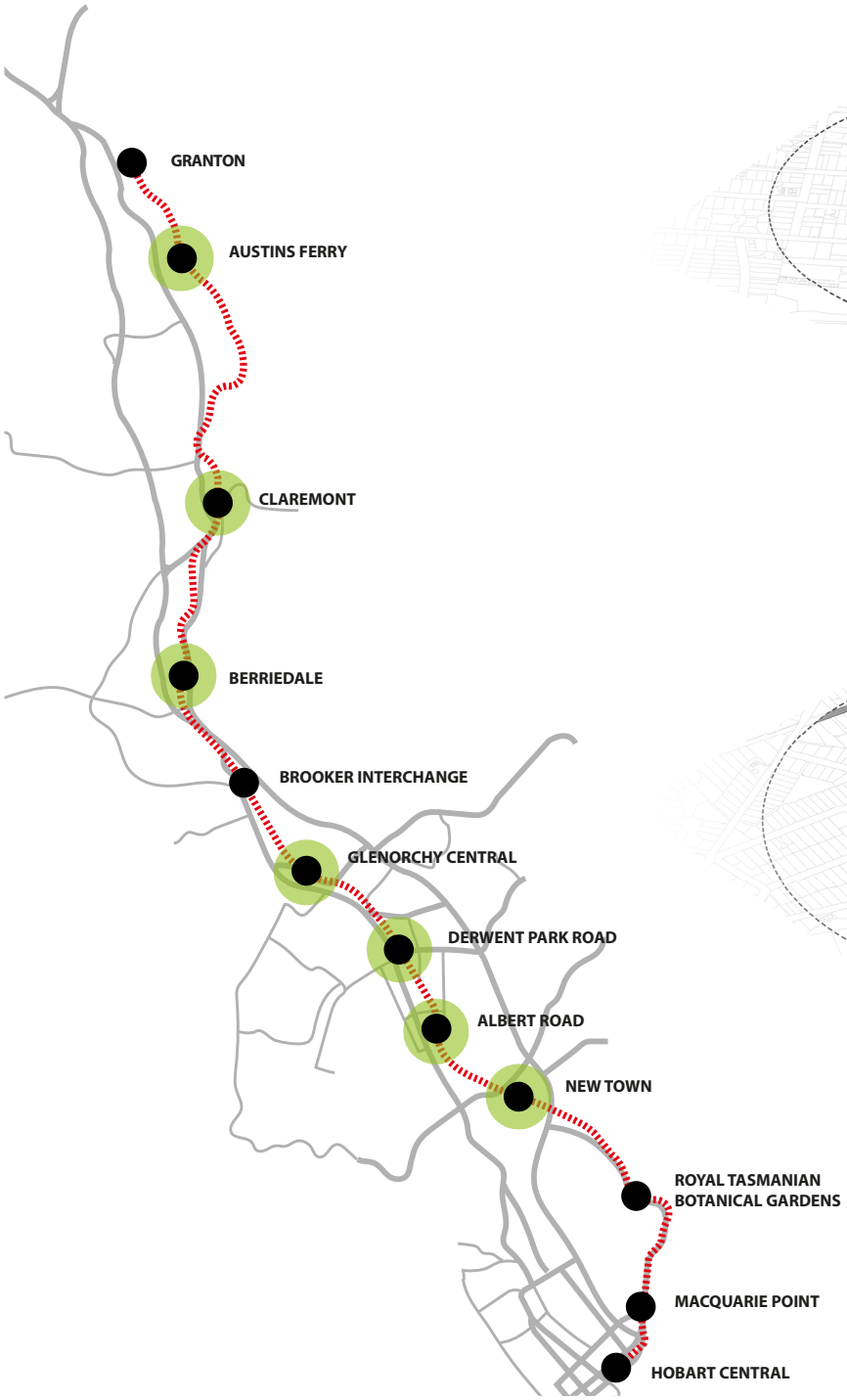

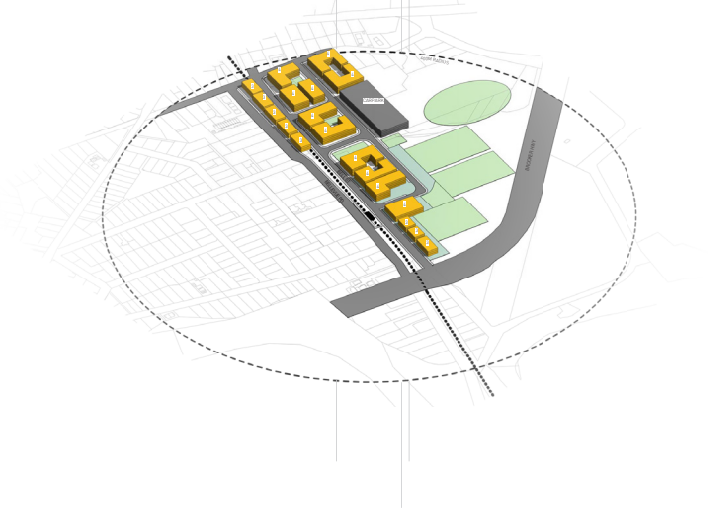

Glenorchy to Hobart Public Transport Corridor Study

Glenorchy City Council & Hobart City Council Joint Steering Committee

OCTOBER 2016

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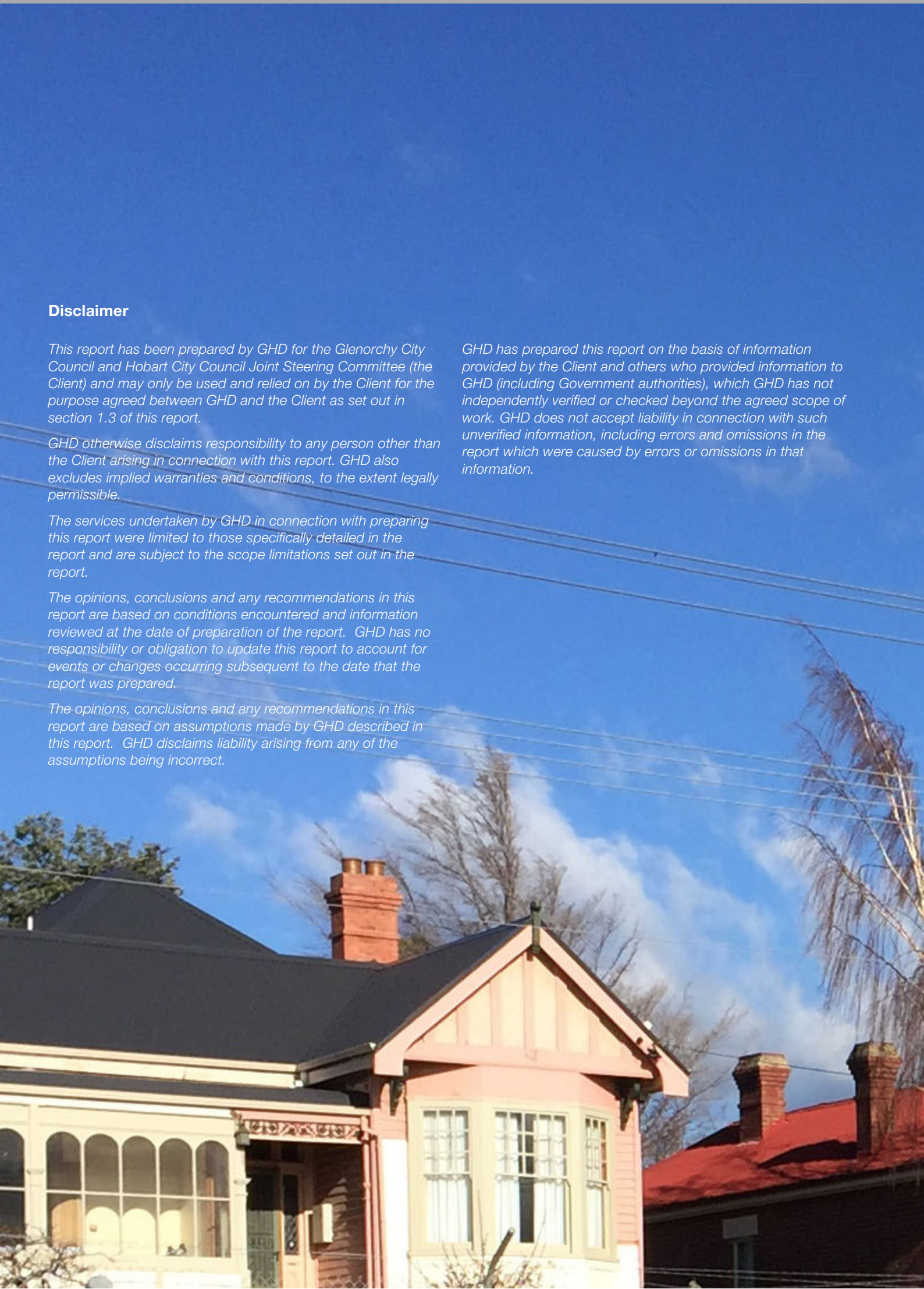

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Executive Summary

The role that the Glenorchy to Hobart Public Transport Corridor will play as a catalyst for urban renewal to the region should not be underestimated. The Corridor has some intrinsic advantages that will enhance the prospects of attracting higher density forms of development. By improving connectivity with the CBD, the transit way has the potential to also deliver significant economic benefits to the area as well as promoting urban renewal in the areas surrounding the stations. It will be a significant catalyst for the revitalisation of centres such as Albert Road, and Glenorchy Central. The improved connectivity that will be realised through the provision of new transport infrastructure provides the stimulus to strengthen the critical mass of commercial, retail and residential activity in each of the nodes, and facilitate the development of a series of transit precincts along the corridor. Previous studies produced by ACIL-Tasman, AECOM and PwC were found to have a narrow focus in examining the viability of the transport corridor and its potential patronage, however the region's currently small population and low density nature affords it endless opportunities for residential and economic growth.

The Glenorchy to Hobart Public Transport Corridor exists in public ownership and provides the opportunity for diversifying public transport modes, social equity improvements and increased resilience by reducing car dependency. The Corridor will reinforce Hobart as an active city, and residents will take full advantage of the Corridor and adjacent Cycleway in tandem. A transit way will play a significant role in the future land uses and transport outcomes by providing a dedicated transit route enabling congested sections of the road network to be bypassed. The vision for the Corridor has focused on seamlessly integrating a transit way into local communities to ensure that it will be an exceptionally useable facility, a welcome neighbour and that its stations will become natural hubs within their local communities.

Urban renewal along the Corridor will be dependent on the delivery of high quality transit, and facilities such as the stations or stops, but the success of these areas as places is founded on the positive perception of quality of life, walkability and pedestrian priority, connectively and wayfinding, the successful mixing of uses in higher density forms and high frequency transit. These elements are the building blocks of precinct placemaking and are usually found within a five to ten-minute walk of a transit stop. Successful transit oriented developments capitalise on the opportunities presented by each location and respond to the local context.

The Vision for the Corridor was produced to provide a planning framework to achieve the quality of the public realm and the standard of development needed to attract people to want to live in these precincts. Creating a strong sense of place, producing a human scale, and ensuring safety are all essential ingredients in the creation of attractive urban renewal communities.

Despite the region's currently small population and low density nature, the Corridor precincts have an established personality and feature predominant local characteristics influenced by urban landscapes and existing land uses. The Corridor features a number of activity centres with five distinctive community types – residential, urban, retail, cultural and sporting villages. These typologies invite similar future land uses and strengthens neighbourhood character, attracting more people to these precincts to work, live and play. These typologies feature a range of attractions and facilitate new forms of development and higher density along the corridor. Rezoning within these communities allows for a variety of unique residential offerings to take advantage of precinct characteristics - such as stunning views of Derwent River, access to vibrant laneways and restaurants, and proximity to parklands and wineries.

The up zoning of land uses and amendments to the planning scheme within the Corridor precincts has the potential to result in an up-lift of capital values in the immediate vicinity to reflect these higher and best uses, but this will only occur if there is sufficient confidence that the transit way will be delivered by the state and local government.

The Corridor will be a major transport infrastructure facility that will be used by the public on a daily basis. Getting the right look and feel for public transport is considered to be a critical part of not only encouraging people to support and use public transport, but also to live in close proximity to public transit.

The importance of good urban design comes to the fore when knitting public infrastructure into established urban environments such as the Glenorchy to Hobart Public Transport Corridor. The stops, their settings and the connections to them will all combine to create places that are appealing, comfortable, safe and easy to use. Not only will the transit way work at a functional level, but it will also be sensitive to the character of the areas it will serve, ensuring it will become an attractive piece of infrastructure that the community can identify with and be proud to use.

The local community has demonstrated that it is open minded and energetic, with The Museum of Old and New Art (MONA) being well received and embraced since its opening in 2011. Awareness of MONA has grown exponentially through associated events and festivals, putting Hobart – and Berriedale – on the map for tourism not just within Tasmania but all of Australia. Similar or inspired future developments will be a positive outcome of the Corridor's urban regeneration and local residents will support these legacies and associated growth.

1. Introduction

1.1 Preamble

Beginning in 2009, various ideas around developing public transit along the now unused public transport rail corridor between Hobart and Brighton have attracted significant interest. A number of independent consultancies have examined the economic viability of a rapid transit service, under a range of operational scenarios. These include preparation of two business cases by ACIL-Tasman (2011 and 2013), a peer review by AECOM (2012) and a project evaluation by Pricewaterhouse Coopers (PWC) (2014).

Infrastructure Tasmania undertook a review of the consultancy reports to date and in January 2016 provided recommendations including;

- Appropriate additional work be undertaken to improve understanding of how land use adjacent to the corridor can be shaped to support a public transit service, including the level and nature of interest from private sector investment in and around the areas.
- The existing rail corridor from Macquarie Point to Granton be retained, and that the use of this corridor for a rapid transit service, and other potential public or passenger transport uses over the long-term, be fully explored.
- The recommendations recognise that prior consultancy reports did not look at the potential for activation of the public transit corridor as a catalyst for urban regeneration; or engage with the private sector regarding investment interest; or look at implementation of planning and regulatory changes to support more complimentary land uses adjacent to the corridor.

It is these complimentary changes, and their impacts on the viability of utilising the Public Transit Corridor that forms the basis for the outcomes of this study.

1.2 Study Objectives

Glenorchy City Council and Hobart City Council have collaborated to investigate the potential activation of the Glenorchy to Hobart public transit corridor as a catalyst for broader city shaping and urban renewal activity. The outcome of this work is this Glenorchy to Hobart Transit Corridor Study, the objectives of which are to:

1. Examine the potential for urban regeneration in Hobart and Glenorchy capitalising on public transit corridor use;

2. Identify a Vision for urban regeneration in Hobart and Glenorchy arising from use of the public transit corridor, including visualisations to assist with communications;

3. Understand planning changes required to facilitate urban regeneration along the public transit corridor;

4. Focussed engagement to understand potential private sector investment interest along the public transit corridor;

5. Identify economic development opportunities arising from urban regeneration along the public transit corridor.

1.3 Purpose of this Report

GHD has been engaged to undertake the Transit Corridor Study, including Structure Plans for each key station precinct and its surrounds, to guide potential urban renewal within the Public Transit Corridor. This includes analysis of suitable future growth scenarios for each precinct, including a high level assessment of the economic feasibility of the opportunities identified.

The aim of this study is to identify future visions for precincts surrounding key public transit corridor station precincts and establish frameworks for managing future land use change and ultimately inform future planning controls, infrastructure requirements, and investment strategies to fund this project.

"Efficient, reliable and well-planned transportation systems are fundamental to a community's economic prosperity and quality of life."

1.4 Report Structure

This report provides a summary of the land use and strategic context for the Transit Corridor, the report methodology, an outline of the developed Structure Plans for each key precinct station and projected growth for residential and employment. It is structured in 8 sections, as follows:

- **Section 1: Introduction**

  Section 1 presents the project rationale and objectives; report purpose and methodology.

- **Section 2: Background**

  Section 2 summarises the key relevant findings from previous Corridor Studies between 2009 and present and the land use planning context along with a brief synopsis of Transit Corridor's historical timeline.

- **Section 3: Site Context**

  Section 3 Identifies the study area location, demographic characteristics including housing growth forecasts to 2036 taking into account scenarios for regional population growth distribution inclusive of potential induced effects of a public transit system along the corridor, and preliminary local market analysis.

- **Section 4: Transit Corridor Infrastructure Analysis**

  Section 4 provides a constraints and opportunities analysis for urban regeneration in terms of transport and movement, utilities and infrastructure and identifies the infrastructure required to support projected growth. This includes comments on the potential synergies between the rail corridor and main road.

- **Section 5: Vision**

  Section 5 identifies a Vision for urban regeneration arising from use of the public transit corridor, and the unique attributes of each key precinct station. The places created along the corridor will allow a range of experiences, conditioned by a focus on origin and destination (and a combination of both in the major activity centres) and a mix of activities including residential, commercial, retail and leisure.

- **Section 6: Precinct -Land Use and Urban Design Plan**

  Section 6 provides for a high level structure plan for the public transit corridor which is designed to identify key precincts for urban infill development; identifies the existing characteristics, opportunities and constraints for each of these precincts; and provides visualisations of what the corridor might look like if developed.

- **Section 7: Economic Findings**

  Section 7 will provide a preliminary assessment of how Local Government and the State Government might capture some of the value increases (via land and property based taxes) to contribute to the financing of a public transit project including identification of the capacity for land value uplift and opportunities that may lead to uplift.

- **Section 8: Market Demand Assessment**

  Section 8 outlines Knight Frank's market demand knowledge and private investor feedback on the identified urban renewal opportunities along the transit corridor for residential, commercial and mixed use development as well as specific comments on key precincts and sites.

- **Section 9: Implementation Plan**

  Section 9 considers the planning policy and statutory changes that may be required to facilitate urban regeneration along the public transit corridor such as approvals processes, governance (i.e. land development authority) and market interventions.

1.5 Process

For this project, GHD adopted an iterative approach, whereby the investigation outcomes were discussed and tested with the Steering Committee before proceeding to the next task. The key hold points being:

- Opportunities and constraints analysis including the shortlisting of key precincts for urban renewal.
- Visualisation workshop in which the character statements and vision for each key station was established and from which the massing models and visualisations were developed.
- Economic analysis workshop in which GHD and KPMG identified the preliminary costings, assumptions, and recommendations from which the key recommendations and implementation plan was established.
- Private investor workshop in which the vision for each of the key precincts was tested in the market through one on one discussions by Knight Frank and existing developers within the area.

A summary of the methodology followed to inform this study is illustrated in Figure 1.

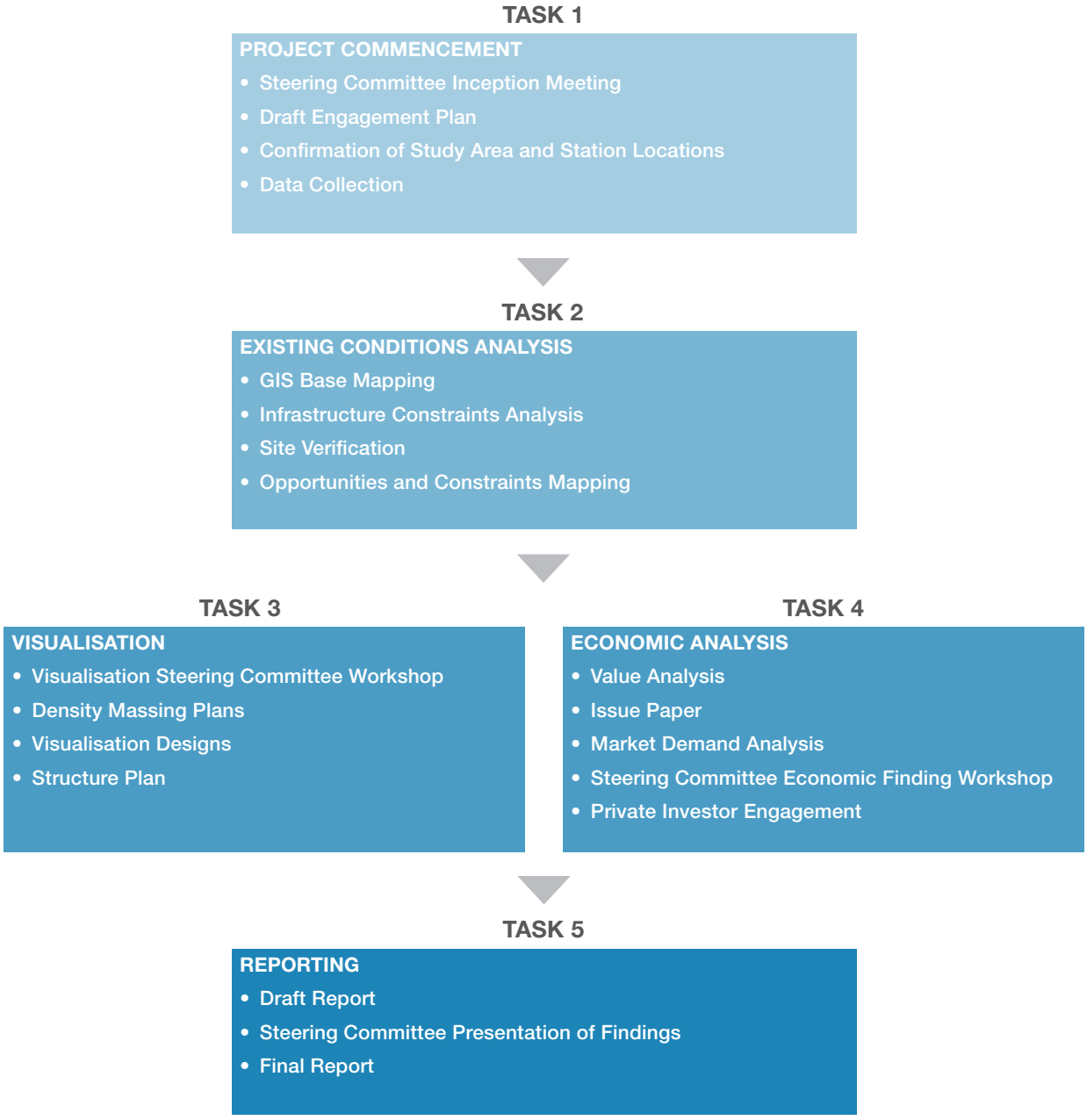


Figure 1-1: Project Methodology

2. Background

2.1 Previous Transport Corridor Studies

A number of previous reports have been undertaken examining a proposed light rail transport project within the corridor from Hobart's CBD to the northern suburbs. The Department of State Growth final advisory report *Review of a proposed light rail system in Hobart January 2016* noted that these consultancies had a narrow focus examining the viability of a specific transport mode, including an assessment of potential patronage, operating models and project costs and benefits as components of a wider economic evaluation of operational viability.

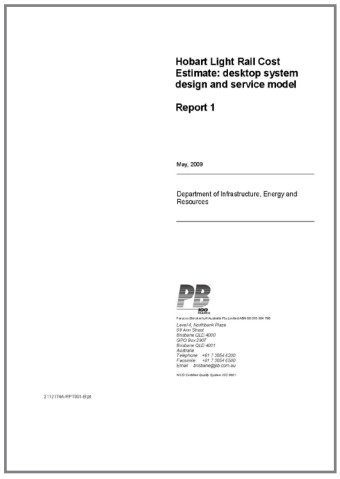
A key recommendation from this review was that a wider perspective was required to ensure the corridor was seen in the context of the supportive land use and development that would be required to ensure the attractiveness and viability of a future light rail mode of public transport. The review also recognised that a potential city shaping project based around a transit corridor, and where modest growth rates are being experienced across a widely dispersed urban area, would require collaboration between local and state governments to ensure a supportive legislative and planning framework.

The previous consultant studies have included the documents outlined below.

2.1.1 Sustainable Transport Strategy 2009-2014

The Strategy plans for a more compact metropolitan area, reduced car dependency and smaller environmental footprint, and a more equitable and cheaper transport system for Hobart's residents and visitors. Specifically, it commits to continuing dialogue with Glenorchy City Council, State and Commonwealth Governments and other stakeholders in exploring further the opportunities inherent in a North-South dedicated public transport corridor supporting Transit Oriented Development (TOD). Council also committed to reviewing its Draft Planning Scheme to determine how it can support strategically placed TOD's.

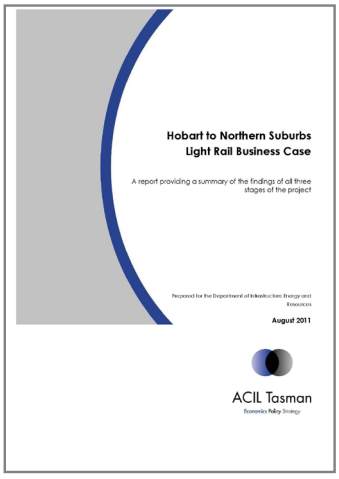
This commitment is provided in the context of seeking to provide a high quality sustainable transport infrastructure, one that provides improved access to a greater proportion of the community, and quality urban facilities for walking, cycling and public transport usage.



2009

Parsons Brinckerhoff

Hobart Light Rail Cost Estimate: Desktop system design and model

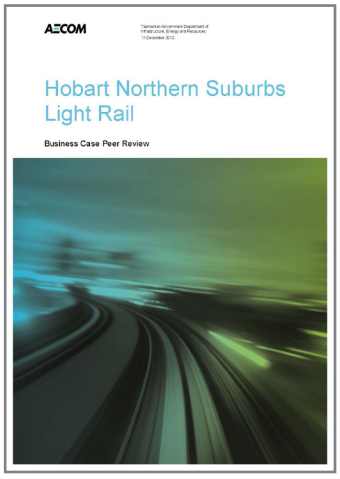


2011

ACIL Tasman

Hobart to Northern Suburbs Light Rail Business Case. A report providing a summary of the findings of all three stages of the project (August).

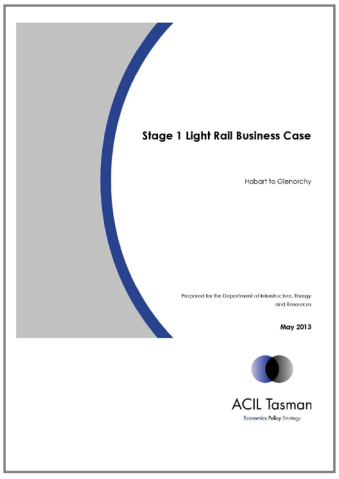
Hobart to Northern Suburbs Light Rail Business Case. A report detailing the findings of the third stage of the project (July).



2012

AECOM

Hobart northern suburbs light rail. Business case peer review (December).

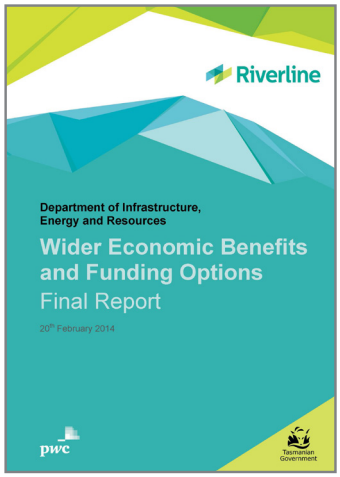


2013

ACIL Tasman

Stage 1 Light rail business case - Hobart to Glenorchy (May).

Development Sites Analysis - Main Road



2014

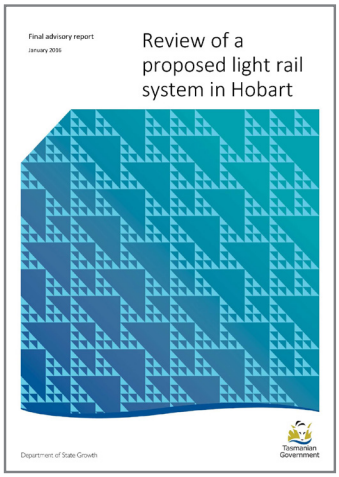
Pricewaterhouse Coopers

Wider economic benefits and funding options - final report (February).

Riverline - Hobart light rail preliminary plan (March).

Riverline - Hobart light rail strategic assessment (March).

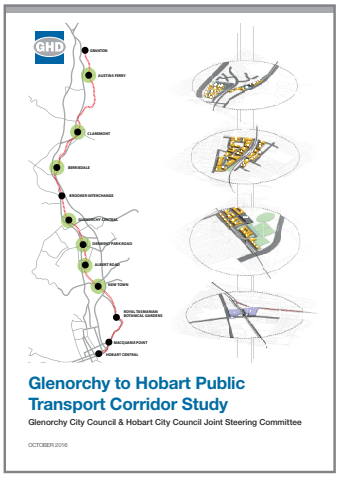
Infill Development within Greater Hobart.



2016

Infrastructure Tasmania

Review of a proposed light rail system in Hobart (January).



2016

GHD (Current Study)

Glenorchy to Hobart Transport Corridor Study - Glenorchy City Council and Hobart City Council Joint Steering Committee.

2.2 Land Use Strategic Context

2.2.1 Regional

Southern Regional Land Use Strategy

The Southern Tasmania Regional Land Use Strategy 2010-2035 (Amended 1 October 2013) recognised that an improved integration of transport and land use planning is both a major challenge and a critical factor in the development of efficient and liveable urban areas. In a region that has a highly dispersed settlement pattern, and low population, the achievement of an integrated transport network and sustainable communities is frustrated by:

- the high construction and maintenance cost in providing road infrastructure;
- increasingly complicated travel patterns;
- increased environmental footprint;
- reduced choice and accessibility to public transport;

In response a number of key focus areas for the Strategy are identified, including:

- *Recognising and protecting major infrastructure corridors and assets through planning schemes including retaining and protecting the rail corridor to preserve potential for the future development of mass transit options; and*
- *Increasing residential densities and mixed use around designated integrated transit corridors where appropriate.*

(Ref: P.52 Overview)

The associated settlement and residential development recognises that the location, form, type and density of residential development is a significant land use planning challenge.

More specifically managing the growth within Greater Hobart is identified as requiring a more nuanced approach because of the size and extent of growth pressures and the influence that metropolitan growth has on the economic, social and environmental health of the whole region.

Demand of 26,500 dwellings has been forecast, although the Strategy argues that continued urban expansion on the fringes of Greater Hobart is not sustainable. Currently 85% of new dwellings occur through greenfield development and at relatively low densities of between 7 to 10 dwellings per hectare (net density).

In the interests of encouraging greater efficiency in the use of land for residential development, a policy of balancing greenfield development with infill development is adopted.

Although recognising that there are sufficient infill opportunities to accommodate the forecast demand of 26,500 new dwellings, the Strategy proceeds on the basis of a 50/50 ratio of greenfield to infill scenario, with a minimum net residential density of 15 dwellings per hectare. Pursuing a 100% infill policy would likely result in a decrease in housing affordability in the short to medium term.

To achieve the desired outcomes, the Strategy outlines other elements that need to be considered:

- *More efficient use of physical and transport infrastructure;*
- *Reduced vulnerability to increases in petrol cost and peak oil;*
- *Reduced ecological footprint of urban development and reduction in loss of biodiversity;*
- *Increased opportunities for social interaction and reduction in social segregation;*
- *A greater proportion of the population living in proximity to services and employment opportunities;*
- *Increased economic viability of public transport, and subsequent extension thereof;*
- *Better utilisation and revitalisation of other public infrastructure, including parks and open spaces;*
- *Provision of a greater range of housing options to suit the decreasing size of households and ageing population;*
- *Promotion of health and wellbeing by eliminating distance as a barrier to walking and cycling as preferred modes of transport; and*
- *Maximising aggregation potential of inner cities through intensification of land use.*

(Ref: P.91 Greater Hobart Residential Strategy)

To ensure an orderly release of land within the designated Urban Growth Boundary a land release program recommended.

The Regional Policies also include:

SRD 2.6

Increase densities to an average of at least 25 dwellings per hectare (net density), within a distance of 400 to 800 metres of Integrated transit corridors and Principal and Primary Activity Centres, subject to heritage constraints.

SRD 2.7

Distribute residential growth across the existing urban areas for the 25 year planning period as follows:

Glenorchy LGA 40% (5300 dwellings)

Hobart LGA 25% (3312 dwellings),

Clarence LGA 15% (1987 dwellings)

Brighton LGA 15% (1987 dwellings)

Kingborough LGA 5% (662 dwellings)

2.2.2 Inner City

Infill Development Pilot Project

The Department of State Growth together with Glenorchy and Hobart City Councils undertook to complete a strategic planning project to assist in facilitating increased infill residential development along the Glenorchy to Hobart Main Road Transit Corridor. Prepared by Emma Riley & Associates together with Knight Frank, the intent of the study was to identify any planning scheme amendments that would be required to allow infill developments to proceed, and secondly to encourage land owners to consider redevelopment of their land for infill residential purposes.

Several of the sites investigated fall within the catchment of the Transit Corridor Study, and the findings provide a useful input to the type of development and market influences that may shape future densification around identified transit stations.

Hobart 2010 Public Spaces and Public life - A city with people in mind (Ghel Architects)

With an intent to create a city centre with a 21st century traffic system, the Gehl report calls for a rethink and simplification of public transport, including the possibility of a transit link from the City to the northern suburbs.

Inner City Action Plan

The Inner City Action Plan (ICAP) is the first stage response by Hobart City Council to implement the Ghel Report, and forms the basis for future planning and development for the inner city. ICAP identifies a number of projects that seek to make the city a more vibrant and liveable place. In support of the specific project identified, further consultation with stakeholders and the community is recommended in relation to investigating improved public transport, including opportunities to introduce a light rail system.

Capital City Strategic Plan 2015 - 2025

The development of sustainable transport initiatives and future proofing or resilience building are key themes underpinning the plan. A number of the strategies identified, including the development and implementation of a transport strategy, enhancing transport connections within Hobart, and identifying and implementing measures to support use of public transport, support and reinforce the opportunity inherent in activating the Transit Corridor and related densification around its stations.

2.2.3 Glenorchy

CBD Strategic Framework 2014

The City of Glenorchy has been at the forefront of the movement to build more liveable cities and the initiative in preparing the CBD Strategic Framework was recognition that with planning for a concentration of activity within a well-designed public realm, and ensuring environmental and economic sustainability are to the forefront of decision making, Glenorchy is positioned to be the 'modern and dynamic' city it seeks to be.
(Ref: P4 CBD Strategic Framework)

The growth projections suggest infill housing targets will be influenced by supply (a lack of suitable sites, remediation or demolition costs or speculative land banking, land costs and/or planning controls) and demand (population or economic growth, demographic change including decreasing household size and/or affordability). Despite these factors it has been observed that there is increasing acceptance of higher density dwelling forms in the City, and is driven particularly by meeting the requirements of an ageing population and/or for single person/single parent households who wish to remain in their community and be close to services and transport such as found in the Glenorchy CBD.
(Ref: P30 CBD Strategic Framework)

In response the framework identifies a need to identify appropriate sites for infill development in and around the CBD and ensuring planning and development controls support higher density development. In addition, mixed use development is to be encouraged, which combined with higher density housing with commercial and retail space will add potential new employment opportunities and interest for a growing population in the city. A more active city is good for business, and Council is identified as having a significant role to play, as a major landowner, in leveraging private investment in higher density, mixed-use development in support of the strategic directions for the CBD outlined in the Strategic Framework.

In this context opportunities around the Transit Corridor in vicinity of the Glenorchy CBD support the Strategic Framework and the underlying intent to drive a reshaping of the CBD as a vibrant place, and focus for the daily lives of residents living in its proximity.

Interim Land Use Planning Strategy (Glenorchy City Council 2010)

The land use strategy identifies a number of key planning strategies including:

1. Adopting planning provisions to encourage more compact development;
2. Promote public transport use by allowing increased density of residential development within walking distance of the high frequency transport corridor along main road;
3. Developing planning provisions which support alternative transport choice, including walking, cycling and public transport;
4. Protect the main line railway corridor as an important transport and infrastructure link; and
5. Actively monitor the progress of the proposal for light rail along the existing railway corridor and adjust the planning strategy, if necessary, to accommodate the additional transit corridor and associated transit oriented development.

These strategic directions are clearly supportive of densification along its transit corridors represented by Main Road and disused rail line, and resulted in significant zoning changes with introduction of the Glenorchy Interim Planning Scheme 2015 by the inclusion of an Inner Residential Zone around key activity centres and along transit corridors. This zoning allows for higher density development to occur, and introduction of a wider range of uses to support increased population in these locations.

2.2.4 Other Government Policies

Macquarie Point Master Plan

The principles underlying preparation of the Master Plan require that any development concepts for Macquarie Point:

- Involve a mix of uses;
- Are people focused;
- Promote inner city living;
- Are well connected to the broader Hobart environment;
- Respect the site's history;
- Incorporate principles of sustainability;
- Do not prejudice port activities;
- Complements, and do not compete with, activity in the Central Business District and greater areas of Hobart; and
- Leverage local competitive advantage to thereby deliver major socio-economic benefits to Hobart and Tasmania.

The mobility elements of the plan envisage a long-term vision for a possible future light rail passenger service, and a corridor has been reserved through the site from the headland, sweeping around the Round House building to join the Tasman Highway where it enters Davey Street.

Affordable Housing Strategy

The ten-year strategy (2015-2025) seeks to identify key directions for reform, identifies problems, provides solutions and seeks to prioritise actions. A number of the propose actions arising from implementing the AHS potentially provides infill development opportunities within the transit corridor.

