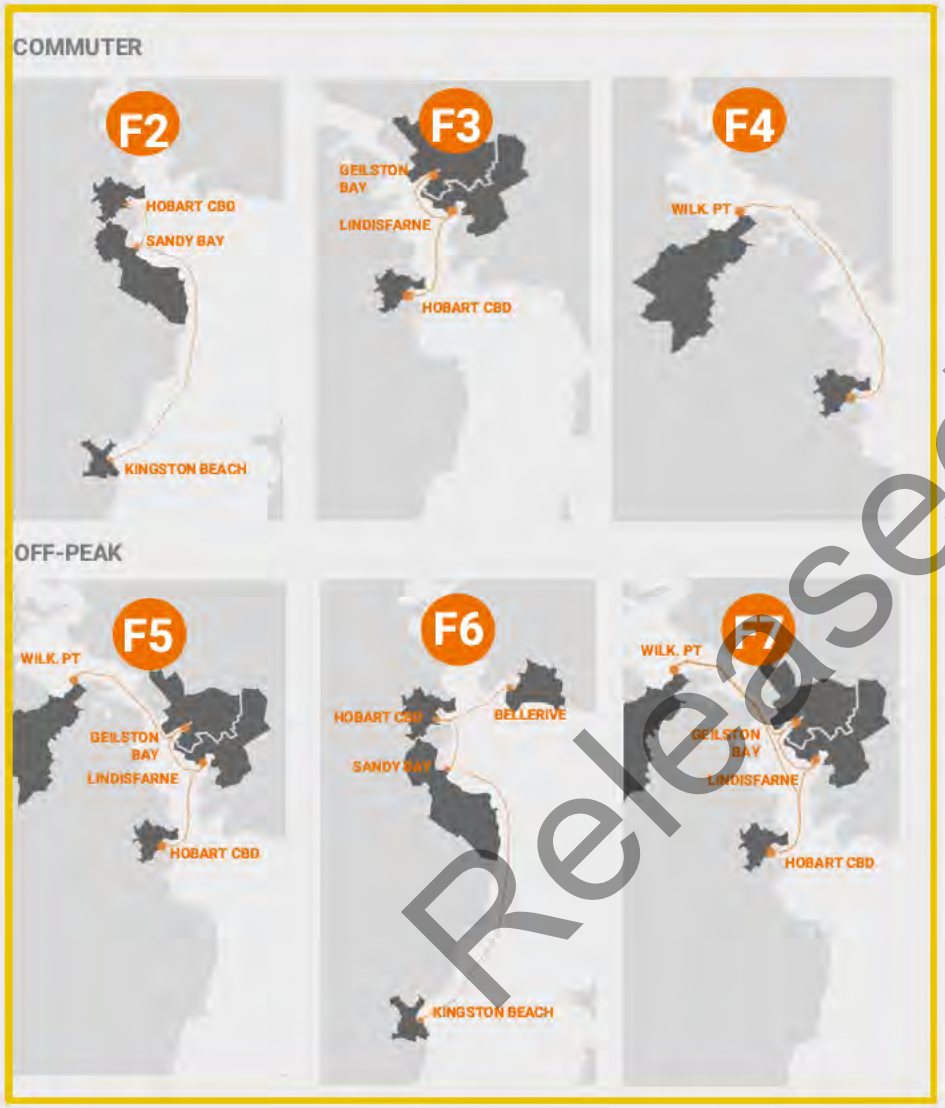
Where there are three runs: assumed 10% of demand would use early, 30% mid and 60% later service. Where there are two runs: assumed 20% would use early service and 80% would use later service.

Timetables are only intended to demonstrate travel time and have not yet been aligned with bus schedules.



