

Macquarie Point Development Corporation

October 2023

# Macquarie Point Precinct

## Event Transport Access Study

wsp



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## Macquarie Point Precinct Event Transport Access Study

Macquarie Point Development Corporation

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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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# Executive summary

## *Introduction and purpose*

Tasmania's new multipurpose stadium at Macquarie Point presents a once in a generation opportunity to fulfill the potential of the last remaining urban waterfront site in Hobart.

This report presents initial planning undertaken to develop target transport modal splits for Mac Point stadium access, and the demands and spatial requirements of each mode of transport, building upon and in coordination with both precinct and wider city and state planning policy and strategy.

The location of Mac Point on the edge of Hobart's CBD presents a unique opportunity for the precinct and associated transport access plan to support economic development, leverage existing transport assets and act as a catalyst for uplift of existing infrastructure and services, providing more sustainable transport choices and opportunity for people across Hobart both on event and non-event days.

The precinct event transport demands and capacities together with the spatial requirements presented should be considered preliminary and strategic at this stage of the planning process based on the limitations of the scope of this initial study. Further studies during the planning process will determine the detailed design and service requirements and likely costs required for the implementation of the precinct event transport access plan.

## *Guiding principles*

Guiding principles for the development of the Macquarie Point Transport Plan were established in conjunction with key stakeholders (the Macquarie Point Development Corporation, the Tasmanian Department of State Growth including Infrastructure Tasmania, City of Hobart and TasPorts). The principles focus on utilising and enhancing sustainable (non-car) transport modes for site access - including walking, cycling and public transport (including buses, coaches and ferries).

In line with sustainability objectives and spatial constraints, a key assumption of the precinct event transport access plan is that no new public car parking is provided at Mac Point, however existing off-street parking capacity around the Hobart CBD will be utilised by spectators. Parking, drop-off / pick-up and ride share are all considered car based mode shares, as is the walking component of the spectator's journey using these modes.

## *Mode share development*

In response to the guiding principles, initial analysis of network capacities and following further discussions with Macquarie Point Development Corporation (referred to as MPDC for clarity between the corporation and the location) and the Department of State Growth (State Growth), it was agreed for the purposes of stadium planning to establish the following transport mode shares:

- **Base Target** - non-car mode share of 60%
- **Stretch Target** - non-car mode share of 70%.

The development of these targets considered factors including the overall context including that of the local stadium, existing travel behaviours in Hobart, the ultimate capacity and coverage of proposed public and active transport network enhancements whilst also referencing other new and exemplar stadiums both globally and domestically.

## *Demand identification*

To support an estimation of the potential demand on each mode, the transport mode targets were applied to three different event scenarios based on their crowd size and associated spectator demographic travel behaviour:

- **Regular event – 15,000 spectators** - represents the average crowd for domestic teams (AFL, Cricket)

- **Capacity event – 23,000 spectators** – represents the proposed seated capacity of the stadium
- **Special event – 30,000 spectators** – represents the maximum venue capacity for events which use the playing surface for additional seating or standing e.g. concerts. It is noted this is not expected to be the typical scenario (1-2 events a year).

Table ES.1 Mode Shares for a 23,000 capacity event under the ‘Day One’ and ‘Ultimate’ scenarios

Event Size	Target	Public Transport*		Non-Car		Car		Total	
		Mode Share	Patrons*	% of Task*	Patrons	% of Task	Patrons	% of Task	Patrons
Capacity 23K	60% Day One	8,711	38%	13,802	60%	9,198	40%	23,000	100%
Capacity 23K	60% Ultimate	8,704	38%	13,802	60%	9,198	40%	23,000	100%

Notes \*Public Transport is also captured in Non-Car Mode share

For a full summary of preliminary mode share estimates and associated demand for each transport mode by event size and mode share target see Table 7.2. This was developed based on assessment of the likely available capacity and associated demand of each individual transport mode, and hence how each mode will contribute towards the transport load associated with meeting base and stretch targets. Assumptions built into capacity and demand assessments are presented and discussed mode by mode in section 5.

### *Staged implementation*

Various state and local government transport infrastructure and service projects are planned to be implemented alongside the development of the Macquarie Point Precinct, including a Rapid Bus network, expansion of the ferry network, and walking and cycling improvements. It is noted that these projects do not necessarily have committed funding and implementation timelines.

A range of possible transport infrastructure and service upgrade timelines were tested against the scale of the event transport task identified under the different event and mode share scenarios. This provided an initial evaluation of the level to which Hobart’s transport network could support the development and operation of the Macquarie Point Stadium on ‘Day One’ and into the future.

Analysis showed that the highest capacity public transport initiative that will serve as the backbone for travel to and from the Hobart CBD and the Macquarie Point Precinct is the planned Rapid Bus network. However, even if the Rapid Bus network was in place, under all demand scenarios event buses are required to supplement regular bus, Rapid Bus and ferry (base and extended) networks from Day One of stadium operation.

Delivery of the planned transport infrastructure and service improvements (Rapid Bus, ferry, walking and cycling) was shown to be comparatively effective for regular events, achieving a 40% reduction in the number of event buses required for a regular event, compared with a ‘do nothing’ scenario. For special events, due to the increased demand relying upon event buses, the reduction in event buses achieved is lower at 20%.

In particular, synergies were identified between the delivery of the Ferry Network Expansion, and Stages 1 and 2 of the Rapid Bus initiative, which independently service different areas around Greater Hobart, creating a broad integrated transport network from the Macquarie Point precinct.

See section 7.5 for further information and results from analysis undertaken across all event demand scenarios.

### *Infrastructure opportunities*

Initial analysis has demonstrated merit in bringing some aspects of the future transport infrastructure and service spending forward, ahead of Day One stadium operation. To support and enable meeting the transport mode share targets outlined, an assessment on the essential “need to haves” on Day One of stadium operation in 2029 was undertaken. These are listed in full in section 8.2. Key ‘need to haves’ are summarised here:

- **Walking and cycling** – upgrades including delivery of safe and separated walking and cycling infrastructure to the stadium precinct via the waterfront, within the Hobart CBD, and a shared pedestrian and cycle bridge to access Rapid Bus stops and the Collins Street active transport corridor
- **Bus** – Delivery of the planned Rapid Bus network and associated bus priority measures (full or at minimum partial north and south routes), local bus route timetable uplift, and an event bus network and associated infrastructure including and event bus hub within the precinct, bus staging areas, park and ride facilities
- **Coach** – identification of cruise terminal (primary) and secondary coach parking locations
- **Ferry** – Brooke Street Ferry services upgrade, event timetable uplift and delivery of ferry network expansion (full or partial)
- **Road network** – establishment of a traffic management area including parking and shared mobility exclusion zones around the stadium, proposed northern access road, local road and property access operations and cruise terminal operation overlap plan

Without this infrastructure on Day One there is likely to be ongoing recurrent operational costs of additional game day management for transport operations, lower levels of service for patrons, delays in achieving net zero targets, disincentive for positive travel behaviour change and potential wider and longer disruption to the Hobart CBD and Greater Hobart transport network depending on the take up of seats for events at the stadium.

Further detail around mode by mode demands, requirements and assumptions is included in section 5. Further planning and design is required to determine the scope and prioritisation. Work presented is the result of the preliminary investigations, scoping and strategic transport planning.

### *Transport concept*

The overall stadium transport concept for site operation is outlined below and in Figure ES.1. As discussed previously, analysis has highlighted the merit in progressing with the development of the Rapid Bus network, the ferry network expansion and walking and cycling upgrades in advance of the stadium opening. Key features of the overall concept for each mode include:

- **Walking and cycling** – Dispersed pedestrian movement to various modes, two key pedestrian corridors along the waterfront, key cycling and walking corridor on Collins Street including shared bridge to access Rapid Bus stops and Collins Street, new cycling connection(s) to the Intercity Cycleway, sufficient cycling and micromobility parking, enhancement of pedestrian’s paths and crossing storage areas adjacent to and crossing major roads near the precinct
- **Bus** – Rapid Bus stops on Brooker Highway / Tasman Highway, connected into pedestrian and cycle access bridge, an event bus hub located to the north east of the stadium including associated passenger and driver facilities and bus staging area on the approach road to the stadium.
- **Ferry** - Wharf established at Regatta Point, additional services at Brooke Street, associated pedestrian wharf access, and provision of new vessels to support timetable uplift.
- **Coach** –Use of existing coach parking spaces in the Cruise Terminal facility and provision of new parking spaces at a secondary location in close proximity to the precinct.
- **Taxi/ride share** –taxis/ride share to utilise existing facilities located throughout the Hobart CBD.
- **Car Parking, Drop-off / Pick-up** - Establishment of traffic management / area in stadium vicinity including no public car access and drop off within immediate precinct, limited on-site car parking and access for corporate guests, members and operational vehicles.

Further detail around mode by mode planning principles, requirements and assumptions is included in section 5.





Figure ES.1 Overall high level transport concept developed

### Next steps

This initial study has developed transport concepts and preliminary strategic event demand estimates and indicative spatial requirements for planning and stakeholder discussion purposes only. Over the next few years a significant amount of transport planning and design will be required to realise the opportunity of a world class stadium in Hobart, Tasmania.

A full list of anticipated further studies to be undertaken is included in section 8.3.

# 1 Introduction

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## 1.1 Aim / purpose / limitations of planning

Tasmania's new multipurpose stadium at Macquarie Point (Mac Point) presents a once in a generation opportunity to fulfill the potential of the last remaining urban waterfront site in Hobart. Despite being on the water's edge, the precinct is centrally located and well connected to the current local and future rapid bus routes, ferry services, active transport corridors for walking and cycling and the road network. As noted in the Strategic Business Case, (Tasmanian Government) the location encourages 'more sustainable transport options' than is possible at Tasmania's current stadiums at Bellerive and Launceston.

An understanding of available transport modes and their likely capacity which will influence people's anticipated preferred mode for travel to and from the stadium events are critical to informing spatial planning for the Mac Point Precinct Plan. There are two ways transport mode shares can be estimated:

- 1 A vision and validate approach whereby progressive stretch targets for non-car travel are set, for say increasing public transport usage much higher than current levels and in line with capital city stadiums such as those in Sydney and Perth. Public transport provision would need to be high and car parking capacity would be restricted.
- 2 Acknowledging established travel behaviours and the existing capacity in the Greater Hobart transport network. In this scenario the availability of existing off-street parking in the Hobart CBD is acknowledged, as is the desire to self-drive as seen in Greater Hobart's journey to work data from the 2016 and 2021 census and revealed in travel behaviour to events at Bellerive Oval and MyState Arena. Event day public transport services (local bus and ferry) would be enhanced targeting regular users of public transport. Those spectators that are open to using public transport would be encouraged to ride on dedicated event shuttle bus services linked to new park and ride locations in the suburbs of Greater Hobart. This desire for sustainable travel and identified increases in capacity are leveraged as part of the transport plan, forming the basis of the mode shares.

Through discussion with Macquarie Point Development Corporation (Mac Point) and the Department of State Growth (State Growth) we understand that option one is preferred however with the acknowledgement of network constraints. Option two is considered realistic based on the time and budget constraints however it was agreed that there should be a base mode share target as well as a more ambitious stretch target for future increases in public transport usage over time.

As is typical for event planning, the largest event scenario needs to be considered for transport planning and mode shares. In the case of Macquarie Point Stadium, the 'worst' case is a special event e.g. concert where the capacity is 30,000 with patrons occupying the seating or standing areas on the field of play. This may require significant infrastructure and services above the regular seated capacity of the stadium. The primary scenario is the 23,000 seated capacity event and a further scenario is typical event of 15,000 which represents the majority of events once the stadium is established. We note that 15,000 is higher than typical Bellerive AFL attendances but this capacity represents a mid-point with built in contingency suitable for planning purposes.

Planning is such that spatial requirements will meet the needs of the primary 23,000 and secondary 15,000 scenario. The worst case 30,000 scenario can also be addressed but with a longer (but still acceptable) egress time. Permanent infrastructure will not be over scaled so as to retain the space available for daily activity and operations in the precinct.

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## 1.2 Relevant planning documents

The event transport planning, mode splits and spatial requirements for the stadium have considered and are aligned with the following planning guidelines and studies for both the Macquarie Point Stadium and the Greater Hobart transport network:

- Macquarie Point Stadium, Tasmanian Arts, Business, Entertainment and Sports Precinct (Tasmanian Government, LIMINAL Studio Pty Ltd (LIMINAL) and A.E.N. Advisory and Design Services Pty Ltd (A.E.N.) 2022) - A guide for promoting the Macquarie Point Stadium
- Hobart Stadium – Site Selection Process (MCS Management & Consulting and Philp Lighton Architects 2022) - Preliminary feasibility of stadium site options
- Hobart Stadium Site Options (Aurecon Australasia Pty Ltd 2022) - Pre-Feasibility Study for Regatta Point and Macquarie Point Sites
- Hobart Stadium (PricewaterhouseCoopers Consulting (Australia) Pty Limited 2022) - Estimating the economic impacts of a new multipurpose stadium precinct in Hobart
- Macquarie Point (PricewaterhouseCoopers Consulting (Australia) Pty Limited 2022) - Estimating the economic contribution of commercial uses at the new multipurpose stadium precinct
- Metro Tasmania Network Maps (Metro Tasmania 2023) - Hobart East Network, Hobart North Network and Hobart Southern Network
- Proposed Greater Hobart Rapid Bus Network Maps (State Growth - Publication date TBC)
- Draft River Derwent Ferry Masterplan (State Growth - Publication date TBC)
- Greater Hobart Cycling Plan (Tasmanian Government, Greater Hobart Councils, 2021)
- Tasmania’s New Arts, Entertainment and Sports Precinct (Tasmanian Government Not stated) - Strategic Business Case.



Photo 1.1 Hobart Waterfront



## 2 Existing context

### 2.1 Macquarie Point precinct

Macquarie Point is a 9.3 ha flat, open site within the heart of Greater Hobart, as shown in Figure 2.1. The site is situated amongst key landmarks including Hobart's Central Business District (CBD), the Hobart Cenotaph and future development potential for an Antarctic Facilities hub, as well as being next to Hobart's iconic waterfront.

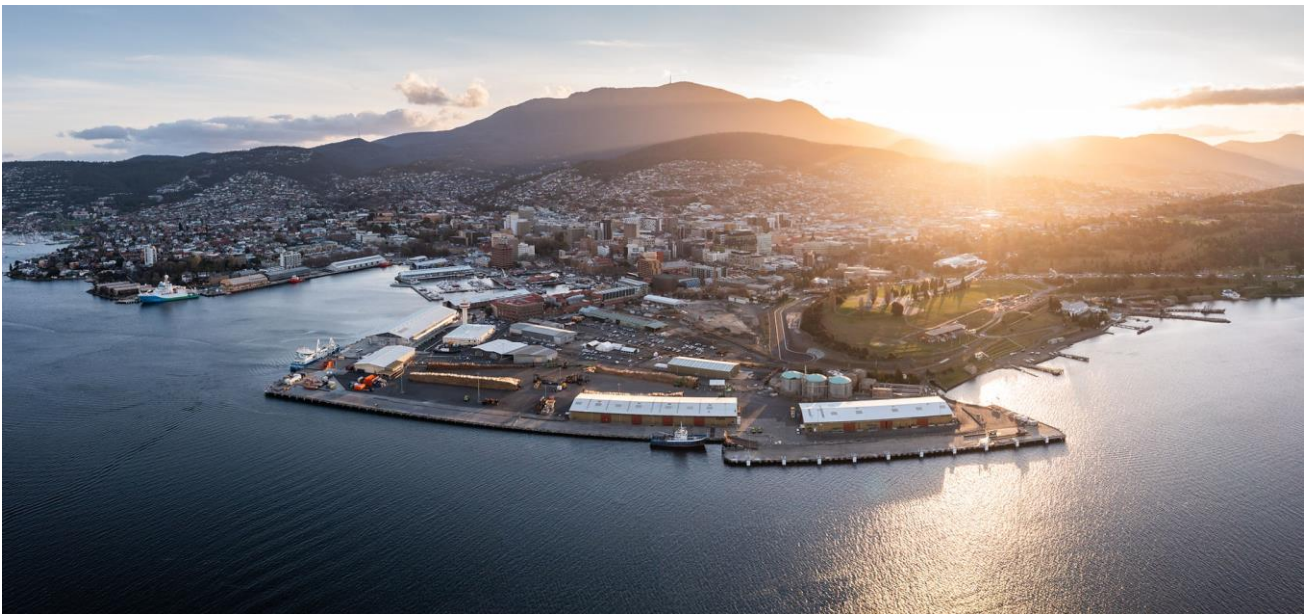


Figure 2.1 Macquarie Point site in context of the Hobart CBD

More than just a stadium, Macquarie Point Stadium forms part of a precinct for all; a place where the community feel they belong. A place to experience and be inspired, engaging fans and adding to the fan-journey (way beyond the pre-match and the final siren). It will be both a major events precinct as well as a community precinct where locals, visitors and Tasmanians dwell, mingle and share their experiences to the world via social media. It will provide the infrastructure to support a diversity of activities including festivals, community sports, Monster Jams; art galleries, theatre, while integrating parklands, playgrounds, walkways and cycleways with connections to Timtumulili Minanya the River Derwent, the Cenotaph and the Queens Domain precincts. *Macquarie Point Stadium overview, Department of State Growth, 2022*

The precinct plan is proposed to include:

- A **multipurpose stadium** as a hub for arts, entertainment and sport offerings. The stadium has a planned seating capacity of 23,000 people in sports mode and up to 30,000 in entertainment mode. It's expected that at least 44 events (28 new to Tasmania) could be hosted at the new stadium, seeing 587,000 attend per year, including 123,500 overseas and interstate visitors. On non-event days, this will offer a space to host a range of events, exhibitions, festivals, performances and experiences.
- A **Cultural Space /Park**, to be delivered in conjunction with the Tasmanian Aboriginal community.
- **Residential development** including affordable housing for key health workers.
- Space for an **Antarctic hub** as part of Tasmania's unique role as Australia's Gateway to Antarctica and the Southern Ocean.

Once fully realised, Macquarie Point will be an iconic destination and home for residents and visitors to Hobart, while providing significant growth in commercial and cultural real estate, and public space on the edge of the CBD.

It is noted that the Cenotaph area sits outside the site boundary and is to be retained as grass and usable public open space for the community. There are no plans to utilise this area for parking for day-to-day or specific event transport operations. Event patrons are likely to use the established walking and cycling paths through this sensitive area to access the precinct.



Source: Macquarie Point Development Corporation

Figure 2.2 Precinct overview



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## 2.2 Site history

From its original shoreline, mud flats and deep-water bay, to reclaimed land with a long industrial past leaving layers of forgotten pipes, tanks, foundations and polluted soil and groundwater, Macquarie Point carries a long history.

The site has significant cultural importance as a meeting place of First Nations people through to European colonial life. Since European settlement, Mac Point has been the home of Southern Tasmania's industrial needs. Over the past 200 years, Macquarie Point has been used as a farm, an abattoir, lumber yard, a gas works, cold store, goods storage, for heavy industry, rubbish disposal, the military, freight and rail.

The developing precinct plan seeks to respond to the history and site context, setting a vision for Mac Point as a place to gather, to celebrate and to reflect, through the arts, culture, sport, events and entertainment.

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## 2.3 Precinct user groups and access

As shown in Figure 2.2, existing key landowners and land uses within the Macquarie Point precinct area include:

- **TasPorts** – shipping vessels, Antarctic research vessels and cruise ships operate from wharves at Macquarie Point. The TasPorts site is accessed via Evans Street which runs around the southern and eastern boundaries of the Macquarie Point precinct. Cruise ships dock at the Macquarie Wharf No. 2 Cruise Terminal, with additional cruise ships able to be accommodated at the adjacent multiuser berth at Macquarie Wharf No. 4/5. During peak (typically summer) periods, there can be up to two different cruise ships in port daily. On arrival, shore excursion coaches are staged alongside the ship at berth. Typically, Franklin Wharf is closed between Hunter Street and Constitution Dock Bridge to through traffic on days when cruise ships are in port, to reduce traffic movements.
- **TasWater** – a wastewater treatment plant is located within the TasPorts site, at the end of Evans Street to the east of the Macquarie Point stadium precinct. This facility is in the process of being decommissioned.
- **Antarctic research** - Hobart is an international centre of Antarctic and Southern Ocean expertise, home to the vast majority of Australia's Antarctic and Southern Ocean scientists. Currently, Antarctic research vessels operate from berths at Macquarie Point. Further to this, an Antarctic hub concept is currently being considered for a development at Macquarie Point
- **Other residences and business premises** - There are a number of hotels, businesses, residences, cultural attractions and educational establishments located on and accessed via Evans Street and Hunter Street, to the south of the stadium precinct site. This includes the prominent University of Tasmania School of Creative Arts building. There is public on-street paid parking located around the waterfront on Hunter Street and Evans Street.