2.2.5 Federal Initiatives

On 29 April 2016, the Australian Government launched its Smart Cities Plan. The Smart Cities Plan will position our cities to succeed in the 21st Century economy. It is a plan for supporting productive, accessible, liveable cities that attract talent, encourage innovation and create jobs and growth.

The Smart Cities Plan represents a new framework for cities policy at the federal level - and it is a framework that will guide action across various portfolios, to deliver better outcomes for our cities, the people who live in them and all Australians. It sets out the Australian Government's vision for our cities, and our plan for maximising their potential. It includes three pillars: Smart Investment, Smart Policy and Smart Technology.

To deliver the Smart Cities Plan, the Australian Government will invite state and territory governments to partner on City Deals. City Deals will provide common objectives across levels of government, support for key industry and employment centres, infrastructure investment linked to broader reform and changes to planning and governance arrangements to deliver enduring benefits.

While the Hobart to Glenorchy Public Transport Corridor could be a key anchor project within a City Deal, the approach is better suited for a wider spectrum of policy initiatives – including both infrastructure and non-infrastructure interventions. Key to this is the understanding of a holistic program-based approach to economic development where the whole impact of the program on the economy of the Greater Hobart is larger than the sum of the impact of the individual projects.

See Appendix B of the value Capture funding analysis (GHD, 2016) for more details in relation to the City deals process and how to implement it within the context of the transit corridor redevelopment."

2.3 Historical Development along Corridor

The Tasmanian Main Line Railway Co. (TMLR) commenced the Hobart suburban passenger service in 1875. The TMLR built Hobart station terminus on the northern edge of the inner city beside the Queen's Domain. The suburban services were developed over the next 45 years with numerous stations opened as illustrated in Table 1-1 and Figure 2-1.

The line followed the western shore of the Derwent northwards beside the Domain. This gave Hobart one of the most attractive rail approaches in Australia, but it kept the line away from the densely populated inner northern suburbs. This combined with the relative remoteness of Hobart station from the city centre have been identified as an ongoing problem for suburban train operations.

The Second World War and post war period brought an increase in suburban passengers peaking at 2.5 million passengers in mid 1950s (Table 2-2). Jim Stokes identified in his article for Australian Rail History journal key influences for the increase as fuel restrictions for car travel, productivity of factories such as the Zinc Works and Cadbury's, new engineering and munitions factories establishing in the Derwent Park area, and the Australian Newsprint Mills factory at Boyer.

From the 1950s onwards rail traffic substantially reduced falling to 514,018 annual passengers in the mid 1970s (Table 2-2) predominately due to the rise in car ownership and competition with bus transport. The introduction of television in 1960 also impacted on evening and weekend patronage with these services virtually ceased by 1962. Another problem identified is the separate operation of bus services by Metropolitan Transport Trust from 1955, reducing the coordination provided between the modes of transport.

Table 2-1 Hobart Suburban Stations - Timeline 1875 to 1920s

1875	Glenorchy (previously O'Brien's Bridge)
1877	Moonah (previously New Town & then South Glenorchy)
1878	Austins Ferry
1879	Berriedale Road
1883	Botanical Gardens (previously Royal Society's Gardens)
1885	Elwick Railway Company built a branch from Elwick jct to Elwick Racecourse
1887	New Town (previously named Risdon Road)
1890	Claremont
1891	Rosetta
1893	Cornelian Bay
1896	Derwent Park
1905	Elwick Junction
1909	Montrose
1913	Royal Agricultural Society moves to eastern side of Elwick branch
1917	Chigwell
1920s	Lutana Cadbury Branch

Table 2-2 Hobart Suburban Train Passenger Numbers per year

Date	Passengers
1891	151,827
1915-1916	692,092
1945-1946	Almost 2 million
1953-1954	2.5 million
1961-1962	Under 1.6 million
1966-1967	Below one million
1973-1974	514,018

The decline was also experienced in other modes of transport with trams ceasing in 1960 followed by the trans-Derwent ferries in 1963 and trolley buses in 1968. The train services were scheduled to cease in 1974 but were continued until 1978 following the partial demolition of the Tasman Bridge with the hope was that eastern shore residents would drive to Brighton and take the train into Hobart. In addition, services continued for the Royal Hobart Show.

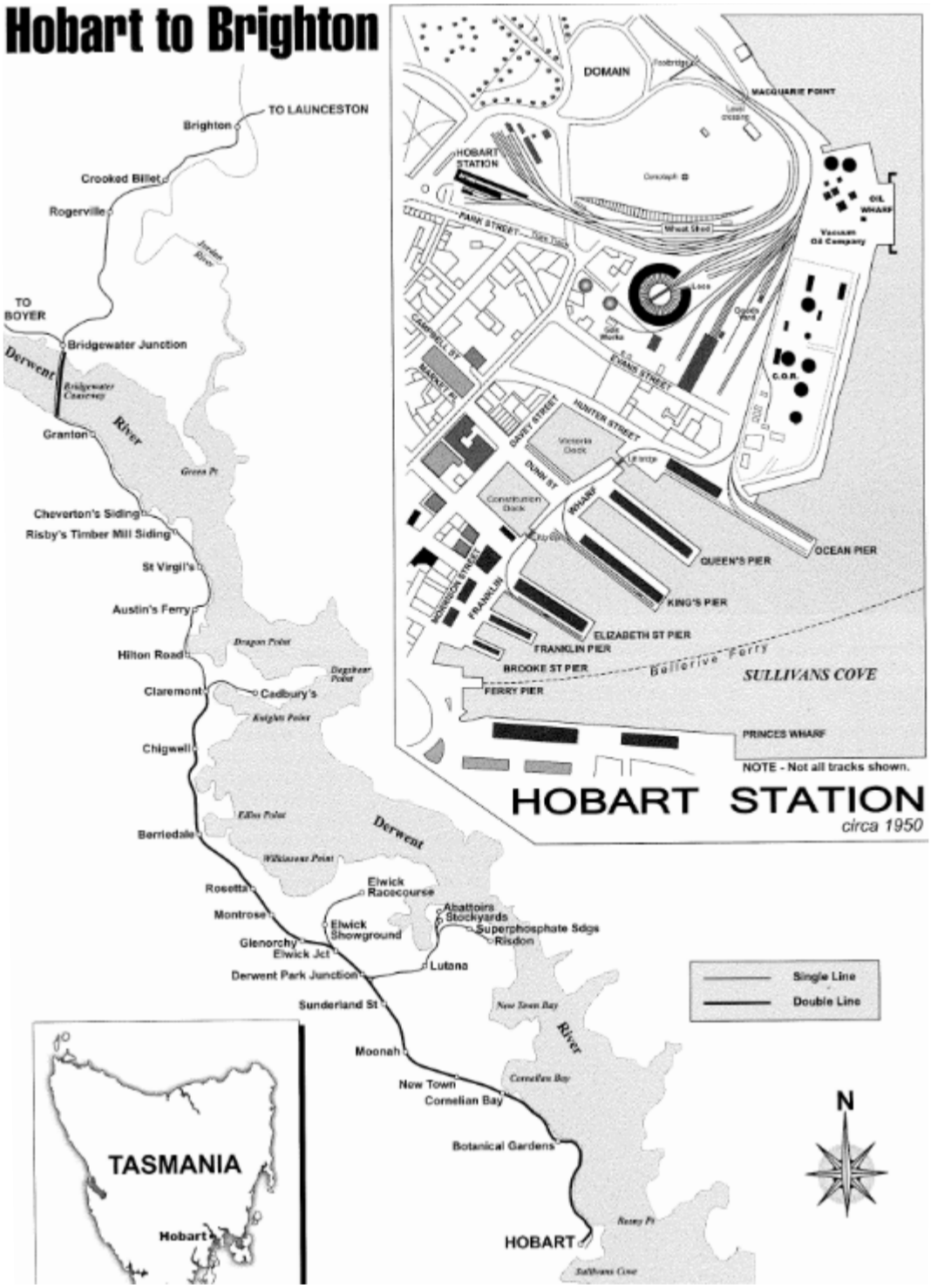


Figure 2-1: Hobart to Brighton Suburban Passenger Train Line
Source: Australian Rail History, 2005 Volume 56 No 808 The Hobart Suburban Passenger Service 1875-1975

3. Site Context

3.1 Study Area

The extent of the study area is within the 400m 'walkable catchment' of the public transit corridor (the previous rail corridor) between Austins Ferry and Macquarie Point and includes potential public transport interchanges in the Hobart central business area.

Within the study area key historical station locations (Austins Ferry, Claremont, Berriedale, Glenorchy, Derwent Park Road, Albert Road, New Town, RTBG, Macquarie Point and Hobart Central), in addition to new sites for potential urban renewal (Brooker Interchange), were identified as illustrated in Figure 3-1.

Following Steering Committee consultation and further analysis these sites were further refined (i.e. did not include Hobart Central, Macquarie Point, RTBG, Brooker Connector, and Austins Ferry) for the infrastructure analysis (Section 4). These were then further refined in terms of the primary urban renewal sites of New Town, Albert Road, Derwent Park, Glenorchy Central and Berridale (Section 5) for which massing models and visualisations were undertaken.

Figure 3-1: Study Area

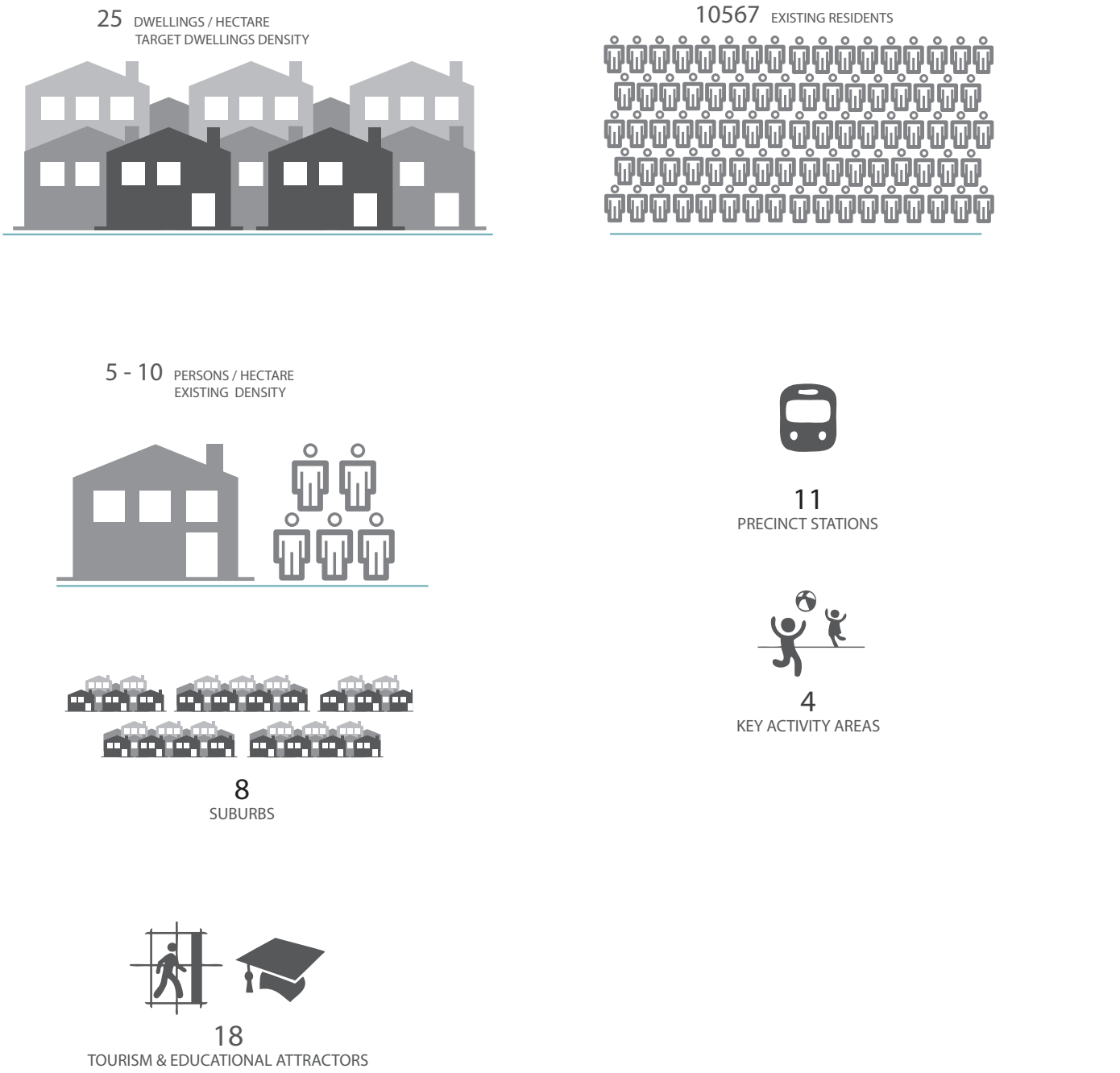


Figure 3-2: Snapshot of Study Characteristics

3.2 Demographics

Demographer Lisa Denny undertook a projections and analysis of regional population growth for Glenorchy in Tasmania the findings of which are presented in Appendix A. This report was based on ABS regional population data including the 2011 Census and Tasmanian Treasury LGA population projections.

The report provides for an overview of the Glenorchy area population and projected population to 2036, household characteristics, workforce characteristics, travel to work methods and educational participation and comparison with the Greater Hobart region data with a view to informing potential urban renewal opportunities along the transit corridor. The Glenorchy municipality is the focus of the demographic analysis as a majority of the existing residential area of the transit corridor is located within the Glenorchy municipality (with exception of New Town).

The key finding are summarised as follows:

- Greater Hobart has a small, low density population with a high car dependency.
- Glenorchy is projected to experience an ageing demographic, trending at or below the Treasury Low Series population growth projections in contrast to the strong actual growth currently evidenced in outer suburbs located in Clarence and Kingborough.
- The majority of households are single person households (40.4%) followed by two person households (29.9%).
- The median age of Glenorchy residents was 39.1 years with 18.7 per cent of the population aged between 0 and 14, 64 per cent aged between 15 and 64 and 17.4 per cent aged over 65 years.

The Tasmanian Treasury projections do not taken into consideration any impacts on the population from policies such as the Southern Regional Land Use Strategy, which sets a greater Hobart residential growth strategy and density targets including higher densities along transit corridors of 25+ dwellings per hectare and provision of residential accommodation within activity centres (above ground floor level).

It is therefore difficult to make inferences about medium term population growth at the Glenorchy municipal level. Such policies, if successful, may impact on the expected population should for instance densification occur within the CBD and along the transit corridor.

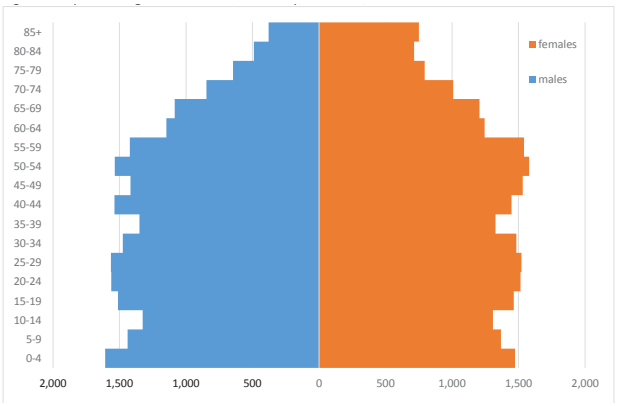


Figure 3-3 Population Age Sex Structure, Glenorchy 2014

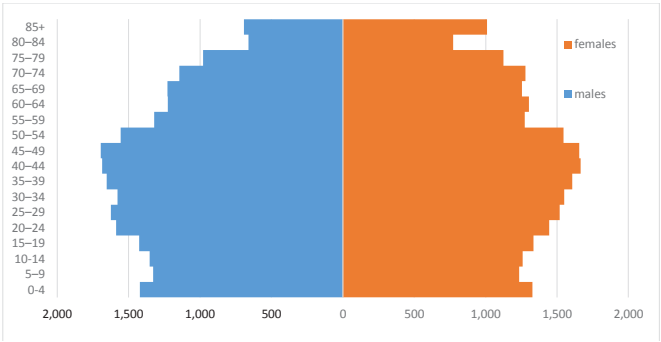


Figure 3-4 Population Age Sex Structure, Glenorchy 2036

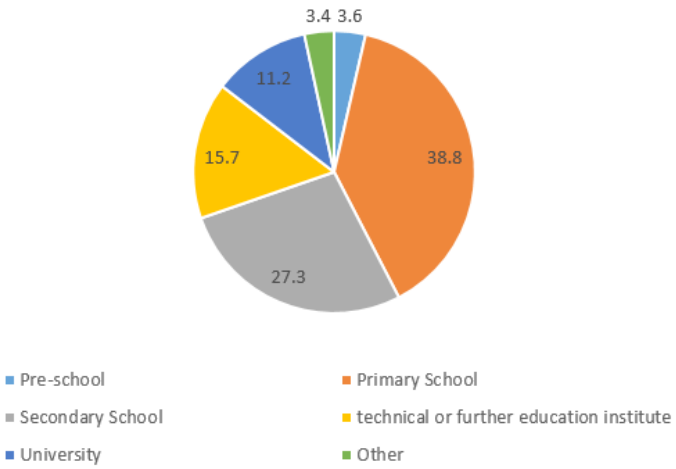


Figure 3-5 Educational Institute Attendance, 2011

3.3 Market Appraisal

Knight Frank undertook a preliminary analysis of land supply and demand in relation to the transit corridor. The results of which are detailed in terms of land supply and demand and by key urban renewal sites in Section 8 of this Report.

In summary the key finding is that new housing should be in conformity with the current urban landscape to gain market acceptance, with the following exceptions and area specific commentary as follows:

- New Town and south to CBD where inner city living to 4 levels can be considered;
- Moonah area can justify a premium to average unit price, and provided good design terraces, villas and medium density to 3rd level may achieve market acceptability;
- Large sites need to be master planned, and staged release;
- Further north along the corridor more conventional units and houses up to two levels acceptable;
- Waterfront properties at Berriedale, Claremont, and Austins Ferry can achieve higher prices, however, over densification will not be acceptable in the market place; and
- Style, type of housing and proximity to the corridor will be equally impotant functions.
- The development of the transit corridor would accelerate the current and expected future success of the real estate market between Hobart CBD through the inner northern suburbs to Moonah.

View of MONA from the River Derwent
(Photographer: Leigh Carmichael)

3.4 Stakeholder Consultation

Knight Frank and GHD undertook targeted engagement with the investment industry to explore development opportunities associated with the transit corridor. The stakeholder consultation consisted of one on one discussions with key developers with existing experience within the Tasmanian market of mixed use, higher density housing and activity centre development. The discussion focussed on identified opportunities for urban renewal at the identified sites of New Town, Albert Road, Derwent Park, Glenorchy Central and Berridale.

The Steering Committee also sought further input from interstate and international investors. Knight Frank however identified no such investors that have either participated in or are considering participating in the local market particularly for significant (i.e. 4 or more unit or lot) residential developments. Although there are a number of such investors within the CBD at present these are either tourism (visitor accommodation) or retail and the style of development are major projects at a scale well beyond any current identified development potential on the transit corridor which is of a smaller scale than these developers are interested in.

Given Knight Frank's feedback the consultation was therefore focussed on local developers, which are the dominant investor in the current market. Key potential investors were approached as well as representatives from the University of Tasmania, in the context of their expansion plans into the city, and the Department of Health and Human Service in relation to synergies with the Tasmanian Affordable Housing Strategy . The nature of questions asked (with the benefit of a few of the plans for discussion purposes) included:

- Would a transit corridor be a catalyst for development interest?
- What would be your expected development approach? Mix of development?
- Questions around number of units, amount of land needed, mix of development (eg residential/retail) were discussed but not elaborated on due to the preliminary nature of the exercise

From these discussions, all stakeholders expressed interest from Hobart through to Moonah station. The investors doubted the extent of the development in Moonah as proposed by the massing diagrams but certainly saw the merit in the concept to a certain extent.

It is acknowledged that the current discussion with these parties was broad and did not go into significant detail. This is because of the current stage of the project is at a conceptual level only and the preferred funding mechanism is not yet known.

Given the conceptual nature of the project at this stage, stakeholder feedback and Knight Frank's experience, we would recommend that the focus for the next phase of the project should be placed on addressing practicalities such as the potential for adhesion of properties currently in separate ownership so a reasonable scale of development can be achieved and addressing relocation where sites are encumbered by existing businesses. This is currently restricted to the HCC land at New Town, with the remainder of sites predominately in multiple titles and ownership. Developers struggle to realise potential if the fundamentals cannot be addressed.

Further the engagement will be compromised without a discussion about the greater detail of timeframes and access to public funding. Interested parties have stated they wish to be part of ongoing discussions when these major factors are likely. The next step in terms of investor engagement will therefore be to create greater connection between concept and developer realisation.

Another disruptor is the impact on investor interest if significant players such as UTAS expressed an interest or intent to locate at one of the transit urban renewal sites (but still contingent on the line being activated). If this would occur, there would likely be much stronger private investment interest in co-locating or taking advantage of the drawing power of a UTAS facility. Another potential impacting factor is if Government was seen to be moving in and aggregating land and offering to the market 'developable parcels'.

4. Transit Corridor Analysis

4.1 Overview

An analysis of the existing corridor was undertaken by key precincts to examine the potential opportunities and constraints for urban regeneration in Hobart and Glenorchy including infrastructure and transport planning assessment. This section identifies the existing characteristics, opportunities and constraints for the six identified precincts.

Development within the Transit Corridor will require upgrades of existing, or provision of new, infrastructure depending on existing capacities, densities proposed, and likely impacts on existing users both locally and in the wider area. The following assessment of existing land use characteristics, constraints and opportunities, and key infrastructure assets has been undertaken for a number of the key stations identified for potential activation. This includes the critical mobility or access links between these stations and its surrounding catchment.

Also critical for all stations is consideration of potential site contamination where industrial land is to be converted for residential use. The risk assessment processes being incorporated into planning instruments requires that the most conservative of assumptions be met to protect for future residential usage. While industrial land or buildings can be developed with minimal effort where contamination risk is shown to be minimal, other sites can contain pockets of contamination that requires significant effort to remediate. This is particularly the case where asbestos in soils is determined to be a constraint to residential development that requires significant effort to remediate. While change from industrial usage represents a desirable development outcome, it comes with potential cost, time and compliance with regulation risks

The methodology for identification of each of the key precincts is detailed in Section 5.

4.2 Key Precincts

4.2.1 New Town

Locational Characteristics

The original station is now occupied by a plant nursery necessitating identification of an alternative location in Bell Street. A station here is close to Cornelian Bay foreshore, playground and café/restaurant, Rugby Park, Stainforth Court public housing, which are all within of in close proximity to the 400m walkable catchment. The adjacent Tasmanian Hockey Centre and nearby sporting fields are also accessible from the station. Kmart, while outside the walkable catchment, is easily accessed from this station. The typology of this station could be described as having a residential and recreational focus.

Constraints

Heritage properties and heritage character housing may limit densification efforts, with no obvious vacant or underutilised site that could be redeveloped for significantly higher density housing within the existing built up area.

Opportunities

The key opportunities are seen as the stations proximity to a range of community and recreation facilities, Kmart, adjacent to a suburb with some densification opportunities. The primary attraction of this location are the extensive car parking areas and playing fields adjacent to Bell Street that could be potentially better utilised for development, while still maintaining functionality as providing car parking for the adjacent Hockey Centre.

Figure 4-1: New Town Pedestrian Analysis Map

4.2.2 Albert Road

Locational Characteristics

Moonah in proximity to Albert Road is an area rapidly gentrifying. In proximity to a wide range of retail, commercial, industrial and community uses and amenities, the area is becoming increasingly attractive for young families and migrants. The location of the original station is clearly evident, with parking in the adjacent Station Street being utilised in support of local businesses and those cycling the InterCity Bicycle trail. A 400m walkable catchment incorporates a number of community facilities including New Town High School, Benjafield Park, Moonah Sports Centre, Hopkins Street Medical Centre, Moonah Arts Centre, to name a few.

The station is also within walkable distance of Main Road and its shops, cafes, hotels, community facilities and other attractions. The walkable catchment also encompasses a number of houses, which under their current Inner Residential zoning can be further developed. The typology of this station could be described as having a mixed use in transition character.

Constraints

Much of the area is zoned either Commercial or Light Industrial, with a pattern of development characterised by small titles which will make aggregation of development sites a challenge.

Opportunities

The transit corridor widens at this point sufficient to accommodate a double track rail line, of sufficient width to enable passing manoeuvres. Potential exists to use underutilised industrial land/buildings for new uses e.g. St Albies restaurant, or potential higher density residential development. There are a number of 'industrial or commercial' buildings located in the Inner Residential zone to the east of the transit corridor which could be redeveloped.

4.2.3 Derwent Park Road

Locational Characteristics

Derwent Park Ave is a key commercial and industrial area characterised by large and small box retail outlets, car yards, warehousing, trade suppliers, and other commercial and light industrial uses. Expansive areas used for display of product or customer car parking is a particular characteristic of the area. Within walking distance of Metro's major Springfield Ave Bus Depot and hub for suburban public bus routes, and adjacent to Main Road, Greater Hobart's busiest public transport route, makes this station particularly attractive from an accessibility view point. On the fringe of the Derwent Park industrial complex and related employment opportunities, the typology of this station could be described as commercial/industrial.

Constraints

Almost all of the area is zoned Commercial, Light Industrial or General Industrial. The majority of buildings in this commercial and industrial area appear to be occupied and well maintained, unlike other older commercial/industrial areas where derelict or rundown properties are more numerous. Redevelopment opportunities are therefore not immediately evident based on need to upgrade buildings, and given the predominately commercial and industrial nature of the areas surrounding the station, introduction of new residential use and development is not considered an appropriate outcome. A significant change in the strategic intent and zoning of land would be required to achieve a shift of this nature.

Opportunities

Proximity to the Main Road commercial strip and linkages with Metro services is an obvious strength of this location.Road a site of approximately 8,800m2 and occupied by underutilised industrial buildings. Both owners have expressed interest in investigating the potential for redeveloping the sites for residential purposes. In addition to the properties identified above, areas to the west of the shopping centre have been zoned Inner Residential which allows higher density residential development to occur.

4.2.4 Glenorchy Central

Locational Characteristics

Located adjacent to the Northgate Shopping Centre and the wide range of support retail, commercial, business and community services that helps identify this precinct as one of the key Regional Activity Centres in the Greater Hobart hierarchy. It sits adjacent to the KGV Oval and newly redeveloped facilities, the YMCA, Glenorchy Aquatic Centre, in proximity to schools, and a range of other community facilities. The typology of this station could be described as a retail, business, community and employment hub.

Constraints

Intersection treatment with Elwick Road will be a key issue to be addressed given the road's key role in the hierarchy and high daily car movements. Interface with other land uses such as the KGV Oval complex will also need to be considered. Rezoning of land will be necessary, and relocation of existing successfully operating industrial uses.

Opportunities

Several sites identified in the Infill Development Pilot Project Stage One Report (Dec 2015, Emma Riley & Associates) are located either within, or close proximity to the walkable

catchment. These include 22 Wrights Ave (McKays Timber Mill) a 7.9ha site that is significantly underutilised, and 97A Grove Road a site of approximately 8,800m2 and occupied by underutilised industrial buildings. Both owners have expressed interest in investigating the potential for redeveloping the sites for residential purposes. In addition to the properties identified above, areas to the west of the shopping centre have been zoned Inner Residential which allows higher density residential development to occur.

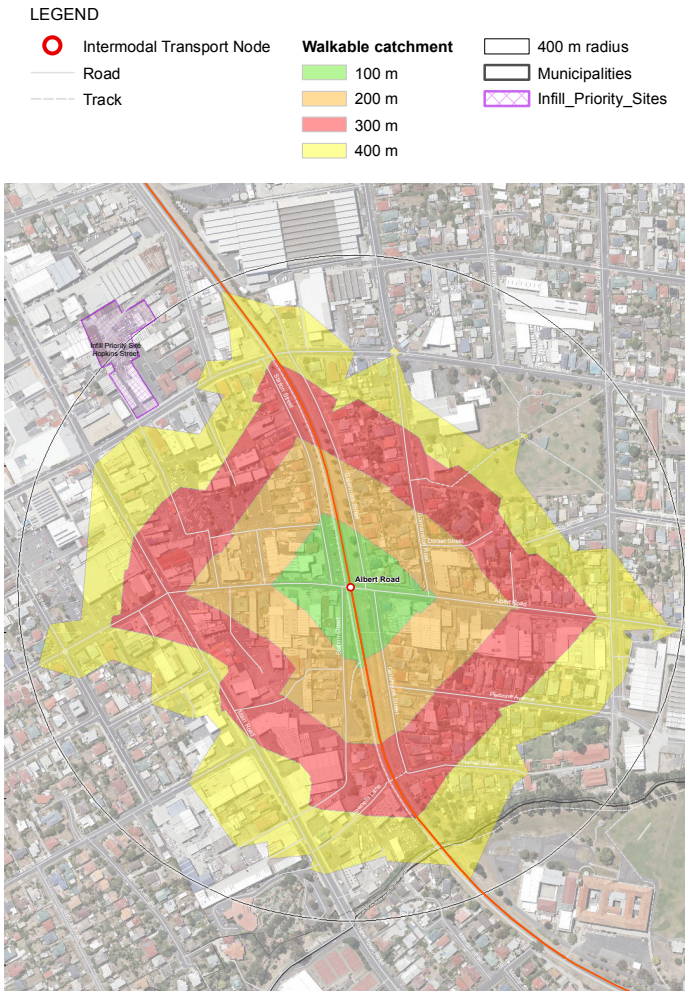


Figure 4-2: Albert Road Pedestrian Analysis Map

Figure 4-3: Derwent Park Road Pedestrian Analysis Map

Figure 4-4: Glenorchy Central Pedestrian Analysis Map

4.2.5 Berriedale

Locational Characteristics

Taking advantage of close proximity to MONA, the station is within walking catchment of a range of commercial, community and recreational facilities. There is also good access to residential areas to the west, including aged care. The typology of this station could be described as residential with tourist mixed use.

Constraints

Proximity to the Granada Tavern may be a constraint if not considered in the design response of new development. Some zoning changes would be required.

Opportunities

There are a number of potential opportunities within the walking ctachment, or within close proximity. To the south west a complex of industrial/commercial buildings, including a Government Archives storage facility has been partially zoned for residential development under the Glenorchy Interim Planning Scheme 2015. The William Adams truck and tractor retail and service complex is poorly located, being in close proximity to housing, and isolated from other industrial/commercial developments. Similarly, the storage facility could be better located in order to free up a significant development opportunity, subject to a rezoning. Land adjacent to the waterfront could be redeveloped to a higher density than currently is the case, with tourist accommodation in close proximity to MONA an obvious opportunity. Council is seeking to master plan Cameron Park opposite the site, and with MONA continuing to develop new facilities, proximity to this significant cultural and recreational precinct is an attraction in itself. Although beyond the walking catchment, cycling access to the nearby Claremont Shopping Centre is an added bonus. The typology of this station could be described as residential with tourist mixed use.

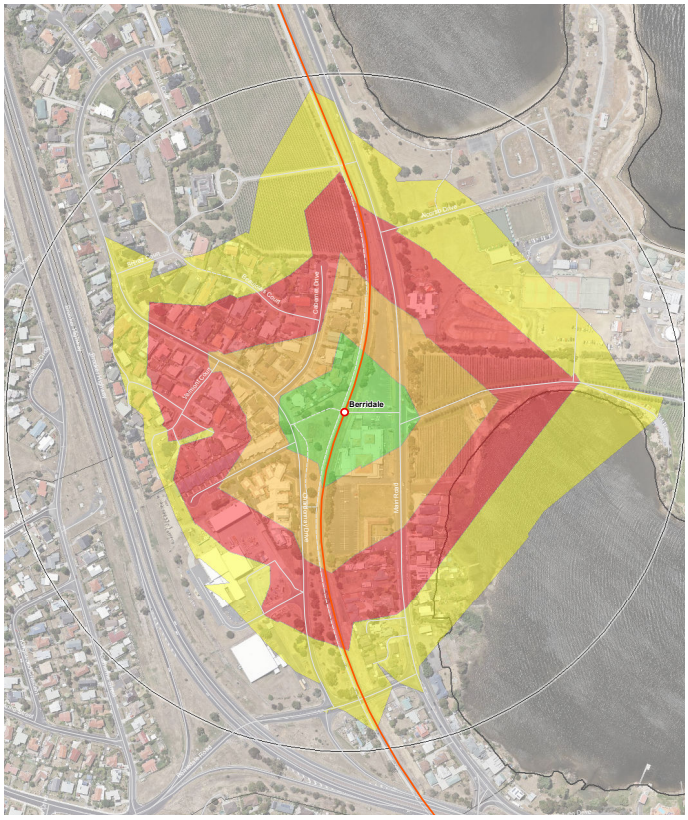


Figure 4-5: Berriedale Pedestrian Analysis Map

4.2.6 Claremont

Locational Characteristics

Claremont Station takes advantage of proximity to Claremont Shopping Centre, Mondelez International chocolate factory (formerly Cadbury), Derwent Waters retirement complex, Claremont Golf Club, Windermere Primary School, Claremont College, and a range of other retail, community and recreational facilities located in the vicinity. The typology of this station could be described as retail, business, community and employment hub.

Constraints

Close proximity of housing adjacent to the original station location, compared to housing further north along the corridor.

Opportunities

Council owns the adjacent parkland allowing some flexibility in the location of the station. There appear to be numerous opportunities for densification of the surrounding areas, including a vacant former school site zoned Inner Residential, proximity to retail and employment opportunities, and access to recreational facilities including the River Derwent.

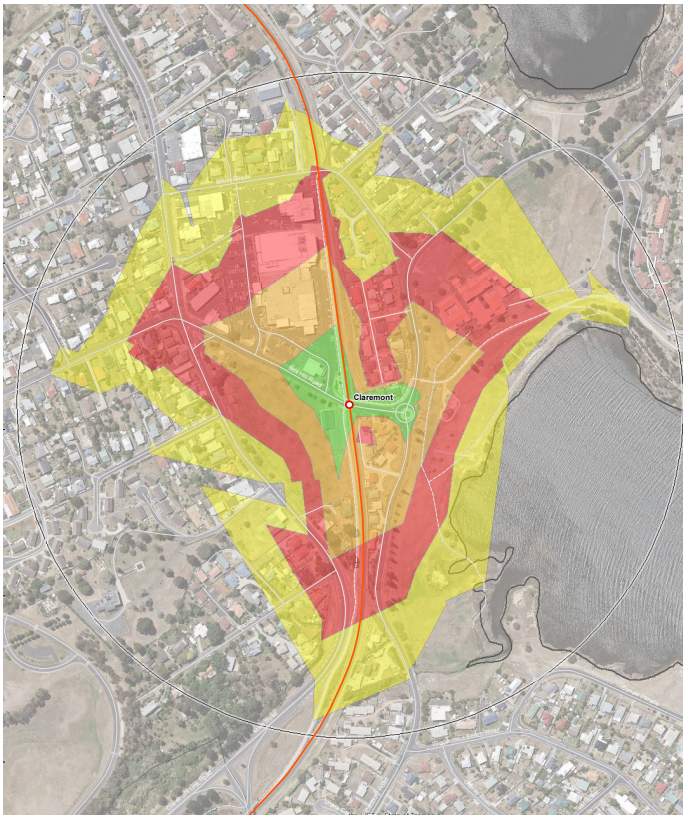


Figure 4-6: Claremont Pedestrian Analysis Map

4.3 Infrastructure

4.3.1 Sewer

The areas of all the proposed sites are currently serviced by sewers owned and managed by TasWater. TasWater has advised that in general, any increase in sewer load caused by development will require a separate assessment at the time of development. TasWater no longer requires developers to pay 'headworks' charges (a set amount for each development dependant on location) but does require every development to pay for any upgrade works to the sewer system required to service that development. Individual developers may choose to group together to collaboratively share costs for any upgrade (for example an increased diameter of main between the development precinct and the trunk main); however, there is no necessity for this to occur. Indeed, a single developer may be required to bear the entire cost of an upgrade depending on the timing of developments and triggering of the need to upgrade.

No specific upgrade requirements are nominated at this time by TasWater.

New Town

There are limited sewer mains in the area with DN150 mains in Bellevue Parade and the western end of Bell Street. Additional local infrastructure is anticipated to be required. The area drains through gravity to the nearby Selfs Point Treatment Plant.

Albert Road

There is a local DN150 sewer gravity main in Albert Road as well as servicing the rear of properties along Station Street and Gatehouse Street. Local upgrading may be required depending on density of developments.

Derwent Park Road

There is a DN300 and DN600 sewer main in Derwent Park Road draining to the Prince of Wales Bay Sewage Treatment Plant. No upgrades are anticipated due to development associated with the station.

Glenorchy Central

There are limited sewer mains in the area. It is anticipated that local sewer mains will be required to be installed to service the station and associated development.

Berriedale

The area drains via an existing DN375 gravity sewer main to Berriedale Sewage Treatment Plant. No upgrades are anticipated to be required as a result of the station and associated development.

Claremont

There is a trunk sewer main adjacent to and approximately parallel with the intercity cycleway.(~DN525). Augmentation of the existing sewer mains in the area are not anticipated to be required for the station and associated development.