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Route Evolution: Example Configuration(s)





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Estimated Demand

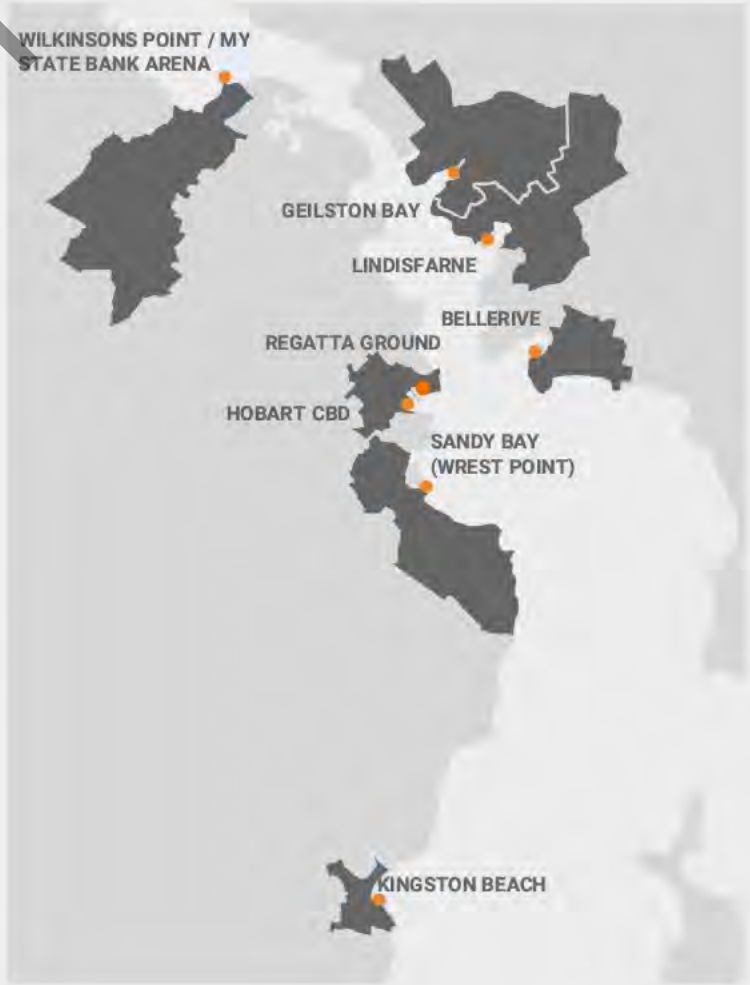
3
Locations

250
Boardings Per Day



6
Locations

1,650
Boardings Per Day



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Tasmanian Government

DEPARTMENT OF STATE GROWTH

Dept. Ref MR24/3079/1

Critical Signing Date

APPROVED/NOT APPROVED

*

SIGNED: out of scope

DATE: 3/2/25

MINUTE FOR THE MINISTER FOR TRANSPORT

SUBJECT: PROCUREMENT OF ONGOING FERRY SERVICES – FUNDING AND RECOMMENDATIONS ON OPTIONS

Minister's notation: * Would a longer contract reduce costs?

Recommendation:

That you:

out of scope

4. **NOTE that the 2024-25 budget detailed $8.4 million for the ongoing operation of the Existing Ferry Services until the 2027-28 financial years, with recurrent funding of $3.6 million from 2028-29. Additional recurrent funding will be required to secure a long-term contract for the operation of an expanded River Derwent ferry network.**

Current Situation:

out of scope

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Financial implications

Based on the current terms of the contract between Derwent Ferry Co and the Transport Commission, it is anticipated that the cost of directly sourcing the provision of the Existing Ferry Services from Derwent Ferry Co for a further two years' (until August 2027) will be approximately $3.7 million (ex GST).

The 2024-25 budget provided recurrent funding for the operation of the Existing Ferry Services that is sufficient to cover the above costs.

The recurrent funding allocated for the Existing Ferry Services *may also* be sufficient to procure two long-term (10 + 2 years) timetabled services (i.e. Bellerive and one other location). However in order for State Growth to commence an open tender process for the long term procurement of expanded River Derwent ferry services that includes Bellerive, Lindisfarne, Sandy Bay *and* Wilkinsons Point, additional recurrent funding will be required (this risk was identified as part of the 2024-25 budget process).

Rele

This could be addressed through utilisation of the government's 2024 election commitment of $20 million towards Derwent Ferry infrastructure to "…support delivery of ferry services to three new ferry terminals at Lindisfarne, Sandy Bay and Wilkinson Point over the next four years" for the expanded long-term ferry services.