### 2.3.1 Site assumptions

The key site assumptions in respect to precinct and adjacent landowners are:

- Access to TasPort's Macquarie wharves is to be maintained at all times, via Evans Street or the proposed Northern Access Road. Evans Street is likely to be a managed space for traffic during events due to the large volumes of pedestrians moving to and from the stadium.
- It could be expected that up to two cruise ships could be berthed at Macquarie Wharf No. 2 at once, and this could coincide with event days at the stadium (particularly during cricket season which is peak cruising season).
- Access and staging provision for shore excursion coaches is required alongside the ship at berth utilising the formal 15 coach parking bays.
- Access to residences and businesses on Evans Street and Hunter Street is to be maintained. Ad-hoc delivery and servicing access may be required during events.
- It is noted that event timing (considering both day of week and time of day) may vary and that this may influence exertion of different pressures on different parts of the local transport network.

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## 2.4 Existing event operations in Hobart

Understanding the existing travel behaviour and transport service provision for established event venues in Greater Hobart is important when articulating the level of uplift that will be required by the various transport modes. It is also a reference point for existing event travel behaviours. Hobart's existing venues for national teams such as the Jack Jumpers, Hobart Hurricanes and visiting AFL clubs are all located in suburban settings some distance away from the hub of the city's transport network in the Hobart CBD. The current transport operations for established event venues are outlined in the following section.

### 2.4.1 *Bellerive Oval*

Bellerive Oval or Blundstone Arena is Tasmania's premier national sporting venue which hosts Test cricket, Big Bash League T20 cricket and visiting AFL teams. It is located in Bellerive and has a venue capacity of 19,500 spectators in grandstands and a grassed hill.

Ten national level cricket (BBL T20) and AFL matches have been staged at Bellerive Oval in 2023 for a combined attendance of 65,554 spectators with an average crowd of 6,555 spectators and highest attendance of 10,768 spectators.



Source: *Austadiums.com*

Figure 2.3 Bellerive Oval, Bellerive

The typical transport arrangements for events at Bellerive Oval are as follows:

- Buses
  - Event buses depart Elizabeth Street Mall in the Hobart CBD every 15 minutes
  - Local buses 601, 615, 625 and 634 service the stadium precinct.

- Ferries
  - For most events, River Derwent ferries operate to their typical timetable (Mon – Fri every 40 mins in the peak only and Sat every hour from 9.30am to 12.30pm and 2pm to 4pm).
  - During the Ashes Test in 2021, event ferry services were utilised, with services running on a continual basis outside of scheduled timetable.
- Parking
  - While public transport use is encouraged, however, parking is noted as free on club and venue websites
  - Suggested locations for parking are in South Street Reserve Bellerive, Kangaroo Bay, Regatta Grounds and Bellerive Primary School.

#### 2.4.2 Derwent Entertainment Centre

The Derwent Entertainment Centre or MyState Bank Arena is Tasmania’s premier national indoor sporting venue which hosts national Basketball League (NBL) team the Jack Jumpers as well as concerts. It is located in the northern suburb of Glenorchy and has a venue capacity of 4,800 spectators for basketball and as many as 8,800 spectators for concerts.

Thirteen national level basketball (NBL) matches have been staged at Derwent Entertainment Centre in season 2022/2023 for a combined attendance of 55,403 spectators with an average crowd of 4,262 spectators.



Source: *Austadiums.com*

Figure 2.4 Derwent Entertainment Centre, Glenorchy

The typical transport arrangements for events at the Derwent Entertainment Centre are as follows:

- Parking
  - 1,000 car parking spaces over two car parks within the precinct
  - Overflow parking is also suggested at King George V Oval (KGV) and Montrose Bay.
- Public transport –event buses provided from the eastern shore and south, supported by local bus services
- Ride Share and Taxi located at Entry 1.



### 2.4.3 Festivals

For Tasmania's largest festival, Dark Mofo held every year in June, special event transport arrangements are put in place throughout the Hobart CBD. The key free events are staged at the following locations within the CBD:

- The Procession – Parliament Lawns, The Burning – Dark Park (Macquarie Point), Winter Feast – Princes Wharf 1.



Source: *Image / Pulse*

Figure 2.5 Pedestrians using closed roadways to leave the Dark Mofo event in Central Hobart

The key transport operations for this event are as follows:

- Public transport
  - Buses – Metro Tasmania offered free travel in the Metro Hobart network between 3pm and 9pm on the key Sunday. Low cost public transport travel (\$2) has also been previously provided.
- Parking
  - Hobart Regatta Grounds
  - Abel Tasman Car Park in Salamanca Place was converted to 3 hour accessible parking.
- Road closures
  - to enhance pedestrian safety at Dark Mofo events, a number of strategic road closures were in place during event hours. Increases in pedestrian traffic in the Hobart CBD were experienced for the duration of the festival, but particularly on the Hobart Waterfront.
  - Davey Street was closed on the final night of the festival and traffic was diverted onto Liverpool Street until 7pm.

# 3 Strategic planning context

## 3.1 Supporting policies

The delivery and management of the Macquarie Point precinct plan is carried out through a partnership between the Australian and Tasmanian governments and delivered by MPDC.

Land use planning and development within and around Macquarie Point site is guided and informed by key state and local policies and strategies. These include but are not limited to:

**30-Year Greater Hobart Plan**, Greater Hobart Committee, 2022 – a whole-of-city guide to assist the development of transport, housing and employment centres and how they relate to each other in the long term.

Supports delivery of the **2050 Vision for Greater Hobart**:

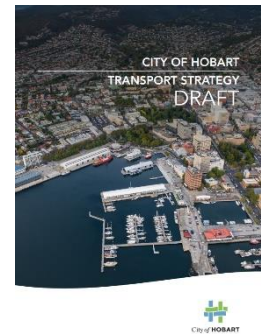
- “We will live in the world’s best small capital city, a city built for people that is connected, friendly and safe.
- Greater Hobart is a thriving and inspiring place to live, where we all work together to make a positive contribution to our extraordinary environment.”

This plan provides strategic advice on sequencing development to support growth and notes that significant policy decisions are required to support more active transport and public transport across Hobart.



**City of Hobart Transport Strategy 2018-30 (Draft)**

Outlines the key areas that the City of Hobart must address to achieve integrated and sustainable transport solutions, to support growth in the city’s population and the economy while holding on to what makes Hobart special and unique.



In particular, the Strategy notes an action to “ensure that public transport facilities and associated cycleway and public transport corridors are provided for in future planning for the development of Macquarie Point”

**Transport Access Strategy**, Department of State Growth

Sets out the Tasmanian Government’s approach to providing better integrated and coordinated land-based passenger transport services for all Tasmanians, particularly those disadvantaged through economic circumstances, age or disability.

Seven priority areas are identified of which five are directly relevant to Macquarie Point’s transport needs:

- 1 **Working together:** fostering stronger collaboration and partnership between governments, key service providers
- 2 **Connected transport system:** focusing on frequent, efficient, accessible, affordable and reliable transport.
- 3 **Closing transport gaps:** developing innovative approaches to enable transport-disadvantaged members of the community to overcome transport barriers.
- 4 **Innovative pricing:** developing innovative pricing mechanisms to support the greater use of public transport in order to make it more viable (such as including public transport travel in the price of all match tickets)
- 5 **Improved infrastructure:** providing more opportunities for people to walk, cycle and use public transport by making sure infrastructure is safe, accessible and attractive to use.



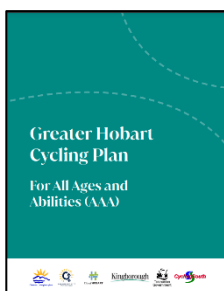


### Greater Hobart Cycling Plan

The Greater Hobart Cycling Plan guides planning and investment in an interconnected network of cycling paths across Greater Hobart, encouraging increased usage and enhancing active transport options across the region.

The Plan aims to provide infrastructure that is safe, convenient and comfortable for ‘All Ages and Abilities’ cycling.

Successful transport mode shares (with a positive split to non-car modes) for Macquarie Point will require safe and accessible active transport links to/from the stadium and bicycle parking options within the precinct which can be shared across facilities under typical weekday conditions.

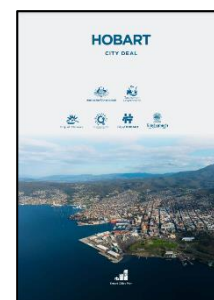


### Hobart City Deal

The Hobart City Deal is a 10 year partnership between the Clarence, Glenorchy, Hobart and Kingborough councils, and the Tasmanian and Australian Governments. It provides a framework to guide and encourage further investment in Greater Hobart, plans for future growth and addresses key strategic and infrastructure challenges.

This City Deal will improve accessibility in Greater Hobart, embracing the idea of a 30-minute city, including through the establishment of a reliable, sustainable and cost effective transport system with a focus on active and public transport.

The City Deal has a direct link to River Derwent ferries and other public transport upgrades which are required to achieve the positive non-car mode splits at Macquarie Point.



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## 3.2 Sports precinct design guidance

The large volumes of pedestrians and vehicles associated with sports and entertainment precincts requires careful planning of the spatial design considerations. Providing too much space leaves places desolate, difficult to activate and lacking in human scale when not hosting events. Designing spaces to minimal standards can create pedestrian pinch points, conflict areas between vehicles and pedestrians and create environments which feel unsafe, have limited redundancy in the event of an incident and are difficult to manage. A balance must be struck which considers the functional requirements of the venue from the inside of the building to the adjacent urban realm surrounding a precinct.

The Guide to Safety at Sports Grounds (2018), the key UK guidance for public safety and crowd movement breaks down a sports venue and associated precinct into the following six zones to plan for safe pedestrian flow and emergency evacuation:

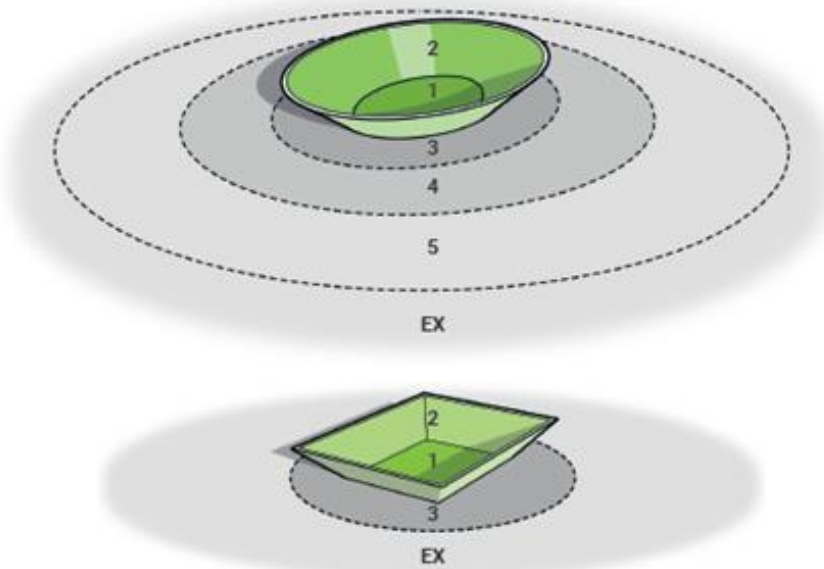
- Zone 1 – The Pitch / Field of Play / Activity area
- Zone 2 – Viewing accommodation / The Stands / Seating
- Zone 3 – Internal Concourse / Building line
- Zone 4 – Outer circulation area / External concourse / secure perimeter
- Zone 5 – Buffer zone / Outside the Sports ground / stadium precinct boundary
- Zone Ex – External Zone / Last Mile.

For the purposes of designing safe spectator and transport movements for the Macquarie Point stadium, the key zones are Zones 4,5 and Ex. The key functional requirements of these zones are outlined in Figure 3.1 below. For the purposes of this study Zone Ex commences at:

- North – the cliff face of the Cenotaph
- East – property boundary with TasPorts
- South – Evans Street (northern kerb)
- West – Davey Street (eastern kerb).

### Figure 6 Zonal planning

In the planning, design and management of sports grounds it may be helpful to consider the circulation areas in terms of zones. Clearly the number and extent of these zones will differ from ground to ground, as shown here. But all grounds (as shown in the smaller example) will at least have the equivalent of Zones 1, 2 and 3 and of the external 'Zone Ex'.



**Zone 1:** the pitch or area of activity. This may be considered a place of reasonable safety\* to which spectators can be evacuated before using other emergency exits (but see [Section 10.16](#)). Zone 1 should be accessible to spectators in Zone 2 via gates or openings in the pitch or area of activity perimeter barriers.

**Zone 2:** the viewing accommodation, including gangways.

**Zone 3:** internal concourses, vomitories and hospitality areas. If any of these areas need to be evacuated, it should preferably be to Zone 4.

**Zone 4:** the outer circulation area. In planning terms, Zone 4 can serve as a vital access area for emergency and service vehicles, without disrupting circulation in Zones 2 and 3.

Note that Zones 3 and 4 will, in most situations, be considered places of reasonable safety\*, which spectators can reach before exiting to Zone 5. Note also that at smaller grounds Zone 3 or Zone 4 may serve as the equivalent of Zone 5 in larger grounds.

**Zone 5:** a buffer zone outside the sports ground perimeter, used for the public to gather before entry and for links to car parks and public transport. The public should be able to circumnavigate the perimeter in this zone, in order to find an appropriate point of entry. Zone 5 should be the designated place of safety\* in the event of an emergency.

**Zone Ex:** the external zone. This zone, sometimes referred to as 'the last mile', is in the public realm and is likely to encompass the main pedestrian and vehicle routes leading from Zone 5 to public car parks, local train stations, bus stops and so on.

\* for more information on places of reasonable safety and places of safety, see [Section 15.26](#)

Source: *Guide to Safety at Sports Grounds – Sixth Edition* (Sports Grounds Safety Authority, 2018)

Figure 3.1 Stadium Zonal Planning

# 4 Stadium benchmarking and guiding principles

## 4.1 Stadium benchmarking

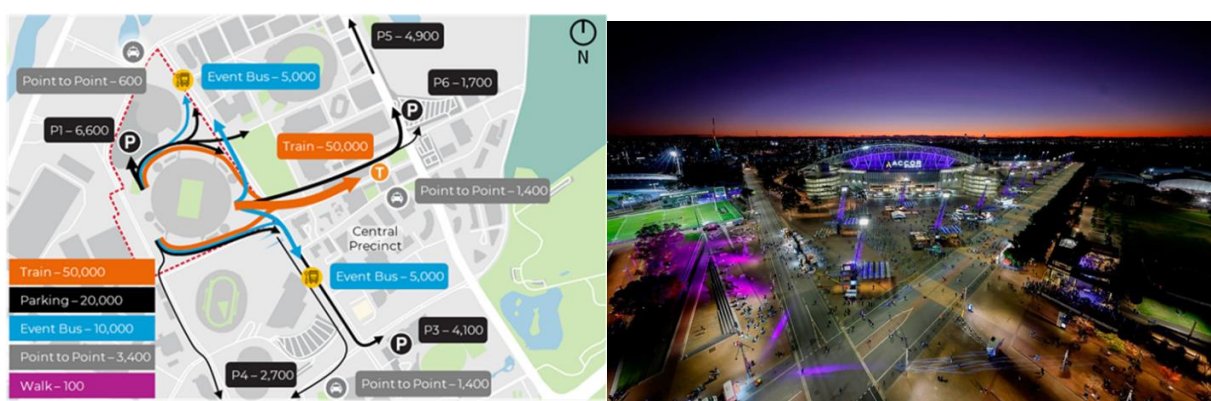
To establish an appropriate transport mode share for the Macquarie Point stadium, a review of recent and exemplar stadium precincts from around the world was undertaken. Whilst such high target non-car mode shares achieved by these stadiums are unlikely to be achieved in Hobart with the absence of high capacity rapid transit, the mode shares reflect what is achievable when focusing on achieving sustainable travel outcomes to events.

The key transport features of exemplar stadiums from around the world include:

- Heavy rail to move large crowds efficiently
- Dedicated event bus shuttles and event bus hubs and associated priority infrastructure
- Pre-booked and restricted car parking to encourage travel behaviour
- Access for all members of the community in areas scaled for large crowds
- Large volumes of bicycle parking and pathway connectivity.

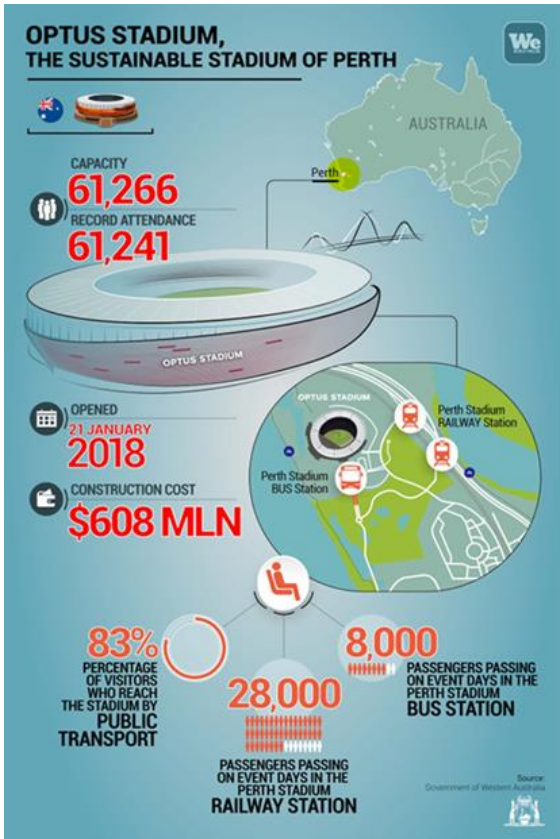
There is no consistent approach to measuring mode shares from stadium to stadium (i.e. driving to a city centre car park and walking the last kilometre may be captured as either walking or driving). However, there is a direct correlation between well planned stadiums and the accuracy of the measurement of event transport mode shares. Three stadiums have been benchmarked which demonstrate this approach, Accor (Olympic) Stadium in Sydney, Optus Stadium in Perth which opened in 2018 and Tottenham Hotspur Stadium in North London which opened in 2019.

As a legacy of the Sydney 2000 Olympic Games, Accor Stadium at Sydney Olympic Park is served by a purpose built rail station and two dedicated event bus terminals and achieves a non-car mode share of 74%. The introduction of a new metro station in 2030 and light rail will see this mode share increase to 80%. Optus Stadium in Perth also has a purpose built rail station and event bus terminal and achieves non-car mode shares of 82%. Tottenham Hotspur's new stadium served by four rail stations achieves one of the highest non-car mode shares in the English Premier League with 76%.



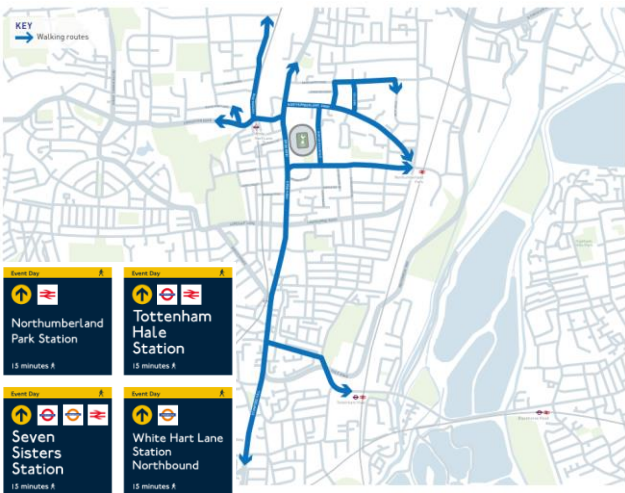
Source: Sydney Olympic Park Authority (2023)  
Figure 4.1 Accor (Olympic) Stadium Sydney Olympic Park





Source: Western Australian Government (2018)

Figure 4.2 Optus Stadium Perth










Source: Tottenham Hotspur (2019)

Figure 4.3 Tottenham Hotspur Stadium, London UK

Hobart's journey to work is shown on the right of Table 4.1 and demonstrates a challenge to increase the non-car share from the current day to day commuter rate. Increases in local non-car mode shares will require targeted travel demand management measures and the implementation of the Rapid Bus routes and new Ferry links across Greater Hobart, supported by a dedicated event bus network.