4.3.2 Stormwater

Hobart City Council and Glenorchy City Council own and operate stormwater infrastructure at the station sites within their respective Local Government Areas. Both Councils have stormwater detention policies such that, should the impervious area of the site be increased by a development, and there are capacity limitations in the downstream infrastructure, the development will be required to install stormwater detention storage to limit the peak stormwater discharge from the development. Generally, where there is a reasonable increase in impervious area, the peak flow of stormwater from the site will be required to be limited to the flows prior to the increase in impervious area.

Stormwater from the site should also include stormwater quality treatment (dependant on size of increased impervious area). Where quality treatment is required, the treatment will generally be required to achieve 100% reduction of Gross Pollutants, 80% reduction of Total Suspended Solids, 45% reduction in Total Nitrogen, and 45% reduction in Total Phosphorus in the stormwater leaving the site.

The quality treatment could be achieved by a number of (combinations of) treatment options including proprietary products, bioretention basins/raingardens, heavily vegetated swales, sand filters, pervious pavement, etc.

New Town

There is local stormwater in the area draining to New Town Rivulet. Hobart City Council has commissioned a flood study for the area including recommendations around stormwater infrastructure. It is anticipated that the existing drainage would have limited capacity and as such increases in impervious area would likely necessitate the detention and treatment noted above.

It should be noted that some flooding is anticipated around Queens Walk and Risdon Road in the 1% AEP flood event, however this is not expected to extend to the proposed station precinct.

Albert Road

There is stormwater infrastructure in the area with limited capacity to drain flood flows. Stormwater detention and treatment requirements above would be anticipated should impervious areas increase with development.

Derwent Park Road

There is local stormwater in the area draining to Prince of Wales Bay. It is anticipated that the existing drainage would have limited capacity and as such increases in impervious area would likely necessitate the detention and treatment noted above.

Glenorchy Central

There is existing stormwater infrastructure in the area draining to Humphreys Rivulet and Elwick Bay. There is likely to be some restrictions on stormwater quantity and so it is expected that stormwater detention and treatment will be required as outlined above where the impervious area is increased. It should be noted that Humphreys Rivulet is subject to flooding in rare rainfall events. This may affect finished floor levels of the developments associated with a station in this area.

Berriedale

The area is drained via existing stormwater mains to Berriedale Bay. It is anticipated that there would be minimal capacity restrictions in the area although increases in impervious area are likely resulting in a requirement for stormwater treatment as outlined above.

Claremont

There is existing stormwater drainage for the site. It is likely that increases to impervious area will necessitate stormwater detention and treatment due to capacity limitations.

4.3.3 Water Supply

The areas of all the proposed sites currently have water supply infrastructure owned and managed by TasWater. TasWater has advised that in general, any increase in water supply requirements caused by development will require a separate assessment at the time of development. TasWater no longer requires developers to pay 'headworks' charges (a set amount for each development dependant on location) but does require every development to pay for any upgrade works to the water supply system required to service that development. Individual developers may choose to group together to collaboratively share costs for any upgrade (for example an increased diameter of main between the development precinct and the trunk main); however, there is no necessity for this to occur. Indeed, a single developer may be required to bear the entire cost of an upgrade depending on the timing of developments and triggering of the need to upgrade.

No specific upgrade requirements are nominated at this time by TasWater.

New Town

The nearest trunk mains are along Park Street (DN250), and Risdon Road (DN200), with local reticulation in Bell Street/ cycleway, and Bay Road. It is anticipated that local reticulation may need to be augmented for the proposed Station and associated development.

Albert Road

There are major trunk mains along Main Road (DN150 and DN200) and Hopkins Street (DN525 and DN375). There are also local reticulation mains in Albert Road (DN150), Station Street (DN100), and Gatehouse Street DN100. Within the context of the larger region, servicing increased development in the area it is expected that the trunk system will not require upgrading although local mains may be depending on developments in the area at the time of the increased development around the proposed station.

Derwent Park Road

There are existing trunk mains along Main Road (DN300, DN200, DN150) and Derwent Park Road (DN150) with local reticulation also along Derwent Park Road. It is anticipated that local reticulation may need to be augmented for the proposed Station and associated development.

Glenorchy Central

There is a trunk main along Grove Road (DN200) as well as local reticulation in McKay Avenue (DN150). It is anticipated that local reticulation may need to be augmented for the proposed Station and associated development.

Berriedale

There are existing Bulk Transfer mains (DN889, DN1371, and DN571) along Brooker Highway and existing trunk mains along Main Road (DN200) and Berriedale Road (DN200) in the vicinity of the proposed station. Local mains are also in Chardonnay Drive. No upgrades are expected to be required to the trunk system, however, local reticulation may require upgrading depending on Station developments and other development (not due to the proposed station) in the area.

Claremont

There is a trunk main along Box Hill Road and reticulation mains in Main Road (DN150), Bilton Street (DN100), and Cadbury Road (DN150). It is anticipated that local reticulation will need to be provided and locally upgraded for a station and associated development.

4.3.4 Telecommunications

Telstra service the area of all the proposed stations. NBN infrastructure is expected to be installed in any future developments in the area.

4.3.5 Electricity

There is electricity in the area. It is expected that the local power authority would need to assess any future development with regard to the electrical infrastructure requirements. Local substations and kiosks as well as conduits for cables are generally required to be installed at the developer's expense.

The existing cycleway generally has electricity mains to provide for the lighting of the existing cycleway.

4.3.6 Old Town Gas

It should be noted that abandoned Old Town Gas is known to exist around the following station precincts:

- Albert Road; and
- Derwent Park Road.

This list may not include all stations affected. While this is not useful for servicing the development, it is a known OHS issue for construction in the area due to the old gas trapped in the mains.

4.3.7 TasGas

A dial before you dig search was undertaken along the transit corridor which confirms that TasGas is available at each of the stations analysed in this section without the need for rerouting.

4.4 Transport and Movement

New Town

The corridor in the vicinity of New Town Station runs parallel to Bell Street and Bellevue Parade. Bell Street, which runs along the northern side of the corridor, terminates for traffic just south of the entrance to the Hockey Centre, although a pedestrian path continues under the Brooker Highway. Bellevue Street, to the south, continues under the Brooker Highway and connects to Cornelian Bay and the Domain Highway.

Metro runs a local bus service along Bellevue Parade, connecting Hobart CBD with Moonah via New Town and Lutana. Other services between Hobart and Goodwood operate via Park Street and Risdon Road.

The Tasmanian Hockey Centre generates high levels of activity at various times of the week, including for training, games and functions. At times of peak demand, such as when a large number of players and/or spectators are in attendance, the on-site car park does not have sufficient capacity, and parking spills onto surrounding streets.

Pedestrian access across the Corridor is severed by the fence which runs between the cycle way and rail line. There is also a grade difference between Bellevue Parade, the cycle way corridor and Bell Street which limits pedestrian accessibility. A ramp is provided east of Bishop Street that connects Bellevue Parade with Bell Street.

Pedestrian subways are provided under the Brooker Highway at Bell Street and at the rear of the Hockey Centre. These are not ideal pedestrian environments, due to their isolation and length.

Like at Glenorchy, the focus of activity in this area is somewhat dispersed. The Hockey Centre provides a hub at certain times, but the surrounding residential catchment is centred on Bay Road, where the original New Town station was located.

Pedestrian subway under Brooker Highway at Bell Street

Hockey Centre car park

Albert Road

Station Street runs parallel to the Corridor between Hopkins Street and south of Albert Road. Albert Road runs in an east-west direction and crosses both the Corridor and Main Road. It also connects to the Brooker Highway via Risdon Road.

Land use around Albert Road includes light industry, retail and residential. Pedestrian connectivity between Main Road and Station Street is good with footpaths on Albert Road and Hopkins Street, and a mid-block path through the public car park between Albert Road and Hopkins Street, at the rear of shops facing onto Main Road.

There is a large quantity of parking in the area, including the large car park with access from Albert Road, Hopkins Street and with a capacity of almost 200 parking spaces. The majority of these have a three-hour time limit, with some all-day parking. Station Street also contains on-street 90-degree parking adjacent to the cycleway for recreational users, which also appears to be used for all-day parking. Gatehouse Street, on the eastern side of the corridor, also has unrestricted on-street parking which is highly utilised on weekdays.

Pedestrian access through car park

Car parking in Station Street

Derwent Park Road Station

Derwent Park Road is the main spine of a primarily industrial and large-format retail area, and is a key route providing access between Brooker Highway and Main Road. Traffic queuing at the Main Road intersection regularly extends across the Corridor, with a separation of some 110 metres between the two.

Metro operates a high-frequency corridor service ("Turn Up And Go") along Main Road between Glenorchy and Hobart CBDs, travelling through Derwent Park. The Metro bus depot is located on the western side of Main Road at Derwent Park.

Existing pedestrian activity through the area is limited, given the industrial and bulky goods retail land uses where travel by private vehicle is most common. Aside from road crossings of the Corridor, there are few locations where pedestrian access to the Corridor is available.

The former Zinc Works rail line reservation, which branches off the Corridor north of Derwent Park Road, provides an opportunity to extend the cycle and pedestrian network from the existing cycleway to the Brooker Highway and Lutana. However, the focus at the Corridor is north of Derwent Park Road, which may not align with redevelopment proposals in this vicinity.

There is currently limited public parking in the area, however most retail land uses have on-site parking for customers. There is potential for car parking to be consolidated through shared or public parking arrangements.

Retail car parking

Inactive frontages to Corridor

Streetscape provides little shade or amenity

Glenorchy Central

At this location, the Corridor runs parallel to Main Road, and will be accessed from King George V Avenue, which connects between Elwick Road and Main Road. King George V Avenue currently provides access to parking at the rear of the Northgate shopping centre and other businesses on Main Road, and the McKay timber yard. However, its primary focus is as a detour around the Glenorchy CBD, taking traffic away from the core activity area on Main Road.

Metro operates a high-frequency corridor service ("Turn Up And Go") along Main Road between Glenorchy and Hobart CBDs, with a bus interchange in Tolosa Street between Main Road and Barry Street.

The proposed station is within close proximity to Glenorchy CBD and Northgate shopping centre, as well as sporting facilities in the KGV recreation precinct, which are significant attractors of travel demand.

Current pedestrian activity around the Corridor is focussed on the InterCity cycleway, and at the northern end of Peltro Street where a signalised crossing of King George V Avenue, and a formal crossing of the railway line, is provided to connect the Glenorchy CBD with the KGV recreation precinct. There is currently limited pedestrian activity across the Corridor in the vicinity of Wrights Avenue in the area due to the industrial and bulky goods land uses.

Northgate Shopping Centre is currently orientated towards Main Road, with the King George V Avenue frontage dominated by the car park access, loading docks and solid walls. The only pedestrian access from the northern side of the building is via the underground car park, with no active land uses at street level. Access at the western end of Northgate is through an open car park.

This creates a significant obstacle for providing connectivity between land uses on either side of the Corridor. Current activity on the northern side is focussed around Peltro Street, although future development of the McKay timber yard will create additional activity towards the west. Land use on the southern side of the Corridor is orientated towards Main Road, and quite literally turns its back on the Corridor.

Main Road at Northgate Shopping Centre

Western access to Northgate Shopping Centre

Berriedale

The existing road infrastructure around Berriedale Station includes the Brooker Highway which provides the primary arterial north-south route. Through Berriedale the Brooker Highway is of freeway standard, with an interchange at Berriedale Road. Main Road is a sub-arterial road running parallel to the Corridor, and was historically the main north-south route prior to the construction of the Brooker Highway. Berriedale Road runs in an east-west direction between Main Road and the areas to the west of Berriedale including Collinsvale and Glenlusk, crossing both the Corridor and the Brooker Highway. Chardonnay Drive is a local street running parallel to the Corridor along the western side, providing access to residential areas.

The area is currently serviced by Metro Buses, including express services, stopping on Main Rd outside the Granada Tavern / MONA entrance.

Existing transport infrastructure in the area provides for recreational walking and cycling along the Intercity Cycleway, however the fence between the rail line and cycleway creates an obstruction for pedestrian movement between Main Road and the residential areas off Chardonnay Drive. There is a worn path and a hole in the fence behind the Granada Tavern which has been created as a more direct route, saving some 500 metres compared to using the established crossing point opposite Alcorso Drive.

The proposed station is located near this pedestrian desire line and provides opportunity to improve pedestrian connectivity by providing a formalised crossing facility at this location. It is likely that the corridor will also be utilised by visitors to MONA, and improved pedestrian access between the corridor and MONA will be required.

There are currently large car parking areas provided for the Granada Tavern, which are largely unoccupied during weekdays. On-street parking on Chardonnay Drive is highly utilised surrounding the Strathglen retirement village and the playground. Increased residential development will further increase demand for parking in the area, and provides the opportunity to minimise redundant parking supply through application of shared parking or other strategies as appropriate.

Car park between Corridor and Main Road at Granada Tavern

Car park at rear of Granada Tavern

Claremont

The Corridor separates the core of Claremont from the adjacent Cadbury Estate, with road connections across the Corridor at Box Hill Road and Bilton Road only. Pedestrian access across the Corridor is limited to these roads and an at-grade pedestrian crossing in the vicinity of Pascoe Street.

Main Road runs to the west of the Corridor, with the Claremont Link Road providing access to the Brooker Highway. Box Hill Road and Abbotsfield Road / Euston Road also provide connection to the residential areas west of the Brooker Highway.

The Claremont Plaza shopping centre, bounded by the Corridor, Bilton Street, Main Road and Box Hill Road, is the focus of commercial activity in the area, as well as being the focus of existing public transport services. The shopping centre building is set back from the adjacent roads, surrounded by open car parking. Pedestrian access to the plaza is orientated towards the west (Main Road) and south (Box Hill Road), with blank facades facing Bilton Street and the Corridor.

Bilton Street is the current northern terminus of the Intercity Cycleway, although potential extensions to the north have been investigated in the past. There is also a shared path from the eastern end of Box Hill Road around the northern shore of Windermere Bay.

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Train line at Claremont

Intercity Cycleway adjacent to train line at Claremont looking south

4.5 Main Road Synergies

Main Road and the Corridor are closely connected in many ways, being of similar alignment and in close proximity to each other for much of the study area north of New Town. Main Road is well-established as a focus of activity, with strong retail precincts in Moonah and Glenorchy, an existing core bus route and an important traffic-carrying function in the wider Hobart road network. Main Road and the Corridor are particularly close together in Derwent Park, Rosetta, and Claremont, creating opportunities for shared infrastructure and enhanced connectivity between them. This may involve transit services moving from Main Road to the Corridor, or vice versa, at key points to maximise the efficiency of public transport services.

The legacy of the Corridor's history as a heavy rail line is that most adjoining land uses are orientated away from the Corridor. The opportunity in renewing land use along the Corridor is to reorientate towards the Corridor as well as road frontages.

Pedestrian and cycle access across the Corridor is also limited as a result of the historical barrier of the heavy rail line. There is opportunity to improve connections from Main Road, to and across the Corridor, and into an expanded catchment on the other side.

There may be opportunities for any transit service on the Corridor, with major stops at New Town, Albert Road, Derwent Park, Glenorchy Central and Berriedale, to include minor stops (hail and ride, or similar) to service local demand. There is a particular opportunity for this between Derwent Park and Glenorchy Central, where a stop in the vicinity of Howard Road could service the Hobart Showgrounds and Cosgrove High School. The Corridor and Main Road are quite close in this location. Similarly, at Cornelian Bay to service recreational opportunities or to provide tourist access.

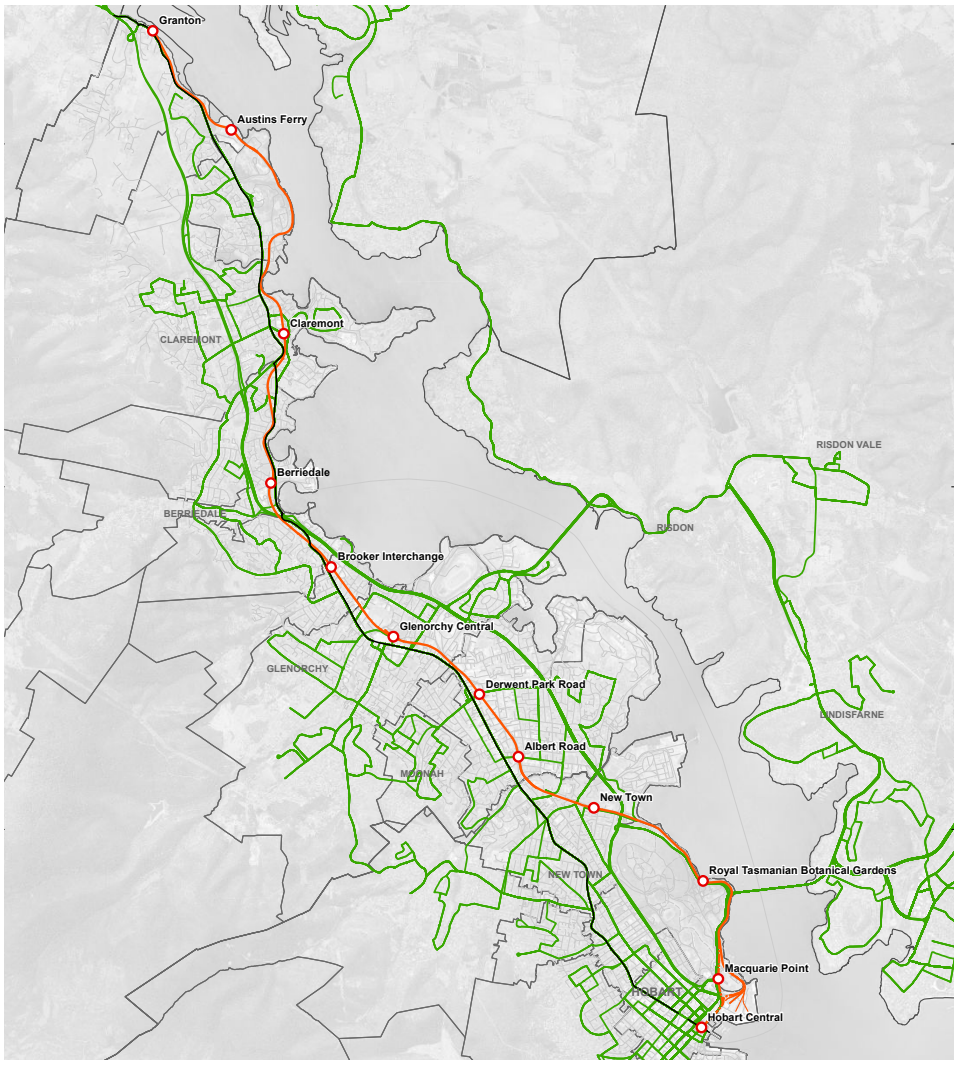


Figure 4-6: Bus Routes

5. Precincts Urban Renewal Strategies

GHD undertook a Project Steering Committee workshop to identify a Vision for urban regeneration in Hobart and Glenorchy arising from use of the public transit corridor. Following on from the Vision Workshop high level structure plans were developed for each of the key precincts to identify key urban infill development opportunities around potential transit corridor stations. This section provides visualisations of what the precincts might look like if developed.

5.1 Workshop

A half day Steering Committee workshop was held on 19 July 2016. The purpose of the workshop was to facilitate discussion about the urban renewal vision for the Corridor and initiatives relating to:

- placemaking increasing density
- economic generators and diversification
- integration of transport modes

The workshop also gave GHD and the Steering Committee the opportunity to discuss urban renewal staging. The workshop was successful in forming a consolidated view about the desired future character of the corridor and produce an initial vision, building on the site analysis and the existing Council knowledge as well historical development.

Vision:

" The public transit corridor will be a catalyst for transforming Greater Hobart into a 21st Century city. One that is sustainable in terms of walking, cycling and public transport. The corridor will provide a diverse range of activities, and reflect the nature and form of development appropriate to precincts along the corridor. It will be an area where residents and visitors will want to live, work and recreate."

The Vision aims to:

- Define long term aspirations and guiding principles to support the realisation of a sustainable, and well-connected series of communities along the corridor.
- Direct the planning and urban design principles to the desired urban form and structure of the corridor.

This exercise included:

- Presentations of background studies and analysis;
- Collaborative examination of opportunities and constraints analysis, taking into account the outcomes of previous work;
- Identifying a range of sustainable development strategies for the study area;
- Testing these through enquiry by design to ensure the delivery of high quality integrated solutions for the Strategic Plan;
- Engagement with key stakeholders to identify landholder/ sequencing opportunities and constraints; and
- Establishing a series of key objectives/principles for each of the consultant teams professional disciplines.

The vision provided a framework to guide the development of the design process for the priority precincts. Precinct analysis also helped determine the primary precincts, with sites roughly rated on a traffic light system including the following criteria:

1. Zoning
2. Land Tenure
3. Walkability
4. Pedestrian Paths
5. Bus Routes
6. Densities

Discussion between stakeholders at the workshop confirmed the heirarchy of precincts, characters and types for GHD to move forward with detailed Urban Design analysis.

" The public transit corridor will be a catalyst for transforming Greater Hobart into a 21st Century city. One that is sustainable in terms of walking, cycling and public transport. The corridor will provide a diverse range of activities, and reflect the nature and form of development appropriate to precincts along the corridor. It will be an area where residents and visitors will want to live, work and recreate."

5.2 Urban Design Initiatives

The following strategies were adopted to identify and promote a series of sustainable, well-connected urban precincts that enabled a sense of place to emerge.

Land use framework and character precinct

The identification of precincts is a simple and effective planning tool for large corridors and regions. Precincts are used as the principal organising element of a planning framework. They are determined and defined by their land use, character and built form associations to aggregate areas of commonality. This approach allows for an ease of transition from master concept into planning schemes and other implementation tools.

- Identifying nodal areas of activity to define precincts
- Identifying land uses and associated user experiences within these precincts
- Assessing the opportunity to build on user experiences in order to create stronger precincts
- Directing the desired nature and interrelationship of land uses and characteristics of activities.

Placemaking

The incorporation of placemaking is an essential strategy to creating a strong sense of place for each precinct and is achieved by:

- Recognising and celebrating the layers of history, heritage, land use and topography that is unique to each precinct
- Focusing on public realm and amenity improvement within a precinct
- Creating an identity for each precinct that users can identify with
- Linking open space corridors
- Widening footpaths and streetscape improvements including tree planting and furniture for gathering
- Improving connectivity for pedestrians and cyclists
- Encouraging activity opportunities eg outdoor dining and public squares
- Ensuring each activity centre has a DNA ie. unique character.

Economic generators and diversification

This strategy considers the following elements to support the growth of Hobart and Glenorchy LGAs with a focus on strengthening each precinct along the corridor.

- Promoting economic diversification across the corridor to ensure robustness and resilience, while also promoting specialisation in certain precincts such as Berriedale as cultural precinct and Derwent Park Road as a bulky goods precinct
- Encouraging employment through education, medical, tourism, culture
- Developer contributions that support renewal and upgrade works
- Promoting economic diversification within the corridor to ensure robustness and resilience
- Encouraging employment through education, medical, tourism and culture
- Developer contributions that support renewal and upgrade works.

5.3 Precinct Character Assessment

As part of the structure planning, GHD assessed the existing character of each precinct to gain a deep understanding about what makes each precinct unique, the opportunities

The following section outlines the predominant existing characteristics for each precinct.

New Town

Characteristics

- One of Hobart's oldest established suburbs
- Single dwellings only comprise 68% of housing stock compared to 82.5% across Greater Hobart suggesting a greater diversity of housing types
- Proximity to recreational facilities, open space and foreshore are key attractions for residents
- New station fronting Bell Street required for precinct
- Heritage considerations may limit densification or shape future redevelopment in some areas of the precinct

Albert Road

Characteristics

- Diverse mixed use character with housing in close proximity to retail and light industrial activity, with various supporting community services scattered throughout the area
- Residential development primarily modest single detached houses on small to medium sized allotments.
- Retail and light industrial development fronting Main Road and Albert Road

Derwent Park

Characteristics

- Commercial and industrial character prevails
- Large floor plate buildings. Large and small format retail, warehousing, and light industrial uses with expansive car parking
- Potential densification of commercial and industrial uses second storey additions or making better use of car parking areas

Glenorchy Central

Characteristics

- Proximity to Northgate and its retail, business, community and social infrastructure and services are key attributes
- Glenorchy CBD mixed use development is encouraged combining higher density housing with commercial and retail space
- Infill housing opportunities evident utilising redundant or underutilised industrial land on the CBD fringe
- Alternative transport choices evident with walking, cycling, and access to public transport promoted

Berriedale

Characteristics

- Predominantly residential with large pockets of recreation, open space and major tourism
- Significant opportunities
- Opportunity to define new built form
- Influences include proximity to MONA, the waterfront, views of vineyards and parkland
- Quality housing and retirement living evident

Claremont

Characteristics

- Suburban shopping centre supporting retail, business, community and social infrastructure and services
- In proximity to retirement living complex, educational opportunities, and recreational and tourist attractions
- Attractive community open space and close links to Intercity Cycleway reinforce the locational advantages and attractivenes of the area

Austins Ferry

Characteristics

- Former industrial land transitioning to future residential development with beneficial zoning under the Interim Planning Scheme
- Adjacent industrial land to the north may influence how development proceeds in some areas
- Provision for local retail precinct made
- Proximity to waterfront, high quality open space and environmental assets, educational facilities and nearby Claremont shopping centre are attractive attributes

Glenorchy Central train line

5.4 Precinct Typologies

By assessing the existing nature of each precinct, the existing and predominant characteristics helped to form a range of precinct typologies. Whilst each precinct has been identified under a typology, the Urban Design outcome aims to retain and build upon those individual aspects that make each precinct distinctive and memorable.

Residential Village

Residential villages have a predominantly residential character, with the opportunity to increase density, community facilities and amenities for quality living.

Cultural Destination

Cultural destinations present the unique opportunity to lift the profile of the surrounding area based on vibrant, cultural activities happening in the immediate area. This appeals to locals as well as interstate and international travellers, providing a strong sense of community and a hub of energy, often with creative, temporary or changeable activities.

Retail Destination

The Corridor offers the opportunity to build on existing large scale/big box retail and establish a retail destination. The attraction of having one central location to access all of these stores is a drawcard for locals and creates a stronger experience.

Urban Village

Glenorchy Central and Albert Road will be urban villages and transit oriented developments, with activated edges for retail opportunities.

Sporting Destination

New Town will be the Corridor's only sporting destination - an exclusive precinct built upon established sporting facilities with a community focus.

Figure 5-1 Glenorchy to Hobart Corridor Precinct Typologies

6. Urban Design and Planning Strategy

6.1 Precinct Assessment

Based on the previous findings this section provides for a structure plan to direct the next Stage of the study including:

- Identification of development site opportunities
- Broad land uses
- Built form (type of residential, type of commercial etc)
- Movement (road, bus, cycle, pedestrian)
- Open space
- Community facilities
- For each station identify potential zoning changes

A number of key station precincts within the Corridor Study Area to ensure built form outcomes are consistent with the scale and massing of adjoining development and are capable of being developed according to the market realities that are driving changes including floor space ratios or aspirational density target for the corridor.

6.1.1 Case Studies - Potential Induced Effects of Transit Oriented Investment

Apart from the improved transport facilities, there are significant city building and urban renewal opportunities around the transit corridor, particularly in the identified precincts in this Section.

The up-zoning of land uses and amendments to the planning scheme within the transit corridor will result in an up-lift of capital values in the immediate vicinity to reflect these higher and best uses, but this will only occur if there is sufficient confidence that the government will deliver the transit corridor.

A literature research was undertaken to identify similar examples of city building opportunities and positive outcomes in relation to investment in public transit infrastructure. From the case studies it was found that the flow-on effect from other similar infrastructure projects has provided a generally positive outcome in the longer term. The case studies are summarised below.

Subiaco Railway Station and Tunnel, Perth, Western Australia

The Subiaco Redevelopment Authority has successfully transformed 80 hectares of under developed industrial land three kilometres west of the Perth CBD.

The cornerstone of the project was the sinking of 800 metres of the Perth to Freemantle rail line to reconnect Subiaco and Wembley, and allow the former Jolimont industrial area to be redeveloped. The undergrounding of the rail line was deemed necessary to ensure the success of the urban village. With support from local businesses, government agencies, and the City of Subiaco, a successful application was made to the government for funding. The lowering of the rail line allowed for a new road network to be constructed over the tunnel, this created space for a new pedestrian precinct adjoining the station and significantly improved access to 80 hectares of under developed land to the north.

The Queensland Government's Transit Oriented Development Guide notes that the below-ground but open-air station is a powerful landmark that is designed to welcome pedestrians and cyclists.

The undergrounding of the railway line and station has led to a number of city-building benefits:

- Creation of a new road network to improve access to the area and provide a safe and enjoyable pedestrian experience.
- Diversity of housing choice.
- Commercial and employment land creation providing an alternative to Perth's Central Business District.
- Additional green spaces and development of a 'green spine'.
- Tripling of rail patronage from the station between 1999 and 2006 (Australian Council for New Urbanism, A Guide to Projects, November 2006).
- Flow-on investment was estimated to be more than $500 million in August 2008, in comparison to the SRA's original investment of $135 million (Your Development, Subi Centro, 2008).

Subi Centro is recognised internationally as one of Australia's best urban renewal projects and has been recognised with a number of awards including the Urban Development Institute of Australia (UDIA) State Award for Excellence 2003, the UDIA National Award for Excellence 2004 and Commendation in the Accessible Communities Awards 2004.

The Adelaide O-Bahn Busway, Adelaide

The Adelaide O-Bahn is a 12 km guided Busway running express from Adelaide CBD to Tea Tree Gully with stops at Klemzig station and Paradise interchange.

The O-Bahn has led to the development of Tea Tree Gully as an urban village with a wide range of land uses (Levinson, et al,

2003), however, little development has occurred at other stations (Professor Graham Currie, Bus Rapid Transit in Australasia: Lessons Learned and Futures, 2006). This can in part be attributed to the high proportion of park and ride journeys which inhibit the development of transit oriented development around stations (Professor Graham Currie, Bus Transit Orientated Development: Strengths and Challenges Relative to Rail, 2006).

RTA HealthLine, Cleveland, Ohio, United States of America

The RTA HealthLine, formally known as The Euclid Corridor, is a 10.9 kilometre bus rapid transit line in Cleveland, Ohio (USA). The corridor runs between Downtown and East Cleveland along Euclid Avenue, connecting the city's cultural and educational institutions, medical and business centres, residential and commercial precincts.

Although spawned as a transport infrastructure project to improve access, the project has generated at least US$ 4.3 billion in economic development along the corridor (RTA, RTA Healthline, 2011) and has led to a reorientation of buildings towards the public realm.

Urban regeneration activities are evident across the length of the corridor including :

University circle –

- More than US$ 2.5 billion planned or existing development.
- US$ 800+ million VA Medical center and University Hospitals medical.
- Promenade at new Heart Center designed to integrate with BRT station.

Midtown –

- Roughly US$ 187 million in new development (mostly residential and commercial).
- Doubling of property values by 2008.

Downtown –

- Roughly US$ 606 million in new development.
- US$ 250+ million at Cleveland State University.
- US$ 115 million additional investment on E. 4 th street.

6.1.2 Station Locations

Stations locations were determined by assessing the following:

- Location with regard to maximum use of nearby community facilities
- Location with regard to local attractions
- Outside of flood zones where possible
- Outside of constrained areas
- Locations that maximise catchments from residents, schools and community facilities.

6.1.3 Structure Plans

The structure plans and key development sites were identified by assessing a number of elements:

- Proposed infill developments
- Selected sites within 400m from the station
- Larger sites that could act as a catalyst development
- Sites that aren't currently utilising their location/size/density to full potential
- Key movements for vehicles and opportunities for new roads that provide better access as well as
- Key movements for pedestrians and cyclists as well as future desire lines from station locations between community facilities and shops, creating opportunities for stronger path networks
- Opportunity to create 'green links' and the connection of existing recreation land uses through the strategic location of new open spaces
- Opportunity for retaining key views as well as providing new ones

Development sites were created by identifying the best locations for open space, new roads, pedestrian and cycle locations. The development sites also considered orientation of built form to take advantage of sunlight, breezes, views and liveability.

6.1.4 Massing / Axonometrics

The 3D/axonometric views are the process of a massing exercise. New development sites were created with a view to design for best practice and design built form that responds to the local character, landform, heritage and supports the surrounding land uses. This ensures an outcome that is appropriate and relatable, with suitable setbacks, heights and scale.

Each building number relates to the number of storeys and is designated as retail, or residential, or commercial etc, as nominated by the individual building colours. A gross floor area calculation by land use was determined and is provided in the tables for each precinct. This provides for a possible future densification within the catchment of the key transit corridor stations.

The massing and axonometric views are part of an illustrative process to show what is possible for the precinct. They demonstrate a potential urban outcome, with an appropriate (yet not conservative) density.

6.1.5 Visualisations

The visualisations provided for Albert Road, Glenorchy Central, Berriedale and New Town illustrate key views within the precinct, reflecting the proposed structure plans. The landscape character for each precinct is unique and helps define the nature of each precinct typology.

6.2 Primary Precincts

6.2.1 New Town

Built Form

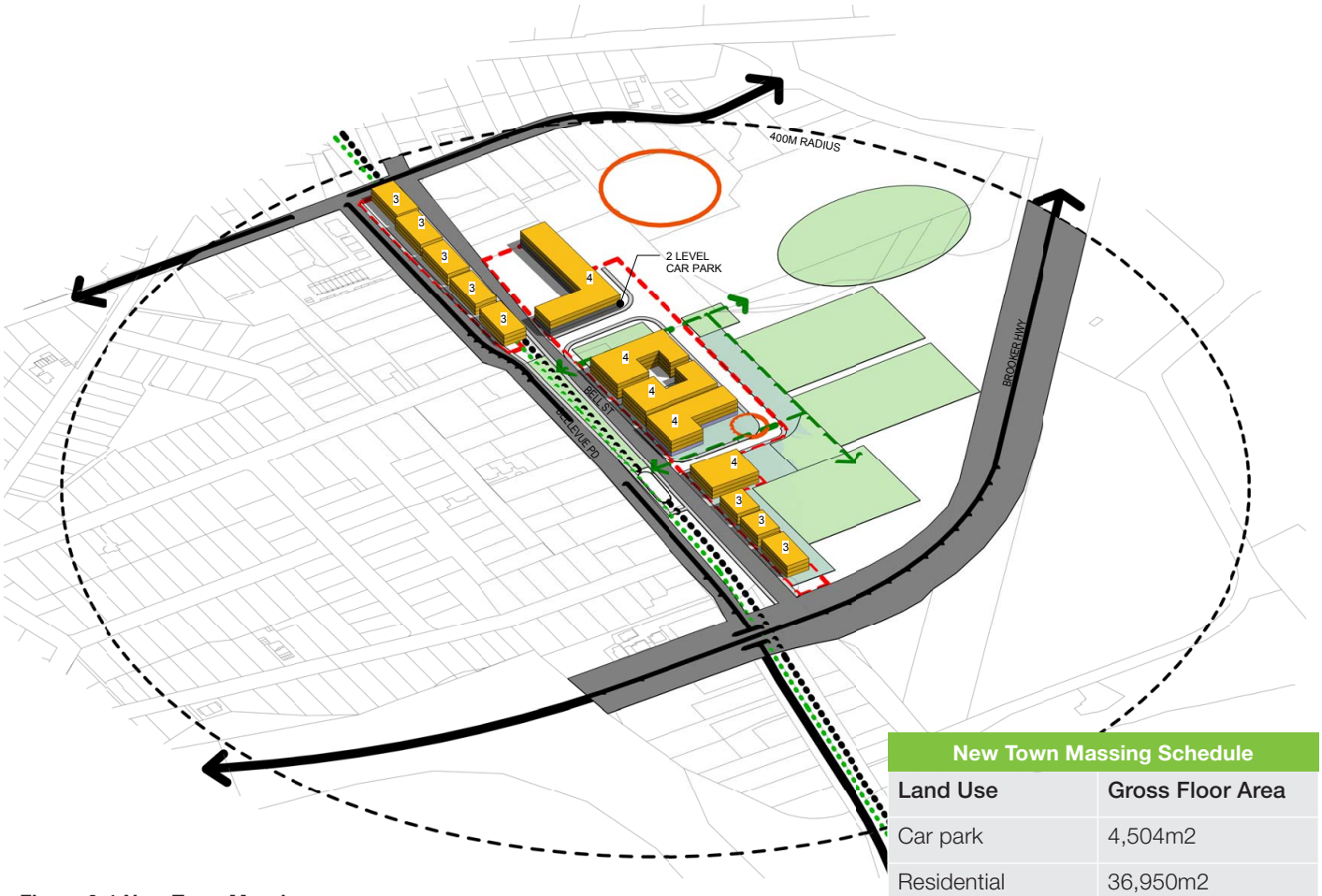
- Medium density housing with a diverse range of terraces and residential apartment buildings, with ground floor café and food venues fronting the station
- Develop selected sites within 400m of the station and taking advantage of narrow sites for contemporary townhouse solutions as well as linear parklands
- The larger development site benefits from a northerly aspect, with new roads that connect the station to sporting facilities and showcases the existing heritage wall as a unique frontage
- A multistorey carpark with residential above for car parking and events at the sporting grounds

Open Space and Movement

- Proximity to a number of desirable services, facilities and Cornelian Bay foreshore
- Accessibility from Hobart on Intercity Cycleway demonstrated by high level of utilisation
- Creation of new pocket parks form 'green links' provide breakout space and ensure clear visual and physical connections between existing and proposed open space
- The new road network provides impressive vistas of Meehan Range/Tunnel Hill when travelling north from the station

Jobs/Economy

- Proximity to Hobart CBD and job opportunities a key element
- Some developer interest shown in tourist uses taking advantage of Cornelian Bay setting and Corridor



New Town Massing Schedule	
Land Use	**Gross Floor Area**
Car park	4,504m2
Residential	36,950m2
Retail	1,465m2

Figure 6-1 New Town Massing

New Town offers quality in liveability, creating a diverse, well connected community featuring iconic Tasmanian heritage and modern sporting facilities.