The total estimated cost of a long-term contract to operate an expanded ferry network, including Bellerive, Lindisfarne, Sandy Bay and Wilkinsons Point, is currently unknown, but s27 [redacted] State Growth will provide further updates to you through 2025 once it has more certainty on estimated cost of operating the expanded network.

out of scope [redacted]

out of scope [redacted]

Cynthia Heydon
Deputy Secretary, Transport

24 January 2025

Prepared by:	out of scope [redacted]	Cleared by:	out of scope [redacted]
Position:		Position:	
Email:		Email:	
Phone:		Phone:	

Released under FOI

From: out of scope
To:
Subject: osts and budget
Date: Monday, 25 May 2026 2:49:47 PM
Importance: High

Hello out of scope

See below, the $60-70M estimate was developed from the monthly operating cost estimates as outlined below. I would note although these are based in accurate operating costs they are pure estimates when looking into the monthly costs of expanded services then allocated out to a 12 year contract.

Probably good to discuss.

Cheers

out of scope

From: out of scope
Sent: Thursday, June 13, 2024 3:20 PM
To: Crane, Martin <Martin.Crane@stategrowth.tas.gov.au>
Cc: out of scope @stategrowth.tas.gov.au>
Subject: Ferry operational costs and budget
Importance: High

Hi Martin

At the moment we spend an average of $150k on the Hobart to Bellerive service a month. This number goes down slightly depending on the fare revenue collected by Navigators, but it averages to be around the $150k mark.

Year to date (including June) we have spent on operating costs we have spent $1,840,000 on operating costs for this service.

The operating costs come out of a big bucket that includes funds for the Bellerive Wharf upgrade and planning and development consultancies, however, over the next fin years we have $3.26M (2024-25) and $3.25M (2025-26) *there may be additional rollover funds coming into 2024-25. This will be enough maintain operation of the current service until August next year and cover the Bellerive Wharf as long as it is not subject significant cost overruns.

Regarding ongoing operational funding, we will definitely need to determine funding arrangements for the current service from August next year when the contract runs out and what capacity when have to fund additional services to new ferry terminals (we choose to service) as they come online from June 26 (at the earliest). I have previously spoken to WSP re looking at these numbers, some of it comes down to the contract model we select, however, you would expect some economy of scale, but the different service levels, longer travel time on water etc, the $150k per route per month is a useful guide.

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Depending on the network, and service levels we rollout the most likely scenario we would have is two routes, or two equivalent routes, servicing Lindisfarne and Sandy Bay in addition to Bellerive, increasing the current cost per month of $150k to $450k per month. *noting Wilkinson's Point likely to be an event service only and subject to separate funding arrangements.

In summary –

Current operating cost of current service - $150,000 per month

Year to date operating cost (incl June 2024) - $1,849,000

Budget available ongoing - $3.26M (2024-25) and $3.25M (2025-26) *includes construction of Bellerive Wharf upgrades at estimated $4.5M

Potential operating cost of increased services to include Bellerive *and* Lindisfarne and Sandy Bay - $450,000 per month ongoing.

Hope this helps.

Cheers

out of scope

out of scope
Strategic Networks
Passenger Transport | Department of State Growth, Tasmania
Level 2, 4 Salamanca Place Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Phone: out of scope
www.stategrowth.tas.gov.au

Courage to make a difference through

TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

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Tasmanian Government

DEPARTMENT OF STATE GROWTH

Dept. Ref MIG21/1707
Critical Date 1 February 2022

APPROVED/NOT APPROVED

SIGNED: out of scope

DATE: 31/1/22

MINUTE TO THE MINISTER FOR INFRASTRUCTURE AND TRANSPORT

SUBJECT: DERWENT FERRY – PROPOSED BUDGET BID FOR CONTINUATION OF SERVICES

Minister's notation:

Recommendation:

That you:

1. **APPROVE the preparation of a budget bid for the continuation of the Derwent Ferry into the second year of trial, as announced on 18 January 2022;**