Table 4.1 Summary of mode share outcomes at exemplar stadia, and Hobart “Travel to Work” data

Event Transport Mode Share Outcomes					Hobart
Mode		Accor Stadium Sydney (83,500)	Optus Stadium Perth (60,000)	Tottenham Hotspur London (61,000)	2016 ABS Travel to Work as a Proxy*
Rail		60%	55%	63%	0%
Bus		11%	23%	8%	5.1%
Coach		1%	1%	1%	N/A
Walk / cycle		2%	3%	4%	6.7%
<b>Total non-car</b>		<b>74%</b>	<b>82%</b>	<b>76%</b>	<b>23%</b>
Taxi/Ride share		3%	2%	1%	0.3%
Car / Motorbike		23%	16%	23%	70.1%

Many regional stadiums, including Newcastle’s McDonald Jones Stadium, the Gold Coast’s Heritage Bank Stadium (23,000 capacity; 55% non-car mode share) and Adelaide Oval (52,000 capacity; 54% non-car mode share) provide a dedicated event bus network running before, and up to 45 minutes after the conclusion of the event. At Optus Stadium in Perth, a large 22 bay bus station accommodates suburban event bus networks, and a shuttle to Perth CBD. In addition to this event or public transport provision, walking, cycling and other forms of micro-mobility are a vital component of the overall transport plan. The key benefits of sustainable event travel include:

- Assisting in achieving Net Zero targets through increasing sustainable travel choices
- Provide exposure to quality public transport for existing car drivers
- Improve legacy travel behaviour, enacting mode shift for regular travel and other trip types
- Help to flatten the arrival profile (i.e. arrivals are not bunched) reducing space constraints around the stadium
- Support wider economic, social and health benefits, including increased activity in city centres and on approaches to stadia
- Reduce traffic congestion in the CBD and surrounding suburbs.

Table 4.2 Comparable regional stadiums in Australia

Stadium name	Seating capacity	Location context	Train	Bus	Event Bus	Ferry	Ride share	Obstructed Approaches	Non-Car Mode share
Macquarie Point Stadium	23,000	City Centre	-	✓	✓	✓	✓	✓	TBC
GMHBA Stadium, Geelong	40,000	City Centre	✓	✓	-	-	-	-	-
McDonald Jones Stadium, Newcastle	30,000	Suburban	✓	✓	✓	-	✓	-	-
Heritage Bank Stadium, Gold Coast	22,500	Suburban	✓	✓	✓	-	-	✓	55%
QCB Stadium, Townsville	25,000	City Centre	-	✓	-	-	✓	✓	-
Blundstone Arena, Hobart	19,500	Suburban	-	✓	✓	✓	✓	✓	-
UTAS Stadium, Launceston	19,000	City Centre	-	✓	-	-	✓	✓	-



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## 4.2 Common success factors

The guiding principles are cross checked against existing planning documents and the common success factors for mode shares and stadium transport identified in Section 4.1. The common success factors for event transport operations are noted here again:

- A multi-modal approach is critical
- Buses provide operational flexibility
- Public transport services should be high quality and frequent
- Traffic and sustainable transport modes should be separated where possible for legibility, safety and efficiency
- The provision of event infrastructure should also support business as usual needs, without the additional overlay of extensive on-the-ground-staff and/or police and temporary equipment
- Restrict parking to those willing to pay a premium through corporate support
- Self-driving is actively discouraged by prioritising active transport and public transport in event travel information
- Active transport links should be obvious to the user, safe and accessible
- Public transport fares/tickets should be included in event tickets
- Traffic diversions routes should be legible and predictable and short in duration

---

## 4.3 Guiding principles

The guiding principles for the development of the Macquarie Point Stadium transport plan are:

- 1 Access for All.
- 2 Sustainable Transport options are 15 Prioritised over other modes. In order of priority:
  - a Active transport (walking and cycling)
  - b Public transport (Event buses, Rapid Buses, public buses, Ferry, Charter Coaches)
  - c Taxi and ride share
  - d Passenger pick up and drop off
  - e Off-site parking.
  - f On-site parking (restricted for premium users and operational needs).
- 3 Leverage existing and future transport provision
  - a Improve walking and cycling links to the Hobart CBD.
  - b Leverage planned introduction of Rapid Bus services
  - c Leverage planned introduction of additional Ferry services.
- 4 Event day transport service overlay should complement existing services.
- 5 State and local multi-agency collaboration in the transport plan and provision.

# 5 Transport modes

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## 5.1 Overall transport access hierarchy

The order of priority for transport provision for the precinct as outlined in Section 4.3 is documented in further detail in this section. Future stages of planning should consider the criticality of both event and business as usual transport operations for each zone of the precinct. Some zones will have critical transport operations with far reaching implications such as the cruise ship terminal. Others may be temporal and only important during business hours. Some zones may be off limits to specific modes during events.

A future detailed prioritisation framework will require engagement with key transport operators in the precinct to understand their detailed needs by zone and by time of day and day of week. The framework should be:

- Integrated
- Mutually beneficial
- Rationalised.

Detailed descriptions of the various transport modes which has informed the development of the transport mode shares are outlined in further detail below. These descriptions outline:

- Planning principles
- Key considerations
- Demands and capacities
- Spatial requirements.

The demands and capacities together with the spatial requirements should be considered preliminary and strategic at this stage of planning based on the limitations of the scope of this initial study. Further studies will determine the detailed design and service requirements and likely costs required for the implementation of the plan. The detailed design and service requirements will also be significantly influenced by the broader stadium and precinct planning as well as the coordinated planning by other stakeholders.

What this initial planning outlines is the scope and scale of the transport task expressed as a transport mode share and the preferred locations of various elements of the transport plan in coordination with both precinct and wider city and state planning policy and strategy.

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## 5.2 Walking

### 5.2.1 *Planning principles*

Every event patron that enters or leaves the stadium could be considered a pedestrian. For the purpose of this assessment, the definition of a pure walking trip which involves no other transport mode is as follows:

- Walk visitor – this is likely to be a trip from accommodation or a place of work within 1.5 kilometres of the Macquarie Point precinct. The origins are most likely to be a hotel or spectators staying with friends or family within this catchment.
- Walk resident - this is likely to be a trip from a dwelling or student accommodation within 1.5 kilometres of the Macquarie Point precinct.

Walking from other transport modes outside the precinct have been captured in other transport modes. The spatial requirements for walking have considered the cumulative total of all walking trips to and from the precinct from all modes.

### 5.2.2 *Key considerations*

The key considerations when planning for walking trips associated with events are as follows:

- Walking is the most sustainable and affordable method of transport.
- Walking is a key contributor to non-car mode share.
- Stadium entries to be scaled, balanced and orientated towards transport nodes and adjacent through site pedestrian links.
- Most destinations are a flat walk within 10 minutes of the precinct e.g. Salamanca, Elizabeth Street bus interchange, proposed Rapid Bus stops, Brooke Street ferry wharf and the proposed Regatta Point ferry wharf.
- Paths around the Macquarie Point precinct are currently narrow and shared with cyclists and vehicles (waterfront)
- The key consideration for spatial provision is for crowd dispersal post-match when the stadium is expected to empty within a 10-20-minute period. Widened footpaths, pedestrian queuing storage at traffic signals and protection between footpaths and traffic lanes will all help maintain safety and traffic flow.
- Existing traffic signal phasing and operations are unlikely to accommodate the intense pulse in demand from pedestrians post-event. Key adjacent intersections (e.g. Davey and Evans) may be better managed manually by Police on egress for a short period of 10 minutes to flush the crowd and create less network disruption which may come at the expense of traffic movements on minor approaches to the intersection.
- Potential pedestrian conflict between pedestrians travelling to the proposed Regatta Point ferry wharf will require a controlled crossing of the northern access road into and out of the TasPorts operational area. This is likely to be the smallest pedestrian flow by direction from the stadium precinct.

### 5.2.3 *Demand and capacity*

In assessing the likely demand for a new stadium, one approach is to take a capacity approach to demand management and travel choice. This is particularly important when working in an established local network such as a Central Business District.

The key planning assumptions used to determine the mode share for walking trips to the stadium are:

- Pure walk visitors within a 1.5km catchment
  - Based upon 3,600 hotel rooms in Greater Hobart
    - 2 persons per room on average
    - 75% stadium event hotel occupancy
- Pure walk residents within a 1.5km catchment
  - Based upon 9,000 residents in Central Hobart SA2
    - <1% event attendees
    - 868 student accommodation rooms for UTAS in the Hobart CBD

The key pedestrian links immediately adjacent to the stadium site which could receive up to 30,000 spectators for a special event in a peak 10 minute egress period have the following capacity:

- Evans Street
  - Northern footpath – 2.5m (1,650 people per 10 minutes at LoS D)
  - Southern Footpath – 2.5m (1,650 people per 10 minutes)

- Davey Street
  - Eastern Shared Path (North)– 2.5m (1,650 people per 10 minutes)
  - Eastern Shared Path (South) – 3m (1,980 people per 10 minutes)
- Macquarie Point Cycleway
  - Northern shared path - 3m (1,980 people per 10 minutes)
- Hunter Street
  - Northern footpath – 3m (1,980 people per 10 minutes)
  - Southern footpath – 1.5m (990 people per 10 minutes)

This represents a combined footpath / shared path pedestrian width of 18 metres and a capacity of 11,880 spectators at pedestrian level of service D (typical for events) in a 10 minute period travelling in one direction. This would also assume that cyclists are walking their bikes / scooters on the shared paths within the vicinity of the stadium until crowds disperse.

It is acknowledged that this capacity is highly theoretical as spectators are unlikely to keep to the footpaths or walk in a uniform or orderly manner as they exit the stadium. This also does not consider any directional splits generated by the stadium internal seating configuration which would see some parts of the pedestrian network put under more stress than others.

This theoretical calculation demonstrates that there is unlikely to be enough capacity in a “do nothing” scenario on the existing dedicated walking and cycling infrastructure adjacent to live roads to accommodate the pedestrian flow associated with the stadium. This has been demonstrated through events such as the Dark Mofo Festival and New Years Eve events previously staged at Macquarie Point and the Waterfront.

The preliminary pedestrian demand estimates by event size and mode share target are outlined below in Table 5.1.



Photo 5.1 Waterfront precinct pedestrian wayfinding

Table 5.1 Macquarie Point Stadium - Preliminary pedestrian demand estimates by event size and mode share target

Event Size	Target	Walk Visitors			Walk Residents			Total Walk		
	Mode Share	Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	1900	1900	13%	117	117	1%	<b>2017</b>	<b>2017</b>	<b>13%</b>
Regular 15K	70% Day 1	2000	2000	13%	98	98	1%	<b>2098</b>	<b>2098</b>	<b>14%</b>
Regular 15K	60% Ultimate	1900	1900	13%	104	104	1%	<b>2004</b>	<b>2004</b>	<b>13%</b>
Regular 15K	70% Ultimate	2000	2000	13%	85	85	1%	<b>2085</b>	<b>2085</b>	<b>14%</b>
Capacity 23K	60% Day 1	4000	4000	17%	91	91	1%	<b>4091</b>	<b>4091</b>	<b>18%</b>
Capacity 23K	70% Day 1	3920	3920	17%	99	99	1%	<b>4019</b>	<b>4019</b>	<b>17%</b>
Capacity 23K	60% Ultimate	4000	4000	17%	98	98	1%	<b>4098</b>	<b>4098</b>	<b>18%</b>
Capacity 23K	70% Ultimate	3936	3936	18%	100	100	1%	<b>4036</b>	<b>4036</b>	<b>18%</b>
Special 30K	60% Day 1	5000	5000	17%	99	99	1%	<b>5099</b>	<b>5099</b>	<b>17%</b>
Special 30K	70% Day 1	5000	5000	17%	101	101	1%	<b>5101</b>	<b>5101</b>	<b>17%</b>
Special 30K	60% Ultimate	5000	5000	17%	96	96	1%	<b>5096</b>	<b>5096</b>	<b>17%</b>
Special 30K	70% Ultimate	5000	5000	17%	88	88	1%	<b>5088</b>	<b>5088</b>	<b>17%</b>

Notes

**Mode share non-car** - Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

**Walk visitors** – walking from accommodation within 1.5km of stadium

**Walk residents** - walking from dwellings within 1.5km of stadium

Preliminary strategic estimates for planning and stakeholder discussion purposes only.



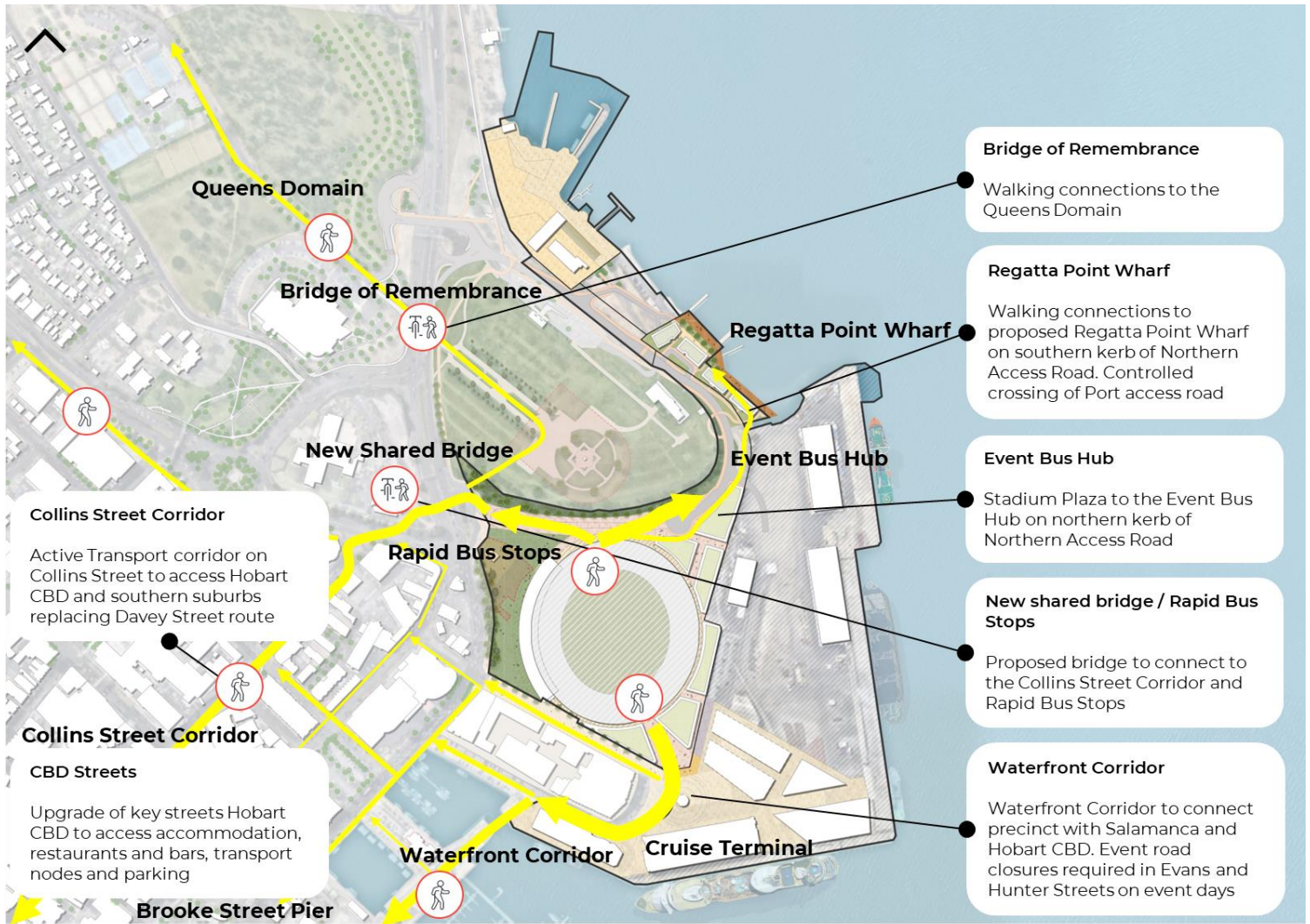


Figure 5.1 Spatial arrangement of pedestrian flows and walking infrastructure within the precinct



## 5.2.4 Spatial requirements

This simple analysis shows the requirement for road closures and footpath enhancements in the immediate vicinity of the stadium site until the crowd is sufficiently dispersed throughout the pedestrian network which may take up to 300-400 metres walking distance away from the stadium when crowds are likely to disperse into the Hobart CBD walking network.

The following footpath width requirements are required in the immediate vicinity of the stadium site.

### **Spatial requirements - Walking**

The following footpath width requirements are likely to be required in the immediate vicinity of the stadium site for the following crowd sizes:

- Regular event - 15,000 spectators – 23-31 metres
- Capacity event - 23,000 spectators – 35-47 metres
- Special event - 30,000 spectators – 46-61 metres

A combined width of 58 metres could be achieved through the use of the following streets (closed to traffic) and paths as pedestrian corridors:

- Northern Plaza – 11 metres
- Evans Street – 15 metres
- Hunter Street – 20 metres
- Davey Street Shared path North (enhanced; cycling moved to Collins Street) – 6 metres
- Davey Street Shared path North (enhanced; bus bay south of Evans Street removed) – 6 metres

Design coordination with the stadium indicates that a 360 degree external concourse with a width of 15 metres will be sufficient to accommodate the immediate regular and emergency egress flows from the stadium building.

Focus on walking improvements to transit nodes throughout Greater Hobart such as event bus stops and ferry wharves should also be scoped during the detailed planning for the stadium. These should focus on the Waterfront and Collins Street corridors.

Enhancement of pedestrian paths and crossing storage areas adjacent to and crossing major roads near the precinct.

The provision of a shared bridge for walking and cycling across the Tasman and Brooker Highways would support safe access to the Rapid Bus stops and the proposed Collins Street active transport corridor into the CBD. It would also remove cycling from immediately adjacent to the stadium (Davey Street) to allow the existing shared paths for high volume pedestrians flows.

These spatial requirements are indicative only and requires further detailed analysis once the Stadium design has been developed.

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## 5.3 Cycling and micromobility

### 5.3.1 *Planning principles*

For the purpose of this assessment, the key cycling and micromobility planning principles are as follows:

- Cycle links should be obvious to the user, safe and accessible. This includes ensuring sufficient path width is provided for safety and comfort during event mode.
- Cyclists and scooters will be required to dismount in the immediate vicinity of the stadium during peak ingress and egress periods to avoid conflicts with large volumes of pedestrians of all demographics.
- Provide safe, easy to identify, comfortable and accessible access routes along cycling desire lines, in particular to/from the Hobart CBD.
- Integrate cycle access with Intercity Cycleway and other key cycle routes as identified in the Greater Hobart Cycling Plan.
- Provide safe, secure and convenient bicycle parking which supports use both during events and business as usual activity within the precinct.

### 5.3.2 *Key considerations*

The key considerations when planning for cycling trips associated with events are as follows:

- Cycling is a key contributor to non-car mode share.
- E-bikes and e-scooters increase the range of catchments.
- Connections to wider city networks are essential.
- Use of bicycle parking facilities in the Hobart CBD should be encouraged. Not all parking for the demand should occur within the precinct itself.
- Separation of fast-moving cyclists and event pedestrians is key for precinct and Hobart CBD safety (likely to be provided outside of the precinct through planned cycleways).
- Separation of cyclists and Port-related heavy vehicle movement, event buses and associated layover.
- The location of bicycle and scooter hire docking stations needs to be carefully considered to not reduce capacity for walking.
- Weather may impact the mode share to cycling.
- Hire of e-scooters is known to be common activity for visitors to Hobart, hence it can be expected some spectators would consider using these to travel to the stadium precinct.

### 5.3.3 *Demands and capacity*

The key planning assumptions used to determine the mode share for cycling trips to the stadium are:

- Cycling residents within a 5km catchment
  - Based upon 9,000 residents in Central Hobart SA2 (initial estimate and considered conservative)
  - <1% event attendees
  - 868 student accommodation rooms for UTAS in the Hobart CBD.
- 600 bicycle parking spaces are provided at Optus Stadium in Perth
- 130 spaces are provided at Sydney Olympic Park in the stadium precinct.

A detailed cycling catchment analysis based upon a distance of 5km using the network (not as the crow flies) is required to better substantiate cycling demand to the stadium. Optus Stadium in Perth has demonstrated that if quality cycling networks are provided to the stadium and adequate and appropriate types of bicycle parking are provided it can be a success as a stadium access mode.

The preliminary cycling demand estimates by event size and mode share target are outlined below in Table 5.2.