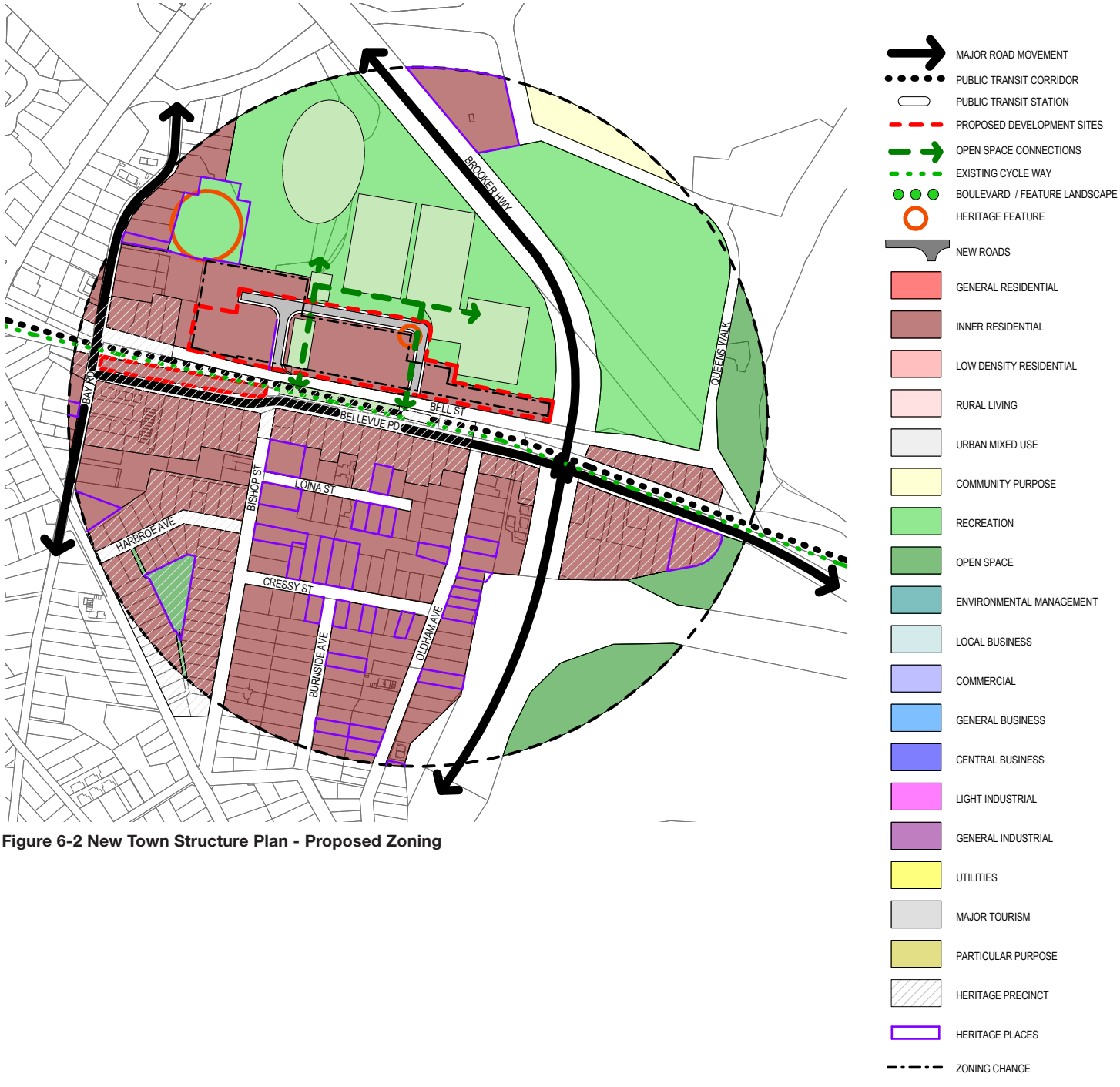


Figure 6-2 New Town Structure Plan - Proposed Zoning

Characteristics

- A public plaza/civic space will be in direct view of the station, the extension of a wide, attractive and leafy street. The plaza provides a clear open space to feature the remnant chimney stack, respecting local heritage and providing a gathering place for the community
- Plaza space will attract residents and pop-up stalls or food trucks for markets and sporting events

New Town Visualisation: Looking north from the station towards the hockey fields and civic space featuring the heritage chimney

New Town Proposed Character Imagery

6.2.2 Albert Road

Built Form

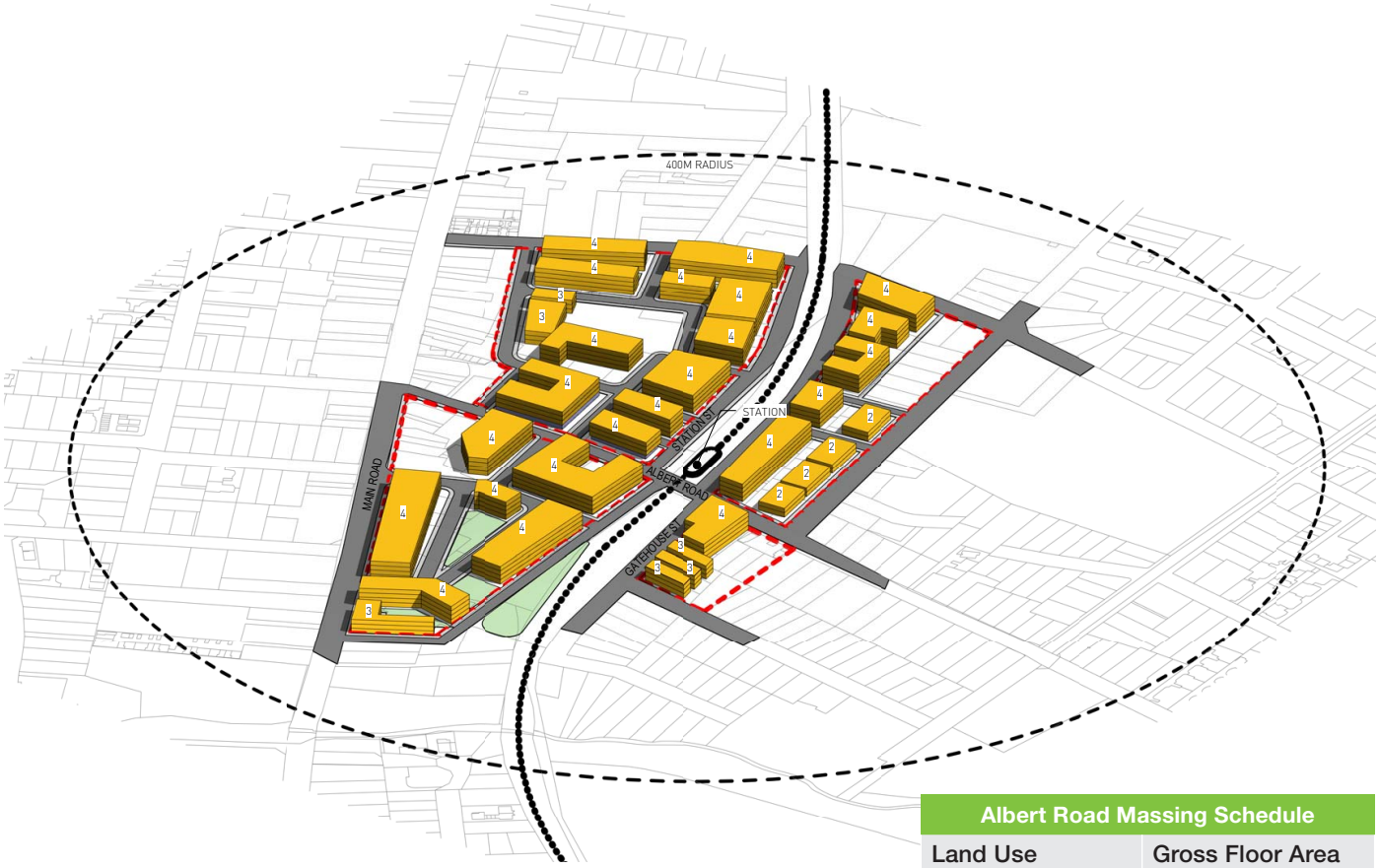
- Main Road remains a high street with infill development towards the transit corridor
- Main Road development remains, providing a gradation between the pedestrian environment and the existing high street
- Medium density housing in residential apartment buildings, with ground floor retail on main roads, typically 4 storeys, within 400m of the station
- Rationalised blocks with new roads create a neighbourhood with strong visual and physical connections to Albert Road and the cycle way

Open Space and Movement

- Albert Road will be a new high street with a leafy tree lined boulevard providing an attractive connection from the station to Main Road
- Strong connections from the proposed built form to the station and cycleway
- Great views of Meehan Range/Tunnel Hill from Station Street and the public transit corridor looking north

Jobs/Economy

- Adjacent to Moonah activity centre and related employment and new business opportunities
- Hub location providing access to job opportunities



Albert Road Massing Schedule	
Land Use	**Gross Floor Area**
Residential	139,884m2
Retail	2,705m2

Figure 6-3 Albert Road Massing

Albert Road will be a mixed use village with affordable student housing, modern residential offerings and Mixed Use.

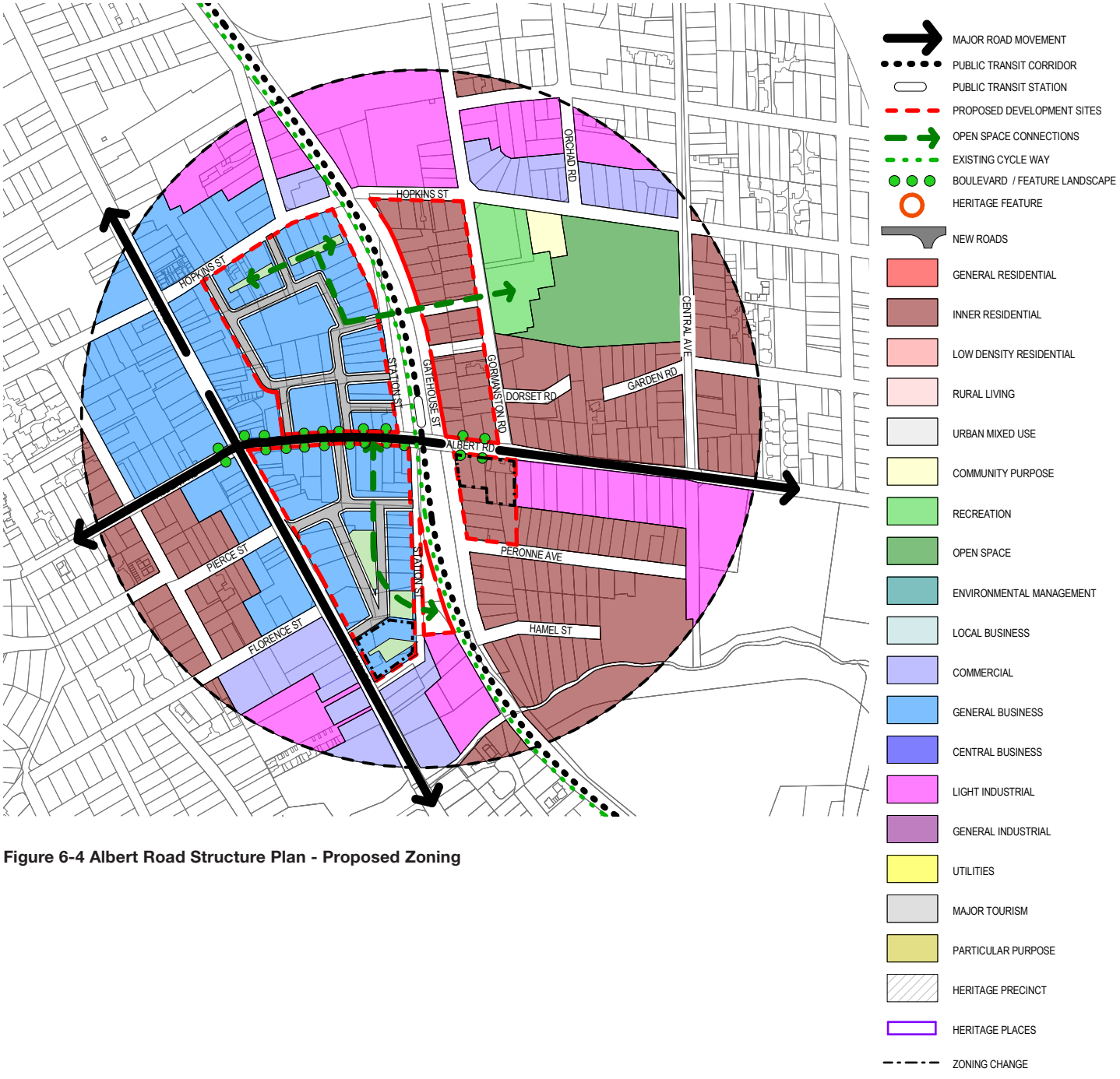


Figure 6-4 Albert Road Structure Plan - Proposed Zoning

Characteristics

- Albert Road will be a new high street, fronted with retail uses, building on the success of St Albi's and Valhalla Icecream to create an 'eat street'
- The densification of this area, and the upcoming eatery-based high street, offers the opportunity for urban laneways with shops and cafes
- The incorporation of laneways supports the promotion of performing arts and will encourage organic growth of 'pop-up' features in these spaces for art, coffee and local culture
- This urban renewal promotes the opportunity to support the performing arts centre and enable an 'after hours' culture

Albert Road Visualisation: Looking west towards Main Road along Albert Road and its new high street with eateries






Albert Road Proposed Character Imagery

6.2.3 Glenorchy Central

Built Form

- Infill Development Pilot Project provides a guide
- Supporting community facilities
- Medium density mixed housing with a diverse range of terraces, single and double storey co-joined apartments as well as residential apartment buildings, ranging from 2 to 4 storeys, with ground floor retail on edges fronting the station
- The built form responds to the strategic location of new roads that connect seamlessly with existing and with future infill development potential at 22 Wrights Avenue
- Proposed infill residential development at 97A Grove Road is approximately 400m walk from the station

Open Space and Movement

- Linkages to adjacent public pool, KGV oval and related recreational facilities
- Strong desire lines are maintained between the development and the Humphreys Rivulet parkland, with a significant amount of open space retained. The parkland offers a prime opportunity for future district parkland with higher level of amenity, within 400m of the station
- Wrights Avenue and the public transit corridor offer the opportunity for leafy green boulevard, with street trees and outdoor seating to complement ground floor retai

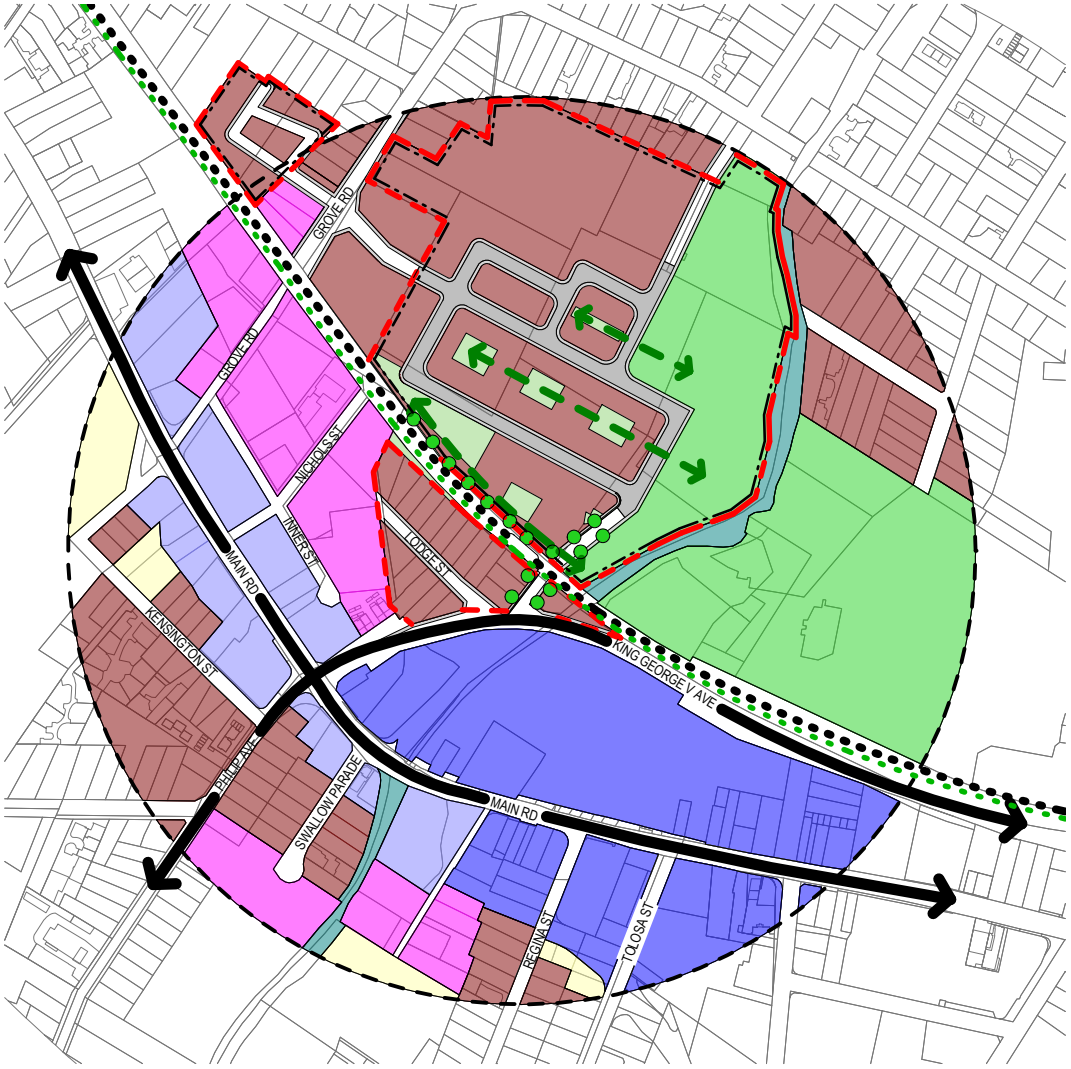
Jobs/Economy

- Adjacent to Glenorchy CBD and related employment and new business opportunities
- Hub location providing access to job opportunities either north or south

Glenorchy Central Massing Schedule	
Land Use	**Gross Floor Area**
Residential	84,155m2
Retail	5,307m2

Figure 6-5 Glenorchy Central Massing

Glenorchy Central will be an urban village and transit oriented development, with activated edges for retail opportunities.



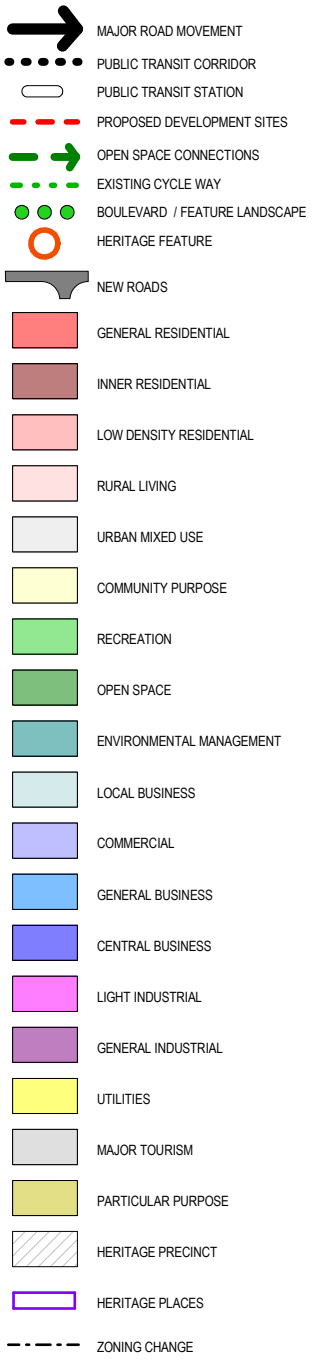


Figure 6-6: Glenorchy Central Structure Plan - Proposed Zoning

Characteristics

- Enclaves of residential development around open space is located within close proximity to the station
- Buildings fronting the station will enclose new civic spaces where people can meet and congregate, with amenities that benefit the wider residential community
- Desirable access to several nearby attractions - Humphreys Rivulet, Glenorchy Aquatic Centre, Glenorchy District Football Club, Tasmanian Transport Museum and the Northgate Shopping Centre

Glenorchy Central Visualisation: Looking north towards the station, cycle way and proposed Wrights Ave Infill Development





Glenorchy Central Proposed Character Imagery

6.2.4 Berriedale (include MONA)

Built Form

- A mix of townhouses and apartments ranging from 2 to 4 storeys, with hotel and commercial built form at the centre, with a residential village that integrates with existing aged care and neighbourhood
- A range of short stay and general holiday accommodation to meet the needs of a diverse market accessing MONA and associated Moorilla Estate winery
- Built form provides strong visual cues between MONA, the civic space and the station

Open Space and Movement

- Proximity to Brooker Highway, Cameron Park, recreational facilities and foreshore
- Easy access to MONA and the numerous cultural activiites
- Maintain visual and physical connections to the Bay, with new built form providing new coastal and winery views
- Creation of new pocket parks provide breakout space between new built form, providing clear visual and physical connections between existing and proposed open space to form 'green links'. Ensure a walkable, scenic open space trail between MONA, attractions and surrounding neighbourhood
- Clear sightlines from MONA's entry to the station, with direct pedestrian link through the activated civic space

Jobs/Economy

- Emerging employment hub at MONA
- A number of other tourist and supported residential employment opportunities in the vicinity.

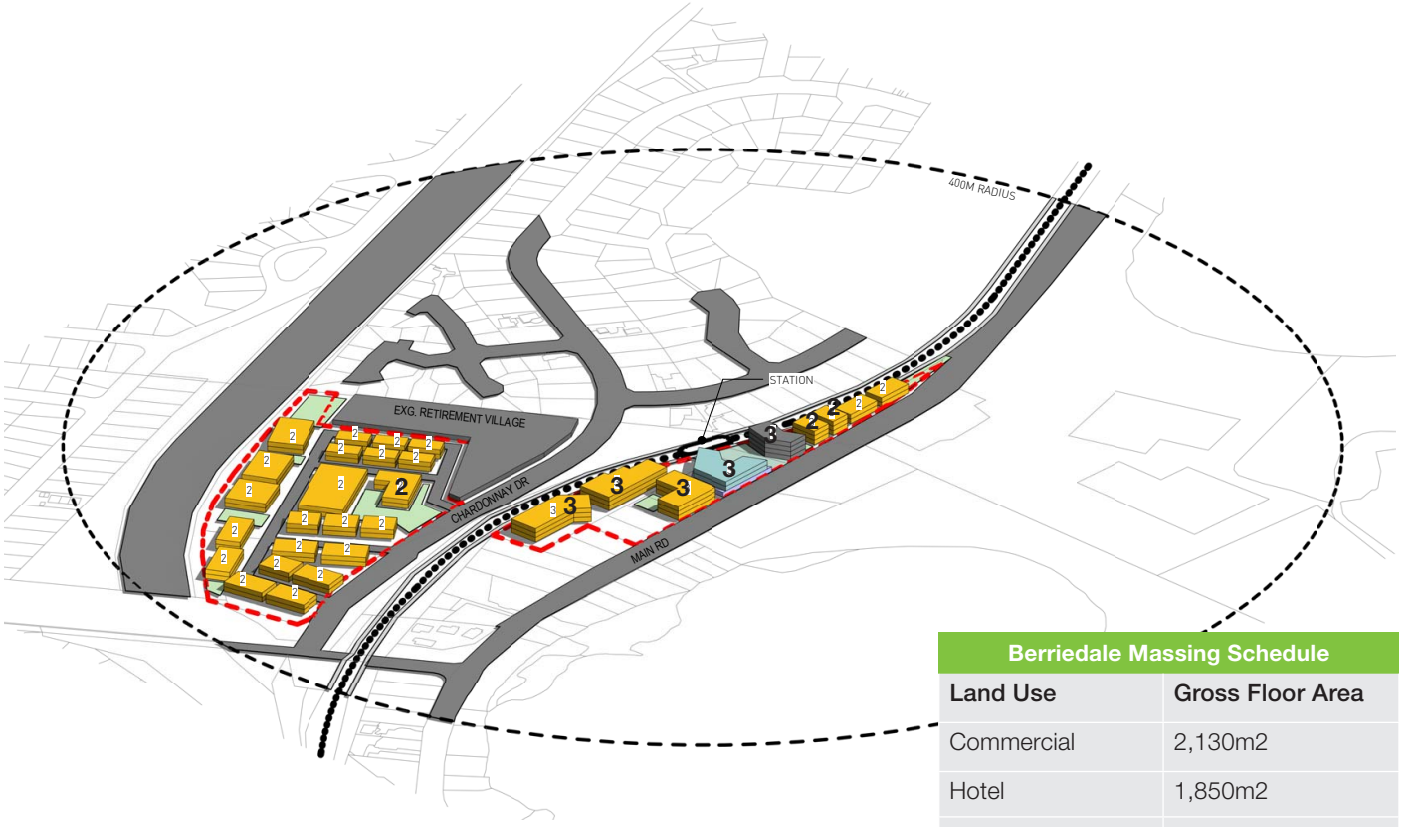
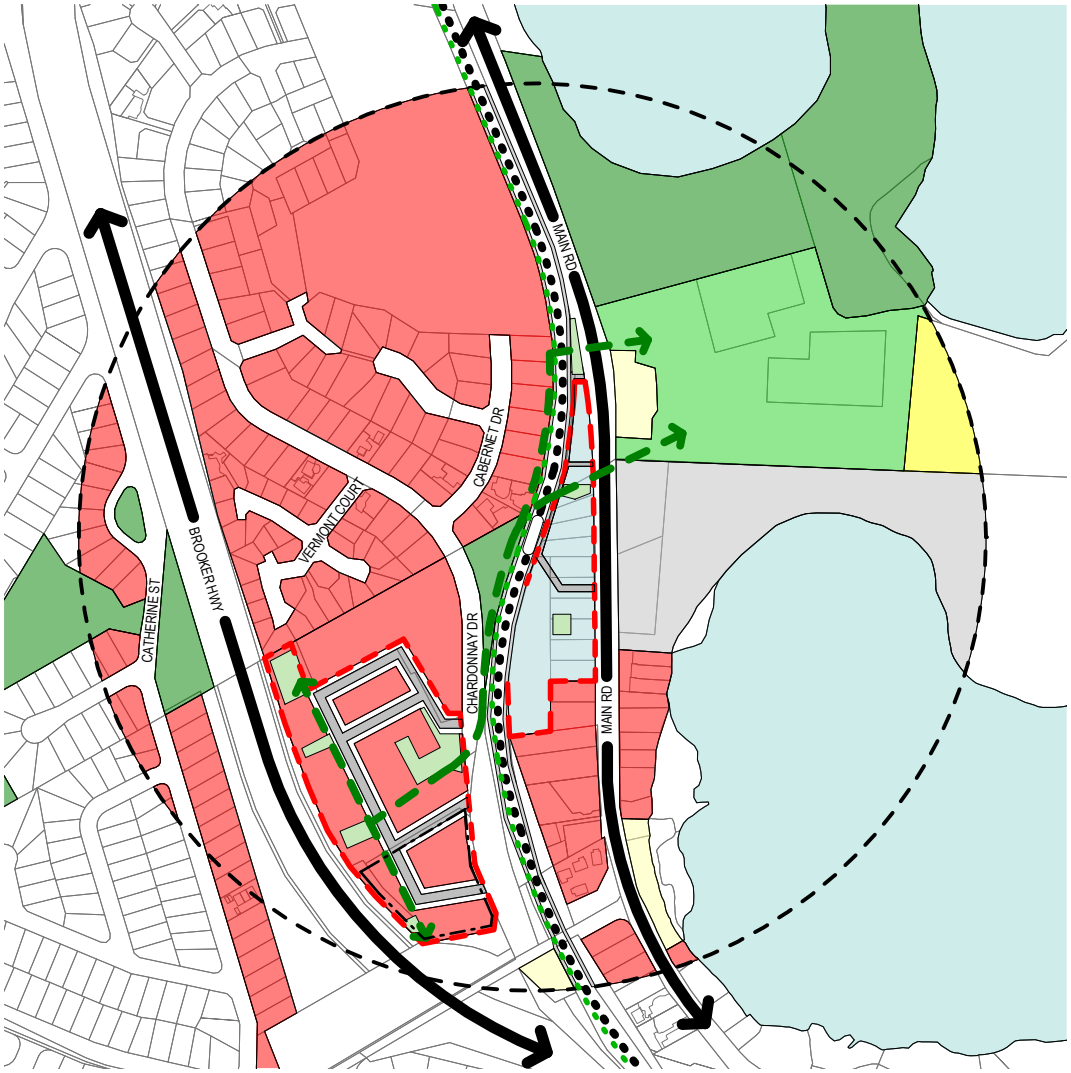


Figure 6-7 Berriedale Massing

Berriedale Massing Schedule	
Land Use	**Gross Floor Area**
Commercial	2,130m2
Hotel	1,850m2
Residential	34,180m2
Retail	1,267m2

MONA has positioned Berriedale to be a vibrant, cultural heart – a must-see tourist destination featuring the best of Tasmania: food, wine and art.



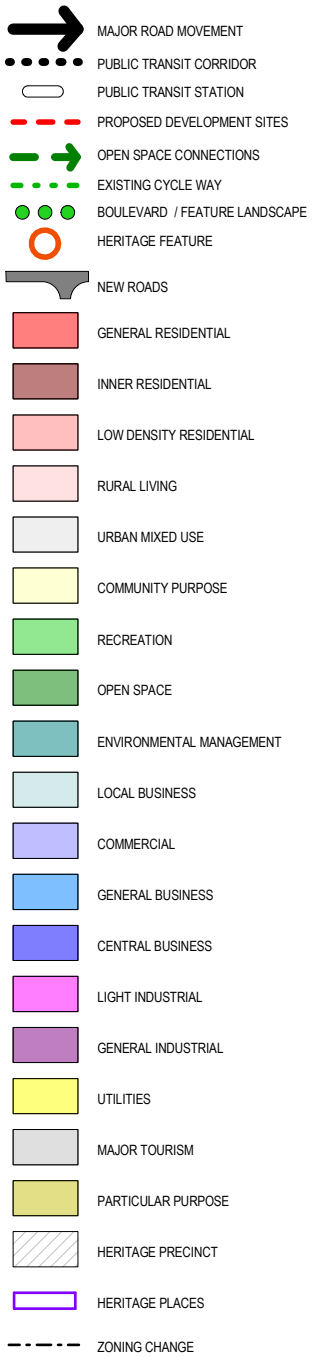
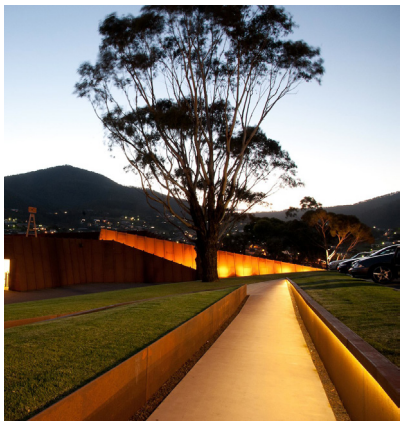


Figure 6-8 Berriedale Structure Plan - Proposed Zoning

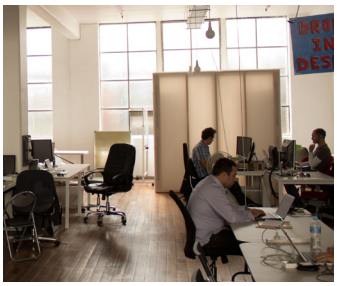
Characteristics

- Residential village with modern built form to reinforce the creative character and nearby MONA, featuring a new civic space at its heart
- Berriedale will be an art, craft and cultural precinct designed to encourage cultural activities and events, an attractor for retail to showcase local food and wine and hub for street life, performances, temporary art, creative industries and boutique small businesses
- The inclusion of a hotel and art hub encourages the organic growth of a cultural precinct, home to students, visitors, artists and entrepreneurs, resulting in job opportunities.
- Civic space provides an intimate and attractive pedestrian environment, strategically located for gathering and events

Berriedale Visualisation: Looking west toward the station upon leaving MONA, towards the new civic space and hotel






Berriedale Proposed Character Imagery

6.3 Secondary Precincts

6.3.1 Derwent Park

Built Form

- Generally single storey in built form with opportunities for 2 storey in future
- Rationalising the location and provision of buildings allows better visibility and movement from Derwent Park Road
- The provision of cafes and smaller retail fronting Derwent Park Road encourages shoppers to stay and enjoy the experience and attracts them to larger bulky good stores
- Encourage shared car parks between sites where car park lots appear to be in excess, taking up valuable street frontage space and allowing more retail opportunities
- Future development to reflect industrial urban heritage

Open Space and Movement

- Proximity to Main Road and Metro interchange - potential linkages between Corridor and Main Road Metro feeder services
- Limited direct access to open space, although using Corridor provides direct access to high quality open space areas
- Derwent Park Road will be a vibrant, green boulevard, with lush understorey mass planting and larger, deciduous trees, providing shade in summer and warmth in winter.
- The streetscape will be attractive and designed for comfort, with outdoor furniture at key nodes for gathering and to rest between shopping.

Jobs/Economy

- Derwent Park and environs an important employment hub
- Using Corridor provides access to Glenorchy CBD, and Hobart CBD in equal measure

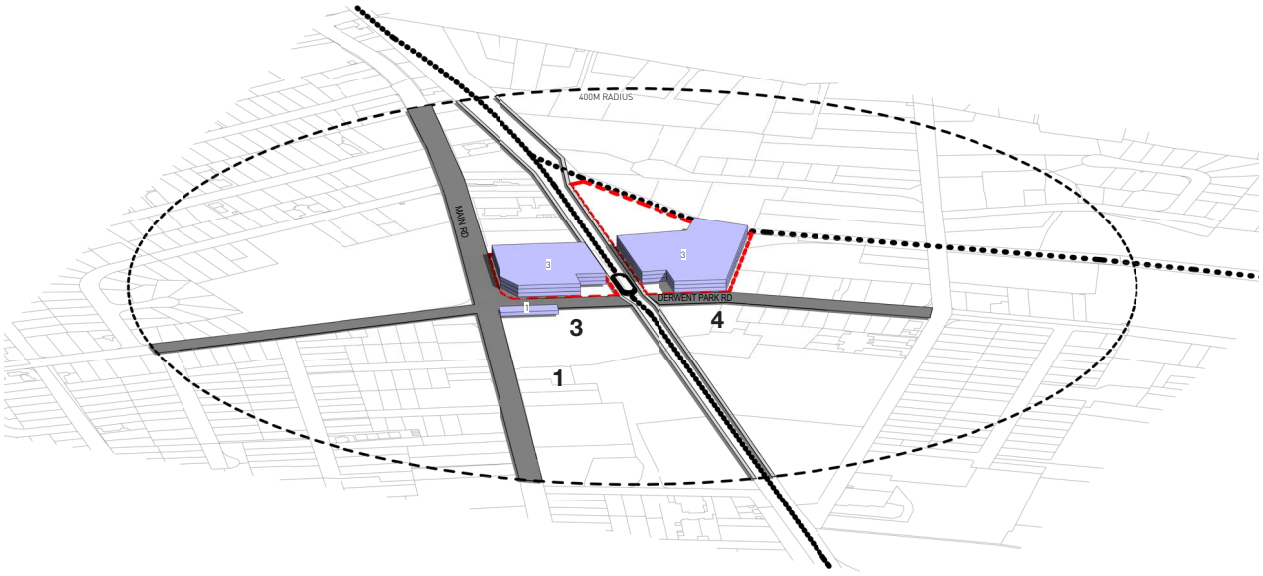


Figure 6-9 Derwent Park Massing

Derwent Park Massing Schedule	
Land Use	**Gross Floor Area**
Retail	44,715m2

Derwent Park Road will offer a destination shopping experience featuring large scale retail within a village setting.