2. **APPROVE, the inclusion in the bid of funding for the introduction of a permanent ferry service beyond the second year of the trial, in line with recommendations of the 12-month review (scheduled for August 2022).**

3. **APPROVE the inclusion in the bid of infrastructure development costs and the procurement of Federal Wharf;**

4. **APPROVE the ongoing support to the Bellerive Yacht Club for the necessary redesign of marina options; and**

5. **NOTE that separate budget submissions will be made in future, in relation to infrastructure and operating costs to support any expansion of ferry services on additional routes. These may include co-contributions from councils.**

Current Situation:

The Derwent Ferry commenced on 9 August 2021 providing commuter services during morning and evening peak travel times between Kangaroo Bay, Bellerive and Brooke Street Pier, Hobart. Since the commencement of the ferry, there has been strong patronage, with a daily average of around 570 in summer.

Passenger data indicates the timetables for both morning and evening services are meeting the work commuter expectations, with the most popular services being the 7.40 am and 8.20 am crossings from Bellerive and the 4.30 pm and 5.10 pm services departing Hobart.

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With the onset of daylight savings and warmer weather, there have been several services where the ferry has been close to capacity. To ensure commuter expectations are met, the department had asked the operator to have a second vessel on standby to cater for demand and capacity constraints. With you recently approving the introduction of the summer timetable to alleviate these potential capacity constraints, the department now has the opportunity to trial targeted services during busy seasonal periods.

Whilst there has not been any extensive evaluation of the ferry and passenger trends, the patronage numbers and anecdotal feedback from passengers suggest the ferry trial is a success. Also, to date, broader community and media coverage has been positive.

The first-year trial is a free service for all commuters with a Greencard and/or a bicycle or e-scooter, which may be an incentive for some people to use the service. It is unknown whether patronage levels will be affected once the free trial ends. Further, as the service has only been operating for five months, it is unknown whether the service will be subject to seasonal variations in usage.

The current one-year trial will end in August 2022 as strengthening work associated with the Tasman Bridge upgrade is underway. This strengthening work will be followed by the pathway construction, which will continue through to 2023-24. While the Tasman Bridge upgrade aims to ensure minimal disruption to bridge traffic and active transport users during construction, it is likely that many commuters would see the ferry service as a more attractive travel option during that time.

Continuation of ferry trial

The Derwent Ferry was announced as a one-year trial with the option of a second year. The Government has a contractual commitment to a trial of two years (to August 2023). The intention, based on service patronage to date and positive commuter engagement, was to extend the service into a second year noting the introduction of fares for year two. The extension of the service into a second year will provide the department with significant data to base an evaluation and look at longer term trends and options for ferry services along the Derwent River.

In mid-January 2021, the 'Ashes Express' provided well-patronised additional ferry services to and from the Hobart 5th Ashes Test match at Bellerive, coordinated with Metro bus services. This avoided significant traffic congestion that would otherwise have marred this high-profile international event.

Following this, as you are aware, on 18 January 2021, the Government announced that:

- The Bellerive to Hobart ferry service would continue beyond the current 12-month trial;
- The length of this extension (including the option to make the service permanent) was yet to be confirmed;
- Further announcements about the extended service would be made in coming months;
- The 12-month review of the service would proceed, and would inform the detail of future service decisions;
- The mayors of Hobart, Glenorchy, Clarence and Kingborough support expansion of the ferry service, including more terminals on the Eastern Shore, and at Glenorchy and Sandy Bay; and
- You would engage with councils on what contribution they would make to extend a ferry service, including wharf and other landside infrastructure.

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Development of ferry infrastructure

The initial ferry tender was for the provision of a ferry service as well as the development of suitable ferry infrastructure within Kangaroo Bay, Bellerive. However, within the time constraints, the use of Federal Wharf was negotiated. As an older and fixed structure, the wharf has limitations in terms of ongoing safe berthing of vessels and in particular the deployment of the passenger gangway. Additionally, the wharf and use of the gangway has meant at variable water levels that passenger embarkation is not always compliant with disability access requirements.