Photo 5.2 Cycling on the waterfront

Table 5.2 Macquarie Point Stadium - Preliminary cycling and micromobility demand estimates by event size and mode share target

Event Size	Target	Cycle / Scooter (1.5km)			Cycle (up to 5km)			Total Cycle		
	Mode Share	Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	400	400	3%	600	600	4%	<b>1,000</b>	<b>1,000</b>	<b>7%</b>
Regular 15K	70% Day 1	400	400	3%	600	600	4%	<b>1,000</b>	<b>1,000</b>	<b>7%</b>
Regular 15K	60% Ultimate	400	400	3%	600	600	4%	<b>1,000</b>	<b>1,000</b>	<b>7%</b>
Regular 15K	70% Ultimate	400	400	3%	600	600	4%	<b>1,000</b>	<b>1,000</b>	<b>7%</b>
Capacity 23K	60% Day 1	400	400	2%	600	600	3%	<b>1,000</b>	<b>1,000</b>	<b>4%</b>
Capacity 23K	70% Day 1	400	400	2%	600	600	3%	<b>1,000</b>	<b>1,000</b>	<b>4%</b>
Capacity 23K	60% Ultimate	400	400	2%	600	600	3%	<b>1,000</b>	<b>1,000</b>	<b>4%</b>
Capacity 23K	70% Ultimate	400	400	2%	600	600	3%	<b>1,000</b>	<b>1,000</b>	<b>4%</b>
Special 30K	60% Day 1	400	400	1%	600	600	2%	<b>1,000</b>	<b>1,000</b>	<b>3%</b>
Special 30K	70% Day 1	400	400	1%	600	600	2%	<b>1,000</b>	<b>1,000</b>	<b>3%</b>
Special 30K	60% Ultimate	400	400	1%	600	600	2%	<b>1,000</b>	<b>1,000</b>	<b>3%</b>
Special 30K	70% Ultimate	400	400	1%	600	600	2%	<b>1,000</b>	<b>1,000</b>	<b>3%</b>

Notes

**Mode share non-car** - Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

**Cycle / Scooter (1.5km)** – cycling / scooter from accommodation within 1.5km of stadium

**Cycle (up to 5km)** - cycling from dwellings / accommodation beyond 1.5km and up to 5km from the stadium

Preliminary strategic estimates for planning and stakeholder discussion purposes only.



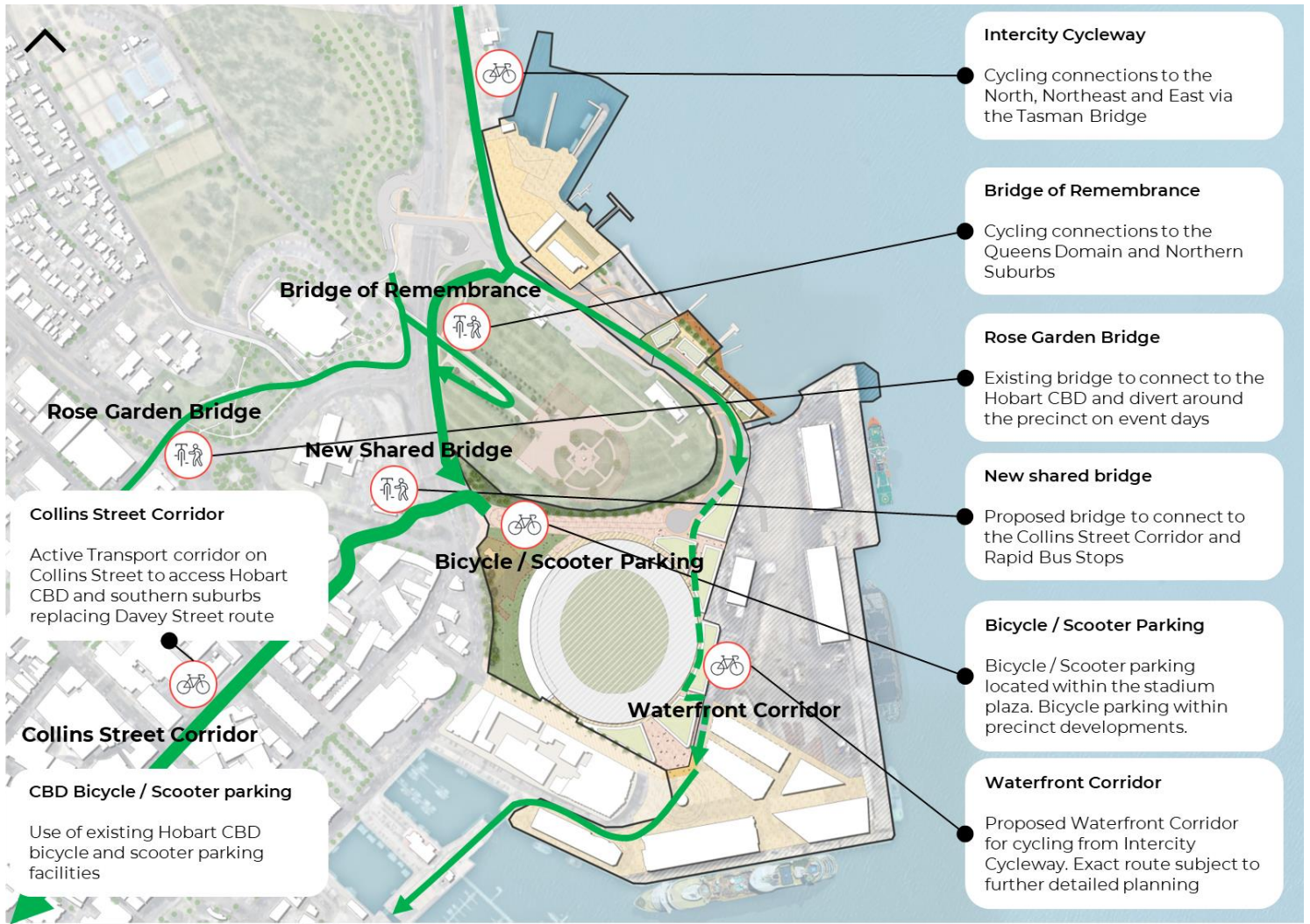


Figure 5.2 Spatial arrangement of cycling flows and infrastructure within the precinct

### 5.3.4 Spatial requirements

The spatial requirements for cycling and micromobility in the immediate vicinity of the stadium are outlined below.

#### **Spatial requirements – Cycling and micromobility**

- 20 x class 1 bicycle spaces within the stadium and associated precinct buildings for dual use
- 120 x class 3 bicycle spaces within the stadium precinct based on Austroads guidance
- New connection(s) from Macquarie Point site to the Intercity Cycleway.
- Creating a bicycle priority route on Collins Street
- Creating a cycle route through the precinct
- Relocating the cycling corridor from Davey Street to the newly created corridors to increase the capacity for pedestrians and reduce conflicts as cycling grows as a mode
- Large pedestrian/cycle access bridge of approximately 180 metres in length and 4 metres in width to connect Mac Point site to the Hobart CBD (Collins Street).
- Suitable shared access route to/from north of Mac Point site (towards Domain Shipyards).
- Sufficient secure cycle and micro mobility parking is placed in convenient locations close to key destinations and along access routes. This may be supplemented by temporary cycle parking on event days.

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## 5.4 Bus

### 5.4.1 *Key planning principles*

For the purpose of this assessment, the key bus planning principles are as follows:

- Buses have the highest capacity transit mode per hour in Tasmania (ferries have limited route coverage, passenger catchments and vessel capacity).
- The proposed Rapid Bus network provides the opportunity to enhance the coverage of quality turn up and go public transport across Greater Hobart and supports both business as usual and event needs.
- Leverage existing/planned local bus services.
- Provision of high quality and high frequency dedicated event bus services to locations not served well by local bus or the proposed Rapid Bus network.
- A high profile location with close proximity to the stadium for an event bus hub.
- Establish event Park and Ride lots (possibly informal) to maximise the role of public transport for the majority of the journey within a city that is currently dominated by private car usage.
- Public transport fares/tickets should be included in event tickets to make public transport use convenient and act as a disincentive to pay for parking as car based spectators will effectively pay twice for transport.

### 5.4.2 *Key considerations*

The key considerations when planning for bus trips associated with events are as follows:

- Dedicated event bus services are required for Day 1 due to the limited capacity of existing local bus services and the demands generated by the stadium.
- The Rapid Bus network can grow over time in line with staging and reduce operational event bus requirements over time.
- Consideration of the availability of fleet and drivers to operate a large scale event bus operation.
- A requirement to establish large amounts of post event bus staging kerb space and bus priority within close proximity to the stadium.
- Requires travel demand management messaging from Day 1 in coordination with Sporting codes (clubs).
- Leverage Greater Hobart bus priority measures developed for local and Rapid Bus.
- Leverage Greater Hobart park and ride facilities developed for local and Rapid Bus.
- Positive public transport experience for events introduces locals to quality public transport for daily travel.
- Event buses would need to share the proposed northern access road with trucks and vehicles accessing the port during events.

### 5.4.3 Demands and capacity

The key planning assumptions used to determine the mode share for bus trips to the stadium are outlined in the sections below.

#### 5.4.3.1 Event bus

The key assumptions for determining demand for event bus are as follows:

- Event bus mode share across several Australian stadiums ranges between 10% at Accor Stadium in Sydney to 44% at Heritage Bank Stadium on the Gold Coast. Optus Stadium Perth (23%), Suncorp Stadium Brisbane (24%), CBUS Stadium Gold Coast (32%) and Adelaide Oval (33%) all generate significant mode shares to event bus.
- The capacity of an event bus is assumed to be 55 seated passengers and all event buses leave the stadium full.
- Due to the distance of the likely routes on stadium egress it is unlikely that each bus would be able to perform more than one journey.
- All event bus fleet and drivers would be in addition to regular Rapid and local bus services.

#### 5.4.3.1 Rapid bus

Rapid Buses will provide faster and more direct services to and from important locations such as the Hobart CBD, Glenorchy, Kingston and Rosny Park via corridors from the north, east and south, as through services. Rapid bus is not intended for servicing large events but may be a supplementary resource during ingress and egress events connecting to Macquarie Point stadium. The rapid bus initiative is planned to be developed in four stages, the capacity for these stages is outlined below.

Table 5.3 Total Rapid Bus Capacity at various stages of development

	<b>Total Ingress Buses (2h)</b>	<b>Total Ingress Passengers</b>	<b>Total Egress Buses (1h)</b>	<b>Total Egress</b>
<b>Stage 1 – Central</b>	8	400	4	240
<b>Stage 2 – North</b>	16	800	8	480
<b>Stage 3 - South</b>	24	1,200	12	720
<b>Stage 4 – East</b>	32	1,600	16	960

Note: Capacity has not considered available parking at Rapid Bus origins. Bus schedules are indicative and are not finalised

It has been assumed that the available seating capacity on rapid bus for events on Day 1 would 40 (160 in total) with 10 seats allowed for by background usage. This may vary depending on the schedule of the event. It is acknowledged that a larger vehicle (potentially up to 80 passengers) may be procured for the proposed Rapid Bus Network which would in turn reduce the fleet size of the event bus network. This should be considered in the next stage of planning.

#### 5.4.3.2 Local bus

Hobart has an existing network that will be leveraged for operations around events at Macquarie Point. Typically, during events, extra bus services would be added to serve the added demand of the ingress and egress to the stadium. It is likely that express routes to key activity centres at Kingston, Rosny and Glenorchy and park and rides would run after large events to ease congestion on other transport modes.

It has been assumed that the available seating capacity on local bus for events is 40 with 10 allowed for by background usage. This may vary depending on the schedule of the event.

The preliminary bus demand estimates by event size and mode share target are outlined below in Table 5.4.



Table 5.4 Macquarie Point Stadium - Preliminary bus demand estimates by event size and mode share target

Event Size	Target	Event Bus			Rapid Bus			Local Bus			Total Bus		
	Mode Share	Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	70	3,800	25%	4	160	1%	13	500	3%	<b>87</b>	<b>4,460</b>	<b>30%</b>
Regular 15K	70% Day 1	82	4,500	30%	4	160	1%	13	500	3%	<b>99</b>	<b>5,160</b>	<b>34%</b>
Regular 15K	60% Ultimate	38	2,050	14%	24	960	6%	13	500	3%	<b>75</b>	<b>3,510</b>	<b>23%</b>
Regular 15K	70% Ultimate	50	2,750	18%	24	960	6%	13	500	3%	<b>87</b>	<b>4,210</b>	<b>28%</b>
Capacity 23K	60% Day 1	107	5,850	25%	4	160	1%	13	500	2%	<b>124</b>	<b>6,510</b>	<b>28%</b>
Capacity 23K	70% Day 1	133	7,280	32%	4	160	1%	13	500	2%	<b>150</b>	<b>7,940</b>	<b>35%</b>
Capacity 23K	60% Ultimate	75	4,080	18%	24	960	4%	13	500	2%	<b>112</b>	<b>5,540</b>	<b>24%</b>
Capacity 23K	70% Ultimate	100	5,500	24%	24	960	4%	13	500	2%	<b>137</b>	<b>6,960</b>	<b>30%</b>
Special 30K	60% Day 1	149	8,150	27%	4	160	1%	13	500	2%	<b>166</b>	<b>8,810</b>	<b>29%</b>
Special 30K	70% Day 1	172	9,450	32%	4	160	1%	18	700	2%	<b>194</b>	<b>10,310</b>	<b>34%</b>
Special 30K	60% Ultimate	118	6,440	21%	24	960	3%	13	500	2%	<b>155</b>	<b>7,900</b>	<b>26%</b>
Special 30K	70% Ultimate	150	8,200	27%	24	960	3%	18	700	2%	<b>192</b>	<b>9,860</b>	<b>33%</b>

Notes

**Non-car mode share** - Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

Preliminary strategic estimates for planning and stakeholder discussion purposes only.

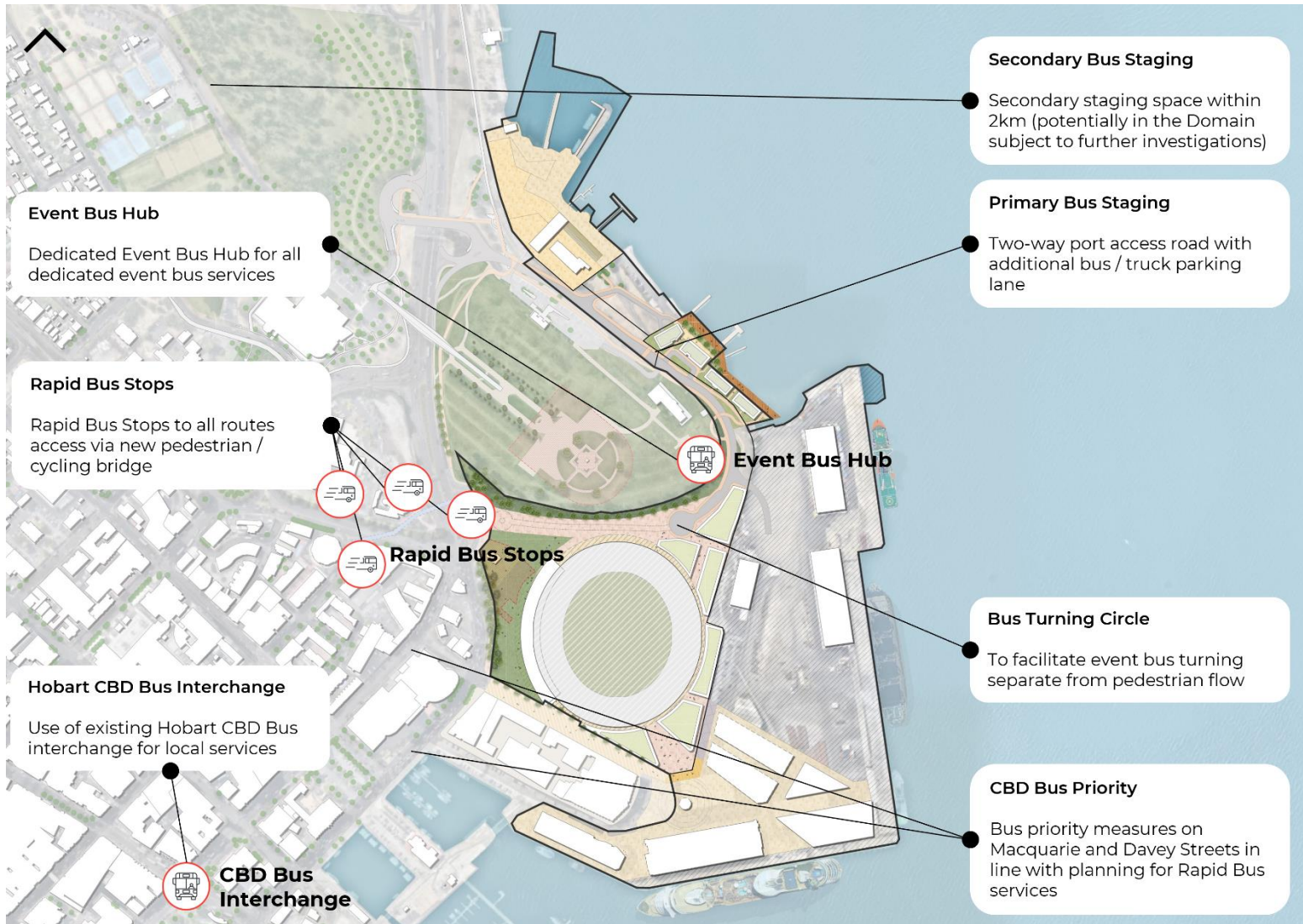


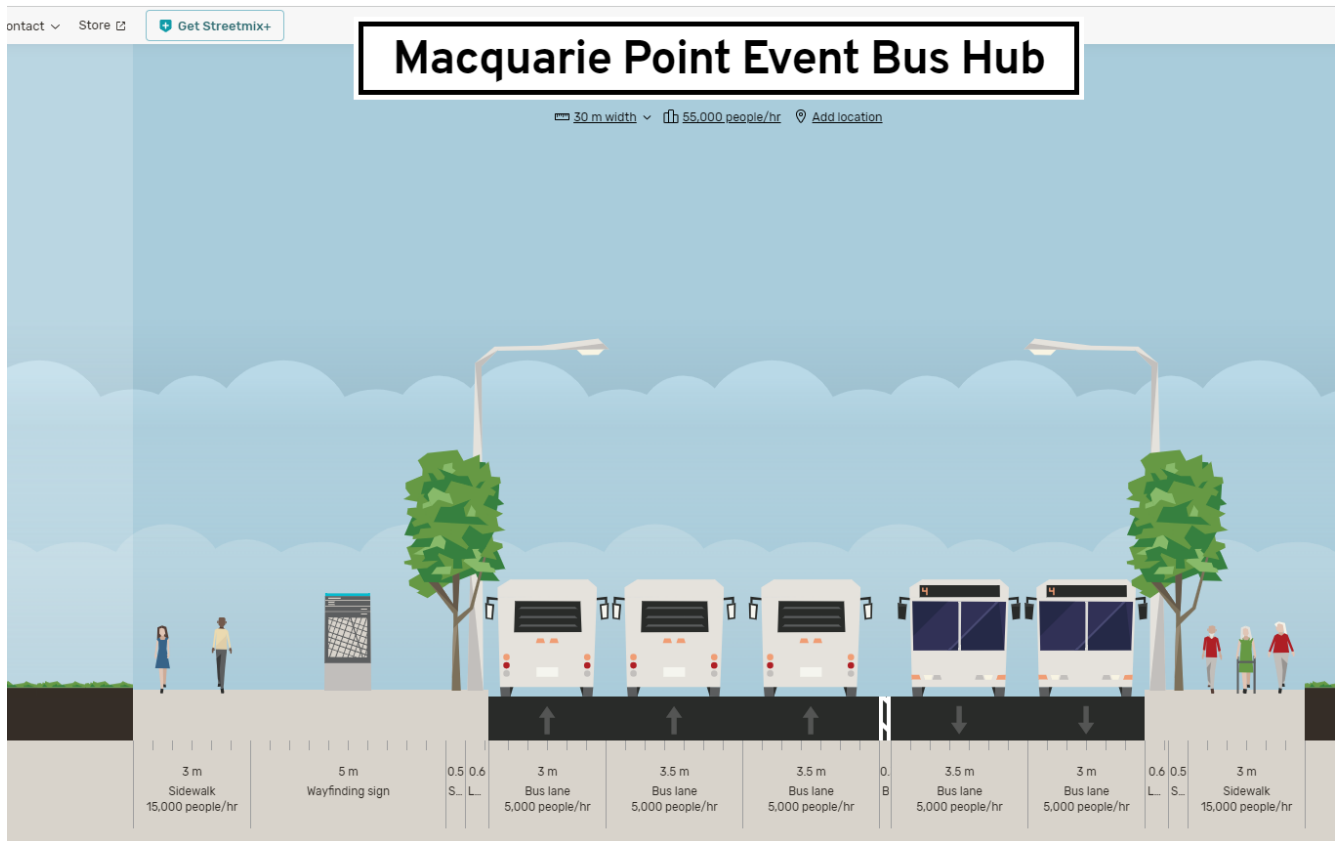
Figure 5.3 Spatial arrangement of bus related infrastructure within the precinct

#### 5.4.4 Spatial requirements

The spatial requirements to operate event bus, rapid bus and local bus services in the immediate vicinity of the stadium site are outlined below.