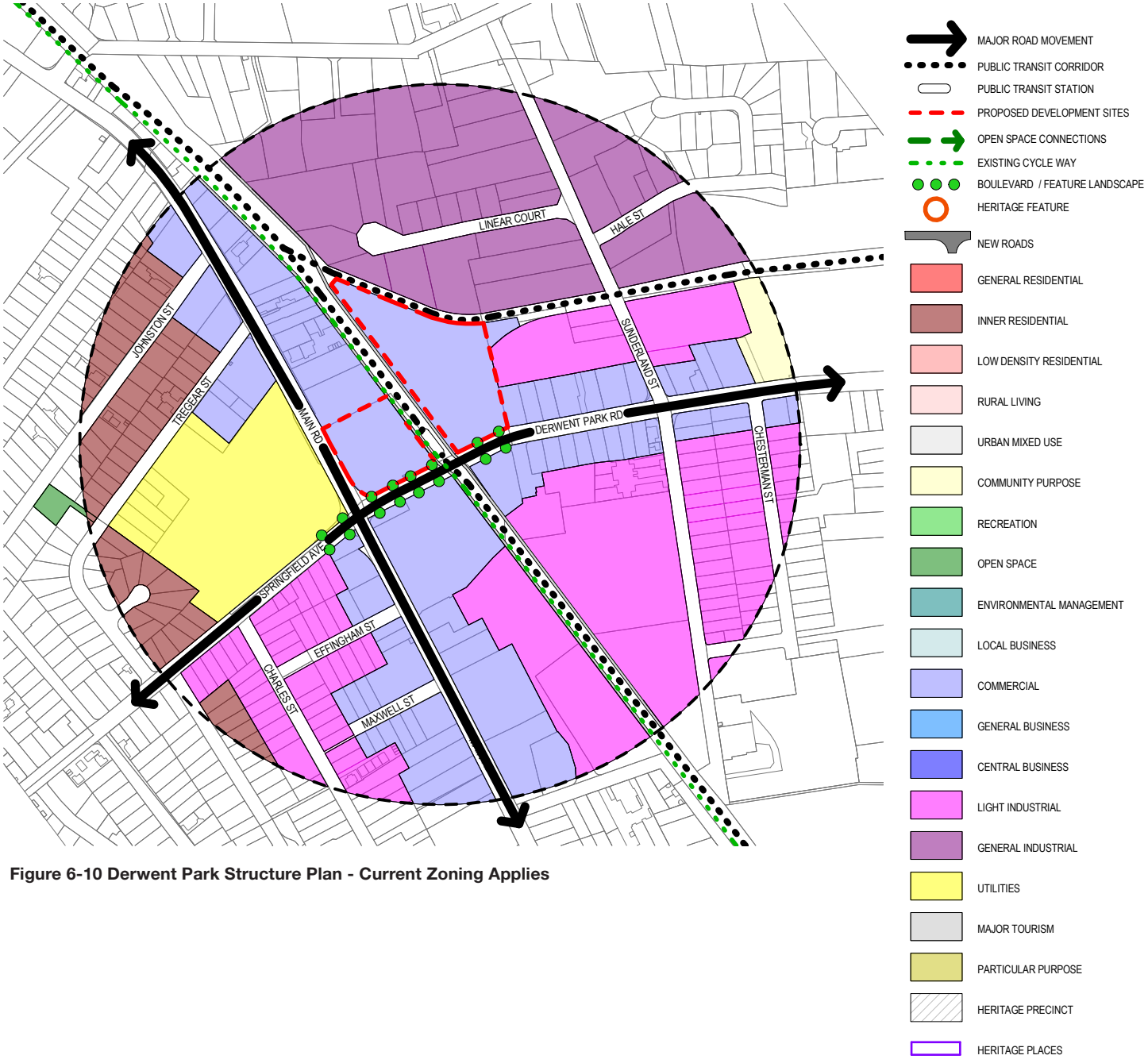


Figure 6-10 Derwent Park Structure Plan - Current Zoning Applies

Characteristics

- This precinct encourages a complete shopping experience – a destination for people travelling via the public transit corridor to select their homewares, have their items delivered at a time that suits them and enjoy the cafes and surrounds
- The provision of a unified, high quality and attractive streetscape will provide a consistent and attractive 'green' façade to the bulky goods sites, encouraging pedestrian movement between stores
- A potential retail destination as a 'Homemaker Centre' for Greater Hobart to rival Cambridge Park

Derwent Park Proposed Character Imagery

Derwent Park Proposed Character Imagery

6.3.2 Claremont

Built Form

- Claremont Shopping Centre prominent including adjacent retail shops and commercial properties
- Adjacent suburban housing interspersed with units and other forms of residential development
- Visual linkages to Cadbury complex

Open Space and Movement

- Village Green adjacent the retail area a significant space for community events
- Proximity to protected bay of River Derwent
- Connections with Metro bus services and shopping centre
- Intercity Cycleway visually prominent in this location

Jobs/Economy

- Claremont Shopping Centre and surrounding businesses a significant employment hub
- Proximity to many other business including Mondelez International (formerly Cadbury), Derwent Waters retirement complex, Windermere Primary School, Claremont College, Claremont Golf Club and related tourism opportunities to name a few

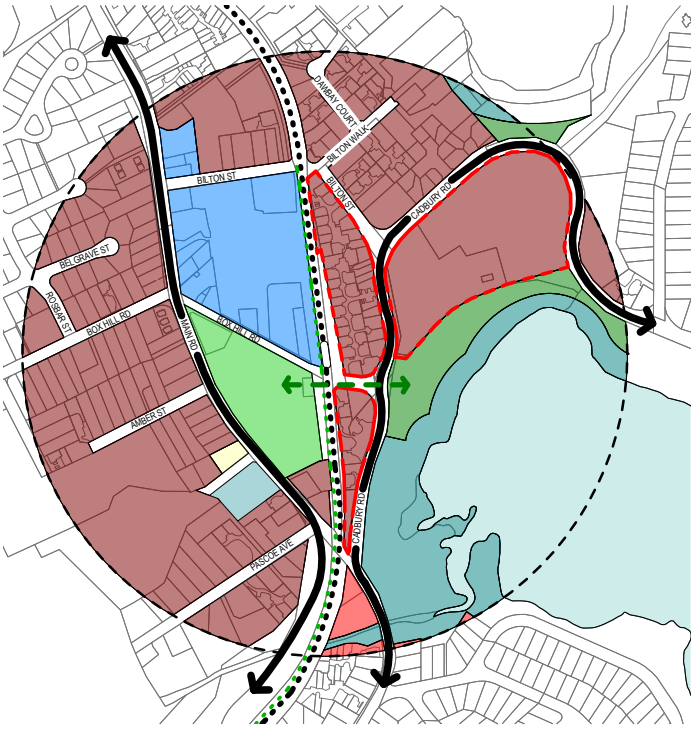
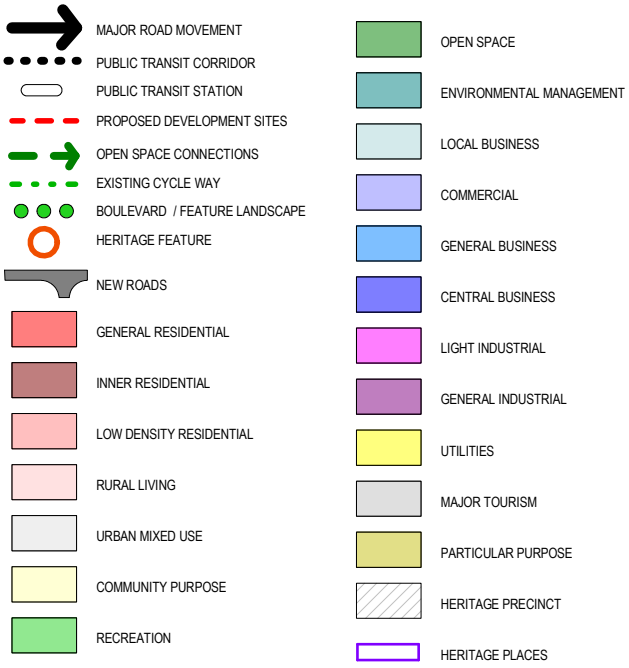


Figure 6-11 Claremont Structure Plan - Current Zoning Applies



6.4 Others

6.4.1 Hobart Central

Built Form

- The primary focus for a wide range of business, professional, retail, civic and community, tourist and visitor facilities within a major centre serving the metropolitan region. The built form is high density although with a streetscape that respects the historic cultural significance of the place.

Open Space and Movement

- Intense pedestrian activity encouraged at ground level supports a network of arcades and through-site links characterised by shop windows, displays, street art and public amenity spaces.
- Franklin Square and its fringing civic and public buildings provides a high quality space that is safe, comfortable and enjoyable for workers, residents and visitors alike who use the city.

Jobs/Economy

- Hobart is the primary activity centre for Tasmania, the Southern Region and the Greater Hobart metropolitan area.
- It is the main focus for jobs in the retail, commercial, administrative, community, and entertainment sectors of the economy, and significant to the economy of the region and State.

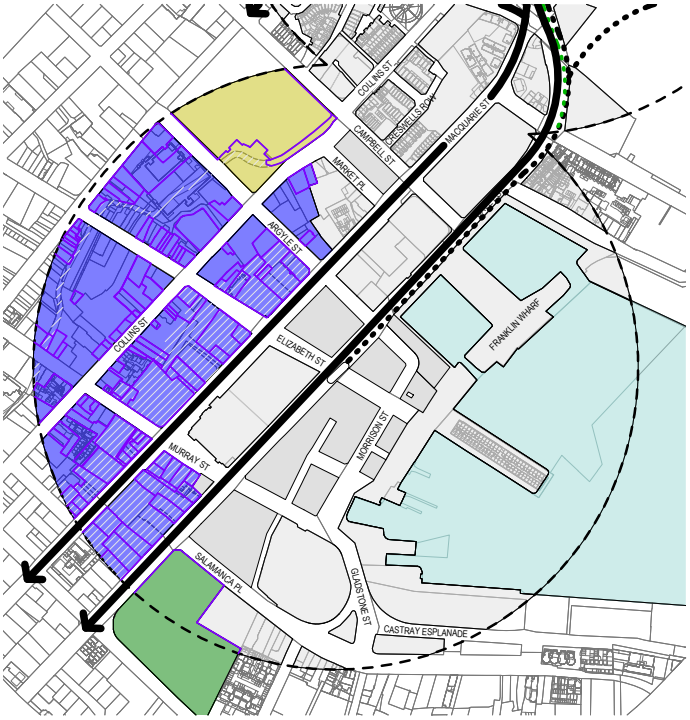


Figure 6-12 Hobart Central Structure Plan - Current Zoning Applies

6.4.2 Macquarie Point

Built Form

- Articulated in Masterplan "New Territory for Old Ground"
- Mixed use precinct with retail, commercial, tourist, residential uses accommodated in a variety of buildings across the site
- A 'neighbourhood feel' to be created

Open Space and Movement

- High levels of accessibility to open space, recreation uses and the River Derwent
- Masterplan makes provision for Corridor on edge of precinct linking to Davey Street and CBD
- Important link to northern communities wishing to access new Mac Point development and to move people from CBD to the site

Jobs/Economy

- If developed as planned Masterplan will deliver significant new investment and job opportunities

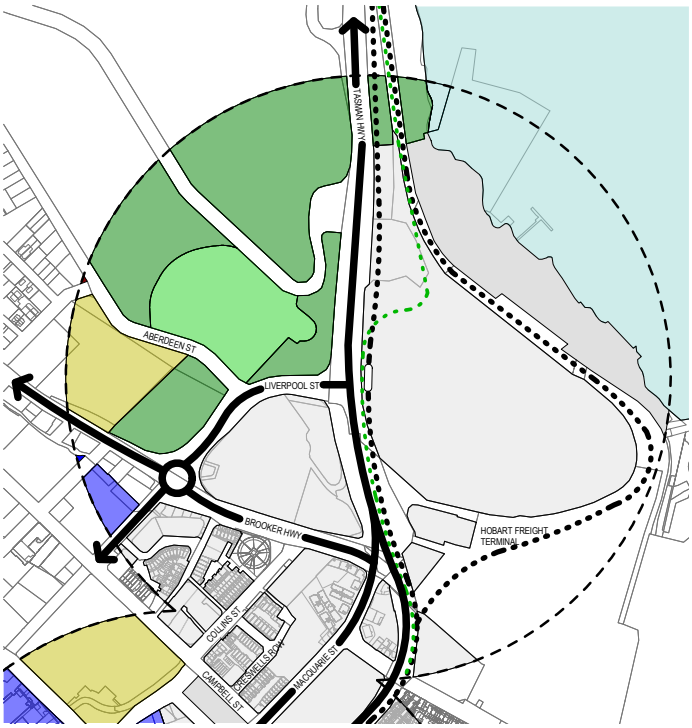


Figure 6-13: Macquarie Point Structure Plan - Current Zoning Applies

6.4.3 Royal Tasmanian Botanical Gardens

Built Form

- Derived by proximity to Royal Tasmanian Botanical Gardens (RTGB)
- Experiential destination with station design to reinforce experience

Open Space and Movement

- RTBG setting to potentially extend to foreshore station location
- Potential for Corridor/Water transport interaction
- Domain Highway could potentially be undergrounded for a short section to allow free pedestrian movement

Jobs/Economy

- Additional patronage of RTBG

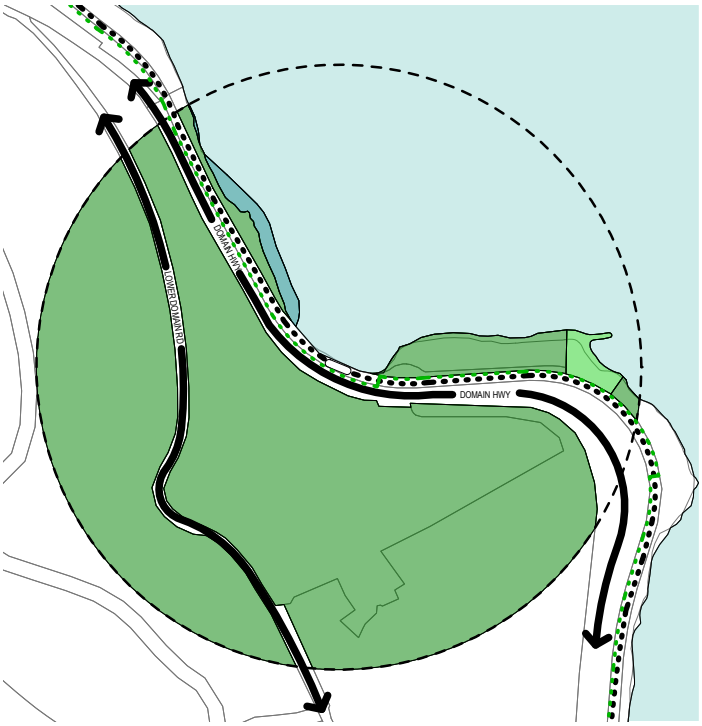
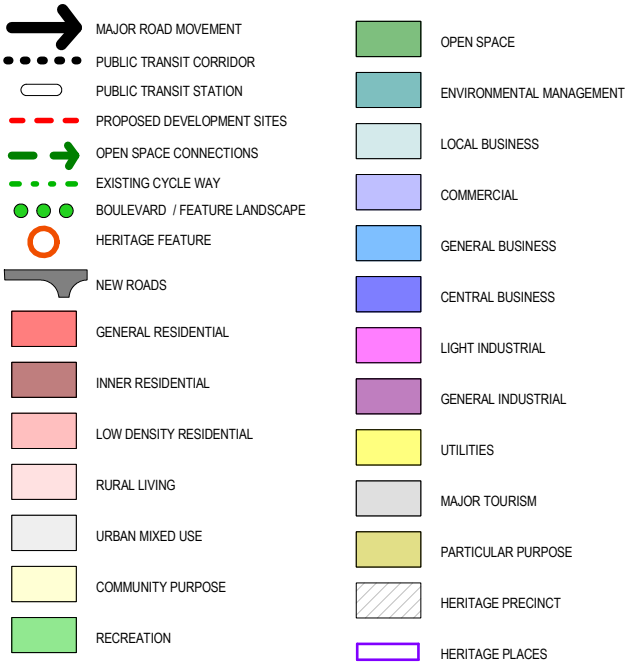


Figure 6-14 Royal Tasmanian Botanical Gardens Structure Plan - Current Zoning Applies



6.4.4 Brooker Connector

Built Form

- Longer term redevelopment opportunity
- Replacement of light industrial with high quality apartment living on elevated site with views over Montrose Bay

Open Space and Movement

- Close proximity of Corridor and Brooker Highway
- Access to high quality foreshore open space and amenities associated with GASP, DEC, Montrose Bay boating activities,with strengthened linkages to MONA planned

Jobs/Economy

- Proximity to Glenorchy CBD and its related community services
- Proximity to Elwick Park,Showgrounds and surrounding industrial areas at Derwent Park

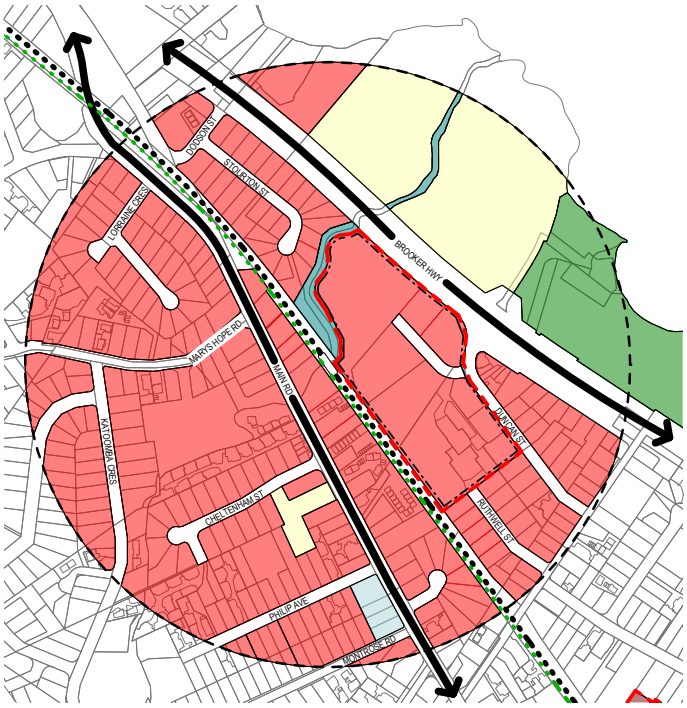


Figure 6-15 Brooker Connector Structure Plan - Proposed Zoning

6.4.5 Austins Ferry

Built Form

- Significant site adjacent to the River Derwent
- Opportunity to influence built form at this 'green field' site
- Proximity to waterfront, elevated landform, good orientation
- Proximity to light industrial land will require buffer areas to be developed and maintained
- Existing zoning may limit opportunities

Open Space and Movement

- Northern limits of the Corridor although future opportunity to extend into Brighton
- Proximity to natural areas including foreshore, Goulds Lagoon, River Derwent recreation opportunities
- Intercity Cycleway

Jobs/Economy

- Adjacent light industrial area, St Virgil's College and Whitestone Drive Industrial Estate nearby
- Future opportunities from growth of tourism/vineyards/ wine sector at Granton and Upper Derwent Valley

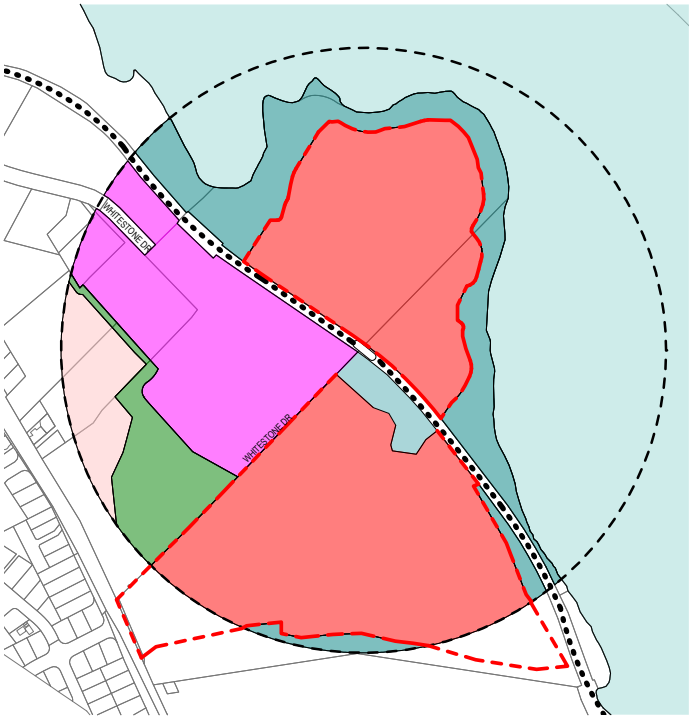
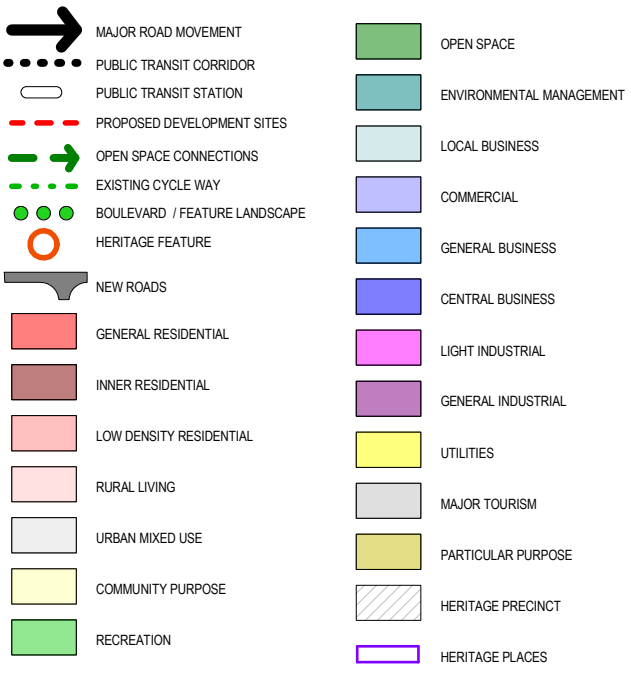


Figure 6-16 Austins Ferry Structure Plan - Current Zoning Applies



7. Economic Analysis - Key Findings

An economic analysis report was undertaken by GHD & KPMG to investigate a range of appropriate alternative funding methods that could be implemented to support the development of the Hobart to Glenorchy Transit Corridor to ease the funding burden off government. The key findings of that report (which is a separate report) are summarised in this Section. GHD also undertook a review of key economic indicators including most recent release data from Tasmanian Treasury. It is noted that Treasury does not provide economic forecasting to 2036, please refer to the demographic analysis for forecasting in Appendix A. The review is attached at Appendix B to this document.

7.1 Funding and project delivery

Hobart has a relatively high dispersed population base with growth predominantly realised on fringes of the city. This fact, coupled with low quantity, quality and price of public transport services has meant that car ownership and use within Hobart is among the highest in Australia.

Steady growth in population following these trends will likely have a major impact on the social welfare, living standards and the economic performance of businesses within the region.

The Hobart and Glenorchy City Councils are undertaking a range of studies to look at supply of land, market factors and supporting policy settings that could support further infill development within the city corridor.

The Glenorchy to Hobart public transit corridor has been earmarked as a project to facilitate greater public transport use within Hobart to alleviate the ever expanding environmental footprint and related increasing cost of congestion facing the local community.

Furthermore, the project, if developed in conjunction with appropriate local government planning measures, has the opportunity to act as a catalyst to support urban renewal within the local area surrounding the corridor.

While the project has been shown to present a range of economic and social benefits to the local community, proponents of the project have sought to analyse how alternative beneficiaries, including local residents, businesses and all levels of government can contribute to the upfront capital costs.

7.2 Commercial project delivery

To support the delivery of the project, Governments can also consider traditional forms of funding and financing associated with the preferred project option(s) such as:

- Fare-box revenues (which may be considered a more traditional form of value sharing since the direct beneficiary of the service contributes most to its funding); and
- Private financing.

In respect of the above funding and financing options, the key factors are the following:

- The likely level of patronage associated with the project option(s);
- The potential pricing that users are willing to pay; and
- The consequent level of revenue that may be generated from farebox revenue, which may be hypothecated in part to private sector investors to defray infrastructure costs.
- From an investment perspective, whether Government funded or financed in part or fully by the private sector, the project over the lease/ownership period will have to provide a commercial rate of return. If the project is not structured in an economically efficient manner there would be the potential for funding shortfalls (or alternately windfall gains) to result in commercial and project structures that do not represent best value for money to the local authorities of the State and are, therefore, not in the public interest. In terms of potential private financing options, these could include; equity returns, debt credit margins and covenants and potential liabilities to be accepted by Government (e.g. termination liabilities under different termination scenarios).
- A key consideration for the delivery of the project will be the alternative forms of financing and funding investment options to support its procurement. While the analysis of alternative financing and delivery options are outside the scope of this evaluation, it is important to note the interrelationship between the two which includes the timing and risk profile of revenue and liability cashflows.

Packaging: different elements of the preferred project option(s) could be separate or integrated as part of different procurement processes. This may include a range of bundled or separate construction and service delivery contracts.

Contestability: in respect of each package identified above, the project sponsor could consider the extent to which there is an a priori case for the investment or service delivery to be undertaken by the public sector or whether the package should be open to competition between public/private sector organisations.

Contracting: for each package procured, the project sponsor can consider the optimal contracting approach, having regard to the optimal commercial risk allocation associated with the construction works and/or services.

7.3 Project funding

Regardless of the financing and commercial model applied to support the delivery of an infrastructure project such as the Glenorchy to Hobart public transit corridor, funding from external sources will be required to support its feasibility. Historically this investment has been provided by general Government funding sources.

In an ever increasing financially constrained budget environment, governments are looking at alternative mechanisms to assist the funding requirements of infrastructure projects.

Value Capture is the process of capturing positive externalities, or indirect benefits which are a direct outcome of infrastructure projects (also known as value uplift).

Value capture instruments use the uplift in land values as a result of an infrastructure projects to financially contribute to its upfront costs. The system uses a beneficiaries pay principle which allows for greater allocative efficiencies.

7.4 Indirect land use beneficiary funding sources

The proposed development of the Hobart rapid transit could bring a range of economic and social amenity and benefits to the neighbouring communities. These benefits have the potential to directly result in an increase in the demand for property in close proximity to the station, as a result of improving the amenity of the local area as well as improving the ease and time to access main centres.

A range of Value Capture mechanisms have been developed, analysed and implemented internationally to allow the government to extract some additional income over and above

that which would be obtained through its existing tax base (as outlined above).

Business Rates Supplement (BRS)

A business rate supplement (BRS), which has most notably been applied as a funding mechanism by the London Council to fund CrossRail, is an increase in the general rates payable on businesses of a certain size and scale within a specified area/ zone.

Such a mechanism would allow Local Government to target the funding requirement on businesses that have a direct and tangible benefit as a result of the project over an extended period of time.

In the case of the Hobart to Glenorchy Rapid Transit corridor, the businesses which would benefit most from the project, are also those which are able to provide a level of funding support (i.e. those within the Hobart CBD).

As can be seen in Figure 7 1, the majority of funds are captured by the top 10% of businesses, meaning safety nets could be applied to business which may not be able to afford additional rates.

There are, however, certain issues which arise from the implantation of this type of value capture mechanism. When developing the mechanism, it is important from a public policy perspective that this financial burden should only be placed on those businesses that were large enough to be able to reasonably absorb the cost with minimal economic growth impact. Furthermore, it is important that stakeholders fully understand the financial benefits, the project will generate for their business and that these benefits are over and above the addition tax they would incur.

The figure below highlights the Present Value (PV) of funding captured through the implantation of a BRS over a 20-year period. A 2.5% rate applied to the top 10% of rate payers in the Hobart LGA which are within 800m of the station capture $5m, while a 5% rate applied to the whole LGA raises $15m. The figure shows significantly less funds are captured within the Glenorchy LGA.

Figure 7-1 Hobart & Glenorchy BRS - PV

Source: GHD

Special Local Government Rates - households

Currently, across a number of States in Australia local councils can apply special rates on top of council rates in special circumstances (across its entire rates base and/or within a defined area). However, using these rates for value capture will require certain changes to legislation.

The Gold Coast City Council has recently implemented a Broad-Based Transport Improvement Levy (a type of local government rate), in conjunction with a range of other measures including an increase in fares, to support the funding requirement of the Gold Coast Light Rail.

Property taxes are also commonly used in North America as a value capturing device. It is determined using the combined value of the land and the improvements on a given parcel of land.

One of the main benefits arising from the implementation of a special local government rate, is that a small rate applied over an entire local government area (LGA) can generate significant contributions. For example, a 2.5% rate applied to the entire Hobart and Glenorchy LGA can capture $13m and $14m respectively (as seen in Figure 7 2).

However, a rate applied to the entire LGA is independent of increases in value to the relevant properties and therefore the landowners close to the new stations contributed the same as landowners with smaller increases in land value. This is considered suboptimal from a social equality perspective.

Furthermore, current local government legislation only allows the rate to be implemented for a maximum of five years and the rate must be applied to the entire municipal area. So whilst the local government legislation allows for the introduction of special rates to be applied, using these revenues as a value capture mechanism to directly support a long term infrastructure project will require legislative changes.

The figure below, represents the PV of funding which can be captured through the implementation of a special government rate over a 20-year analysis period. The figure highlights the significant increase in available funds which occur when the rate is applied across the entire LGA. This is due to the fact that majority of residential properties exist outside of the 800m radius from the proposed stations.

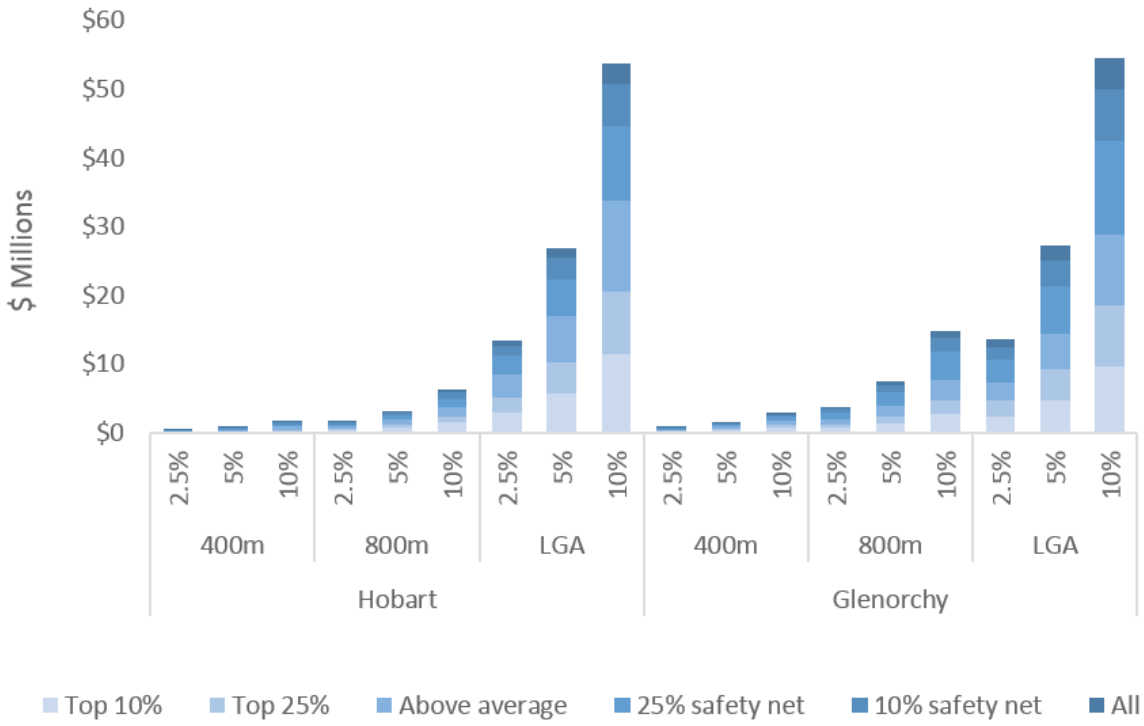


Figure 7-2 Hobart & Glenorchy Special Local Government Rates - PV

Source: GHD

Special interest groups - visitor/hotel tax

One such mechanism may be to impose a special tax upon visitors to the local area. Such a tax could include a rate imposed upon hotels/accommodation providers.

Hotel occupancy taxes have been used as a value capture revenue source to support the development of infrastructure projects predominately in larger cities in North America which are subject to significant amounts of tourism.

Such a mechanism could be imposed upon this beneficiary group either by a direct tax (i.e. directly on accommodation charges) or indirectly through additional rates imposed upon Hotel and accommodation businesses.

However, it must be taken into account whether this additional rate, regardless of its dollar value, would have a material impact upon visitors' willingness to come to Hobart for leisure holiday purposes and the potential impact of using traditional holiday accommodation providers relative to alternative providers (e.g. Airbnb).

such a tax may be seen as politically beneficial given that it does not impose directly on the pocket of its constituents. Although it is likely that such a tax would invariably impose a marginal economic cost on an important local industry.

Figure 7 3 represents the quantum of funds which can be raised through the application of a hotel rate, while Figure 7 4 indicates the quantum of funds captured through the implementation of a visitor tax.

The first figure indicates that the majority of funds are captured by the top 10% of hotel rate payers, particularly within the Hobart LGA. The lack of hotels located in the Glenorchy region, however means significantly less funds can be captured within this region.

In terms of the total potential quantum of funds available, a hotel rate supplement captures significantly less than both a BRS or special local government rate (e.g. a 5% rate applied to both Hobart and Glenorchy over a 30-year period raises approximately $3 million). Significantly more funds can be captured through a tax applied per visitor or visitor night (e.g. a $1 visitor night tax can capture $50 million in funds over a 30-year period) as can be seen in Figure 7 4

Figure 7-3 Hobart & Glenorchy Hotel Rate - PV

Source: GHD

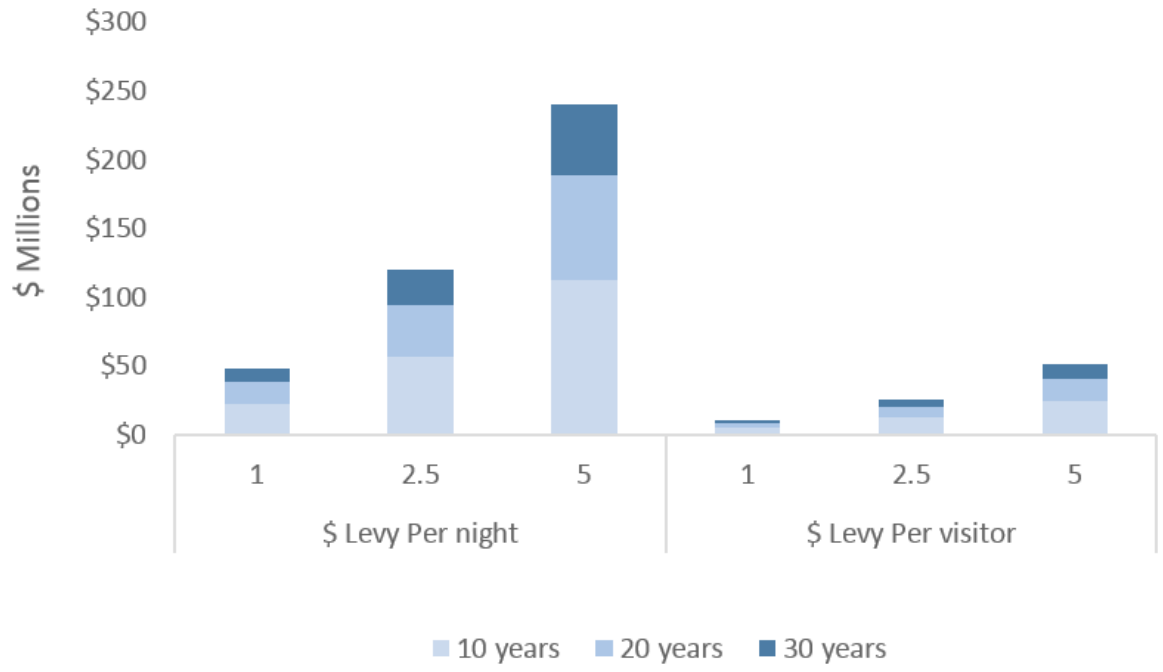


Figure 7-4 Hobart Visitor Tax - PV

Source: GHD

7.5 Project specific funding sources

Furthermore, the project is likely to facilitate development within the wider region which could be another source of revenue to support the funding need. Governments have the opportunity to raise revenues through specific contractual agreements with potential developers. Governments can seek additional headwork charges above which is ordinarily applied (which is zero in the case of Hobart) from developers by varying existing planning and zoning guidelines or through the direct sale of land attached to the corridor.

Voluntary Planning Agreements

Voluntary planning agreements may be a mechanism that relevant local governments could enact to support the funding of the Hobart transit corridor project.

Such a mechanism would be seeking additional funds, over and above that which are currently charged by Local Government on developers to support the funding of this public infrastructure.

Headwork charges are currently not applied to property developments across Tasmania. Furthermore, the mechanism may offset one of the major objectives of the project; to entice development to support urban regeneration within the city.

Sale of bonus Gross Floor Area (GFA)

Local Government's associated with this project may need to vary the existing/proposed planning guidelines so that additional development rights above existing zoning rights are sold to developers. This generally would result in an increase in upfront payment by developers through development contributions but also through ongoing rates payable.

Such a mechanism would only provide an opportunity for local government as a source of funding, where a developer could see the financial benefits associated with seeking relaxed planning provision. Furthermore, the revenue stream realised by local government would be dependent upon when the development would occur, and thus is uncertain.

There is also a risk that an LGA may provide contracts to those parties that are paying for access rather than that which provides the greatest benefit to the community, even though the project and the benefits may not be realised without the funding contribution.