The development and construction of a purpose built floating pontoon is intended to deliver a safe and compliant platform for ferry operations.

Procurement of Federal Wharf

The use of Federal Wharf has provided the Derwent Ferry with an important footprint and presence within Kangaroo Bay. The location of the wharf is also immediately adjacent to the area from which the proposed floating pontoon would be constructed and accessed. The procurement of the wharf would allow suitable onshore infrastructure to be developed to provide the necessary amenity to passengers. One of the current limitations with the ferry service is the lack of a dedicated onshore queuing and ticketing area. Passengers waiting for the ferry are subject variable weather conditions and passenger data to date suggests one of the inhibitors to patronage in all weather is that no suitable amenity or shelter is available.

The intention is to negotiate procurement of the wharf with the current owner Federal Group and then seek funding to develop the area into a dedicated ferry terminus.

Support for the Bellerive Yacht Club

As you are aware, the Bellerive Yacht Club's approved marina development has been a key consideration in ferry operations, in particular the build of 13 vessel berths within proximity of Federal Wharf. The department has been working with the Club to assist in reviewing the marina design and the reinstatement of the 13 berths. The department has indicated to the Club that support will be provided for:

- Costs associated with the lodgement and approval of a further development application with Clarence City Council;
- Costs associated with the preparation of revised marina design options;
- Costs relating to any amendment of the current construction contract for variations to the construction program due to timing and schedule changes; and Costs as a result of amended construction scope due to marina design changes.

Costs

These components of the bid for 2022-23 is made up of $2.9m for costs relating to capital expenditure, $5.23m for operational costs, for a total bid component of $8.13m.

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Introduction of a permanent ferry service

With the success of the ferry to date and the strong community support an expectation of a permanent service is well established. Patronage has exceeded expectations a daily passenger average of around 570 in summer. Additionally, the ferry service has brought recognition to the Government that every effort is being made to introduce choice to commuters. In light of this the department is seeking your approval for the inclusion of funding in this bid for the introduction of a permanent ferry service beyond the trial period, in line with recommendations of the 12-month review, and the development of the Federal Wharf terminus. Indicative costings at this time suggest this component of the bid will total $4.82m with $2.14m being capital expenditure and the balance of $2.68m for operational costs. The annual ongoing cost for ferry operation beyond 2023-24 is anticipated to be approximately $2.95m.

The bid totals $18.85m and a breakdown of costs is at Attachment A.

Should operational and/or capital costs change post the finalisation of the trial and the outcomes of the evaluation process, a further bid will be submitted at the time for consideration.

Given fares are yet to be introduced for commuters there is no consideration at this time of likely revenue and any adjustment to the total of this budget bid.

out of scope

Background:

A 2018 election commitment of the Tasmanian Government was to establish a trial Derwent River ferry service between Hobart and Bellerive. The Derwent River ferry service is an initiative under the Hobart Transport Vision being delivered through the $1.6 billion Hobart City Deal between the Australian and Tasmanian Governments and the Hobart, Clarence, Glenorchy, and Kingborough Councils. A ferry service on the Derwent River will offer an alternative to the Tasman Bridge for pedestrians and cyclists, providing commuters from the eastern shore with fast and convenient

out of scope

Gary Swain
Deputy Secretary, Transport and Infrastructure

20 January 2022

Prepared by: Position: Email: Date: Phone:	out of scope	Cleared by: Position: Email: Date: Phone:	out of scope

Attachments:
Attachment A – Cost breakdown.

out of scope

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Attachment A

Tier 1	2022/23	
	CAPEX	OPEX
	$M	$M
Kangaroo Bay Infrastructure	2.5	
Procure Federal Wharf	0.2	
Hobart City Infrastructure (maintenance only)		0.03
Trial Evaluation Costs		0.1
Trial Extension 22-23		1
BYC Marina Redesign Support		1.8
BYC DA Support		0.05
RFT Process - Extension of Service		0.05
Internal Resourcing		0.25
Consultancy Support (Contingency Sites)		0.6
Expanded Services Seasonal Upscaling		0.5
Second Ferry Operational Costs		0.75
Communications		0.1
Supplementary Total	**2.7**	**5.23**
Capital Contingency 7%	**0.2**	**0**
TOTAL	**2.9**	**5.23**