##### **Spatial requirements - Bus**

- An event bus hub located to the north east of the stadium providing set down/pick up space for the dedicated event bus network.
- Kerb space within the event bus hub of 140 metres in length with 4 bus stands of 2 bus length (8 bus capacity)
- A width of the event bus hub of 30 metres comprising of:
  - 3 x 3.5m bus travel lanes
  - 1 x 0.3m lane separator
  - 2 x 3.0m bus parking lanes
  - 2 x 1.1m tree and lighting zones
  - 1 x 5m bus stop queuing zone
  - 2 x 3m walking paths
- A 15m radius bus turning circle to the north east of the stadium
- Bus staging kerb length of 2.1 km to accommodate 142 buses on egress
  - Primary staging space for event buses close to stadium bus station.
  - Secondary staging space within 2km (potentially in the Domain subject to further investigations)
- Suitable bus stop queuing infrastructure (fencing, signage) and management provided.
- Event bus control room, possibly demountable, in viewing distance of the event bus hub
- A space for driver facilities in proximity to the event bus hub and staging areas. The space may have another use on non-event days.
- Local walking, cycling access and parking at bus stops along the event and Rapid Bus network



Source: Streetmix (2023)

Figure 5.4 Macquarie Point Event Bus Hub looking east towards the River Derwent

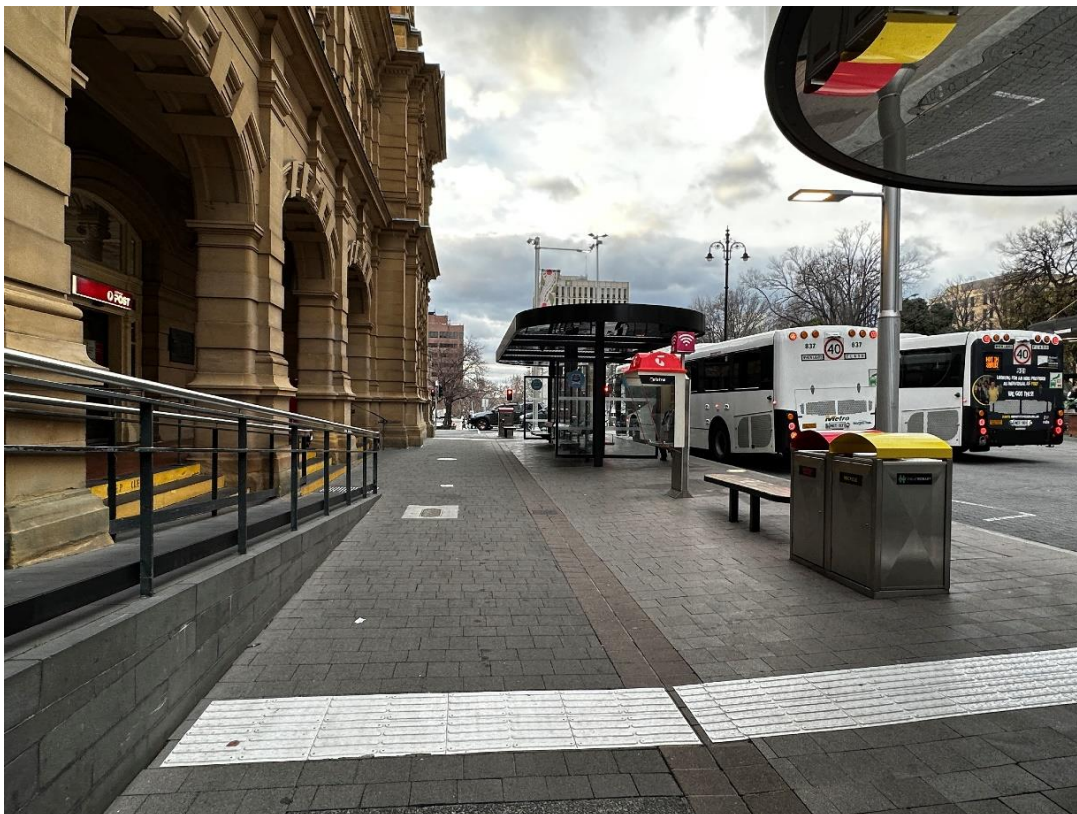


Photo 5.3 Elizabeth Street Bus Interchange



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## 5.5 Ferry

### 5.5.1 *Planning principles*

For the purpose of this assessment, the key ferry planning principles are as follows:

- Leverage existing/planned ferry service provision
- Provide alternatives to potentially crowded road routes (such as the Tasman Bridge). Ferry can supplement higher capacity bus services to/from places where travel times are advantageous
- Provide ferry infrastructure and services that supports both business as usual and event needs
- Provision of high quality ferry services, including dedicated event ferry service
- Public transport fares/tickets should be included in event tickets.

### 5.5.2 *Key considerations*

The key considerations when planning for ferry trips associated with events are as follows:

- Ferry network can grow over time in line with planned staging of services and infrastructure
- Proximity of the ferry wharves will influence attraction of mode in terms of walking distance
- Wayfinding to different wharves for different services (some distance apart) may reduce customer legibility
- Weather conditions will influence the take up of this particular mode, especially wind and rain
- Commercial operators could gain wharf access for corporate customers increasing numbers
- Consideration of the location of ferry routes and event bus routes to avoid duplication
- Wharf face availability during peak periods is a constraint as much as vessel and driver availability
- Ferries are one of the more costly forms of public transport to operate when considering cost recovery and event passenger throughput.

### 5.5.3 *Demands and capacity*

The key planning assumptions used to determine the mode share for ferry trips to the stadium are outlined in the sections below.

The current ferry trial operates using a single ferry making return trips between Bellerive Pier and Brooke Street Pier in 40-minute round trip intervals on weekdays and 30-minute round trip on weekends. The current vessel in service has a capacity of 107 passengers. During egress from an event, it is estimated that up to three ferry trips could service 321 passengers leaving the stadium from Brooke Street.

#### *Proposed Ferry network expansion Stage 1*

Stage 1 of expansion proposed to the Hobart ferry operations focuses on expansion of operations from the Brooke Street wharf (located a short walk from Mac Point). Additional services are expected to ease congestion from the Tasman Bridge. Two more equivalent ferries are expected to be procured for the additional services. With these two additional ferries operating with two trips across the River Derwent, the total capacity of 963 passengers would be achieved.

#### *Proposed Ferry network expansion Stage 2*

Stage 2 of proposed ferry expansion is focused on Regatta Point (also within close walking distance of Mac Point) and involves the operation of 5 total ferry lines servicing a variety of stops on the River Derwent.

Table 5.5 Ferry network service expansion capacity during egress from a stadium event

	<b>Current Conditions</b>	<b>Stage 1 Expansion</b>	<b>Stage 2 Expansion</b>
<b>Number of Ferries</b>	<b>1</b>	<b>3</b>	<b>5</b>
Bellerive	321	321	321
Howrah Point	0	321	321
Lindisfarne	0	321	402
Regatta Point	0	0	81*
Sandy Bay	0	0	80*
Kingston Beach	0	0	81*
Wilkinsons Point	0	0	79*
<b>TOTAL</b>	<b>321</b>	<b>963</b>	<b>1,284</b>

\*Capacity is reduced due to ferry being full to stop at earlier stops

#### *Event ferries*

Currently there are multiple opportunities for dedicated event ferry uplift by using additional vessels. An existing private ferry operator on the River Derwent currently has 2 ferries with capacities of 190 persons each, raising the potential additional capacity to unspecified wharves by up to 380. This would raise the total ferry capacity to 1,664 passengers in egress. Peak event demand for ferries on egress is unlikely to clash with commuter or tourism operations.

The preliminary ferry demand estimates by event size and mode share target are outlined below in Table 5.6.



Photo 5.4 Looking south towards Brooke Street Wharf

Table 5.6 Macquarie Point Stadium - Preliminary ferry demand estimates by event size and mode share target

Event Size	Target	Precinct Ferry			Event Ferry			Total Ferry		
		Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	3	321	2%	2	380	3%	5	701	5%
Regular 15K	70% Day 1	3	321	2%	2	380	3%	5	701	5%
Regular 15K	60% Ultimate	12	1,284	9%	2	380	3%	14	1,664	11%
Regular 15K	70% Ultimate	12	1,284	9%	2	380	3%	14	1,664	11%
Capacity 23K	60% Day 1	3	321	1%	2	380	2%	5	701	3%
Capacity 23K	70% Day 1	3	321	1%	2	380	2%	5	701	3%
Capacity 23K	60% Ultimate	12	1,284	6%	2	380	2%	14	1,664	7%
Capacity 23K	70% Ultimate	12	1,284	6%	2	380	2%	14	1,664	7%
Special 30K	60% Day 1	3	321	1%	2	380	1%	5	701	2%
Special 30K	70% Day 1	3	321	1%	2	380	1%	5	701	2%
Special 30K	60% Ultimate	12	1,284	4%	2	380	1%	14	1,664	6%
Special 30K	70% Ultimate	12	1,284	4%	2	380	1%	14	1,664	6%

Notes

**Mode share non-car** – Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** – Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

**Precinct Ferry** – regular ferry services; schedule could be enhanced

**Event Ferry** – dedicated event special ferry services

% totals may vary due to rounding up

Preliminary strategic estimates for planning and stakeholder discussion purposes only.

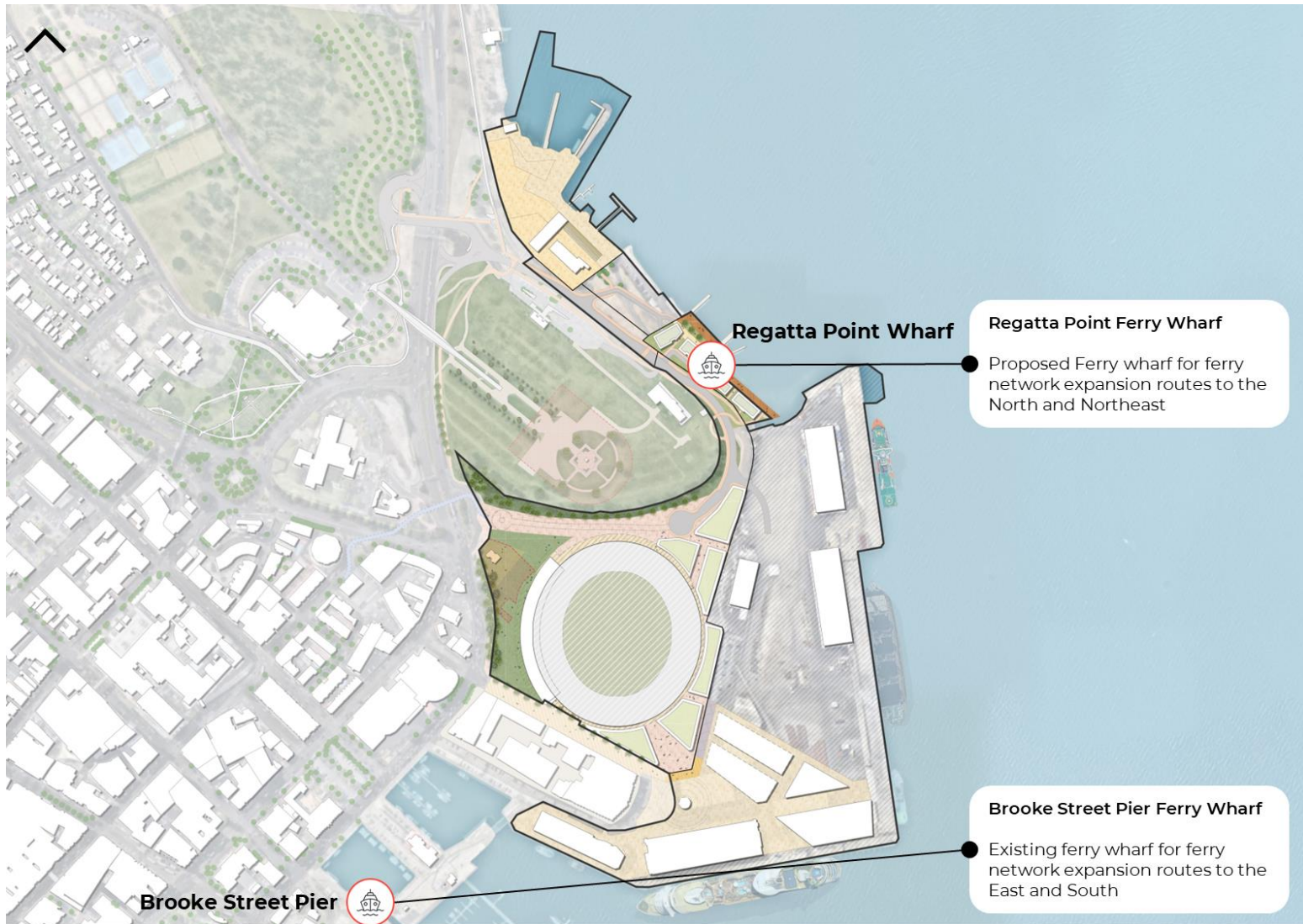


Figure 5.5 Spatial arrangement of ferry related infrastructure within the precinct



#### 5.5.4 *Spatial requirements*

The spatial requirements to operate event ferry services in the immediate vicinity of the stadium site are outlined below.

##### **Spatial requirements – Ferry**

- Additional ferry services at Brooke Street
- Wharf established at Regatta Point
- Wharves at the associated new stops along the River Derwent
- Local walking, cycling and bus access at new stops along the River Derwent
- Additional vessels to operate new services
- New pedestrian paths to access the Regatta Point wharf
- Public domain wayfinding to ferry wharves
- Ferry passenger queuing infrastructure at all wharves to accommodate peak event loadings
- Associated bus infrastructure when required for the cancellation of services on event day due to weather.

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## 5.6 Coach

### 5.6.1 *Planning principles*

For the purpose of this assessment, the key coach planning principles are as follows:

- Coaches will play an important role in connecting regional Tasmania to the stadium
- Coaches provide an opportunity for private charter for groups, sporting clubs and communities to experience events at the stadium
- Utilising existing infrastructure such as the coach parking at the adjacent Cruise Terminal when not in use for its primary function
- Utilise lands within and adjacent to the precinct but within walking distance to the stadium for additional coach parking
- Utilise coach for special events (i.e. concerts) where demands are likely to be dispersed beyond Greater Hobart to maintain a high non-car mode share

### 5.6.2 *Key considerations*

The key considerations when planning for coach trips associated with events are as follows:

- Base requirement for regular matches (club trips)
- Alternative primary coach parking location for the 15 coaches in the event of a cross-over with cruise ship operations
- Servicing regional locations may arrive early based on journey time reliability of longer distances
- Increased demands likely for concerts or non-sporting events
- Set down and pick up should be in the same location
- Departing coaches must wait for the last passenger to board therefore are unlikely to require departure during the peak 10-20 egress flow from the stadium
- Coaches preferably should park against a raised kerb to assist with high door loading and support the mobility needs of an older demographic
- Building permanent infrastructure is risky for a mode that has a high variability in demands from event to event and associated crowd sizes and audience profile

### 5.6.3 *Demand and capacity*

The key planning assumptions used to determine the mode share for coach trips to the stadium are outlined in the sections below.

- 50 seater coach used as worst case scenario but demand may be made up of a fleet of smaller sized vehicles such as minivans or smaller coaches
- Based upon 15 spaces at the Cruise Terminal
- Availability of sufficient hard stand area in the vicinity of the precinct to cater for overflow demands

The preliminary coach demand estimates by event size and mode share target are outlined below in Table 5.7.

Table 5.7 Macquarie Point Stadium - Preliminary coach demand estimates by event size and mode share target

Event Size	Target	Precinct Coach			Off-site Coach			Total Coach		
		Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	15	750	5%	0	0	0%	15	750	5%
Regular 15K	70% Day 1	15	750	5%	15	750	5%	30	1,500	10%
Regular 15K	60% Ultimate	15	750	5%	0	0	0%	15	750	5%
Regular 15K	70% Ultimate	15	750	5%	15	750	5%	30	1,500	10%
Capacity 23K	60% Day 1	15	750	3%	15	750	3%	30	1,500	7%
Capacity 23K	70% Day 1	15	750	3%	35	1,750	8%	50	2,500	11%
Capacity 23K	60% Ultimate	15	750	3%	15	750	3%	30	1,500	7%
Capacity 23K	70% Ultimate	15	750	3%	35	1,750	8%	50	2,500	11%
Special 30K	60% Day 1	15	750	3%	35	1,750	6%	50	2,500	8%
Special 30K	70% Day 1	15	750	3%	60	3,000	10%	75	3,750	13%
Special 30K	60% Ultimate	15	750	3%	34	1,700	6%	49	2,450	8%
Special 30K	70% Ultimate	15	750	3%	50	2,500	8%	65	3,250	11%

Notes

**Mode share non-car** - Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

**Precinct Coach** – coaches parked in the cruise terminal facility when non operational

**Off-site Coach** – coaches parked in walking distance of the stadium preferably within or immediately adjacent to the precinct

50 seater coach used as worst case scenario, but demand may be may up of a fleet of smaller sized vehicles such as minivans or smaller coaches

% totals may vary due to rounding up

Preliminary strategic estimates for planning and stakeholder discussion purposes only.

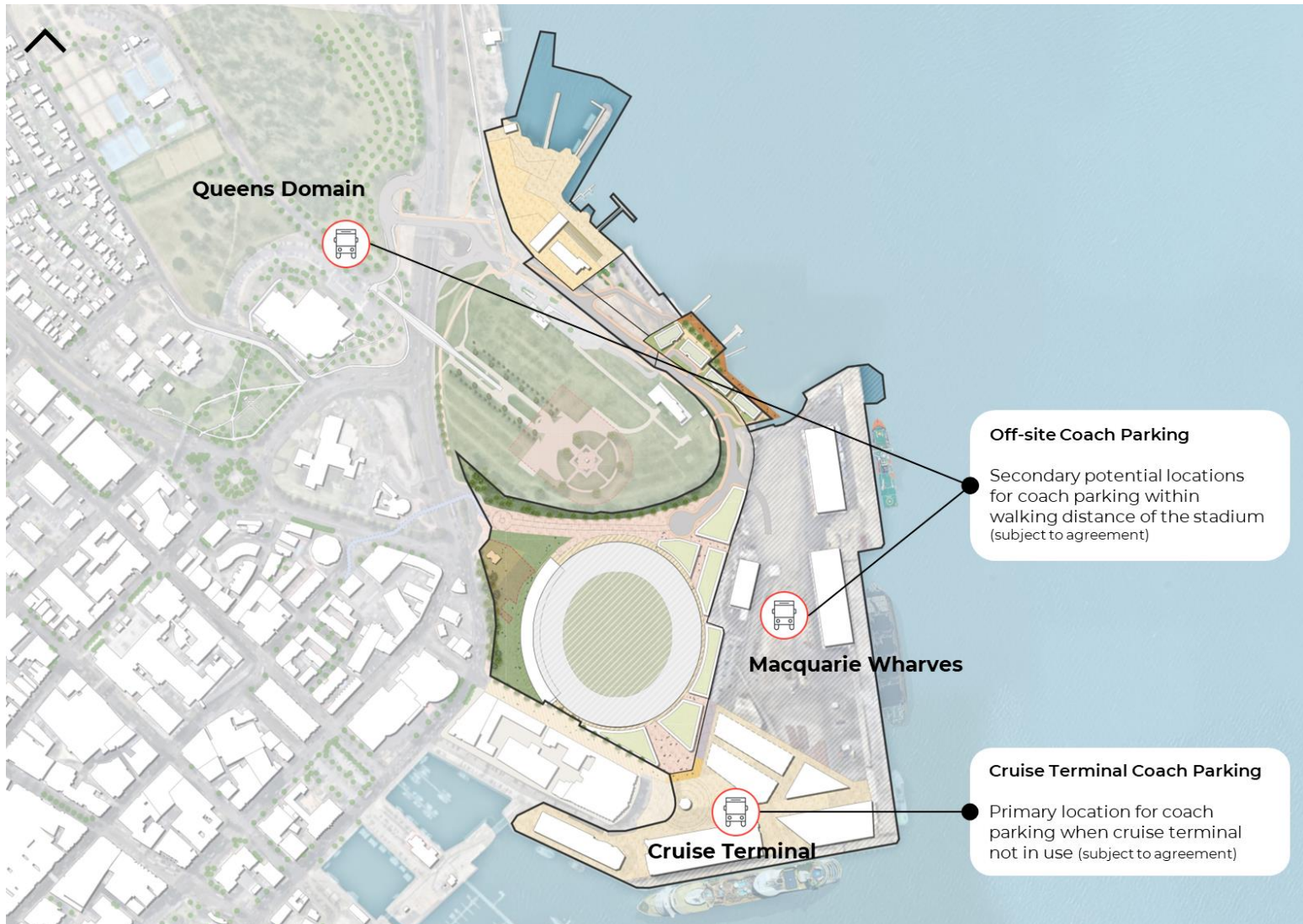


Figure 5.6 Spatial arrangement of coach related infrastructure within the precinct



#### 5.6.4 *Spatial requirements*

The following coach requirements are required in the immediate vicinity of the stadium site.