The figure below highlights that significantly more funding is captured through the sale of residential bonus GFA than commercial bonus GFA, particularly in the Glenorchy LGA. However, this is largely due to the difficulty in quantifying available bonus gross floor area within the commercial sector. A maximum of $5 million could be realised within the Glenorchy LGA, and $1 million within Hobart when applied to residential properties only and over a 30-year period.

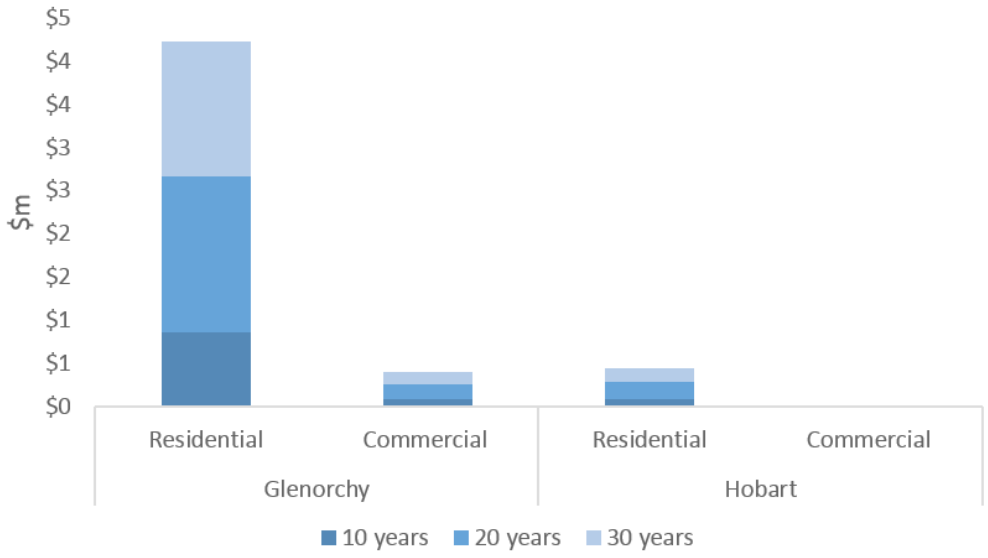


Figure 7-5 Hobart & Glenorchy Sale of Bonus GFA - PV
Source: GHD

Sale or Lease of surplus development sites

Finally, Local government's associated with the project may be able to sell, lease or undertake joint venture arrangements with developers over land owned by government within the project corridor to effectively reduce the funding requirement for the project.

Such a mechanism would allow developers of the project to seek additional returns through either the use and/or sale of such land which would ultimately reduce the net funding burden associated to government.

One of the main benefits for using this type of funding mechanism is there is a potential to use it to provide an immediate upfront funding option. However, it is expected that the government would prefer to optimise the release of the land to maximise the value that government receives from its sale, which would mean the timing of the sale of land is inherently uncertain.

Local governments will also have to weigh up the public policy position of any sale of land with potential adverse community impacts (i.e. the potential relocation of the Friends school oval) and also relative to what terms and stipulations it wishes to impose on any future development (i.e. social housing, open spaces etc.).

The table below shows the number of properties in use/vacant/other which are owned by the Hobart and Glenorchy city councils, however very few are currently deemed to be vacant and/or not in use. It was estimated that the Hobart and Glenorchy City Councils could realise up to $6.5 m and $8.5 m respectively from the sale of this land.

	Number of properties		Sum of AAV of properties	
	400 m	401 - 800 m	400 m	401 - 800 m
Hobart LGA				
In use	10	11	1,193,490	1,035,980
Other	0	81	0	1,007,290
Glenorchy LGA				
In Use	0	0	0	0
Vacant	1	0	2,600	0
Other	99	80	513,900	272,080

Table 7-6 Funding Source - Property Sales
Source: GHD

Note: Other properties may include vacant and in use properties, Only 5 of the 81 HCC properties defined as "other" have accessible AVVs, Only 21 of the 179 GCC properties defined as "other" have accessible AVVs

7.6 Value Capture

Governments are under increasing financial pressure to build and maintain an ever expanding infrastructure base. Combined with increasing community expectations for better services, the decline in availability of traditional funding sources has resulted in the consideration of alternative funding mechanisms.

A key focus over recent years has been the identification of principal beneficiaries, and the allocation of the funding burden to these beneficiaries. The user pays principal is, however, relatively narrow in capturing the realised benefits accruing to the wider economy. The principal of value capture seeks to expand the recovery of elements of the realised benefits beyond direct user pays principals.

There are three main categories of opportunity for value capture uplift:

1. Recovery of a portion of "unearned benefits". This involves the public sector levying a proportion of the increase in unimproved capital value of privately held land that can be attributed to the infrastructure provision (the so called "unearned benefits"). The levy applied can take a number of forms, such as a betterment tax applied at the time of the value uplift or a transaction tax applied at the time of property transaction and so on.

2. Tax Incremental Funding (TIF), which recognises the economic growth and development enabled by the infrastructure provision. Increased economic activity resulting from the infrastructure provision results in increased broad based tax revenues to the public sector. This "extra" revenue can be identified and hypothecated as a funding stream for the infrastructure. In the long term, once the infrastructure asset financing has been fully funded, the "extra" tax base reverts to general revue resulting in a sustained and enhanced tax base for government.

3. Joint development opportunities. Value capture opportunities also enable the public and private sectors to jointly undertake development opportunities that would not otherwise be viable. Value capture methodologies are long term funding streams that extend well beyond the political cycle. Hence they are relatively stable streams, and therefore can be considered sustainable.

Although the theory of value capture is relatively straight forward, its practical application remains problematic. The most significant difficulties yet to be resolved focus around valuing the uplift, and the timing of the application of the payment stream. Some of these difficulties include:

- Appropriately applying the payment stream mechanism to coincide with the accrual of the value change. International experience indicates that best results are achieved when the infrastructure operating model and the property development model are fully integrated, and within a high density urban environment. Failure to fully integrate will potentially result in a weakened symbiotic relationship between the infrastructure asset and land values and a probable increase in difficulty of delivering and measuring benefits. Similarly, application of the methodologies in low density and non-urban areas may limit realisable benefits. Accessing unearned benefits can be implemented in a number of forms available to the local and state government.
- Hypothecated GST and CGT increases. As this would require federal government commitment, which seems unlikely, this is not a viable alternative.
- Stamp duty. The state government could impose an extra duty on properties in an identified corridor.
- Payroll and property taxes. State government could impose an incremental charge on businesses and properties in an identified area.
- Rates. A local government incremental rate could be imposed on properties in a defined area.
- Developer contributions. A portion of increased contributions can be hypothecated to the infrastructure project.
- Planning agreements, this can be used as an alternative to developer contributions.
- "Special" rates, usually applied temporarily. This measure has been used on projects such as the Gold Coast Light Rail.
- Disproportionate charges such as Hotel taxes.
- Disposal of government owned land which has increased in value. This is particularly applicable for future development sites.

Joint venture opportunities are more difficult to define, but should be considered early in the planning process. Anything that adds value to the infrastructure project should be considered, such as provision of land where available.

In considering which if any of these alternatives might be appropriate for this corridor, it is vital to ensure that the funding arrangements are aligned with the financing agreement. For example, under a PPP financing agreement, a "special" rate can provide the sustainable income stream required whereas an upfront funding source such as government land disposal may not offer the sustainability required for the PPP financing agreement.

Additionally, it is recommended that government assess the equity and efficiency; community acceptance; stability of funding stream and quantum of funds accessible from each alternative.

The initial assessment of the opportunities available to the Hobart to Glenorchy Corridor concluded that value uplift was a potentially suitable funding stream. Although the impacted corridor has relatively low urban density by international standards, the density by regional standards is high. The corridor could potentially enable accelerated residential and commercial activity both along the corridor, and at each end. Due to the urban density along the corridor, however, it is likely that any value uplift methodology will need to be shared across a wide economic area (incorporating residential, developer and commercial participants), rather than being contained locally, to stabilise the funding stream for the life of the project financing. The immediate opportunities to consider include accessing the unearned benefits and TIF.

7.7 Project Scope

The evaluation undertaken presents the findings of a desk-top investigation on a range of land based value capturing mechanisms that have been investigated and/or implemented internationally and aims to define and assess its potential implementation within the context of this project.

This report presents a range of alternative, in some cases mutually exclusive mechanisms that either the Local and/or State Government could implement to meet the funding requirement of the project.

This analysis did not consider the range of incremental tax returns as a result of project related additional economic activity was sufficient to meet various levels of government liability if it were to invest in this project.

8. Market Demand Analysis

A market demand analysis was undertaken to ensure that the urban renewal opportunities as identified in section 6 and economic analysis summarised in section 7 is consistent with the market demand along the transit corridor.

8.1 Overview

Knight Frank was engaged to undertake the following tasks:

— a high level market demand analysis based on the local property and valuation data as well as industry knowledge and project experience.

— Site specific analysis for up to 6 sites

— Land value impact analysis (up to 6 sites).

— Focussed engagement to understand potential private sector investment interest along the public transit corridor (results of which are to be provided once complete).

The findings of this analysis are outlined in this Section.

8.2 Land supply and demand along the transit corridor

Residential

Residential land supply is constrained from the City through to Glenorchy within a 400 metre distance of the proposed transit line. Thereafter, from Rosetta through to Austins Ferry, despite lower levels of land supply within the 400 metre distance of the transit corridor, there is less demand. The release or supply of suitable development land within 400 metres of the transit corridor is likely to prosper from the current and expected future success of the residential real estate market between the Hobart CBD through the inner northern suburbs and Moonah. The development of a transit corridor would accelerate and add to the success particularly for sites located between the CBD and Moonah.

The success (uptake and occupancy) of residential development near a transit corridor in Moonah (The Albert Road precinct) will be largely dependent on the ability to relocate and transform the light industrial uses and amalgamate sites to a suitable size for development. Appropriate development can capitalize on future expected housing price growth given the area is a suitable location for first home buyers that now cannot afford price levels in the inner suburbs of Hobart. Development can tap into existing retail amenity provided in Moonah.

Current and proposed land supply is expected to adequately cater for future needs from Claremont and north. If a suitable development site becomes available from Claremont to the north that is within convenient walking distance of the transit corridor, a development will benefit but premium to property value will not be immediately correlated to the transit corridor. Employment and population growth will continue to be the catalyst in these areas and ongoing land supply outside the 400 metre distance of the corridor will remain competitive.

Commercial (Incorporating Retail)

Demand in this sector is purely an economic consideration. Not dissimilar to all demand driven projects in greater Hobart, the transit corridor would be no different. The ability to drive commercial and/or retail developments is a factor of feasibility, catchment demographics and moving annual turnover (MAT) along the catchments through which the transit corridor passes. Unless there is specific known or identifiable site demand with occupancy pre-commitments there will be no developer or investor demand in the light of supply of office, industrial and retail space available in stronger retail hierarchy areas of greater Hobart. Conversations have suggested an opportunity to develop a large format retail (Homemaker) centre in Derwent Park. A homemaker centre will of course be subject to minimum size catchment and cross correlation to Cambridge Park (Hobart is a single population catchment for one homemaker centre) and minimum required traffic count. A full line homemaker centre is unlikely to be justified but a small smaller scale cluster may be viable.

Convenience shopping including café food businesses and neighbourhood grocery stores can complement larger scale projects or value add to existing communities whose local area convenience needs are not adequately met (New Town area along transit corridor for example

8.3 Local Residential Demand Data

Investors are an important contributor to private capital in the housing market. The participation this category of investor contributes to the housing sector has been measured by the REIT in selected areas. The volume of sales is taken from the LIST. The table below 'Non primary residences sold pa FY16' demonstrates the contribution of investors in selected housing areas identified as relevant to the areas of the transit corridor. The contribution by investors is considered an avenue of opportunity in broad terms to a likely target market for housing development along the transit corridor.

Non primary residences sold pa FY16			
Glenorchy	# sales	% Investor	# investor
2	632	16.20%	102
5b	193	18.20%	35
Hobart			
4	272	10.70%	29
5a	208	25.00%	52

Age Profile Groups

2 Glenorchy, Derwent Park, Goodwood, Montrose, Rosetta, Berriedale, Chigwell, Claremont, Austins Ferry

4 City, West Hobart, North Hobart, Mt Stuart

5a New Town, Lenah Valley

5b Moonah, Lutana, East Risdon

Table 8-1 Non Primary Residences Sold, 2016
Source: The LIST

The mix of housing types and number of sales by category provides a greater Hobart snapshot of the current preferred housing types in the residential property market. The following data has therefore been extracted to provide guidance in modelling the mix of housing along the transit corridor and provide developers and property owners with a useful guide to the likely mix that would suit the entire transit corridor.

Housing Type Distribution by Sale (category HOUSE) for Greater Hobart Area					
Cannot obtain more detailed micro analsysis on suburbs					
Housing Type	Median	# Sold		Sqm	# bedrooms
Houses	$379,344	208	69.6%	110	3
Flats	$271,699	1	0.3%	65	1
Units	$276,604	63	21.1%	70	2
Town Houses	$425,833	6	2.0%	105	2
Apartments	$513,792	4	1.3%	105	2
Land	$172,646	17	5.7%		
		299	100.0%		

Table 8-2 Housing Type Distribustion by Sale, Greater Hobart Area
Source: REIT Tasmanian Property Report 2016, Building Size & Bedroom Estimates by KF (for 12 months to March 2016)

Housing absorption data has been compiled from REIT (days on market) and the LIST. Average days on market is the average time taken to sell a property within the area or precinct. There are some distinct and expected differences in selling periods between inner and outer suburbs.

Developers are interested in the average days on market as a guide to likely overall development project selling period. The total number of sales indicates the cap or ceiling on number of expected suburb sales that a given development is likely to work within.

Abosrption Analysis 12 months to 29 February 2016			
Glenorchy Houses	total sales	Ave days on Mkt	
Moonah, Derwent Park	127	35	(Area 5b)
Glenorchy	158	67	(Area 2)
Montrose, Rosetta , Berriedal	138		
Claremont, Austins Ferry	152		
Glenorchy Units			
Moonah, Derwent Park	24	56	(Area 5b)
Glenorchy	66	86	(Area 2)
Montrose, Rosetta , Berriedal	45	65	
Claremont, Austins Ferry	65		
Hobart Houses			
New Town, Lenah Valley	178	28	(Area 5a)
Hobart Units			
New Town, Lenah Valley	63	20	(Area 5a)

Table 8-3 Absorption Analysis, Feb 2015-2016
Source: The LIST & REIT

8.4 Transit Corridor Station Precincts

Bell Road, New Town

This site justifies higher density (multi-level) design and configuration. Suitably located inner suburban area with access to abundant public space. Potentially 2 or 3 local area convenience businesses (food/cafe/smaller grocer) are likely to be viable. There is currently a low level provision. Market acceptance of higher density living in this location is favourable with provision for onsite parking. Opportunity exists to still profit from development with basement/ground level parking that will provide greater levels of green (common) space. Indicative absorption rates up to 45 dwellings/units p.a. (approx 4 years supply).

Albert Road, Moonah

The concept is likely to be gain acceptance subject to market responsive urban design with staging over a longer term basis. The current market has not experienced the proposed density. Development up to the extent of 4 storey apartment buildings is not going to be feasible at expected take up (absorption). The concept adds considerably to unit supply. The key driver will be access to employment or education along the corridor, including the CBD. Retail uses facing Albert Rd are acceptable. Market acceptance of higher density living in the private housing sector in this location is at pre-emergence stage at present. The scale of project will require suitable lead time and staging to absorb the supply it proposes. Indicative absorption rates up to 30 dwellings/units p.a. (30+ years supply).

Derwent Park Road Precinct

Provides an opportunity to consolidate large format retailing into a central point if suitable sites can be adhered. Demand will be driven by the desire for a central point for this type of retailing compared to the current single retailer destination locations scattered around the area. Single level retail with the convenience of drive up parking either at front or at roof level. Under croft (at ground beneath retail area and basement parking is unlikely to be feasible. Upper level retailing will not be market acceptable. Competitive demand analysis required. Minimum population in primary and secondary catchment might be line ball. A transit corridor will not drive the response to opportunity. All large format retailing needs access to adequate parking. This form of retailing is not influenced by public transport. Indicative absorption rates are influenced by anchor tenant commitments. Otherwise a static demand situation for retail space absorption.

97a Grove Road, Glenorchy

The design at medium density levels is an adequate solution to expected market acceptable. Good levels of natural light this location and level/flat sites are easier to develop. Overall there is an adequate mix of housing types in the proposal and density responds adequately to current market expectations. The extent of two level townhouses around the boundaries will need to be staged over time due to larger scale volume difference of product in local market. Market acceptance of medium density living in this location expected to be positive over time. The scale of project will require long lead time and staging to absorb the supply it proposes. Indicative absorption rates up to 20 dwellings/units p.a. (2 years supply).

McKays, 22 Wrights Avenue, Glenorchy

Northern section design at medium density levels is an adequate solution to expected market acceptability. Overall there is an adequate consideration of housing density given this is an infill area. Whilst untested, the proposal and density should respond adequately to current market expectations. The extent of three level Apartments in the centre will need to be weighed up against townhouse market acceptance but it is crucial it does not attempt to over densify and will need to be staged over time due to larger scale volume difference of product in local market. Only local area retail convenience (cafes, local grocer, bakery, etc) are likely to be viable. Risk of market failure to local area competitor shopping centres beyond this. Market acceptance of medium density living in this location expected to be positive over time. The scale of project will require long lead time and staging to absorb the supply it proposes. Large area of open space will be appealing to the market in the take up of housing. This may well result in a price premium with adequate connectivity. Indicative absorption rates up to 30 dwellings/units p.a.(25+ years supply).

Berriedale Precinct

The existing hotel is subject to a long term lease to a profitable business. Dislocation and disruption will be a major challenge in the delivery of the massing proposal for the land between Main Rd and the rail line. The industrial and archive storage land precinct is considered a suitable location for a residential use. The density (massing) is a suitable response albeit to the maximum height the local area market will accept. Commercial space absorption expected to be low. The location is between two established retail precincts. The retail hierarchy adequately caters for expected future needs of the area. No other commercial demand is likely. Indicative absorption rates up to 35 dwellings/units p.a. (10+ years supply).

8.5 Private Investor Feedback

In order to ensure that the development options are realisable some targeted private investor engagement was undertaken via private developer ‘one on one’ discussion to gauge level of interest.

9. Implementation Plan

The purpose of this Section is to understand planning changes required to facilitate urban regeneration along the public transit corridor.

9.1 Overview

As highlighted in the "Infill development within Greater Hobart Stage 2 Report" prepared for the Southern Tasmanian Councils Authority (STCA) in 2013 the challenge of facilitating urban regeneration and increased residential density infill development is significant. Such development is often complex (multiple land owners, zonings, land use conflict), lengthy (approval processes) and costlier to the developer than greenfield development. This is evidenced by the housing market in Tasmania which is geared to greenfield with 85% of new dwellings in greenfield locations.

To tilt this growth to support urban regeneration projects, such as identified for the transit corridor, it is widely recognised that some form of government intervention is required to change existing policies and practices.

9.2 Demand and Supply Incentives

There are a number of strategies that can be implemented to make infill development and urban renewal more attractive. Those identified in the STCA background report included:

- Designate priority areas for renewal
- Undertake more detailed strategic and site based assessments
- Apply supply-side interventions
  - Increase number of opportunity sites for infill e.g. developer incentives for amalgamating sites such as bonus plot ratio; or enable compulsory acquisition such as NSW Growth Centres Development Corporations Act 1974
  - Improve development feasibility of infill
  - Improve efficiency of planning and development processes (e.g. reform LUPAA s.57 process)
  - Infrastructure provision
- Apply demand-side interventions
  - Improve quality of public transport
  - Deliver housing diversity
  - Create high-amenity nodes along corridor
  - Create safe communities
  - Create attractive and high liveable infill development
- Apply a governance structure most likely to achieve desired outcomes e.g. a Greater Hobart Urban Renewal Authority along the lines of Wapping Implementation Group.

Many of the recommendations previous identified by the STCA are still current and relevant to the implementation of the transit corridor project. Indeed, this project furthers the first recommendation of that report being to identify sites for renewal and to designate priority areas for renewal. This project does this by identifying six key precincts (New Town, Albert Road Moonah, Derwent Park, Glenorchy Central, Berriedale and Claremont) from an urban design perspective and tests these from marketability perspective (New Town and Moonah being the key focus).

Project specific investigations in relation to economic and funding incentives are outlined in the GHD Economic Analysis Report (2016) and summarised in Section 7 of this report. The planning and governance initiatives are discussed in more detail in the following subsections.

9.3 Planning Initiatives

The Southern Tasmanian Regional Land Use Strategy (RLUS), as summarised in Section 2.2.1 of this report, provides for some planning policies aimed at reducing barriers including an urban growth boundary, 50/50 split between greenfield and infill development targets, and densification targets of 25 dwellings per hectare along transit corridors.

These policies are implemented through the statutory planning framework within the relevant planning schemes (which are based on the Regional Zoning Framework and Regional Model Planning Scheme) were highlighted by Tony McMullen and James McIlhenny in their presentation to the Steering Committee on 17 July 2016. These include:

- Applying Inner Residential zoning (which allows for greater residential density) to residential areas within approximately 10 minutes' walkable distance of the Glenorchy, Moonah and Claremont activity centres (modified for topography) and otherwise within approximately 5 minutes of the Main Road high frequency public transport corridor
- Providing for explicit recognition of alternative transport modes in the development standards in the Parking and Access Code
- Applying the Utilities Zone to major utilities installations and corridors, including major roads

The project has an opportunity to link in with the current State wide planning reforms which will lead to a single Tasmanian Planning Scheme to deliver some of the identified planning amendments such as rezoning and specific area plans. This recommendation is subject to further precinct specific detailed structure planning to develop up the conceptual structure plans into a form that would support a change to the existing planning framework.

This project has further identified a need for further rezoning and specific area plans to implement the identified urban renewal opportunities along the Corridor. These are highlighted in Table 9 1 and detailed by station below.

9.3.1 Primary Stations

New Town

Zone Changes: Area within Proposed Development Sites in Figure 6-2 rezoned from Recreation to Inner Residential.

Specific Area Plan: Applied to areas within 400 metres of proposed station with specific Local Area Objectives, Desired Future Character Statements and scheme standards aimed at managing integration of higher density development into an area with historic and cultural heritage significance. In addition, the SAP will need to recognise proximity to adjacent recreation facilities and include provisions that manage the interface between sensitive uses and recreation activities, provision and management of car parking, and pedestrian movement within and external to the precinct.

Albert Road

Zone Changes: Extend General Business Zone to Brownell's Lane. Extend Inner Residential Zone to include properties in Albert Road between Gatehouse Street and Gormanstone Road.

Specific Area Plan: Not required.

Glenorchy Central

Zone Changes: Rezone 22 Wrights Road (McKays Timber Mill Site) and 97a Grove Road from Light Industrial to Inner Residential.

Specific Area Plan: Applied to 22 Wrights Road area to provide Local Area Objectives, Desired Future Character Statements and scheme standards that provide for higher densities and greater heights to facilitate up to 4 storey development, ground floor retailing in appropriate locations, and provision of recreation and open space areas as an extension of Humphrey's Rivulet parkland.

Berriedale

Zoning Changes: Rezone 2A Chardonnay Road (Government Archives Facility) from Community Purpose to General Residential.

Specific Area Plan: Applied to 666 Main Road (Granada Tavern and adjacent areas within the Local Business Zone) to provide Local Area Objectives, Desired Future Character Statements and scheme standards that provide for a mix of townhouses and apartments to 4 storeys with a Tavern, tourist accommodation and other complementary commercial uses contained in a built form that takes inspiration from proximity to MONA, the waterfront and adjacent vineyards. The SAP will also make provision for urban spaces and parkland that cater for an increased population and visitation, providing visual and physical connections with the Bay, MONA and nearby parklands.

9.3.2 Secondary Stations

Brooker Interchange

Zoning Changes: Rezone existing Light Industrial land off the end of Ruthwell Street and west of Duncan Street to General Residential.

Specific Area Plan: Not required.

Austins Ferry

Zoning Changes: Not required.

Specific Area Plan: Applied to area identified as Proposed Development Sites in Fig 6-16 to provide Local Area Objectives, Desired Future Character Statements and scheme standards that facilitates an appropriate staging of infrastructure and development, manages the interface between sensitive uses and adjacent industrial areas, provides for Transit Corridor 'end of line' infrastructure and facilities, and master planning of land zoned Local Business.

9.4 Governance

The above analysis is focussed on identification of current planning policies, project specific priority areas for urban renewal, and funding opportunities to facilitate this project through value capture. The successful implementation of these recommendations requires the support and coordination by local and state governments. The transit corridor project for instance affects two local governments, Hobart City Council and Glenorchy City Council, as well as State Growth who is responsible for the transit corridor.

The STCA identifies that the State Government or a Land and Development Authority should be tasked with this role to ensure successful implementation of such strategies. Specific responsibilities identified for such an authority include the preparation of more detailed structure plans, the redevelopment process through land acquisition or coordination of amalgamation of key sites, provision of public private partnerships to fund and develop the site and the timely provision of infrastructure required to support such development.

There are existing examples of such governance structures in place that may be appropriate to utilise as part of the transit corridor project. Examples include at the State level the Office of the Coordinator General which is identified as the Tasmanian Government's 'one-stop-shop' for major or strategic investments including targeting of potential investors and the 'cutting of red tape'. In addition, the Macquarie Point Development Corporation provides an example of a precinct level authority. The Corporation was appointed to plan, facilitate and manage the remediation and redevelopment of the Macquarie Point site, ensuring it:

- is redeveloped as a vibrant and active area, with a mix of uses, that connects with and complements adjacent areas within Hobart;
- encourages inner-city living;
- delivers sustainable social and economic benefits to Hobart; and
- is redeveloped in accordance with sound planning, urban design and environmental principles.

9.5 Implementation Plan

In terms of implementation we have distilled the recommendations throughout this report into the following implementation plan (Table 9 1) to provide for a project specific 'road map' to further the project objectives as outlined in Section 1.2 of this Report.

Table 9-1 Implementation Plan

Objective	Strategic Context/ Reference	Outcomes Achieved By:	Public Transit Corridor Actions	Implementation Responsibility	Staging Priority
To provide for the residential growth of the City in a way that is consistent with the regional settlement strategy	Regional Land Use Strategy 25-year infill target within Greater Hobart of around 13,900 dwellings in existing urban areas, including: 50/50 split between greenfield and infill 25 dwelling/ ha (gross net density)	Implementation of an urban growth boundary to facilitate a more sustainable urban form (in place)	Assess identified strategies to enable development (both enablers and reduction of barriers) and implement Review impact of existing polices such as the developer 'headworks' holiday – is this driving development to greenfield sites?	Local Government State Government (Minister for Planning)	High
		Encourage infill development particularly along transit corridors, and with a high degree of focus on the northern suburbs corridor.	Implement rezoning of land within key precincts to facilitate densification e.g. Glenorchy Central – Light Industrial to Inner Residential.	Local Government State Government	High
To support a network of vibrant, accessible, liveable, and well designed activity centres that create prosperity and bring services within easy reach of the Glenorchy community	Encourage mixed-use residential development within activity centres	Encourage intensification of employment hubs in Hobart and along the northern suburbs corridor, requiring cooperation between state and local government to attract business into these centres	Focus land use and funding strategies in the New Town and Moonah station precincts which are most 'marketable' having regard to the current market demand and land supply analysis.	Local Government State Government	High
			Greater cooperation between the State Government, the Hobart City Council and the University of Tasmania to bring a greater UTAS presence into the CBD with a view to invigorating the CBD (in progress)	Local Government State Government UTAS	In progress

Objective	Strategic Context/ Reference	Outcomes Achieved By:	Public Transit Corridor Actions	Implementation Responsibility	Staging Priority
Affordable housing		Public Housing policies that focus on generating social and affordable housing close to employment opportunities, services and strong public transport corridors	Whether First Home-owners Grant could be reworked to apply to apartment living Canvas with Housing Tasmania opportunities for Affordable Housing targets to be met within the transit corridor	State Government	Policies in progress
Simplified Approval Process		Streamlining the development approval process for infill housing, thus lowering barriers for developers by minimising delays, and increasing certainty about such developments	Rezoning and/or SAP See 9.3 above. Engage with affected land owners and Council regarding preparation of scheme amendments	Council to provide for a holistic urban renewal strategy versus private investor initiated planning change	High

Objective	Strategic Context/ Reference	Outcomes Achieved By:	Public Transit Corridor Actions	Implementation Responsibility	Staging Priority
Transport & Urban Form	Plan for improved energy efficiency in the City's built form Public transport use is promoted by allowing increased density of residential development within walking distance of the high frequency transport corridor along Main Road	Applying Inner Residential zoning (which allows for greater residential density) to residential areas within approximately 10 minutes walkable distance of the Glenorchy, Moonah and Claremont activity centres (modified for topography) and otherwise within approximately 5 minutes of the Main Road high frequency public transport corridor	Support identified rezonings to facilitate the structure plans within key precincts	Council	High
		Providing for explicit recognition of alternative transport modes in the development standards in the Parking and Access Code(e.g. Glenorchy Activity Centre Urban Design SAP & Wilkinson Point & Elwick Bay SAP)	Encouraging improved urban design in the public realm to encourage a pedestrian-friendly environment by applying the SAP for key urban renewal sites subject to further detailed structure planning	Council	Medium
Efficient Infrastructure Utilisation and Provision	Critical and regionally-significant infrastructure are identified and protected from encroachment and fettering	Applying the Utilities Zone to major utilities installations and corridors, including major roads	None required	N/A	N/A

Objective	Strategic Context/ Reference	Outcomes Achieved By:	Public Transit Corridor Actions	Implementation Responsibility	Staging Priority
	To protect infrastructure, use it efficiently and plan for its orderly extension	Applying Inner Residential zoning (which allows for greater residential density) to residential areas within approximately 10 minutes walkable distance of the Glenorchy, Moonah and Claremont activity centres (modified for topography) and otherwise within approximately 5 minutes of the Main Road high frequency public transport corridor	Develop and implement public transport service standards to support more efficient provision of high quality public transport Develop a simplified bus network to improve the quality of transport by focusing on high frequency corridor services, improved total journey times, reduced waiting times, and regular operation over a wide span of hours Improved bus frequency on key corridors Develop a 3-stop express bus service between Glenorchy/MONA and Hobart, including provision of bus priority measures, to provide a fast, reliable commuter service Development of Transit Corridors (high frequency bus services along corridors, with higher density mixed use development) to make it easier for people to use public transport to access services, employment and education. In the northern suburbs this will assist in strengthening the corridor and building public transport demand, thus creating an environment for a genuinely effective investment in rapid transit	Council State Government TasWater	

Objective	Strategic Context/ Reference	Outcomes Achieved By:	Public Transit Corridor Actions	Implementation Responsibility	Staging Priority
Funding Options (Refer to Economic Analysis, GHD 2016)					
Indirect land use beneficiary funding sources	Additional income over and above that which would be obtained through existing tax base	Business Rates Supplement	Target the funding requirement on businesses that have a direct and tangible benefit as a result of the project over an extended period of time. (i.e Hobart CBD)	Local Government	High*
		Special Local Government Rates - Households	Amend Local Government Act	Local Government	High*
		Stamp Duty Supplement		State Government	High*
		Special interest groups – visitor/hotel tax		Local Government (additional rates) State (direct charge)	High*
Project Specific funding sources		Voluntary Planning Agreements			High*

*The responsible organisations are to determine which, or any, of the value capture mechanisms should be implemented

Appendices

Appendix A

Demographic Analysis

Glenorchy Transport Corridor Consultancy

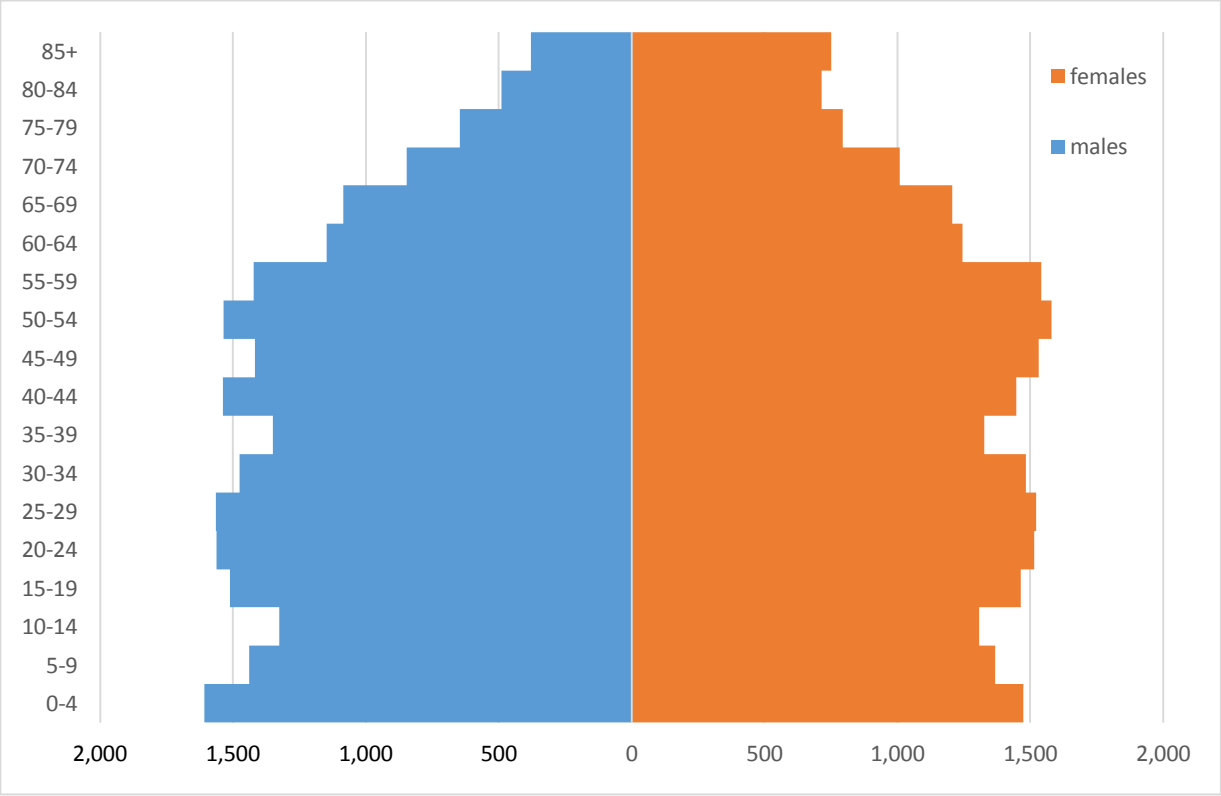
This report provides an overview of the Glenorchy municipality population, projected population to 2036, household characteristics, workforce characteristics, travel to work methods and attendance at educational institutions with a view to informing the planning for a potential transport corridor between Glenorchy and other local government areas.

Data from the Australian Bureau of Statistics (ABS), including the 2011 Census of Population and Housing (Census), and the Tasmanian Department of Treasury and Finance (Tasmanian Treasury) population projections are used in this report.

Population

In 2014, the ABS estimated resident population (ERP) for Glenorchy was 45,622 people[1]. The median age of Glenorchy residents was 39.1 years (37.5 for males, 40.6 for females) with 18.7 per cent of the population aged between 0 and 14, 64 per cent aged between 15 and 64, the traditional working age population, 17.4 per cent aged over 65. See Figure 1.

Figure 1. Population Age Sex Structure, Glenorchy, Tasmania, 2014



Source: ABS, Population by Age and Sex, Regions of Australia, 2014, Cat. No. 3235.0

By 2036, the Local Government Area (LGA) of Glenorchy's population is projected to grow from 45,827[2] in 2015 to approximately 51,339 persons according to the medium series of the Tasmanian

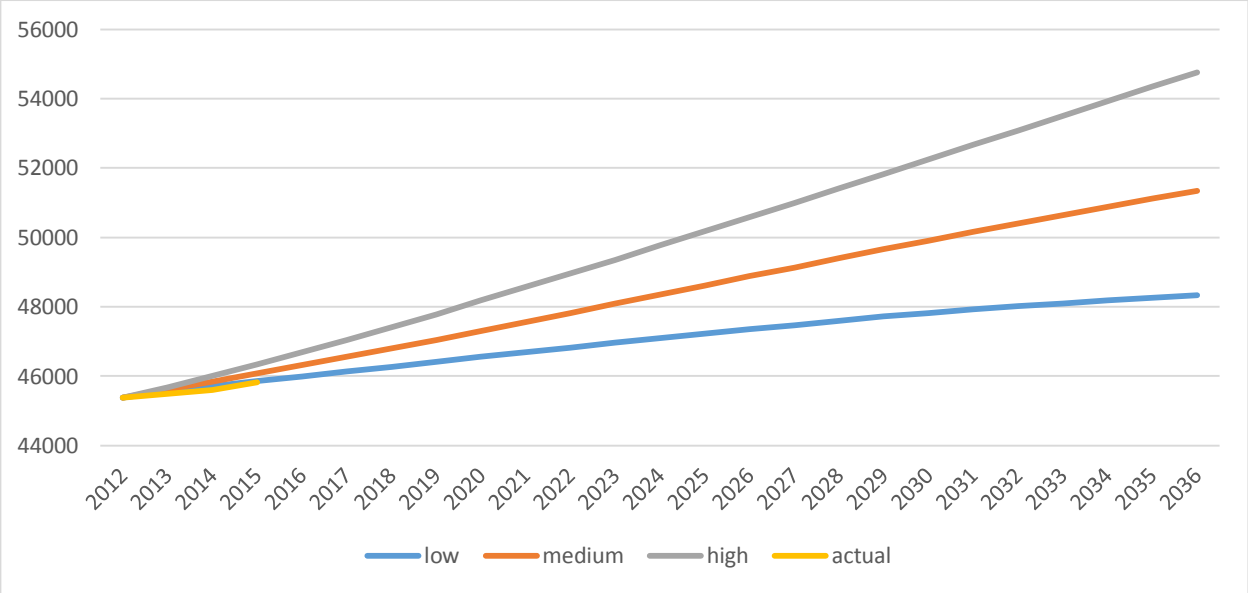
[1] The 2015 Population by Age and Sex, Regions of Australia, Cat. No. 3235.0 data will be released by the ABS on 18 August 2016

[2] ABS, Population by Age and Sex, Regions of Australia, 2014, Cat. No. 3235.0.