Total Tier 1 (Extension of trial for 1 year): $8.13m

Tier 2	2023/2024		2024/2025		2025/2026	
	CAPEX	OPEX	CAPEX	OPEX	CAPEX	OPEX
	$M	$M	$M	$M	$M	$M
Kangaroo Bay Infrastructure		0.1		0.1		0.1
Federal Wharf Amenity Development	2	0.1		0.1		0.1
Hobart City Infrastructure (maintenance only)		0.03		0.1		0.1
Internal Resourcing		0.25		0.25		0.25
Introduction of Permanent Service		2.1		2.3		2.3
Communications		0.1		0.1		0.1
Supplementary Total	**2**	**2.68**		**2.95**		**2.95**
Capital Contingency 7%	**0.14**	**0**	**0**	**0**	**0**	**0**
TOTAL	**2.14**	**2.68**	**0**	**2.95**	**0**	**2.95**

Total Tier 2 (Permanent – in line with recommendations of 12 Month Review): $10.72m

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Tasmanian Government

DEPARTMENT OF STATE GROWTH

Dept. Ref	MR25/1253/1
Critical Signing Date	30/06/2025

APPROVED/NOT APPROVED

* **SIGNED:** out of scope

DATE: 5/6/25

MINUTE FOR THE MINISTER FOR TRANSPORT

SUBJECT: RIVER DERWENT FERRIES - ONGOING FUNDING AND LONG TERM PROCUREMENT OF SERVICES

Minister's notations: * Don't we need approval for long term contract?

Recommendation:

That you:

1. **NOTE advice received from the Department of Treasury and Finance in relation to timings and impacts regarding the reprofiling of capital expenditure to operational expenditure.**

s27 [redacted]

3. **NOTE**
   - **The current Bellerive to Hobart service has been extended on a 1 (+1) year basis.**
   - **Work has commenced towards tendering for a long term ferry service contract, including expanded locations, however, certainty is required at these sites before an approach to market can be made.**
   - **additional funding may be required to establish expanded ferry services for a full 12 year service contract.**

Current Situation:

The Department of State Growth is currently undertaking a range of work towards implementing expanded ferry services on the River Derwent. This includes:

- Collaborating with the greater Hobart Councils to ensure the provision of consistent and serviceable ferry terminal infrastructure to be provided under Council's $20 million grant deed arrangement with the Australian Government.
- Determining long term procurement options for services to from Bellerive to Hobart and additional ferry terminal locations being developed by the greater Hobart Councils.

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To effectively progress the above actions, particularly the determination of long-term procurement options, State Growth needs to ensure there is sufficient reoccurring funding to service the period of the contract.

It should be noted that the above depends on Council delivery of ferry terminal infrastructure at Natone Street, Lindisfarne, Lords Beach Sandy Bay and Wilkinsons Point Glenorchy as per the grant deed arrangement with the Australian Government. Currently, State Growth understands these facilities are to be delivered by end of June 2026 under the terms of the deed, however, The project lead has flagged it may request an extension of this delivery date to end of December 2026.

State Growth requires operational certainty regarding the above locations before any approach to market and tendering for services. To ensure this, State Growth has written to Council requesting specific information to ensure services from Council built ferry terminals can be safely and reliably delivered. Once this information has been provided by State Growth to the Commission for Transport's satisfaction, and terminal developments have completed the relevant Development Application processes, enough operational certainty will be in place to commence tendering for services to expanded locations.

Regarding Bellerive to Hobart services, the Secretary of State Growth has recently approved the direct sourcing of Derwent Ferry Co Pty Ltd (Navigators) for an additional 12 months, with an option for an additional 12 months, to ensure continuity of services into the delivery of an expanded ferry service network.

It is noted that as of the 2024/25 Tasmanian Budget, State Growth has recurrent funding to support delivery of ongoing ferry services between Hobart and Bellerive, and potentially expanded services to new locations as they come online. Specifically, $2.4 million dollars has been allocated of the financial years 2025/26 and 2026/27, with an increase to $3.6 million in 2027/28 (recurring) accounting for the potential expansion of services on the River Derwent, this represents approximately $40 million dollars over a potentially 12-year contract period.