##### **Spatial requirements - Coach**

- 15 coach parking spaces in the Cruise Terminal facility as the primary coach parking area
- Location for up to 60 additional coaches at a secondary location in close proximity to the precinct
- A raised kerb for loading passengers
- Access to bus driver facilities at coach parking areas or nearby

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## 5.7 Taxi / ride share

### 5.7.1 Planning principles

For the purpose of this assessment, the key taxi / ride share planning principles are as follows:

- The benefits of the stadium’s location within the Hobart CBD means that dedicated areas for taxis and ride share within the precinct on event days are not required.
- Technologies such as geofencing should be utilised to form a pick-up exclusion zone around the immediate stadium precinct on event days.
- Site access provided in line with overall transport access hierarchy (i.e. active transport and public transport are prioritised first).

### 5.7.2 Key considerations

The key considerations when planning for taxi / ride share trips associated with events are as follows:

- The size of the local taxi fleet and the ease of access to the precinct from the road network will be crucial in delivery capacity
- Management of ride share at stadiums is problematic due to the unregulated nature of operations and equity for all players in the market
- Demand for taxi and ride share is likely to be higher during night time events and times of inclement weather
- Demand for taxi and ride share is likely to be higher for capacity and special events
- Operational arrangements for corporate suite visitors and adjacent businesses are likely to be required
- Operational arrangements for adjacent visitor accommodation businesses are likely to be required
- Dispersed city street network supports efficient ride share operations
- Cross-over events with the cruise terminal may restrict the availability of drivers and fleet for event related trips
- Queue management of ranks and security are key considerations post event at taxi ranks
- Staging areas for the large post event demand for taxis.

### 5.7.3 Demand and capacity

The key planning assumptions used to determine the mode share for taxi and ride share trips to the stadium are outlined in the sections below.

The most recent statistics regarding the number of taxi licenses operating in Hobart indicates that 357 actively used licenses operate in Hobart.

Uber, and other ride share companies, are typically secretive about the specific driver/rider numbers operating in a single city. Published numbers exist on the total number of Uber drivers in Australia (62 000). These numbers are used to estimate the number of drivers in Hobart, by scaling according to the most recently published taxi data.

$$62\,000 \text{ ubers in aus} \times \frac{357 \text{ taxis in Hobart}}{21\,344 \text{ taxis in AUS}} = 1037 \text{ ubers in Hobart}$$

It should be noted that uber drivers are typically part time, and so the number of active drivers is not necessarily indicative of the number of drivers able to service an event. Other ride share services were not included in this analysis as typical drivers (greater than 90%) drive for multiple ride share providers, to avoid double counting only Uber's numbers were analysed.

According to Ride Guru (Minis, 2018), Uber drivers typically work half the hours of a typical taxi driver. It is assumed that each taxi can, on average, serve three people in egress (taken as an average of each taxi carrying 2-3 persons per vehicle with some taxis making multiple trips).

$$(500 \text{ ubers} + 357 \text{ taxis}) \times 3 \text{ to } 4 \text{ passengers per vehicle} = 2600 \text{ to } 3650 \text{ capacity}$$

Note, this figure is considered an upper bound, as various other factors can reduce the number of taxi/ride shares operating on the night of an event. This number is in addition to private drop-off/pick-up.

The typical passenger occupancy per car for taxi and ride share services is 3.1 persons per vehicle.

The preliminary taxi and ride share demand estimates by event size and mode share target are outlined in Table 5.8.



Photo 5.5 Taxi turning into Davey Street from Evans Street

Table 5.8 Macquarie Point Stadium - Preliminary shared mobility demand estimates by event size and mode share target

Event Size	Target	Ride share			Taxi			Total Shared Mobility		
	Mode Share	Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	400	1,240	8%	150	465	3%	550	1,705	11%
Regular 15K	70% Day 1	300	930	6%	150	465	3%	450	1,395	9%
Regular 15K	60% Ultimate	400	1,240	8%	150	465	3%	550	1,705	11%
Regular 15K	70% Ultimate	300	930	6%	150	465	3%	450	1,395	9%
Capacity 23K	60% Day 1	600	1,860	8%	180	558	2%	780	2,418	11%
Capacity 23K	70% Day 1	600	1,860	8%	200	620	3%	800	2,480	11%
Capacity 23K	60% Ultimate	600	1,860	8%	180	558	2%	780	2,418	11%
Capacity 23K	70% Ultimate	600	1,860	8%	200	620	3%	800	2,480	11%
Special 30K	60% Day 1	800	2,480	8%	180	558	2%	980	3,038	10%
Special 30K	70% Day 1	800	2,480	8%	180	558	2%	980	3,038	10%
Special 30K	60% Ultimate	800	2,480	8%	180	558	2%	980	3,038	10%
Special 30K	70% Ultimate	800	2,480	8%	180	558	2%	980	3,038	10%

Notes

**Mode share non-car** - Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

**Ride share** – Formal ride share services such as Uber, Ola, Didi

**Taxi** – Registered taxi plate vehicles

% totals may vary due to rounding up

Preliminary strategic estimates for planning and stakeholder discussion purposes only



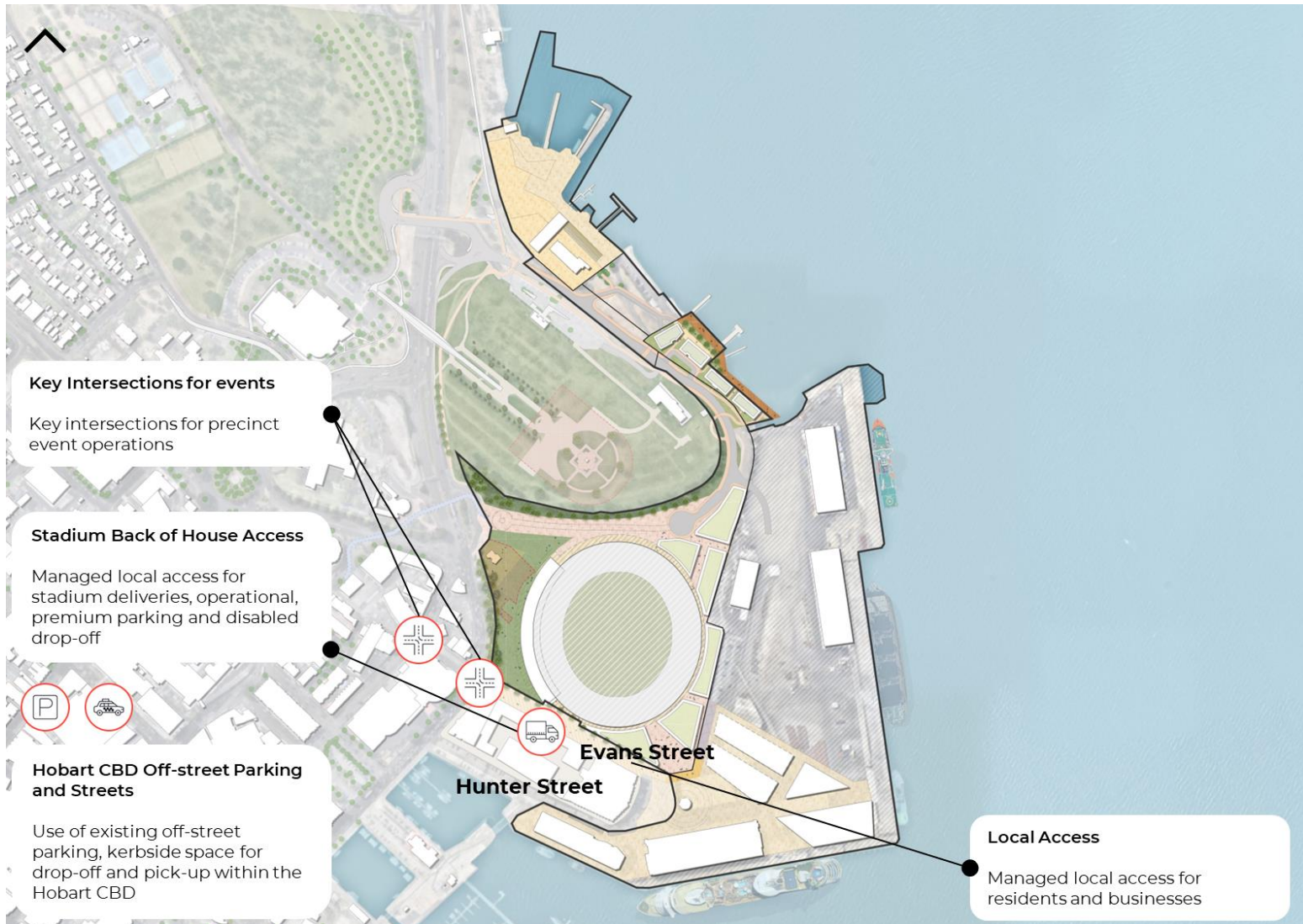


Figure 5.7 Spatial arrangement of taxi and ride share related infrastructure within the precinct

#### 5.7.4 *Spatial requirements*

The following taxi and ride share spatial requirements are required in the immediate vicinity of the stadium site.

##### **Spatial requirements – Taxi and Ride Share**

- All dedicated spaces for taxis should utilise existing facilities located throughout the Hobart CBD
- Dedicated kerbside space could be established for business as usual activity within the precinct
- Provision of dedicated, separated space for different activities (taxi / ride share)
- Suitable queuing infrastructure and management provided at CBD ranks
- Suitable circulation routes which do not impact access for active transport and public transport.

---

## 5.8 Car parking and drop-off / pick-up

### 5.8.1 *Planning principles*

For the purpose of this assessment, the key car parking and drop-off / pick-up planning principles are as follows:

- Parking within the Macquarie Point precinct is strictly limited during events to corporate guests.
- Key access routes are closed for private vehicle access during event mode.
- Self-driving is actively discouraged by prioritising public transport and active transport in event travel information.
- Public transport and active transport modes will provide an important role in supporting stadium access for vehicles parking in Hobart CBD or other surrounding sites.
- Establishing a restricted parking zone around the precinct to ensure residents and businesses are not inconvenienced by events at the stadium.

### 5.8.2 *Key considerations*

The key considerations when planning for car parking and drop-off / pick-up trips associated with events are as follows:

- Leverage existing Hobart CBD public off-street parking supply.
- Appropriately scaled precinct parking provision for businesses.
- Dispersed CBD street network supports the efficient drop-off and pick-up of patrons.
- Designated stadium and port operation zone required (local access only).
- Without controls on parking immediately within and adjacent to the stadium precinct on event days, there is likely to be traffic congestion, conflicts between vehicles, pedestrians and cyclists and no incentive to use sustainable transport modes.
- Restricted public parking immediately adjacent to stadiums is a common success factor of modern stadiums.

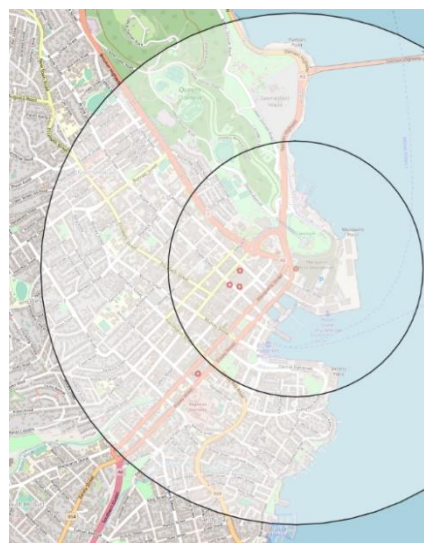
### 5.8.3 *Demand and capacity*

The key planning assumptions used to determine the mode share for car parking and drop-off / pick-up trips to the stadium are outlined below.

A census process was conducted to observe the number of potential carparks already within the City of Hobart which may be able to currently service Macquarie Point. Potential existing sources of car parks include “curb side parking” and various parking garages/lots in and around the Hobart CBD.

The curb side parking was estimated using the City of Hobart Street Parking interactive web map (City of Hobart, 2017). It is assumed that no parking spots are available within 1km and 50% of parking spots are available between 1 and 2 kilometres. Parking spots outside 2 kilometres are considered too far to service the stadium without further public transport infrastructure.

- Number of car parks between 1km and 2km: 782
- Likely number of available parking spaces:  $782 \times 0.5 = 391$
- Available capacity assuming 2.1 persons per vehicle:  $2.1 \times 391 = 821$



- 70.1% Journey To Work (Car Motorbike Truck 2016 JTW. Note 2016 selected as a more typical year than 2021 which was affected by Covid 19 measures)
- Passenger occupancy per member car - 2.0 persons per vehicle (typical occupancy for premium stadium product)
- Passenger occupancy per car park & walk - 3.1 persons per vehicle
- Passenger occupancy per car drop-off – 2.1 persons per vehicle (reduced for driver).

In addition, various parking facilities and lots were identified within walking range of the stadium. These additional opportunities are also to be considered with respect to their potential for servicing events at proposed stadium.

It is acknowledged that a more detailed parking supply and occupancy study will be required in the next stage of the planning process to ensure conflicts with worker, retail and leisure peaks are considered. Parking capacities are summarised in Table 5.9.

Table 5.9 Capacity of Carparks within walking catchment of stadium

<b>Name</b>	<b>Capacity (veh)</b>	<b>Distance (m)</b>
Centre Point Car Park	780	400
Dunn Place Carpark	77	400
Regatta Grounds Carpark	8	400
Argyle Street Carpark	1,129	800
TCA Car Parks	40	900
Hobart Central Carpark	460	1,100
Melville Street Carpark	144	1,100
Salamanca Square Car Park	197	1,200
Condell Place Carpark	82	2,000
Lefroy Street Car Park	34	2,300
<b>Total Car Parks</b>	<b>2,951</b>	<b>N/A</b>

The preliminary parking, drop-off / pick-up demand estimates by event size and mode share target are outlined in Table 5.10.



Table 5.10 Macquarie Point Stadium - Preliminary parking, drop-off / pick-up demand estimates by event size and mode share target

Event Size	Target	Corporate / Member Parking			Park and Walk			Drop-off / Pick-up			Total Car		
		Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task	Trips	Patrons	% of Task
Regular 15K	60% Day 1	300	600	4%	1017	3150	21%	294	617	4%	<b>1611</b>	<b>4367</b>	<b>29%</b>
Regular 15K	70% Day 1	300	600	4%	619	1916	13%	300	630	4%	<b>1219</b>	<b>3146</b>	<b>21%</b>
Regular 15K	60% Ultimate	300	600	4%	1017	3150	21%	294	617	4%	<b>1611</b>	<b>4367</b>	<b>29%</b>
Regular 15K	70% Ultimate	300	600	4%	619	1916	13%	300	630	4%	<b>1219</b>	<b>3146</b>	<b>21%</b>
Capacity 23K	60% Day 1	300	600	2%	1655	5130	22%	500	1050	5%	<b>2455</b>	<b>6780</b>	<b>29%</b>
Capacity 23K	70% Day 1	300	600	2%	807	2500	11%	600	1260	5%	<b>1707</b>	<b>4360</b>	<b>19%</b>
Capacity 23K	60% Ultimate	300	600	2%	1655	5130	22%	500	1050	5%	<b>2455</b>	<b>6780</b>	<b>29%</b>
Capacity 23K	70% Ultimate	300	600	2%	807	2500	11%	600	1260	5%	<b>1707</b>	<b>4360</b>	<b>19%</b>
Special 30K	60% Day 1	300	600	2%	1850	5732	19%	1200	2520	8%	<b>3350</b>	<b>8852</b>	<b>30%</b>
Special 30K	70% Day 1	300	600	2%	1097	3400	11%	1000	2100	7%	<b>2397</b>	<b>6100</b>	<b>20%</b>
Special 30K	60% Ultimate	300	600	2%	1850	5732	19%	1200	2520	8%	<b>3350</b>	<b>8852</b>	<b>30%</b>
Special 30K	70% Ultimate	300	600	2%	1097	3400	11%	1000	2100	7%	<b>2397</b>	<b>6100</b>	<b>20%</b>

Notes

**Mode share non-car** - Walking, Cycling, Bus, Ferry, Coach

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

**Corporate / Member Parking** – Off street parking within the precinct or stadium building; assumes 2 persons per vehicle

**Park and Walk** – Off street or unrestricted on-street parking within 1.5km walk of the precinct; assumes 3.1 persons per vehicle

**Drop-off / Pick-up** – patrons dropped-off or picked-up within 1.5km walk of the precinct; assumes 2.1 spectators per vehicle

% totals may vary due to rounding up

Preliminary strategic estimates for planning and stakeholder discussion purposes only

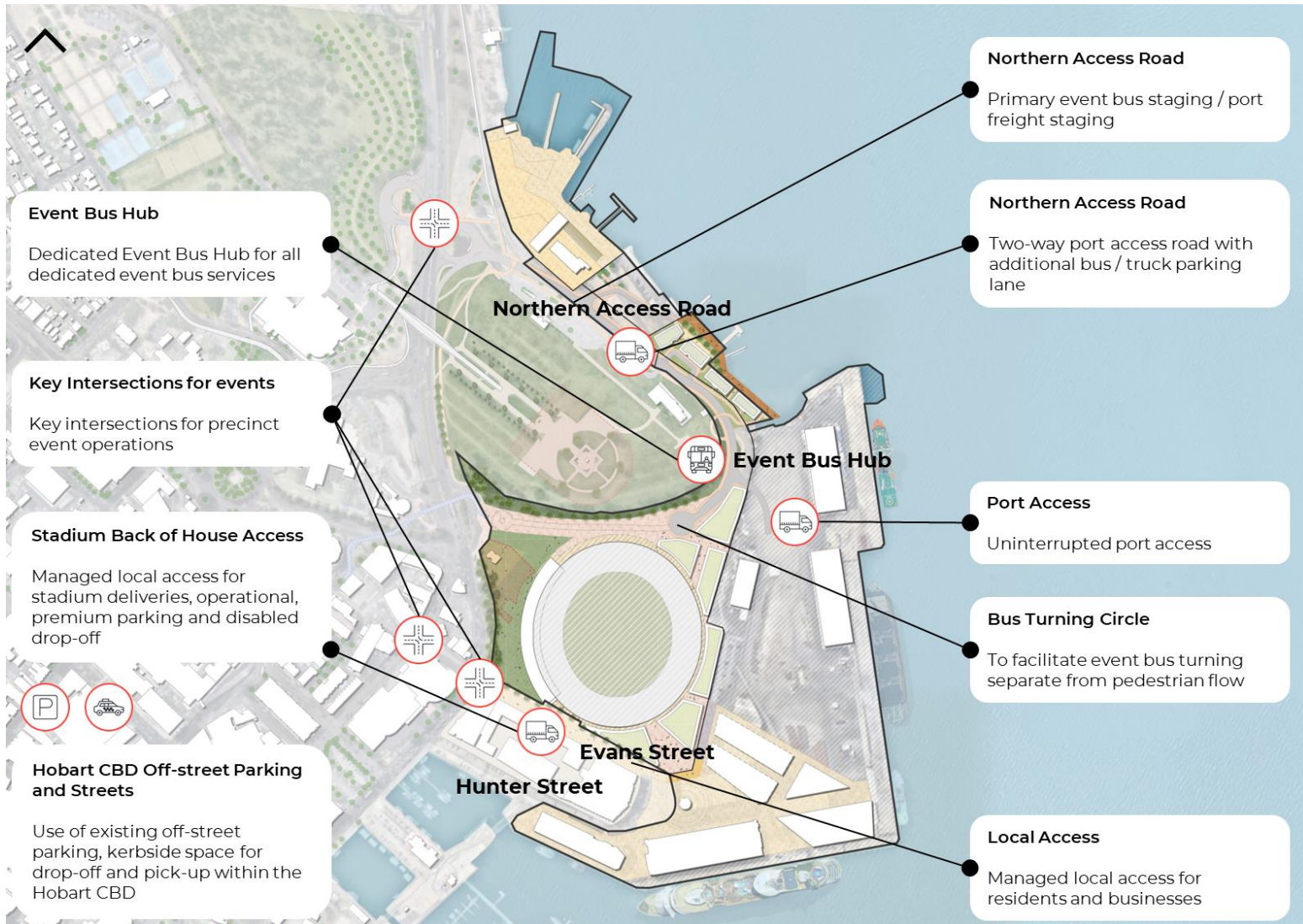


Figure 5.8 Spatial arrangement of car and truck related infrastructure within the precinct

#### 5.8.4 Spatial requirements

The following Car Parking, Drop-off / Pick-up spatial requirements are required in the immediate vicinity of the stadium site.