Treasury population projections. The medium series is considered to the be most likely based on historic trends[3].

However, since the release in 2012 of the population projections, Glenorchy's population growth has tracked slightly below the low series projected by the Tasmanian Treasury to 2015, as evident in Figure 2. The low series assumes the total fertility rate[4] to be 1.93 for the projection period, life expectancy at birth to be 78.9 for men and 83.3 for women and annual net migration (regional and overseas migrants) to be a loss of 86 persons. The assumed age and sex profile of migrants is unknown[5],[6].

Figure 2. Projected population, 2036, Glenorchy, Tasmania; actual and low, medium and high series



Source: Tasmanian Department of Treasury and Finance, ABS, Population by Age and Sex, Regions of Australia, 2014, Cat. No. 3235.0

Under the low series, Glenorchy's population is projected to be around 48,333 by 2036.

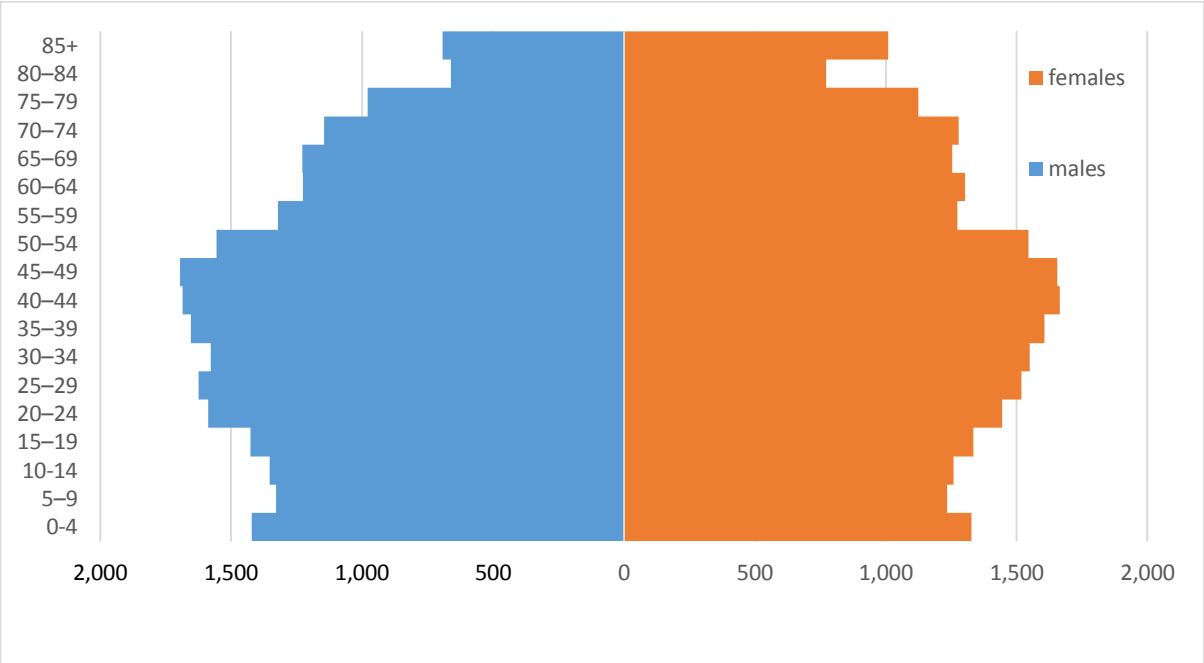
[3] Tasmanian Department of Treasury and Finance, 2014 Population projections for Tasmania and its Local Government Areas, http://www.treasury.tas.gov.au/domino/dtf/dtf.nsf/v-ecopol/397D0680E5DCC583CA257CEC0005F727, accessed 20 June 2016

[4] The total fertility rate is the number of babies a woman can expect to bear in her lifetime if she experiences the same age-specific fertility rates over her lifetime. 2.1 births per woman is considered the population replacement rate for developed nations.

[5] Further details were requested from the Tasmanian Treasury on 27 June 2016.

[6] Please note that age and sex data of regional migration movements is not available at an LGA level. Data is available at SA3 level and above. Overseas migration data is not available at an LGA level, it is only available at State level. For these reasons population projections at LGA level are complex and require a specialised methodology and considerable investment.

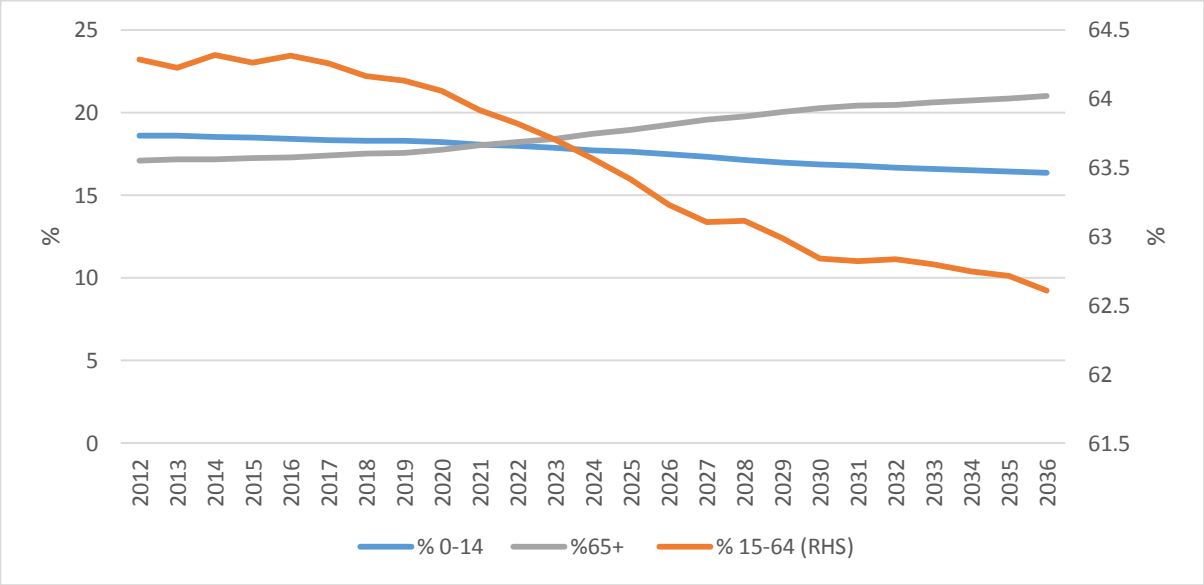
Figure 3. Population Age and Sex Structure, Glenorchy, 2036



Source: Tasmanian Department of Treasury and Finance, 2014 Population projections for Tasmania and its Local Government Areas

By 2036, the population aged between 0 and 14 is projected to decline to 16.4 per cent, 62.6 per cent for those aged between 15 and 64, and 21 per cent for those aged over 65, as illustrated in Figure 2.

Figure 4. Proportion of population by age group, Glenorchy, 2012 to 2036



Source: ABS, Population by Age and Sex, Regions of Australia, 2014, Cat. No. 3235.0, Tasmanian Department of Treasury and Finance

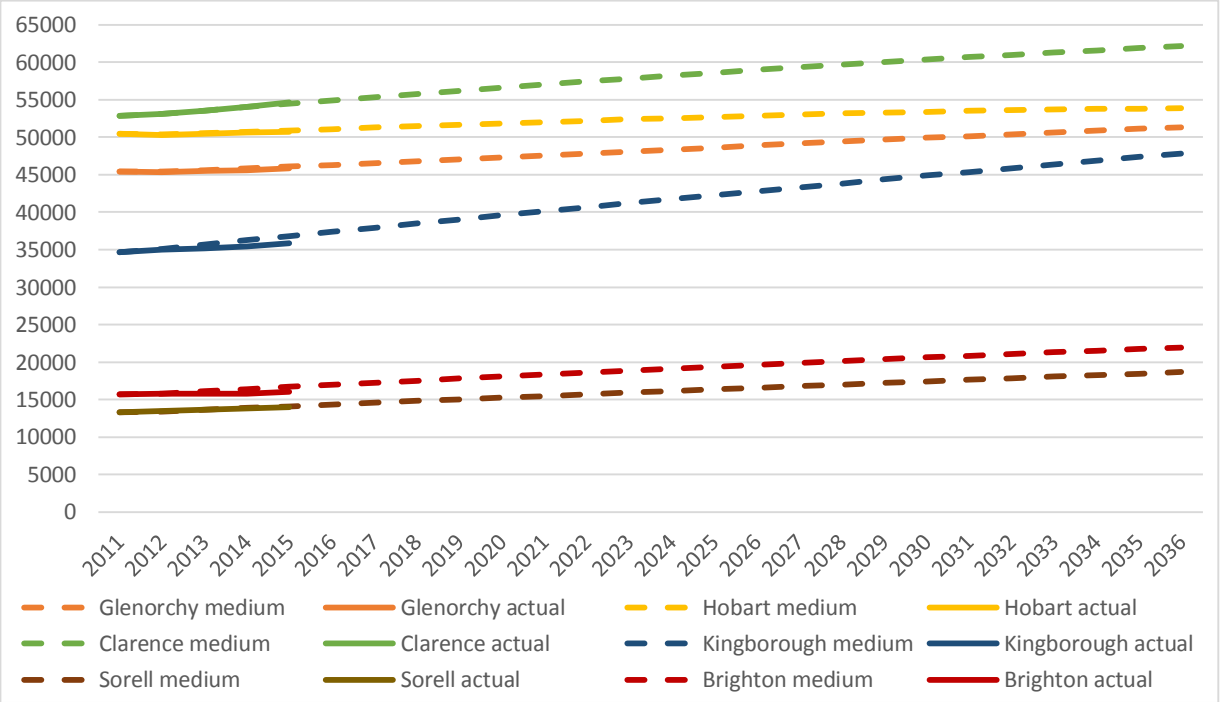
However, importantly, up to 2014, the observed components of population change have differed in comparison to the assumptions in the low series of the projections. The actual average total fertility rate for the period was 2.19 and the average net migration loss was 70 persons per annum (resulting from an average net annual regional migration loss of 340 persons per annum and an average net

overseas gain of 270 persons). It is not known if life expectancy or the age and sex profile of migrants has differed over the period.

If these trends continue to differ from the population projection assumptions, the future size and age and sex population structure of the Glenorchy municipality will differ to that projected by the Tasmanian Treasury. These differences will have longer term implications for planning.

All municipalities in the Greater Hobart area are projected to experience population growth to 2036 under the Tasmanian Treasury medium series with Clarence and Kingborough projected to experience the greatest growth over the period. Compared with actual growth between 2011 and 2015, the Clarence municipality is tracking slightly above the medium series, Hobart is stable with the medium series and, in addition to Glenorchy; Sorell, Kingborough and Brighton are all tracking slightly below the low series. See Figure 5.

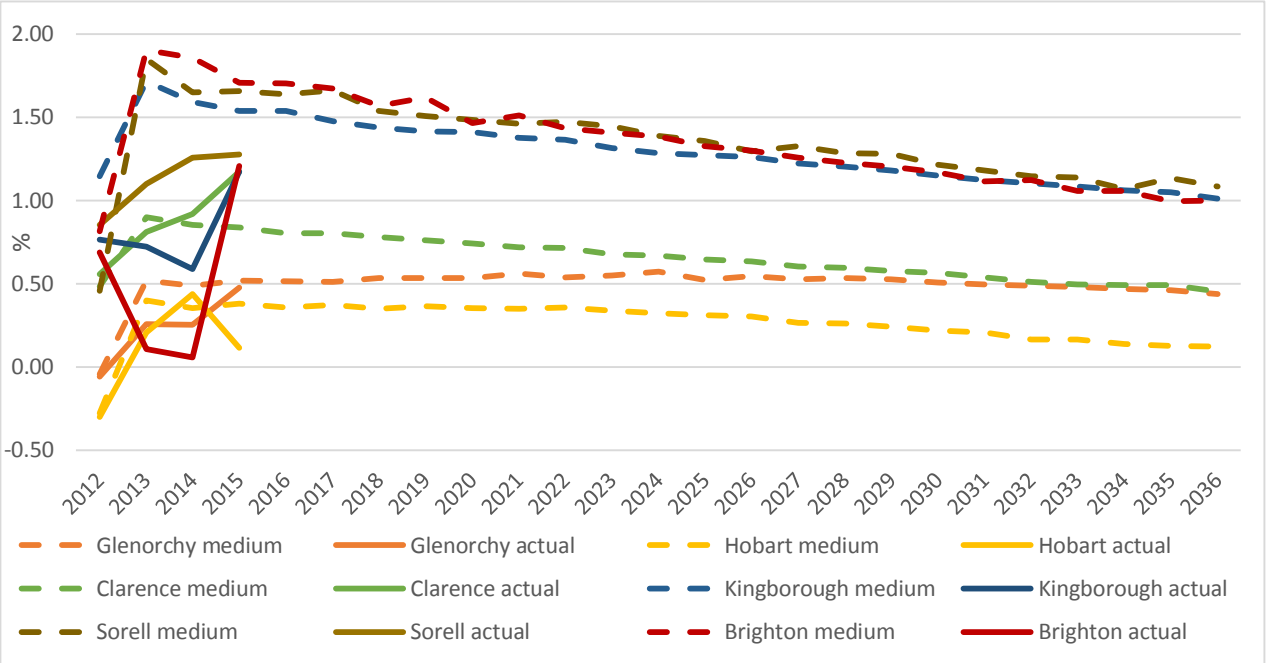
Figure 5. Population projections by Greater Hobart municipality, medium series and actual



ABS, Population by Age and Sex, Regions of Australia, 2014, Cat. No. 3235.0, Tasmanian Department of Treasury and Finance

In terms of annual population growth rates each municipality, except Glenorchy, is projected to experience declining population growth rates over the projection period to 2036. Even so, the actual annual growth rates have differed markedly with the projections over the period from 2011 to 2015, reflecting volatile economic circumstances in Tasmania. See Figure 6.

Figure 6. Population growth rates by Greater Hobart municipality, projected (medium series) and actual



ABS, Population by Age and Sex, Regions of Australia, 2014, Cat. No. 3235.0, Tasmanian Department of Treasury and Finance

Given the complexity of the components of population change and the relationship with economic performance, it is difficult to make inferences about medium term population growth at a municipal level.

Furthermore, the Tasmanian Treasury projections do not take into consideration any impacts on the population from policy intervention such as the Tasmanian Population Growth Strategy[7] nor a potential transport corridor.

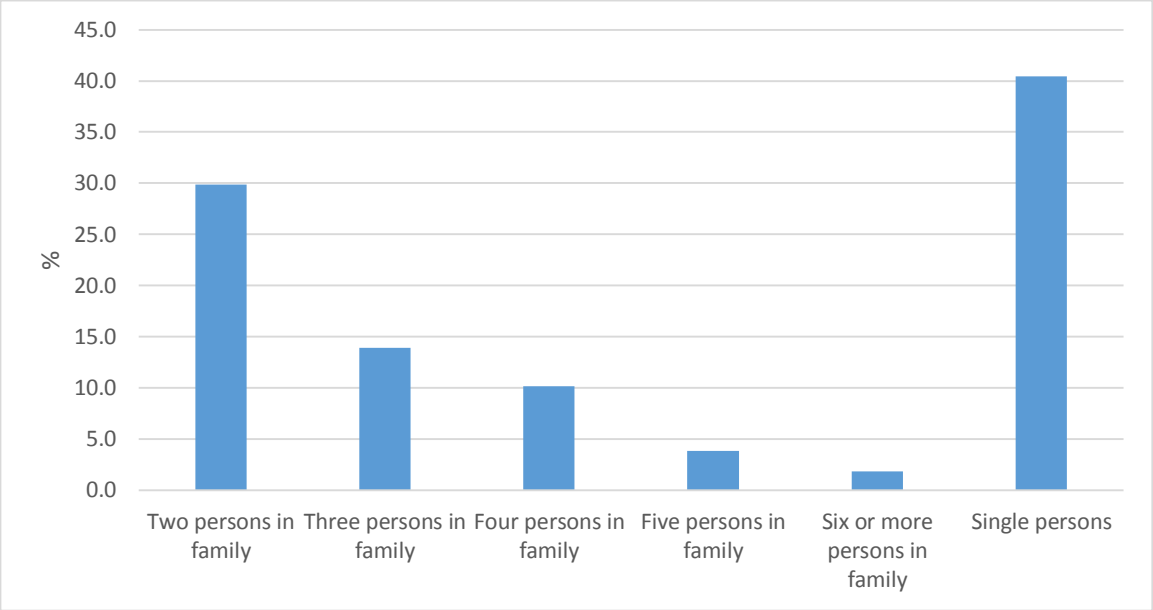
7 http://stategrowth.tas.gov.au/__data/assets/pdf_file/0014/124304/Population_Growth_Strategy_Growing_Tas_Population_for_web.pdf

Glenorchy Resident Characteristics

Household composition

In 2011, there were 19,950 family households in the Glenorchy municipality. Of those, 40.4 per cent were single person households (8,064 persons), 29.9 per cent two person households and 13.9 per cent three person households. See Figure 7.

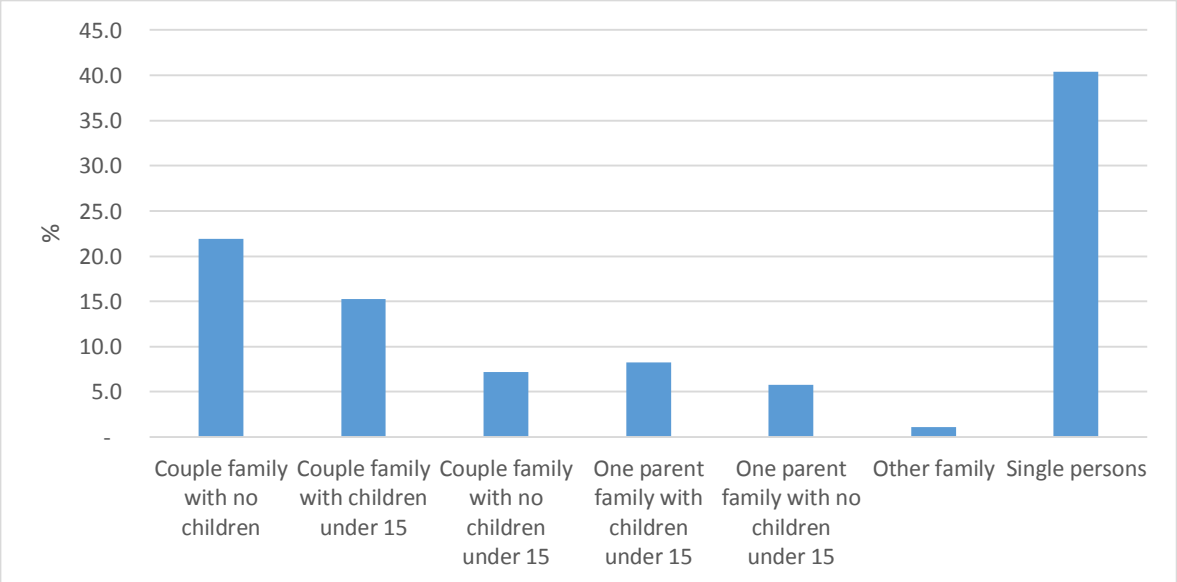
Figure 7. Family Size, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

The family households can be further disaggregated into couple or single parent family with or without children and whether or not the child/ren are younger than 15 years of age. The largest household group is those made up of single persons, followed by two person households. See Figure 8.

Figure 8. Household composition, Glenorchy, 2011

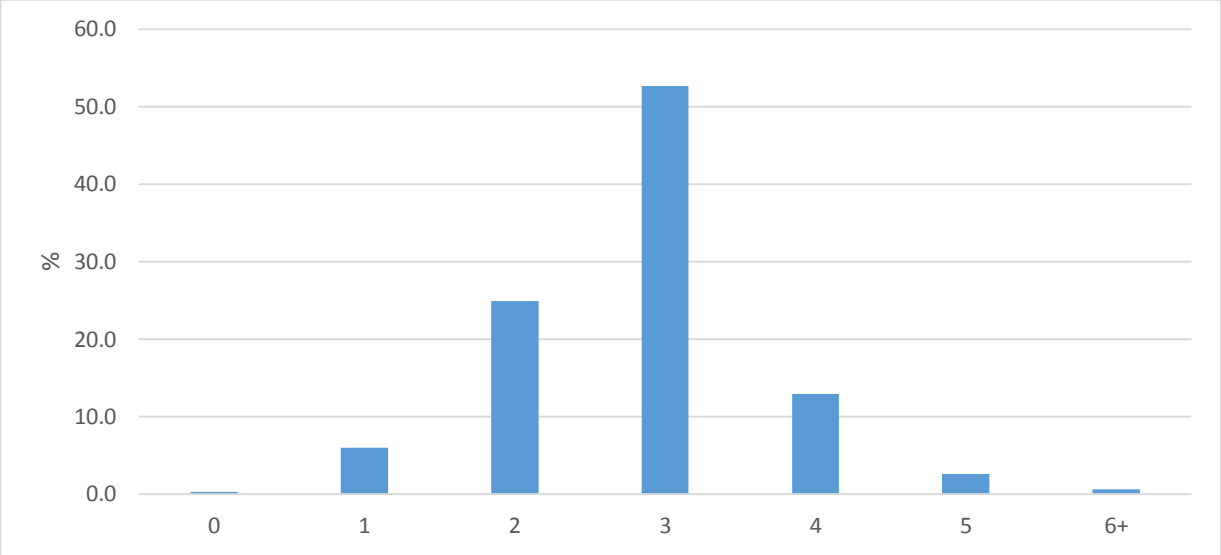


Source: ABS Census of Population and Housing, 2011

Of the two person families (5,962 households), 71.4 per cent are couples with no children, 14.5 per cent are single parent families with no children under 15 and 10.8 per cent are single parent families with children under 15. Of the three person families (2,772 households), 32.8 per cent are couple families with no children under 15, 31.8 per cent are couple families with children under 15 and 21.5 per cent are single parents with children under 15. Of the four person families (2,024 households), 62.8 per cent are couple families with children under 15, 21.6 per cent are couple families with no children under 15 and 13.4 per cent are single parents with children under 15.

In terms of number of bedrooms per household, the majority live in three bedroom dwellings (52.7 per cent or 10,068 households), 24.9 per cent live in two bedroom dwellings and 12.9 per cent live in four bedroom dwellings. See Figure 9.

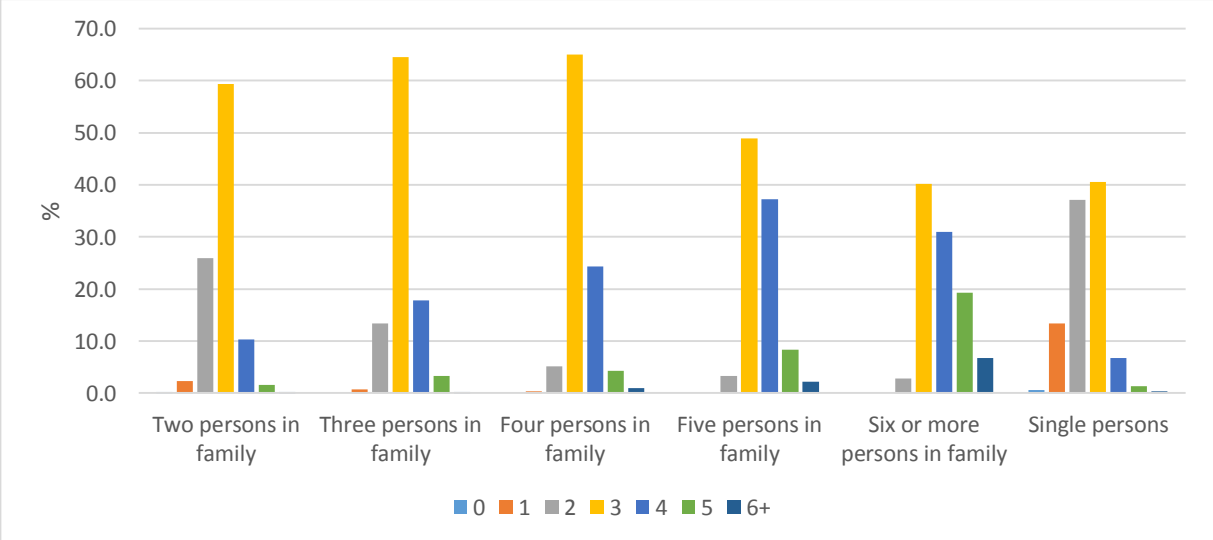
Figure 9. Number of bedrooms per household, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

The number of bedrooms differs further by size of the family. Generally, the number of bedrooms increases as the size of the family increases, until there are more than six persons in a family. See Figure 10.

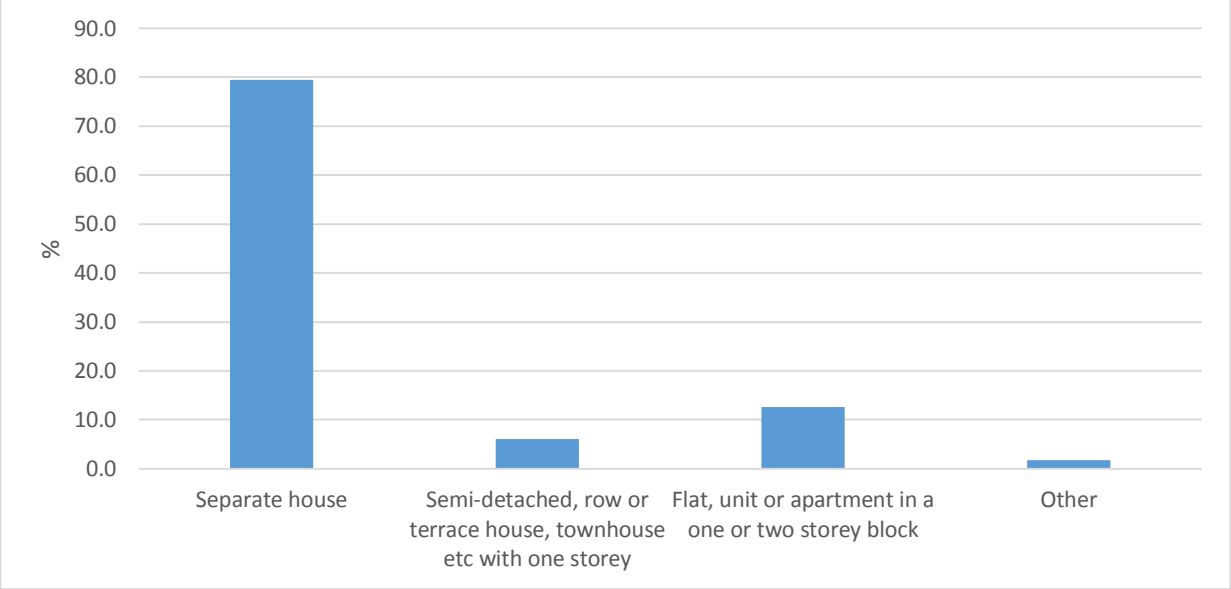
Figure 10. Number of bedrooms per household by family size, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

The majority of Glenorchy households live in a separate house (79.5 per cent or 15,828 households) 12.6 per cent live in a one or two storey flat or unit and 6 per cent in a one storey, semi-detached property with the remainder living in other dwelling types (1.8 per cent). See Figure 11.

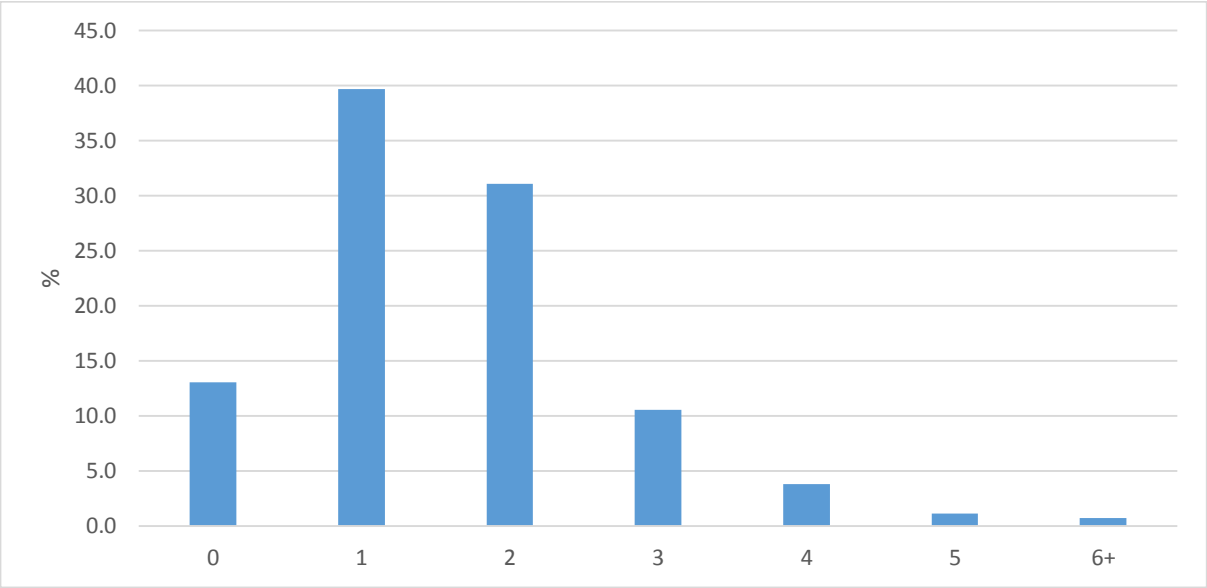
Figure 11. Dwelling type, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

In 2011, 39.7 per cent of Glenorchy households owned one motor vehicle, 31.7 per cent owed two motor vehicles, 13 per cent did not own a motor vehicle and 10.6 per cent owned three. See Figure 12.

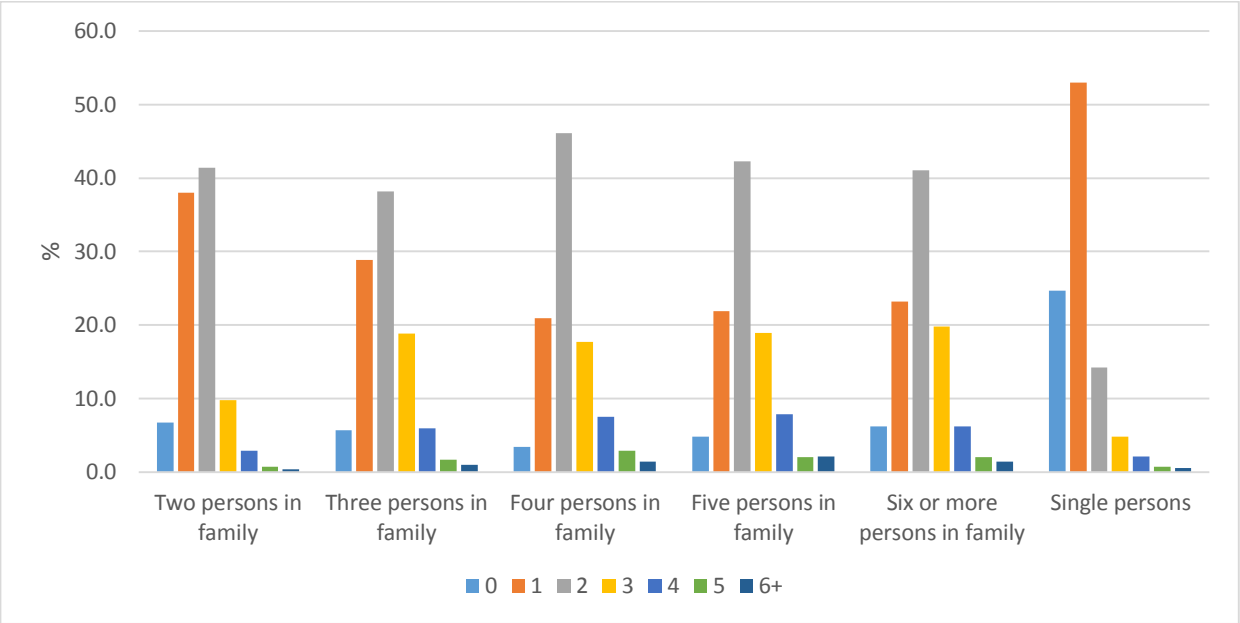
Figure 12. Number of motor vehicles per household, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

The number of motor vehicles differs further by size of the family. See Figure 13.

Figure 13. Number of motor vehicles per household by family size, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

Workforce Characteristics

At the time of the 2011 ABS Census of Population and Housing, of the Glenorchy residents aged between 15 and 69, 64 per cent were employed either full time (38.1 per cent), part time (21.8 per cent) or away from work (4.1 per cent), as in Table 1.

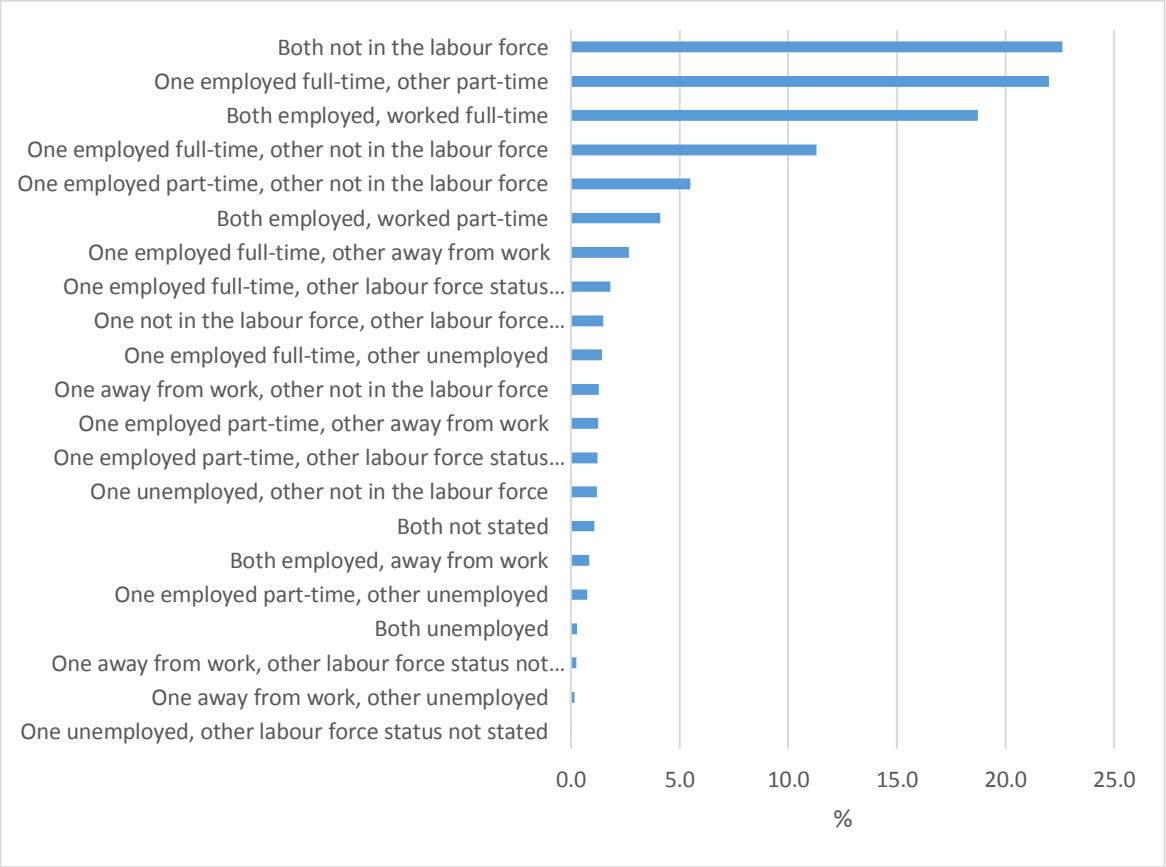
Table 1. Labour Force Status, Glenorchy residents aged 15 to 69, 2011

	%
Employed, worked full-time	38.1
Employed, worked part-time	21.8
Employed, away from work	4.1
Unemployed, looking for full-time work	3.1
Unemployed, looking for part-time work	1.5
Not in the labour force	31.4

Source: ABS Census of Population and Housing, 2011

In terms of household participation in employment for couple families, in 22.6 per cent of couple households, neither adult is participating in the labour force, in 22.0 per cent of households, one works full time and the other part time, and in 18.7 per cent of couple households, both work full time. See Figure 14.