While the exact scope and costs of an expanded ferry service operating under a 12-year contract period are yet to be fully established, initial cost estimates for a long-term contract of this nature are in the vicinity of $60-70 million. s27 s27 s27 It should be noted, that the full $60-70 million amount will provide coverage for current Bellerive to Hobart services as well, while Wilkinsons Point event services will be funded under different arrangements.

However, it should be noted that the $60-70 million amount is dependent on the scope of the commercial contract entered into for the provision of expanded services. This scope will include a strong value for money and local content component, which may involve factors that can vary costs including:

s27

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Considering the above, s27 [redacted] The exact amount is to be determined with more accuracy as the Council delivered infrastructure comes online and scoping of the commercial contract is completed.

s27 [redacted]

Background:

In its 2022 budget, the Australian Government provided $20 million to Clarence, Glenorchy, Hobart, and Kingborough Councils (the Councils) to build three new ferry terminals at Lindisfarne, Wilkinsons Point, and Sandy Bay by June 2026.

Pursuant to this funding arrangement, the Councils are responsible for, and will manage terminal specific site selections, planning, development and construction. More generally, the Councils are also responsible for planning applications and upgrades to surrounding landside infrastructure such as roads and footpaths.

State Growth, as the party responsible for contracting public transport including ferries, has been working with the Councils to facilitate a coordinated approach to expanding ferry services on the River Derwent.

The State government has also provided $20 million as part of the 2024 election to support delivery of ferry services to these locations.

A River Derwent Ferry Service Expansion Steering Committee has been established to ensure coordinated infrastructure development, and councils are currently working through specific site planning development, and consultation.

While councils are responsible for building ferry infrastructure and managing planning applications, roads, and footpaths around ferry sites, State Growth plans, designs and

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manages public transport services, and must ensure sites support a safe and efficient ferry network.

out of scope

Cynthia Heydon
Deputy Secretary, Transport

28 May 2025

Prepared by:	out of scope	Cleared by:	Martin Crane
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Tasmanian Government

DEPARTMENT OF STATE GROWTH

Dept. Ref	MIG24/586
Critical Signing Date	ASAP

APPROVED/NOT APPROVED

SIGNED: out of scope

DATE: 26/6/24

MINUTE FOR THE MINISTER FOR TRANSPORT

SUBJECT: TRANSPORT PORTFOLIO – UPDATES TO AGENCY BUDGET SUBMISSIONS AND BUDGET RISKS

Minister's notation:

Recommendation:

That you:

1. **Note the new budget risks and updates to the agency budget submissions and risks that have been identified for the transport portfolio.**

Current Situation:
The agency budget submissions and budget risks were provided to the Department of Treasury and Finance (Treasury) in January 2024 for consideration as part of the 2024-25 state budget. State Growth has reviewed the transport portfolio submissions and budget risks in light of the election commitments, the 2024-25 Australian Government budget and the time that has passed since they were prepared.

Treasury has advised that there is no opportunity to formally update and resubmit these budget submissions. However, a summary of the updates and new budget risks we have identified is set out below to assist you during Budget Committee deliberations (see **Attachment 1** for more detail).

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[redacted]

Keeping Hobart Moving budget submission – minor updates

out of scope

[redacted]

- **River Derwent ferry services:** No change - ongoing (recurrent) funding is still required so that a long-term ferry contract for the current Hobart to Bellerive service can be entered into and ongoing maintenance to the Bellerive Wharf can be undertaken. Without a funding commitment, the ferry service cannot continue operation.

out of scope

[redacted]

out of scope

[redacted]

Craig Limkin
Secretary

17 June 2024

Prepared by:	out of scope	Cleared by:	Denise McIntyre
Position:		Position:	A/Deputy Secretary, Transport and Infrastructure
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Date:		Date:	4 June 2024
Phone:		Phone:	6165 5356