##### **Spatial requirements – Car Parking, Drop-off / Pick-up**

- Limited on-site car parking for corporate guests and operational vehicles.
- Suitable arrangements for delivery and servicing activities off Evans Street to the stadium back of house and precinct businesses
- Proposed Northern Access Road to provide continuous access to the port at all times
- Controlled local access to businesses and residents in Evans Street and Hunter Street during events
- Active traffic management of the Hobart CBD road network and approaches
- Rapid incident response teams on standby for traffic incidents during events
- A network of variable message signs to inform drivers of incidents and pre-event travel demand management messages
- Access for emergency vehicles at all times.



Photo 5.6 Waterfront parking controls on Hunter Street



# 6 Challenges and opportunities

The location of the Macquarie Point precinct on the northern edge of the Hobart CBD brings a number of challenges to staging events of up to 30,000 people as has been experienced during previous cultural festivals. The site also presents a number of opportunities for the provision of transport and the changing of travel behaviours as the city continues to grow and attract more domestic visitors. For the purposes of this study a zone of influence of approximately 1.5 kilometres has been considered as this represents the longest likely distance someone may walk to an event at the stadium as outlined in Figure 6.1.

Typically, event spectators have a lower propensity to walk long distances in car dominated cities. Both local and state governments also typically do not have the resources to manage event day parking enforcement beyond 1.5km. Best practice traffic management for event precincts aims to minimise the footprint of event road closures and disruption to local and broader transport networks.



Source: Google Maps (2023)

Figure 6.1 1.5km zone of influence of Macquarie Point precinct

## 6.1 Urban context

When considering challenges and opportunities for the Macquarie Point stadium, references to the urban context of the Hobart CBD and the future event transport operations have been considered to link the integration of land use and transport. The landmark Hobart Public Spaces Public Life study by world renowned Gehl Architects in 2010 still remains relevant to this day as it challenges the urban framework and captures the ideas of many subsequent studies and policies. Its key findings have been reviewed in their relevance to Macquarie Point and the stadium development. This can be found in Table 6.1.



Table 6.1 Hobart Public Spaces Public Life Study - Challenges and recommendations

	<b>Past challenges</b>	<b>Future recommendations</b>	<b>Relevance to Mac Point</b>
1	Car orientated city	A city that puts people first	A multi-modal event transport plan
2	Small, introverted city centre	Expanded people-orientated city	High capacity social infrastructure located on the edge of the city centre
3	Traffic barriers across the city	Strong links between the city and the harbour	Key locations to connect waterfront walking routes to CBD
4	A rather neglected harbour front	A people orientated waterfront	Catalytic development on the waterfront and activated walking corridors
5	Parking in all parts of the city	Parking on the edges of the city centre	No additional public parking and leveraging existing parking supply
6	Buses in all streets	A bigger role for public transport	Bus and Ferry services at the core of the event transport plan
7	Low bicycle priority	A bicycle friendly city	Safe and efficient access from citywide network on dedicated corridors supported by parking
8	A city with poor links surrounding nature	A city with strong links to surrounding nature	Integration with adjacent parklands and waterfront
9	A monofunctional city centre	A more multifunctional and diverse city centre	A new and regular activity generator in the CBD
10	A city with some education and students	A university city	Supporting adjacent education land uses
11	A mixed-welcome city	A great city for visitors	An integrated welcome gateway with the cruise terminal facility and public transport nodes
12	A city with scattered street trees	A green city centre	Landscaped corridors to support walking and cycling routes

Source: *Hobart Public spaces Public Life (Gehl Architects, 2010)*

## 6.2 Transport plan

Challenges and opportunities for transport modes that make up the Macquarie Point Stadium Transport Plan are outlined in Table 6.2.

Table 6.2 Challenges and opportunities for the Macquarie Point Stadium Transport Plan

Mode	Challenge	Opportunity
All modes	Established travel behaviour sees promotion of free parking and low take-up of public transport for events at Bellerive Oval and the Derwent Entertainment Centre	A catalyst for improved travel behaviour and build upon existing event bus services and ferry service promotion
All modes	Urban form – Access to the event precinct restricted by the Cenotaph cliff face to the north and the working harbour to the east	Create priority corridors for walking and cycling to the southeast, southwest and northeast
All modes	Importance of adjacent land uses (including working harbour) for economic development	The benefits from shared-use transport infrastructure and urban realm upgrades e.g. Port access road, coach parking and waterfront walking routes
All modes	Sensitivity of the Cenotaph	Improve physical engagement with the cenotaph through formalising walking and cycling connections to the Bridge of Remembrance and restricting vehicle access
All modes	Multiple levels of governance. Multiple agencies responsible for the different components of the transport plan	Clear scoping and consolidated funding to achieve common outcomes. Early and continual coordinated engagement between all levels of government and stakeholders
All modes	Stakeholders desire to “stick” their desired project to the stadium and precinct project adding cost but limited value	Not all transport 'problems' need to be solved within the confines of the Macquarie Point precinct boundary or through the stadium project. Clear scoping, funding and delivery scheduling could see initiatives delivered in advance of the stadium opening
Bus	Operational capacity and event experience of bus operators, drivers and fleets	Commencing a trial of increased services to events at Bellerive Oval, the Derwent Entertainment Centre and other notable events could commence the start of a buildup of industry capability applicable to events
Bus	Global bus driver shortages. Lack of rail to move large volumes of spectators on transit may hinder confidence of event bus users with cancelled services or low frequencies.	Global and national bus industry bodies need to develop common solutions to driver shortages in the 5-10 year horizon before the large scale deployment of automated vehicles
Bus, Ferry	Availability of ongoing funding required for event transport infrastructure and services	The uplift of 23-30,000 additional visitors per day to the city centre require ongoing recurrent operational funding. Coordinated and targeted funding for required event infrastructure and services can also maximise its use for business as usual operations.

<b>Mode</b>	<b>Challenge</b>	<b>Opportunity</b>
Bus, Ferry	A lack of infrastructure for one mode may push demand onto another mode and another responsible agency	Scenario planning for different travel behaviours and operational scenarios can alleviate the impact of shifts in demand. Staged implementation of the Rapid Bus and Ferry networks is an example of this.
Bus, Ferry, Walking, Cycling	Backlog of urban realm upgrades and transport infrastructure projects	The national status of the social infrastructure (stadium) raises the profile of the need for urban realm upgrades and transport related infrastructure to supports its regular safe and efficient operation.
Bus, Car, Shared	Resilience of transport network to disruptions	Mutual benefit of incident management, active road management and increased travel choices will help to lessen the impact of disruptions.
Bus, Car, Shared	Lack of alternative routes through the city centre	Clear and integrated network of corridors for modes through the CBD removing "single corridors of failure"
Bus, Car, Shared	Road network capacity adjacent to the stadium	Introduction of high quality event bus network can introduce people to benefits of transit
Ferry	Operational capacity and event experience of ferry operators, drivers and fleets	Better utilisation of assets e.g. vessels when not in peak use, taking cars off roads
Ferry, Walking, Cycling	Impacts of weather on event transport operations	Improved travel choices to reduce the impact of weather on transport operations
Walking, Cycling	Conflicts between high volumes of pedestrians and cyclists	Targeted road space reallocation to better balance movement and place
Walking, Cycling	Scale of road network infrastructure in terms of street widths and numbers of lanes	The extreme transport demands of a stadium challenges the thinking of people throughput per lane and the scale of road network infrastructure for private vehicles at other times

# 7 Transport mode shares

The development of transport mode shares is a key step towards the development of a transport management plan for any stadium. Mode shares help determine the likely demands and spatial requirements of each mode. They also provoke thought on the capacity and ability of existing fleets and established travel behaviours to meet the planning objectives and desired operational and sustainability outcomes for such a significant piece of social infrastructure as a stadium.

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## 7.1 Mode share planning considerations

The key consideration of developing transport mode shares for Macquarie Point stadium have included:

- Reference to other new and exemplar stadiums globally and throughout Australia
  - Reference to the local stadium context in the Hobart CBD and within Tasmania
  - Existing travel behaviours – experiences from other significant stadiums and arenas in Tasmania
  - Audience profile, which is likely to vary for events, especially special events
  - Temporal – the timing of the event be it time of day or day of week
  - Strategic planning mode share targets for business as usual transport planning in greater Hobart and Tasmania
  - Horizon years – the learned behaviour of regular event patrons and the staged introduction of new transport services.
- 

## 7.2 Stadium operating capacities

For the purpose of this study, three stadium event operating capacities have been developed to demonstrate the uplift in transport service and infrastructure provision required. The three categories include:

Use the following terminology to reflect the capacity:

- Regular event – 15,000 spectators
  - represents the likely average crowd for domestic teams (AFL, Cricket).
- Capacity event – 23,000 spectators
  - represents the proposed seated capacity of the stadium.
- Special event – 30,000 spectators
  - represents the likely maximum capacity for events which use the playing surface for seating e.g. concerts. As each artist has a unique audience profile and demographic, the terminology of special event better reflects the variability in associated transport needs and infrequent occurrence of such events.

The frequency of the occurrence of the three stadium operating capacities are subject to further detailed studies and will ultimately inform more detailed transport planning.

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## 7.3 Levels of service and infrastructure provision

When commencing the transport mode share planning process, it was agreed with various stakeholders that a range of transport mode share targets should be developed to inform the growth in sustainable transport use over time and acknowledge that there are finite funding and government resources that may not be available on day one of stadium opening.



The following permutations of the transport mode share planning have been developed:

- Highest level of transport mode share
  - Base Target non-car mode share
  - Stretch Target non-car mode share.
- Level of service and infrastructure provision
  - Non-car transport mode share Day 1 – Partial government transport network upgrades are in place
  - Non-car transport mode share Ultimate – Entire government transport network upgrades are in place.
- Do nothing transport mode share
  - While not an option for the stadium development the ‘do nothing’ scenario demonstrates that the existing transport network could “theoretically” accommodate a capacity crowd of 23,000, however, the non-car mode share would not be considered acceptable for a new stadium in a CBD location. Under this scenario, where only 1,950 people (8%) use public transport, there would likely be significant disruption to the local and broader road network and limited availability of parking in the Hobart CBD for other non-event users.
  - The operation of Hobart CBD road network and the availability of CBD car parking under the proposed mode share targets would need to be assessed as part of the future planning process in line with the Vision and Validate planning approach. The theoretical “Do Nothing” transport mode share for Macquarie Point Stadium can be seen in Table 7.1.

Table 7.1 Theoretical “Do Nothing” transport mode share for Macquarie Point Stadium

<b>Mode</b>	<b>Capacity</b>
Walking	5,100
Cycling	300
Local Bus	500
Ferry	700
Charter Coach	750
<b>Non-car mode share</b>	<b>7,350 (32%)</b>
Taxi/Rideshare Capacity	3,000
Drop-off / Pick-up	2,900
Parking Capacity (1.5 km, 3.1 passengers per vehicle)	9,750
<b>Car based mode share</b>	<b>15,650 (68%)</b>
<b>Total Current Capacity</b>	<b>23,000 (100%)</b>

## 7.4 Mode split estimates

Based upon the mode share planning process outlined above and presentations and discussions with key government stakeholders, it was agreed for the purposes of stadium planning to establish the following transport mode shares:

- 60% base target non-car transport mode share
- 70% stretch target non-car transport mode share.

Table 7.2 Macquarie Point Stadium - Preliminary summary mode share estimates by event size and mode share target

Event Size	Target	Public Transport		Non-Car		Car		Total	
		Patrons	% of Task	Patrons	% of Task	Patrons	% of Task	Patrons	% of Task
Regular 15K	60% Day 1	5,911	39%	8,928	60%	6,072	40%	15,000	100%
Regular 15K	70% Day 1	7,361	49%	10,459	70%	4,541	30%	15,000	100%
Regular 15K	60% Ultimate	5,924	39%	8,928	60%	6,072	40%	15,000	100%
Regular 15K	70% Ultimate	7,374	49%	10,459	70%	4,541	30%	15,000	100%
Capacity 23K	60% Day 1	8,711	38%	13,802	60%	9,198	40%	23,000	100%
Capacity 23K	70% Day 1	11,141	48%	16,160	70%	6,840	30%	23,000	100%
Capacity 23K	60% Ultimate	8,704	38%	13,802	60%	9,198	40%	23,000	100%
Capacity 23K	70% Ultimate	11,124	48%	16,160	70%	6,840	30%	23,000	100%
Special 30K	60% Day 1	12,011	40%	18,110	60%	11,890	40%	30,000	100%
Special 30K	70% Day 1	14,761	49%	20,862	70%	9,138	30%	30,000	100%
Special 30K	60% Ultimate	12,014	40%	18,110	60%	11,890	40%	30,000	100%
Special 30K	70% Ultimate	14,774	49%	20,862	70%	9,138	30%	30,000	100%

Notes

**Public Transport** – Event Bus, Rapid Bus, Local Bus, Ferry, Event Ferry, Coach

**Non-car mode share** - Event Bus, Rapid Bus, Local Bus, Ferry, Event Ferry, Coach Walking, Cycling

**Car mode share** – Parking, Park and Walk, Drop-off / Pick-Up, Ride Share, Taxi

**Day 1** – Opening event with minimal proposed transport network upgrades (Rapid Bus, Ferry, Cycling)

**Ultimate** - Event with all proposed transport network upgrades implemented (Rapid Bus, Ferry, Cycling)

Preliminary strategic estimates for planning and stakeholder discussion purposes only.

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## 7.5 Implementation staging scenarios

Various state and local government infrastructure and service projects are to be implemented alongside the development of Macquarie Point Stadium. These include but are not limited to:

- Rapid Bus network
- Ferry network expansion on the River Derwent
- Local bus network reviews
- Park and ride facilities
- Cycling infrastructure upgrades
- Walking routes and urban realm upgrades
- Road network upgrades.

Implementation staging scenarios for these transport infrastructure and service projects were analysed to evaluate how Hobart’s transport network could support the development and operation of the Macquarie Point Stadium into the future.

The highest capacity transit initiative that will serve as the backbone for travel to and from the Hobart CBD and the Macquarie Point Stadium is the Rapid Bus network.

Any demand that cannot be met by the above transport infrastructure and service projects will need to be served by an event bus network and ferry network to achieve the non-car transport mode shares identified.

### *Limitations*

The analysis performed in this section is derived from first principles and is based on a strategic theoretical understanding (limited operational details). The key assumption being that all vehicles and vessels can operate at or near capacity for the duration of event egress over a one hour period. To achieve this operational outcome, more detailed analysis will need to be performed to ensure that transit infrastructure and services are planned and operated appropriately.

### *7.5.1 Possible Infrastructure and service upgrade schedules*

Multiple upgrade schedules for the Rapid Bus and Ferry network expansion were analysed to evaluate the wider efficacy of supporting the operation of the Macquarie Point Stadium. Neither the Rapid Bus project or the Ferry Network expansion have committed funding and implementation timelines. These scenarios are designed to test a range of possible infrastructure and service upgrade timelines and are outlined in Table 7.3.



Photo 7.1 Bus travelling on Macquarie Street

Table 7.3 Transport infrastructure and service upgrade timeline scenario descriptions

Scenario	Description
Early Complete (best case)	All Infrastructure initiatives around ferry and rapid bus supporting the stadium are completed before the stadiums first event
Quick development	Upgrade transport infrastructure to support small to medium events as soon as possible. <ul style="list-style-type: none"> <li>— Rapid bus: option 3</li> <li>— Ferry development: Option 3</li> <li>— General Buses: Option 1</li> </ul>
Slow development	Develop infrastructure independently with excess event demands served by temporary buses. <ul style="list-style-type: none"> <li>— Rapid Bus: option 2</li> <li>— Ferry network development: option 2</li> <li>— Local Buses: option 1</li> </ul>
No development (worst case)	No development occurs (primarily for reference)

Rapid Bus development scenarios are shown in Table 7.4, Ferry scenarios are shown in Table 7.5 and local bus scenarios are shown in Table 7.6.

Table 7.4 - Rapid Bus development sub-option scenarios

Rapid Bus development option	Description
Option 1	No Development
Option 2	Slow development
Option 3	Fast early development
Option 4	Fast development



Table 7.5 Ferry network expansion development sub-option scenarios

Ferry network development option	Description
Option 1	No additional ferry network development beyond current
Option 2	Stage 1 of ferry expansion implemented at opening of Macquarie Point
Option 3	Rapid development of ferry infrastructure

Table 7.6 Local bus development sub-option scenarios

Local Bus development option	Description
Option 1	No additional capacity is added to the current local bus routes operating
Option 2	A small amount of capacity is added to the current local bus operations

### 7.5.2 Planning horizon years

Three planning horizon years were selected for assessing transport infrastructure and service implementation over the first six years of the stadium’s operation.

- 2029
- 2032
- 2035

These years have no reference or status to government planning and have been selected to demonstrate the impact they may have on the provision of transport for the stadium’s operation. This represents the ultimate network development and completion of all projects is in place by 2035.

## 7.6 Comparison of scenarios

Since a large challenge to event transport operations will be the procurement of event buses, the primary assessment by which the scenarios are compared are the likely number of event buses required to service the stadium. In Table 7.7, the grey rows indicate the preferred scenario of quickly developing the transport infrastructure and services to support regular events.

No specific development scenarios have been generated for walking and cycling as it has been assumed that all necessary infrastructure and upgrades would be complete by Day One of stadium opening. The analysis of the required pedestrian capacity and associated cycling network enhancements is outlined in Sections 5.2 and 5.3.

Table 7.7 Expected mode by mode passenger carrying capacity for Rapid Bus, Ferry network expansion and Local Bus under different implementation scenarios

Year	2029	2030	2031	2032	2033	2034	2035
Rapid Bus (option 1)	0	0	0	0	0	0	0
Rapid Bus (option 2)	0	240	480	480	720	720	960
Rapid Bus (option 3)	480	480	720	720	960	960	960
Rapid Bus (option 4)	720	720	960	960	960	960	960

Year	2029	2030	2031	2032	2033	2034	2035
Ferry (option 1)	594	594	594	594	594	594	594
Ferry (option 2)	594	594	1,022	1,022	1,022	1,664	1,664
Ferry (option 3)	1,022	1,022	1,022	1,664	1,664	1,664	1,664
Local Bus (option 1)	500	500	500	500	500	500	500
Local Bus (option 2)	550	550	600	650	700	700	700

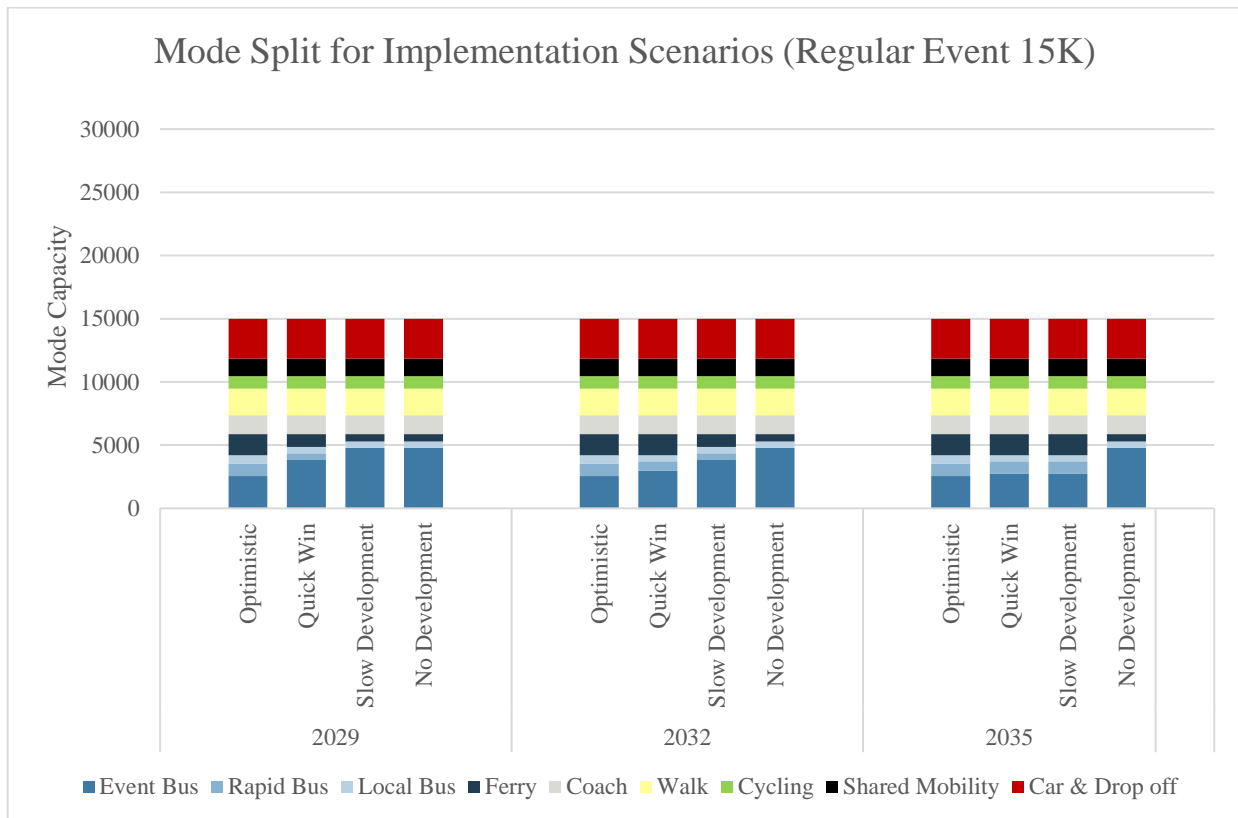


Figure 7.1 Mode split for implementation scenarios (Regular event 15K)