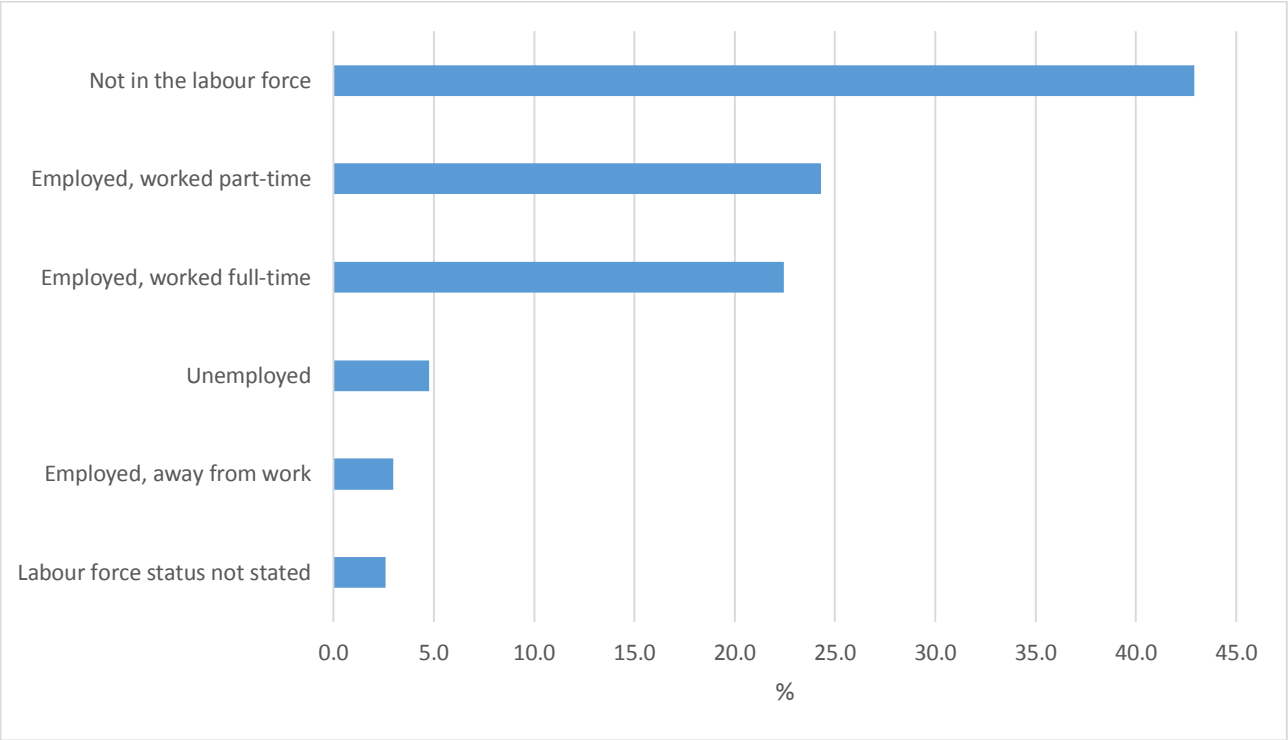
Figure 14. Labour Force Status, couple families, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

For single parent families, 42.9 per cent are not participating in the labour force, 24.3 per cent are working part time and 22.4 per cent work full time. See Figure 15.

Figure 15. Labour Force Status, single parent families, Glenorchy, 2011



Source: ABS Census of Population and Housing, 2011

Travel to work characteristics

Of the employed Glenorchy residents, 81 per cent drive to work (13,652 people), either as the driver (72.86 per cent) or as a passenger (10.14 per cent). Other modes of transport include bus (5.79 per cent) and walking (3.02 per cent).

Table 2. Method of transport to work, Glenorchy residents, 2011

	Number	**%**
Car, as driver	11,984	72.86
Car, as passenger	1,668	10.14
Bus	952	5.79
Walked only	496	3.02
Worked at home	406	2.47
Truck	164	1.00
Bicycle	135	0.82
Motorbike/scooter	113	0.69
Taxi	102	0.62
Other	97	0.59

Source: ABS Census of Population and Housing, 2011

For the employed residents of Glenorchy, 42.4 per cent work in the local government area of Hobart (7,159 people), 41.8 per cent work in Glenorchy and 8.7 per cent work in Clarence. See Table 3.

Table 3. Place of Work, Local Government Area, Glenorchy residents, 2011

Local Government Area	Number	%
Hobart	7,159	42.4
Glenorchy	7,059	41.8
Clarence	1,470	8.7
Brighton	456	2.7
Kingborough	327	1.9
Derwent Valley	207	1.2
Sorell	80	0.5
Southern Midlands	24	0.1
Huon Valley	20	0.1
Launceston	18	0.1

Source: ABS Census of Population and Housing, 2011

For those Tasmanians who work in the local government area of Glenorchy, 40.8 per cent also reside in Glenorchy (7,060 people), 17 per cent commute from the local government area of Clarence, 12.9 per cent from Hobart and 9.7 per cent from Brighton. See Table 4.

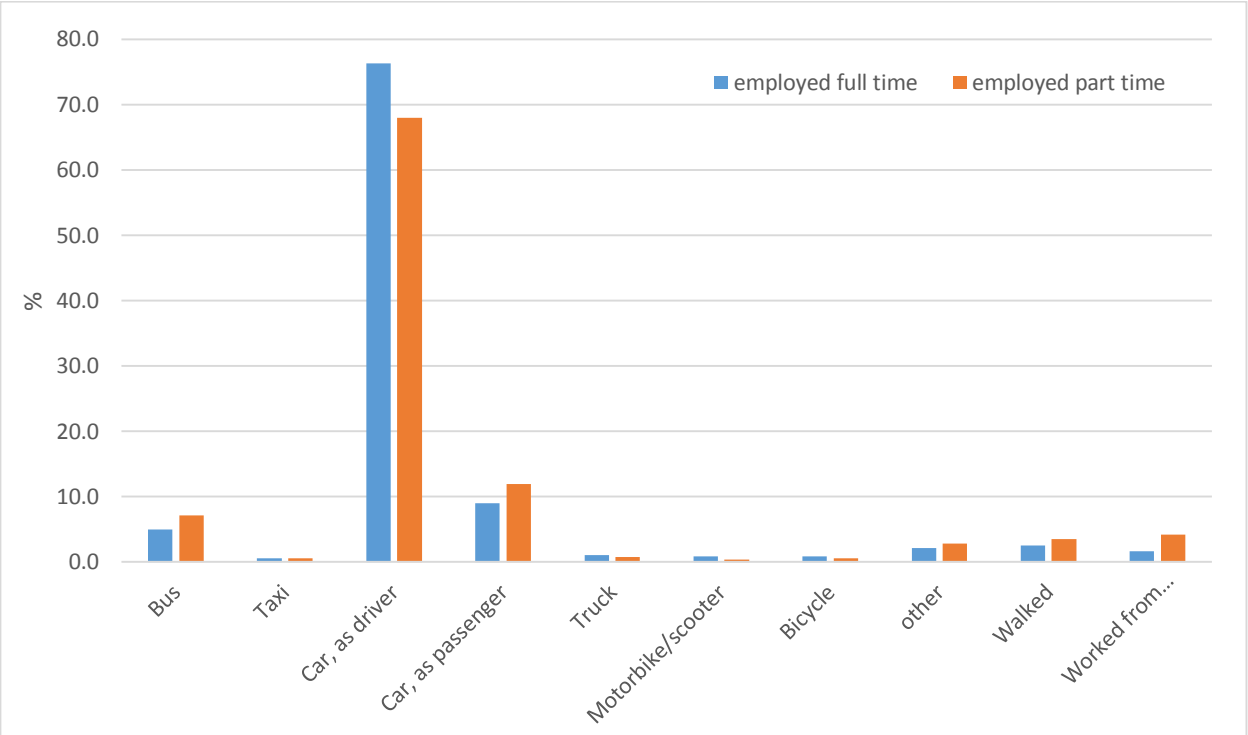
Table 4. Place of residence, Local Government Area, Glenorchy workers, 2011

Local Government Area	Number	%
Glenorchy	7,060	40.8
Clarence	2,937	17.0
Hobart	2,240	12.9
Brighton	1,678	9.7
Kingborough	1,148	6.6
Derwent Valley	737	4.3
Sorell	631	3.6
Southern Midlands	411	2.4
Huon Valley	256	1.5
Central Highlands	52	0.3

Source: ABS Census of Population and Housing, 2011

There was little difference in the means of transport to work between those who worked full time and part time. Full time employees were more likely to drive to work whereas part time employees were more likely to be a passenger in a car. Part time employees were also slightly more likely to catch a bus or walk to work than full time employees. See Figure 16.

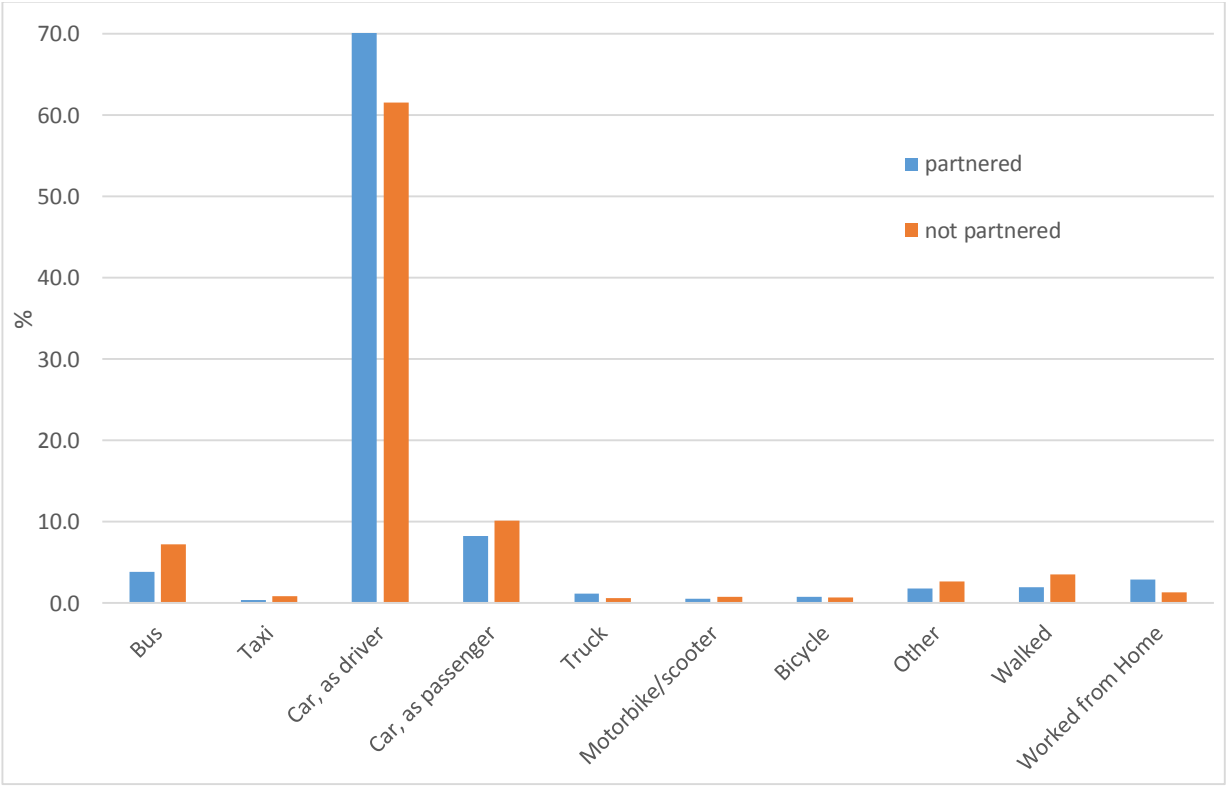
Figure 16. Means of transport to work by employment status, Glenorchy residents,2011



Source: ABS Census of Population and Housing, 2011

In terms of partner status and means of travel to work, not partnered workers were less likely to drive a car to work than partnered workers and were more likely to catch a bus, be a passenger in a car or walk to work. Partnered workers were slightly more likely to ride a bike to work than non-partnered workers. See Figure 17.

Figure 17. Means of transport to work by partner status, Glenorchy residents, 2011



Source: ABS Census of Population and Housing, 2011

Education attendance

Of the Glenorchy residents, 9,246 attended an educational institution in 2011. 25.4 per cent attended government primary schools, 16.7 attended Government secondary schools, 15.7 per cent attended technical or further education institutes, including TAFE, and 11.2 percent attended University or another tertiary institution. See Table 5. No data is available on method of transport to educational institutions from the Census.

Table 5. Educational institution attendance, Glenorchy residents, 2011

Type of Education Institute	**Number**	**%**
Pre-school	333	3.6
Infants/Primary - Government	2,351	25.4
Infants/Primary - Catholic	1,090	11.8
Infants/Primary - Other Non Government	154	1.7
Secondary - Government	1,541	16.7
Secondary - Catholic	828	9.0
Secondary - Other Non Government	145	1.6
Technical or Further Educational Institution (including TAFE Colleges)	1,455	15.7
University or other Tertiary Institution	1,033	11.2
Other	316	3.4
Total	**9,246**	**100.0**

Source: ABS Census of Population and Housing, 2011

Appendix B

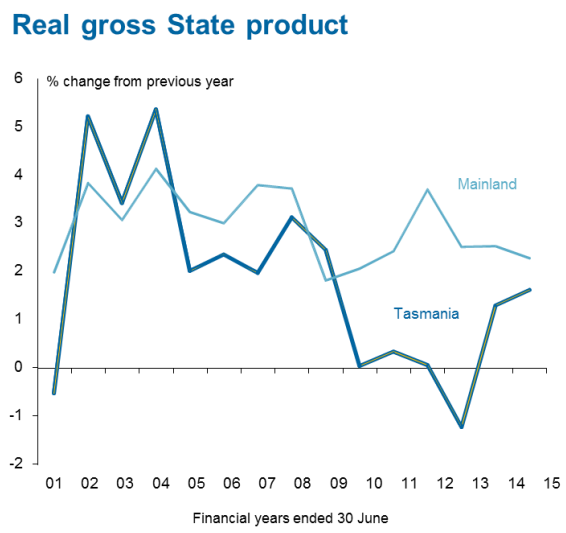
Economic Review

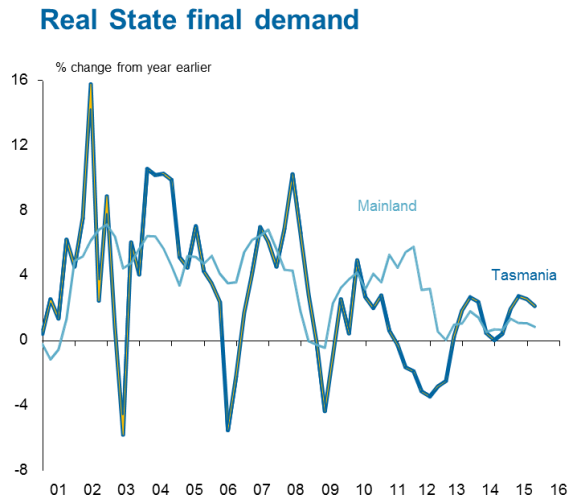
The Macroeconomic Environment

Key Economic indicators for Tasmania

The most recently released key economic indicators by the Tasmanian Treasury shows a continued modest growth in state final demand, with an annual growth rate of 2.6 per cent in real term to $29.3 billion.[1] Retail trade has increased by 3.6 per cent in real term from a year ago to $5.7 billion, with the number of new motor vehicle sales increasing by 6.4 per cent in the same period. The Tasmanian economy is growing at a relatively higher rate when compared to the Australia wide average of annual growth of 1.2 per cent in total final demand, 2.8 per cent in retail trade and 3.8 per cent in motor vehicle sales. Despite business investment declining by 4.8 per cent for the year, the level of residential and non-residential building activity work commenced at $703 million (decreased by 11.4 per cent) and $913 million (increased by 75.9 per cent) respectively for the year to June 2016. The unemployment rate is currently 6.5 per cent which is a slight deterioration of 0.4 per cent from a year ago and continues to lag the national average of 5.9 per cent.[2]

The following charts displays the percentage changes in the time series statistics (real) for the state final demand and gross regional product for Tasmania compared with the average of the rest of Australia (Mainland).





Source: Saul Eslake, 2016.[3]

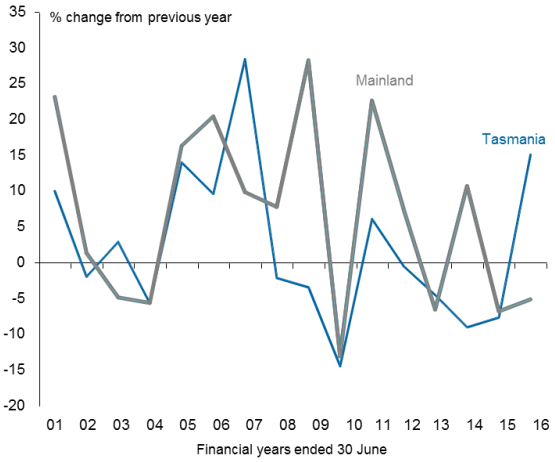
[1] Note: State Final Demand (SFD) is used here in the absence of the Gross State Product (GSP) for 2015-16, which is due to be released in November 2016 and normally published only once a year. SFD measures the sum of spending by households, businesses, and governments prior to adjustments are being made for the interstate and international trades and changes in inventory.

[2] Department of Treasury and Finance, 2016, *Summary of Key Economic Indicators*.

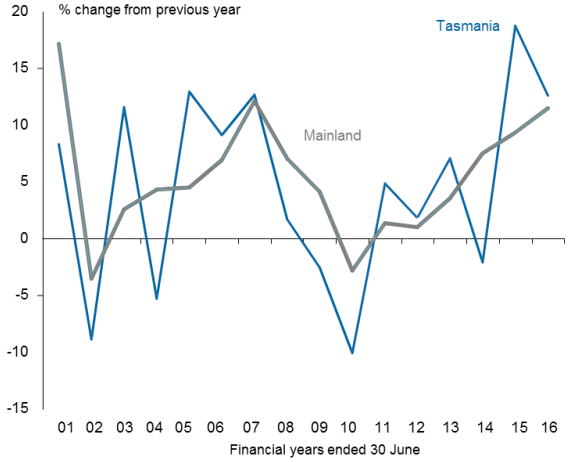
[3] Saul Eslake, 2016, *The Tasmanian Economy* presentation.

The state level performance appears to be partly driven by the healthy international export of goods and services, supported by high value horticultural products and agricultural products and increasing attraction of Tasmania as a tourism destination for international and domestic visitors.

International exports of goods

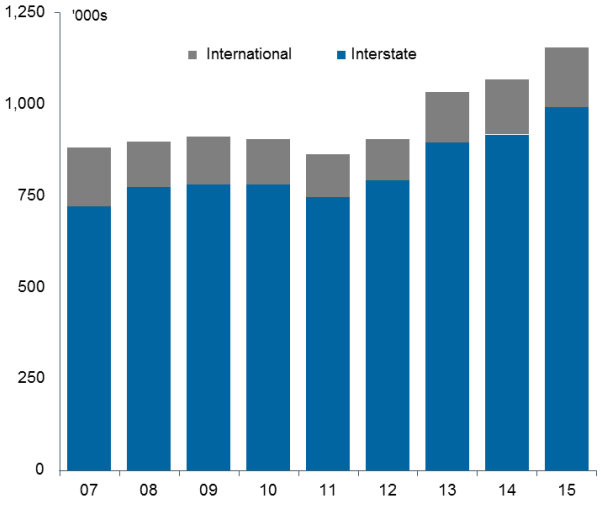


International exports of services

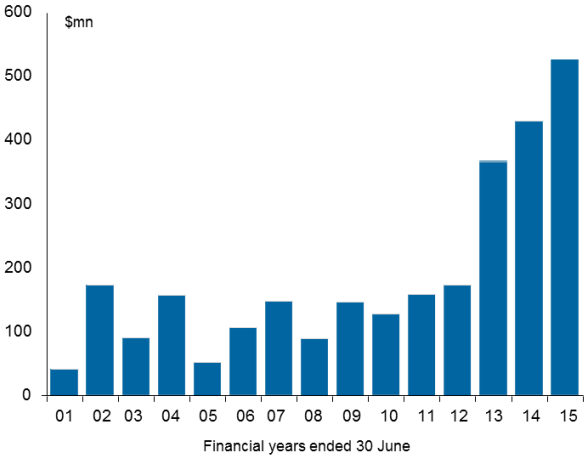


Source: Saul Eslake, 2016.

Visitors to Tasmania



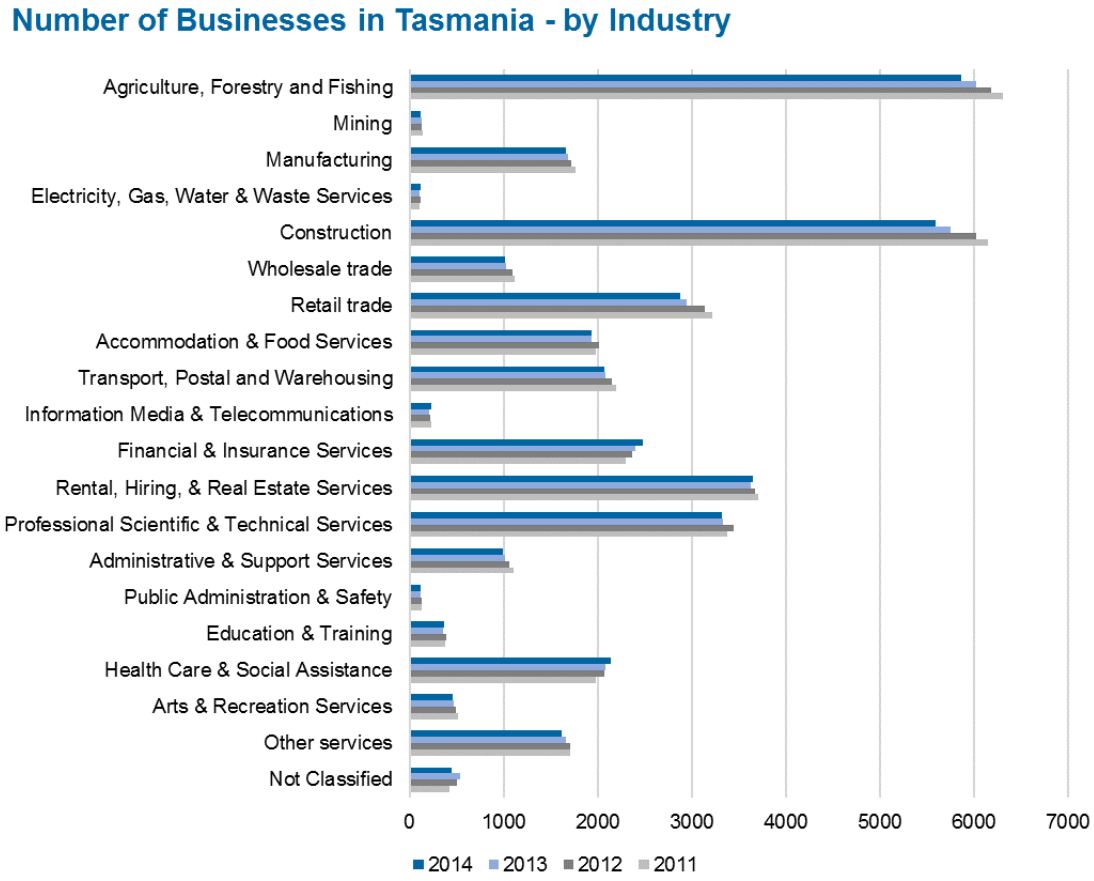
Agricultural income - Tasmania



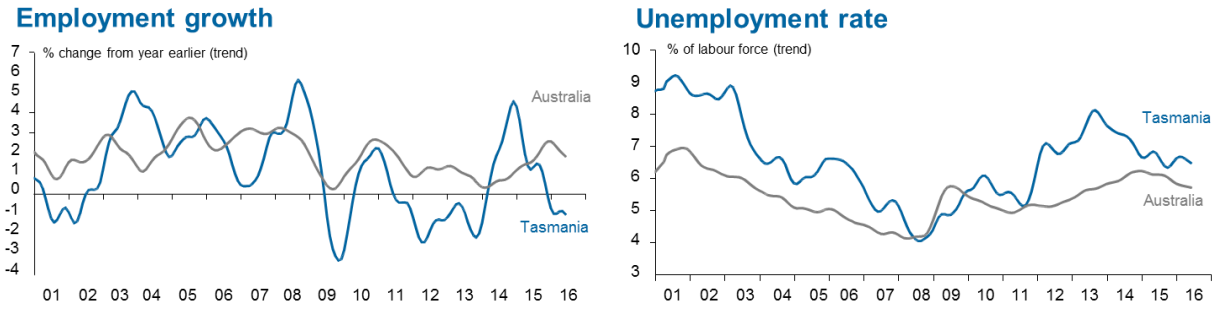
Source: Saul Eslake, 2016; Tourism Research Australia, 2016.[4]

In the recent years, Tasmania has transformed its economy from one that is heavily reliant on paper and pulp products and homogenous agricultural products to high value premium products in horticulture (cherries and truffles), agriculture (Wagyu beef), fisheries and aquaculture (lobsters, oysters and abalones), wine and spirits, and tourism and arts in recent years. However, this transition has yet to be evolved into growth in the number of businesses and employment figures, as can be seen below. The total number of businesses have reduced from 38,859 registered as at 30 June 2011 to 37,074 registered as at 30 June 2014.

[4] Tourism Research Australia, 2016, *Regional Profile – Tasmania*.



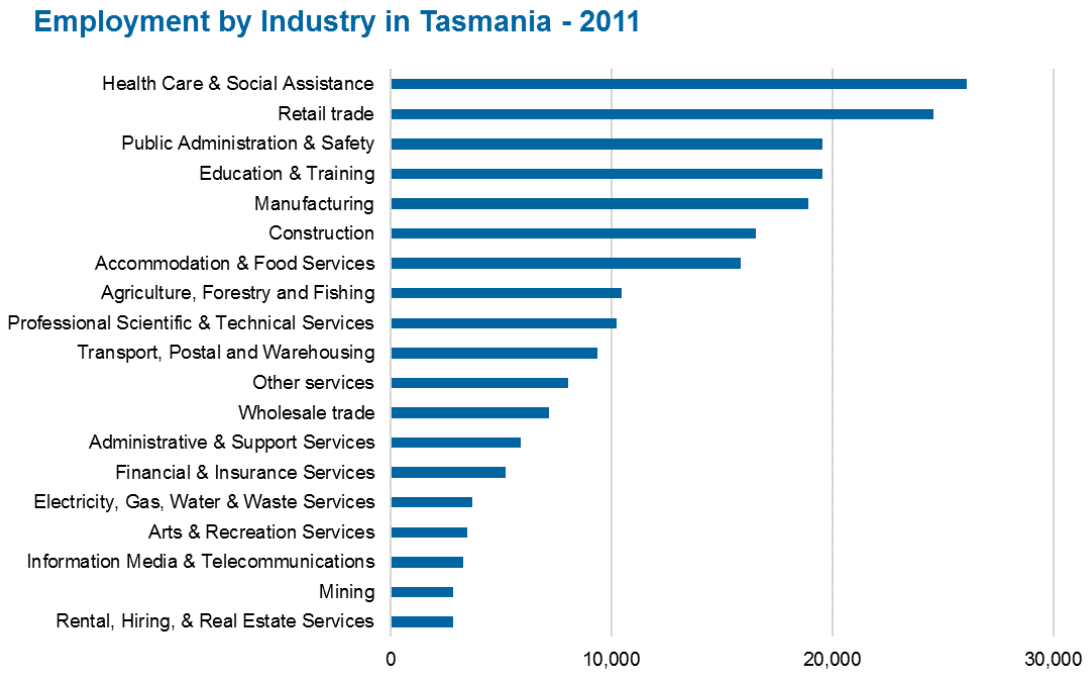
Source: ABS, 2016.[5]



Source: Saul Eslake, 2016.

Based on the 2011 Census data, the top employing industries in Tasmania are healthcare and social assistance (12%), retail trade (11.3%), public administration and safety (9%), education and training (9%), and manufacturing (8.7%). The top four employing industries are all considered to be more city-based employment and state funded industries (except for retail trade). With the advent of technology and the need to invest in technology aided operations to stay competitive in agribusinesses, future increases in gross value added from the agriculture, aquaculture and horticulture sectors may not translate to additional labour hire.

[5] ABS, 2016, *National Regional Profile*, Regional Statistics by ASGS, 2010-2014 for Tasmania.



Source: ABS, 2016.[6]

Key Economic indicators for Greater Hobart[7]

A closer look at the industries that are located within the Greater Hobart region shows a slightly different story compared to the state-wide level numbers for businesses. This could easily be explained by the fact that Hobart is the capital city of Tasmania and therefore most of the businesses located within the region would be head office / city job nature, which is dominated by construction, professional scientific and technical services, as well as real estate services and retail trades, as shown in the figure below. The total number of businesses located in Greater Hobart have decreased from 15,245 businesses registered by 30 June 2011 to 14,758 businesses registered by 30 June 2014.

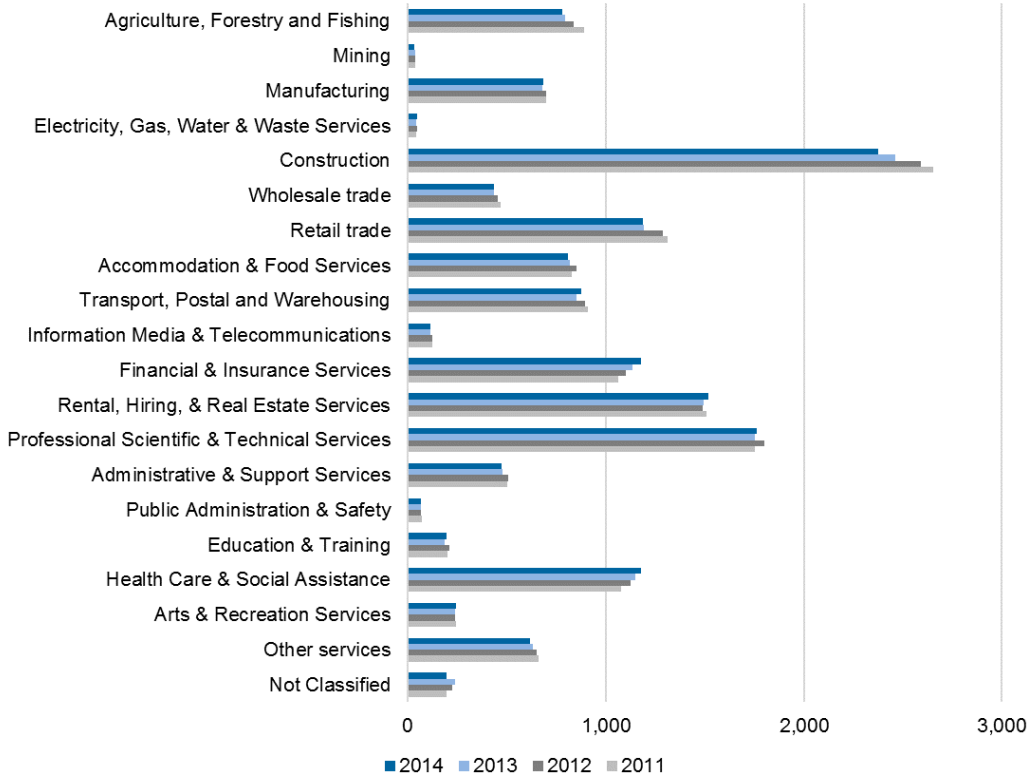
With the increasing contribution by the tourism industry to the Tasmanian economy, it is worth noting that about half of visitor numbers that visit Tasmania visit the Greater Hobart region. For international visitors to Australia, the amount of time they spend in Tasmania as a proportion of their overall stay have increased dramatically over the past four years. In 2013-14, tourism industry contributed a total of $2.3 billion (or 9 per cent) to Tasmania's gross state product. The magnitude of the tourism contributed economy is recognised in that more Tasmanians depend on tourism for their employment than any other Australian States and Territories.[8]

[6] Ibid.

[7] There is limited amount of publicly available macroeconomic statistics at the Greater Hobart level.

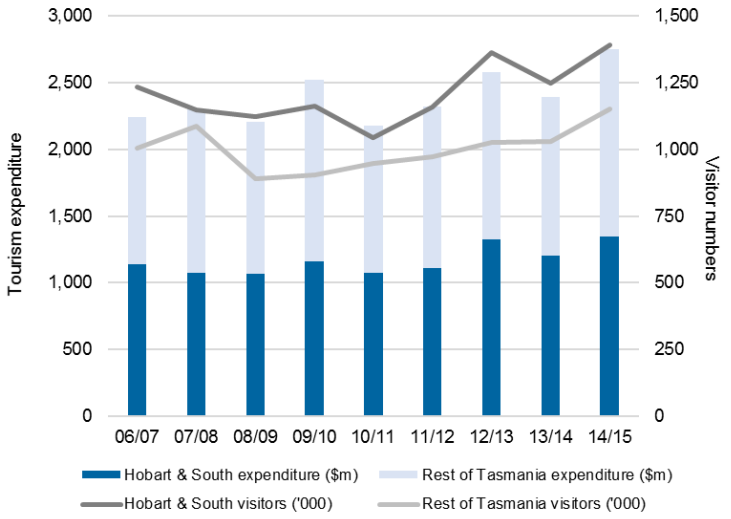
[8] Tasmanian Government, 2015, *The Tasmanian Visitor Economy Strategy 2015-2020*.

Number of Businesses in Greater Hobart - by Industry



Source: ABS, 2016.[9]

Visitors to Tasmania & Greater Hobart

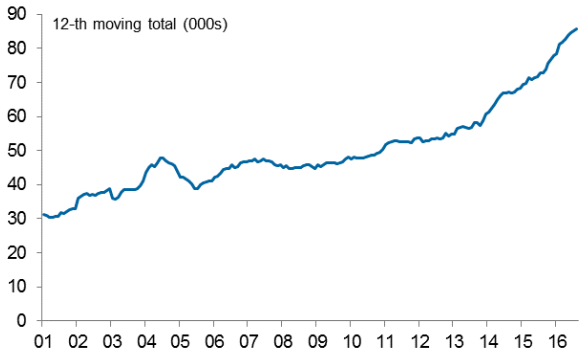


Source: Tourism Research Australia, 2016.[10]

[9] ABS, 2016, *National Regional Profile*, Regional Statistics by ASGS, 2010-2014 for Greater Hobart.

[10] TRA, 2016, *Tourism Region Profiles – Tasmania*; TRA, 2016, *Tourism Region Profiles – Hobart and the South*.

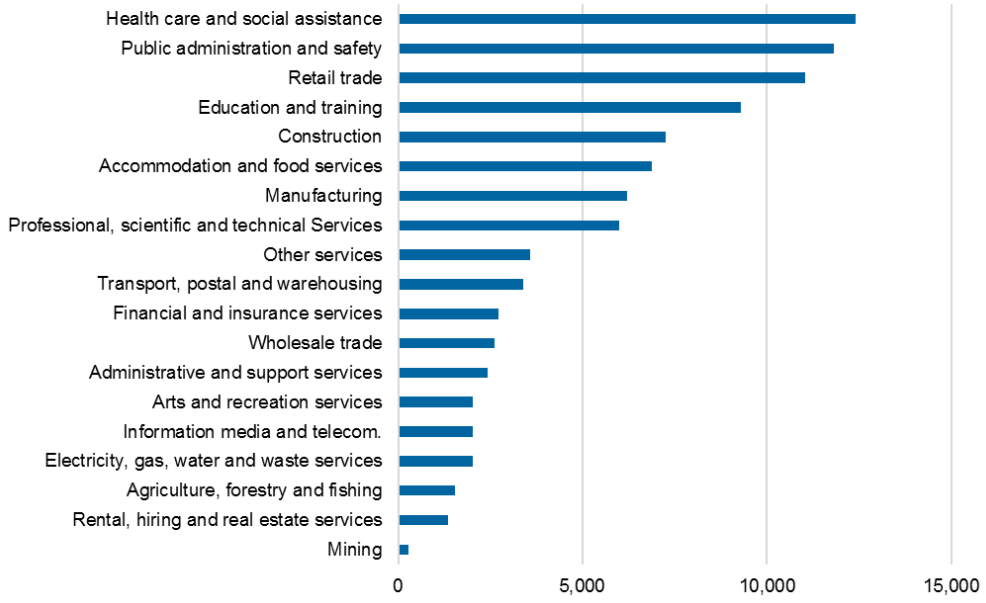
International Visitors Spending Most Time in Tasmania



Source: ABS, 2016.[11]

Employment by industry in Greater Hobart is primarily consistent with the state wide profile with healthcare and social assistance, public administration and safety, and retail trade forming the top three employing industries in 2011, as shown in the figure below. The nature of the service industry and city based jobs will tend to remain quite constant overtime and primarily held by local residents rather than transient or seasonal workforce. Furthermore, with strong growth in visitor numbers in Greater Hobart, this will directly increase the number of local jobs in tourism, hospitality and connected industries, such as retail, accommodation, transport, education and training, food services, tour operator and cultural services.

Greater Hobart Employment Profile



Source: ABS, 2016.[8]

[11] ABS, 2016, *Overseas Arrivals and Departures*, Cat. No. 3401.0.

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