[redacted]

out of scope

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Keeping Hobart Moving

Category	Agency Response
Request Type (Select one)	Budget Risk Other New Initiative (Operating) Infrastructure Funding Request
Short Description	Funding is sought to deliver priority transport projects and initiatives under the draft *Keeping Hobart Moving – Transport Solutions for Our Future Plan*, namely: • a long-term ferry contract, additional ferry services and routes, and wharf maintenance out of scope [redacted]
Ministerial Portfolio	Infrastructure and Transport
Policy Objective	Implementing efficient and flexible transport solutions for a growing Greater Hobart. Providing more choice, greater equity and improved accessibility across Hobart's transport network. Delivering on the Government's commitment for Tasmania's new Arts, Entertainment and Sports Precinct at Macquarie Point.
Impact on existing and related services	This funding request links directly with the draft *Keeping Hobart Moving – Transport Solutions for Our Future Plan*, which is being coordinated and delivered within State Growth. The discrete elements of the funding request will be delivered by the relevant project teams and project governance mechanisms within State Growth.
Commission of Inquiry Links	N/A
Gender specific policy impacts	N/A

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Climate Change Action Plan Link	This initiative aligns with the Climate Change Action Plan Priority 2.3 – 'Reduced emissions from our transport sector by increasing the uptake of electric vehicles and public and active transport'. Elements of this initiative are designed to increase the uptake of public and active transport (e.g River Derwent Ferry Service, out of scope [redacted].
Other Policy Links and Public Announcements	The elements in this package form part of the draft *Keeping Hobart Moving – Transport Solutions for Our Future Plan,* which was released for public consultation in October 2023 and is due to be finalised by mid-2024 after consultation closes on 31 January 2024. out of scope [redacted] Continuation and expansion of Derwent River ferry services has been flagged through the release of the draft River Derwent Ferry Masterplan for public consultation (see media release). Federal Labor also announced $20 million for additional ferry terminals on the Derwent at the 2021 election. out of scope [redacted]
Other Government Entity Impacts	out of scope [redacted] State Growth will also continue to work closely with the four Greater Hobart Councils to finalise the River Derwent Ferry Masterplan, which will guide the expansion of ferry services, as out of scope [redacted]

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Implementation Timeframe	out of scope [redacted] Funding for the following elements is sought on an ongoing basis from 2024-25 onwards: • River Derwent Ferry Services • out of scope [redacted].
Identified through Community Consultation	Yes out of scope [redacted] **River Derwent Ferry Services** - significant consultation has occurred with the Councils and broader community consultation recently closed on the draft River Derwent Masterplan.
BIMS Adjustment No.	Where applicable.

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Relationship to past funding requests	out of scope [redacted] In the 2022-23 budget, $18.85 million was allocated over four years until 2025-26 for the River Derwent Ferry Service. In 2022-23 a request to rollover $3.378m was made, however this was declared savings. out of scope [redacted]

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Consequences of not funding	out of scope [redacted] **A long-term ferry contract, additional ferry service and routes and wharf maintenance**: A long term ferry contract on the current Hobart to Bellerive route cannot be entered into without ongoing (recurrent) funding. The cost of the current service between Bellerive and Hobart and the ongoing maintenance required at Bellerive Wharf cannot be met given the existing level of funding. Absent further funding, discontinuation of the service will be required. This will send a signal that further services under the Masterplan are not possible. out of scope [redacted]

out of scope [redacted]

Release

out of scope

[redacted]

Alternative options to address policy objective

Alternative option one – Delay projects or reduce their scope

The Government could choose to delay the elements in this package or reduce their scope if funding is not available at this time. The consequences of this option for each element of the package are outlined below.

out of scope

[redacted]

- **A long-term ferry contract, additional ferry service and routes and wharf maintenance:** The government could choose to provide additional funding only to enable essential wharf maintenance and to complete the current service contract to August 2025 at which time the current service would be discontinued. This would remove a transport option. However, equivalent funds provided as additional investment in bus services between the Eastern shore and Hobart would move more passengers more efficiently.

out of scope

[redacted]

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out of scope

[redacted]

Attachments

N/A

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