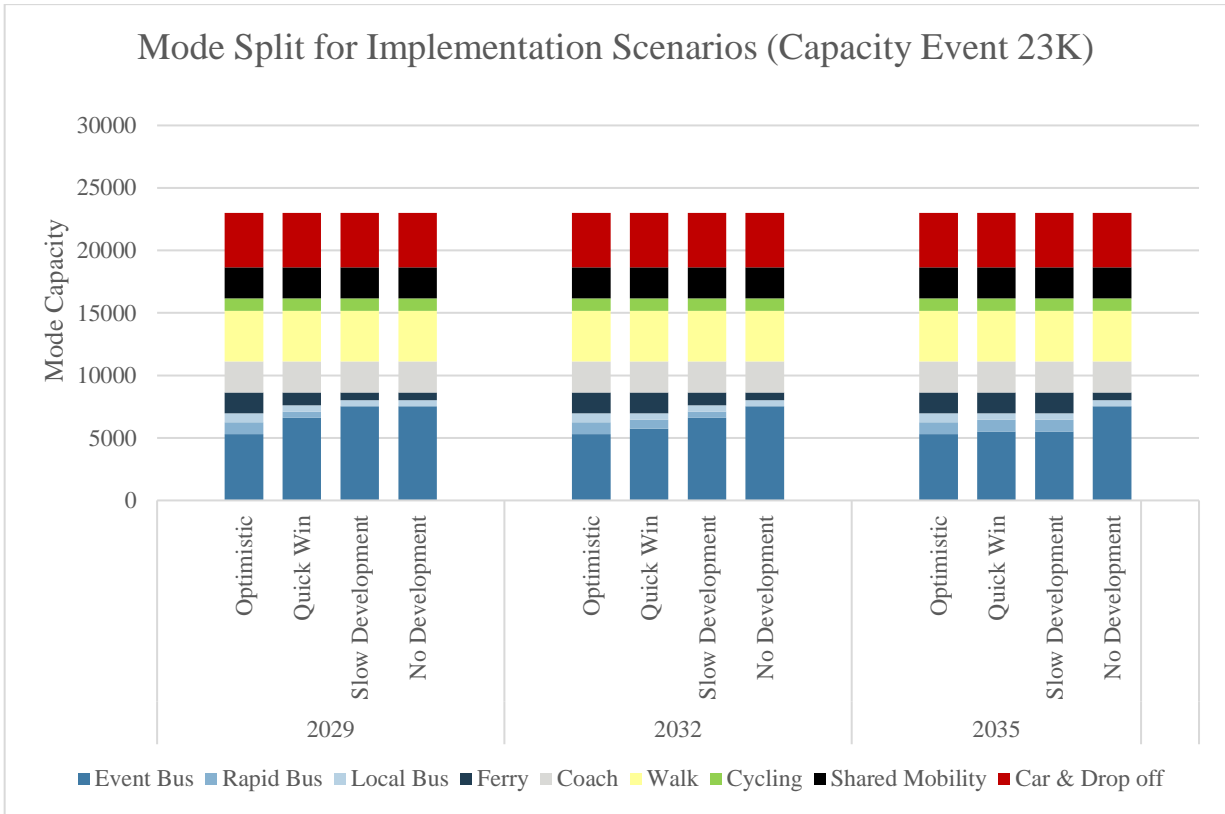


Figure 7.2 Mode split for implementation scenarios (Capacity event 23K)

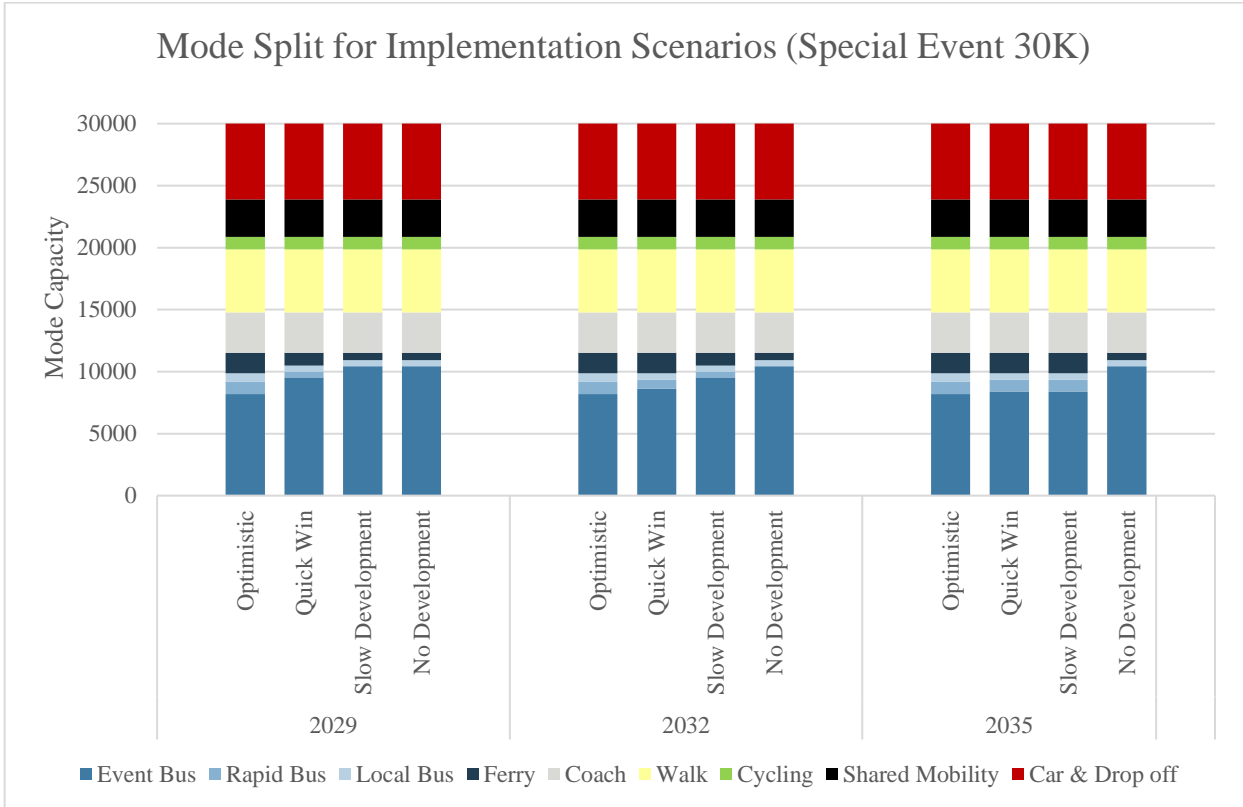


Figure 7.3 Mode split for implementation scenarios (Special event 30K)

Most of the infrastructure and service uplift advantages are found in regular events at 15,000 capacity where permanent transport infrastructure moves a bigger proportion of the crowd than when compared to a capacity and special events scenario.

Infrastructure and service development is comparatively effective for regular events, achieving a 40% reduction in the number of event buses required for a regular event compared with no development (20% reduction for the opening day of quick win scenario). For special events, due to the increased demand relying upon event buses, the reduction in event buses are only 20% (10% for quick win scenario opening day). This means that planned transport network developments will have a key role in providing event transport, reducing the extent to which special event buses need to be procured and operated - at the regular event level, this could reflect a 40% lower requirement for event buses to be provided.

### 7.6.1 Key insights

During the analysis of the various scenarios, some key insights into this study's final conclusions and recommendations are shown.

#### ***The service of small to medium events is most important, as stadiums typically operate at half to two thirds capacity***

Stadiums typically operate under capacity for most events. Observing two comparable stadiums of the most recent AFL expansion teams the Greater Western Sydney Giants (Sydney Showground) and the Gold Coast Suns (Heritage Bank Stadium), using publicly available data sourced from on austadiums.com indicate that most stadiums operate under 65% capacity for a typical event. Sydney Showground (GWS) operated at an average attendance of 10,461 (45%) for the 2023 BBL cricket and AFL season which is significantly less than its 23,500 capacity. It had a peak crowd of 20,864 (89%) for the local BBL cricket derby.

Likewise, the Heritage Bank Stadium (Suns) had an average attendance of 14 555 (65%), which is significantly less than the capacity of 22,500. It had a peak crowd of 22,483 (100%) for the AFL match against Collingwood.

It should be noted that these teams have been in the league for 11 years (GWS) and 12 years (Suns) respectively. The demand for a local AFL team is yet to be determined. Local support of the Tasmanian NBL team the Jack Jumpers which regularly reach capacity of their 4,300 seat arena is positive. The attendances at Bellerive Oval for Melbourne based AFL teams currently only average around 6,000 spectators (for North Melbourne).

Due to the attendance pattern of comparable stadiums, most of the benefits will be achieved supporting regular events of 15,000. Capacity and Special Events are comparatively rare, and the additional expense of event buses would be required less frequently.

#### ***Stage 1 and Stage 2 of the Rapid Bus initiative synergizes with the Expansion of the Ferry network.***

An important note of the potential infrastructure and service opportunities is their relative alignment in terms of distributing attendees from the stadium equitably across Greater Hobart. Since Stage 1 and 2 of the Rapid Bus initiative are focused on transport to/from the western side of the river and the Ferry expansion is focused on transport to/from the eastern side of the river. This allows for each transport initiative to independently service different areas around Greater Hobart, creating a broad integrated network from Macquarie Point stadium.



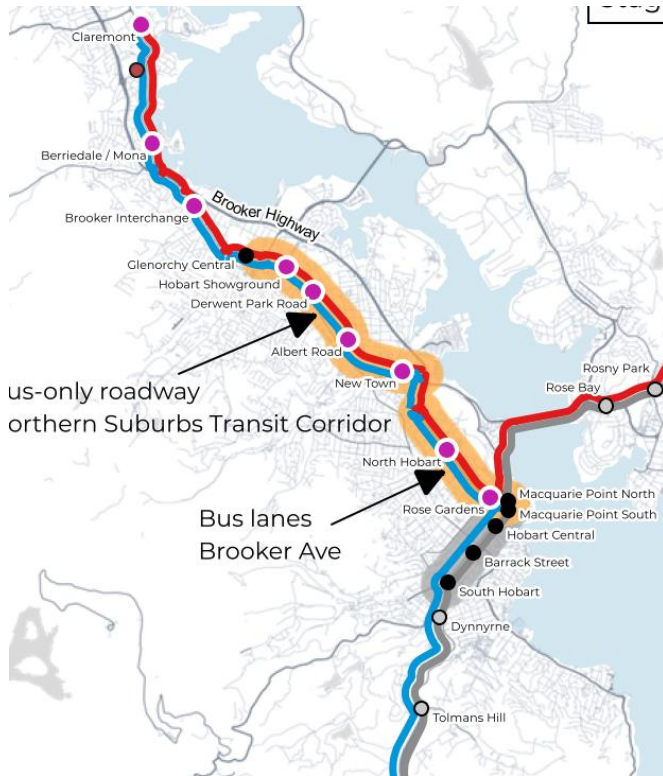


Figure 7.4 Stage 1 the ferry network to the eastern shore will complement proposed rapid bus services on the western side of the Derwent

### 7.6.2 Conclusions

Considering the synergy between Stage 1 of the Ferry Network Expansion, and Stage 1 and 2 of the Rapid Bus initiative, this study recommends focusing on these infrastructure and service initiatives for supporting the development of Macquarie Point stadium. If these initiatives are leveraged well, they may reduce the required event bus uplift for a Regular event by 20%. Further development of Stage 2 of Ferry and Stage 3 of Rapid Bus will continue to support the operations of the stadium reducing the requirement for event buses for a regular event by another 20%.

Table 7.8 Vehicle Requirements for Preferred Scenario

Year	2029	2030	2031	2032	2033	2034	2035
Rapid Bus Stage 1	4	4	4	4	4	4	4
Rapid Bus Stage 2	4	4	4	4	4	4	4
Rapid Bus Stage 3	0	0	4	4	4	4	4
Rapid Bus Stage 4	0	0	0	0	4	4	4
<b>Rapid Bus Total</b>	<b>8</b>	<b>8</b>	<b>12</b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>16</b>
Ferry Current Operations	1	1	1	1	1	1	1
Ferry network uplift	2	2	2	2	2	2	2
Ferry development 1	2	2	2	2	2	2	2
Ferry development 2	0	0	0	0	2	2	2
<b>Ferry Total Vessels</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>7</b>

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## 7.7 Overall transport concept

Considering the outcomes of the assessment of the implementation scenarios for the planned public transport upgrades, it is clear that there is merit in progressing with the development of the rapid bus network and ferry network expansion in the context of serving most of the regular stadium attendance levels of around 15,000 spectators.

The requirement for walking and cycling upgrades should also be considered by various levels of government in a similar way to prioritise upgrades as they are also likely to contribute positively not just to the Day 1 requirement of the stadium but also daily life in Greater Hobart.

These outcomes reinforce the operationally integrated and spatially distributed transport concept for the stadium which can be seen in Figure 7.5.



Figure 7.5 Integrated Transport concept for the Macquarie Point stadium

# 8 Forward transport program

## 8.1 Infrastructure opportunities

Through the planning and mode share analysis for this study, the list of key transport infrastructure requirements for the operation of event transport to the stadium have been captured in Table 8.1.

Further planning and design is required to determine the scope and prioritisation and this list represents the results of the preliminary investigations, scoping and planning.

Table 8.1 Key transport infrastructure requirements for the stadium precinct and Hobart CBD

Item	Location	Use / Benefit
Event bus hub	Northern access road to the north east of the stadium	Key public transport node for carrying large volumes of spectators
CBD bus priority lanes	Macquarie Street and Davey Street	To provide priority for rapid bus, local bus and event bus services over general traffic to access the stadium
Pedestrian upgrades	Davey Street, Evans Street, Hunter Street, Northern Access Road, broader Hobart CBD	To distribute large volumes of pedestrians safely and efficiently post-match to transport nodes and entertainment areas within the Hobart CBD without adversely impacting on key arterial roads
Pedestrian and cycle bridge to Collins Street	Across Tasman and Brooker Highways to the Collins Street corridor	Provide grade separated access to Rapid Bus stops and the active corridor to the Hobart CBD via Collins Street To divert cyclists away from the stadium precinct in times of high pedestrian flow.
Northern Access Road	Between the Tasman Highway and Evans Street to the east of the cenotaph into the port	Provide uninterrupted access to the Port during stadium events and provide access and bus staging for the event bus hub
Secondary Bus staging	Locations within the Domain, other suitable locations within 2km of the precinct	Investigation of suitable locations and quantities of bus staging curb space is required in the detailed stage of transport planning
Precinct car parking	As part of the precinct / stadium development. Access off new access road	To provide restricted parking for corporate guests, members and operational vehicles
Loading dock servicing	As part of the precinct / stadium development. Access off new access road.	To service the stadium and deliver team coaches, resupply and waste removal.



Item	Location	Use / Benefit
Rapid bus stops	Tasman and Brooker Highways near the Collins Street corridor	Key public transport nodes for carrying significant volumes of spectators
Regatta Point Ferry Wharf	Regatta Point	Key public transport node for carrying spectators. Provides a diversity of routes and relieves pressure on Brooke Street Wharf
Covered bicycle parking	As part of the precinct / stadium development.	To support workers and visitors to the stadium and precinct.
Uncovered bicycle parking	Northern stadium plaza at the base of the Cenotaph cliff. Temporary event bicycle parking can be bumped in as required	To support workers and visitors to the stadium and precinct.
Primary Coach Parking	Existing facility at the Cruise Terminal	To support visitors to the stadium and precinct.
Secondary Coach Parking (Temporary)	Within the precinct or immediately adjacent. Potentially on port lands if available subject to agreement.	To support visitors to the stadium and precinct particularly for capacity and special events.
Park and ride origins	Associated with event bus and rapid bus routes	To increase the attraction of public transport and intercept car-dependent spectators.

## 8.2 Indicative staged implementation of event transport infrastructure and services

Based upon the limited scope of this study, an assessment on the essential “must haves” on Day 1 of stadium operation in 2029 has been undertaken. Future stages of implementation have been bundled together for consideration by various levels of government to whether they be undertaken into the future or be brought forward for Day 1.

As demonstrated by the analysis in this initial study, there is demonstrated merit in bringing some aspects of the future infrastructure and service spending forward. If the decision is made not to bring items forward, there is an acknowledgement that there is likely to be ongoing recurrent operational costs of additional game day management for transport operations, lower patrons levels of service, delays in achieving net zero targets, disincentive for positive travel behaviour change and potential wider disruption to the Hobart CBD and Greater Hobart transport network depending on the take up of seats for events at the stadium.

The breakdown of the possible implementation sequence is outlined in Table 8.2.

Table 8.2 Possible Transport infrastructure implementation sequence

Mode	Day 1 Stadium Opening	Future Stages
Walking network	<ul style="list-style-type: none"> <li>— Priority walking corridor 1 – Stadium to Salamanca via Waterfront</li> <li>— Priority walking corridor 2 – Stadium to CBD via Collins Street</li> <li>— Northern city active transport bridge to access Rapid Bus and Collins Street corridor</li> <li>— Key to accessing CBD Hotels, night-time economy, parking, drop-off locations</li> <li>— Relocation of Davey Street cycleway</li> </ul>	<ul style="list-style-type: none"> <li>— Enhanced city centre streetscape upgrades</li> </ul>
Cycling network	<ul style="list-style-type: none"> <li>— Safe and separated cycle infrastructure to the stadium precinct (may require diversions on event days if permanent solutions not in place)</li> <li>— Northern city active transport bridge</li> <li>— Stadium precinct bicycle parking</li> <li>— Collins Street separated cycleway to replace Davey Street corridor</li> <li>— Stadium bicycle parking and promotion</li> <li>— Precinct access and waterfront routes</li> </ul>	
Bus network	<ul style="list-style-type: none"> <li>— Critical Bus Priority works identified through Rapid Bus</li> <li>— Event bus network and associated infrastructure – more fleet required until Rapid Bus is fully delivered</li> <li>— Local route timetable uplift</li> <li>— First route of Rapid Bus Network</li> </ul>	<ul style="list-style-type: none"> <li>— Staged implementation of all Rapid Bus routes</li> </ul>
Coaches	<ul style="list-style-type: none"> <li>— Cruise terminal coach parking</li> <li>— Secondary parking location</li> </ul>	
Ferry network	<ul style="list-style-type: none"> <li>— Local ferry route (Bellerive)</li> <li>— Event timetable uplift</li> <li>— Brooke Street Ferry service upgrades</li> </ul>	<ul style="list-style-type: none"> <li>— Staged implementation of various routes</li> <li>— Regatta Point Ferry Wharf location</li> </ul>
Road network	<ul style="list-style-type: none"> <li>— Stadium parking and Shared Mobility exclusion zone</li> <li>— Construction of northern access road and event bus node</li> <li>— Local road and property access operations</li> <li>— Incident management</li> <li>— Driver advisory Variable message signage</li> <li>— Port operations continuation plan</li> <li>— Cruise terminal operation overlap plan</li> </ul>	<ul style="list-style-type: none"> <li>— Situational awareness traffic monitoring</li> </ul>

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## 8.3 Next steps

This study represents an initial scoping and assessment of the transport requirements to operate a stadium within the Macquarie Point precinct in the Hobart CBD. This study has developed concepts and preliminary strategic demand estimates and indicative spatial requirements for planning and stakeholder discussion purposes only. Over the next few years a significant amount of transport planning and design will be required to realise the opportunity of a world class stadium in Hobart Tasmania.

Some of the future studies that are required include but are not limited to:

- Detailed stadium precinct planning
- Stadium design development
- Event bus network analysis incorporating bus stops and park and ride locations
- Ferry network uplift and wharf requirements
- Stadium precinct pedestrian analysis incorporating road closures and traffic signal timings
- Precinct related cycling infrastructure detailed scoping
- Road network management and ITS enhancements for event operations
- Port access and shared infrastructure coordination planning
- Ongoing stakeholder engagement and alignment of infrastructure implementation plans
- Wider area on-street parking management plan
- Event day operational transport management plans.



Photo 8.1 Sunset over the River Derwent