

BROOKVALE STRUCTURE PLAN

FINAL SCENARIOS REPORT

Prepared for Northern Beaches Council

**NORTHERN
BEACHES
COUNCIL**

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INTRODUCTION

1.0

INTRODUCTION

1.0 Introduction

Brookvale Structure Plan describes the securing of Brookvale as an employment focused Strategic Centre of the future for metropolitan Sydney. It will guide future growth in the area for the next 20 years while protecting employment in Brookvale, managing housing diversity and affordability with consideration of traffic, transport, environmental, social and governance imperatives necessary for a Strategic Centre of the future.

Led by Hames Sharley, the process is supported by close collaboration with Arup for transport infrastructure and MacroPlan Dimasi for urban economics. More than simply describing a Structure Plan for Brookvale, this report aims to deliver a strategic methodology that will underpin the integrated urban design, planning, transport and economic inputs that will lead to the sustainable and feasible development of Brookvale.

This report seeks to articulate a place that achieves the Northern Beaches Council and the Department of Planning and Environment's goal for a Strategic Centre at Brookvale - Dee Why. This goal is identified by the Department of Planning and Environment in its document titled "A Plan for Growing Sydney". Northern Beaches Council envisages that the role of Dee Why within the strategic centre will primarily be provision of housing, civic functions and supporting retail, service and commercial functions. It envisages the role of Brookvale within the strategic centre will primarily be the provision of employment functions within the industrial, commercial, retail, service and education sectors. Brookvale will perform a vital economic and employment role for both the Northern Beaches region and metropolitan Sydney.

The report demonstrates a capacity for Brookvale to evolve over time to include a future mix of industrial, commercial, retail, educational, residential and community uses. Brookvale represents a unique opportunity due to its high performing function as the economic heart of Northern Beaches and its strategic location at the intersection of Pittwater Road and Warringah Road, two significant corridors serving the Northern Beaches.

Brookvale Structure Plan intends to take advantage of the existing strengths of Brookvale to create a synergy between a variety of existing and future uses and users. This project has the opportunity to deliver more than just a mix of industrial, commercial and retail uses associated with a Strategic Centre. It can create localised employment opportunities to spur the economic evolution and redevelopment of Northern Beaches as a self-sustaining region. In doing so, Northern Beaches can become a more dynamic, prosperous and liveable region.

This transition can be achieved through understanding the site, its region and its people. Engagement with key stakeholders and community members who will work, reside and visit Brookvale is essential. This report represents the compilation of data collected with respect to planning, environment, economics, transport and the community. It is supported by benchmarking and identifies priority considerations to deliver a Strategic Centre of the future at Brookvale.

This report builds upon the Brookvale Structure Plan Analysis Report to prepare development scenarios for review and evaluation by the project team. This is done in order to select a preferred development scenario for the Structure Plan, which will guide development at Brookvale for the next 20 years.

Note: While the focus of this report is Brookvale, it is recognised that Brookvale forms part of the Brookvale - Dee Why Strategic Centre. In order to determine scenarios for Brookvale a number of agreed assumptions have been used. These are documented for clarity in the report.

SECURING BROOKVALE - DEE WHY AS A COMPETITIVE STRATEGIC CENTRE FOR THE 21ST CENTURY

The primary goal of the Brookvale Structure Plan is the development of a framework and vision to manage growth to the Strategic Centre over the next 20 years and beyond. As part of the investigations undertaken for this report, the following key initiatives were identified for Brookvale and are the basis for a development framework strategy. They describe the actions for government, stakeholders and the community to work together to evolve Brookvale as a vibrant, growing and prosperous Strategic Centre.

In 2015, Hames Sharley undertook a workshop with the US Think Tank, The Brookings Institution, and the Committee for Sydney. The following initiatives are based on the principles for effective city development as defined by the Brookings Institution.

1. Enhance your Local Assets

Know what makes your place unique and leverage off it.

- + Brookvale has an enviable lifestyle with the beach and bush right next door, however the centre currently turning its back on both of these. The opportunity exists to reposition Brookvale to reveal its natural assets.
- + Brookvale operates as the engine room, noted by the community as a "one stop shop" for the Northern Beaches and beyond. It offers a wide range of industrial, commercial, retail and service opportunities within a few blocks.
- + Brookvale's existing industrial character, differentiates it from the other part of the strategic centre at Dee Why and also surrounding centres. Through introducing new complementary uses, Brookvale can continue to attract and retain people in the centre.

2. Export your Knowledge

The best way to put yourself on the map is to share and export your assets.

- + For Brookvale this is the creative or industrial activities, such as surfboard designers.
- + Transition automotive knowledge and skills to the 21st century.
- + Build upon the success of the Lifestyle Working hub to reinforce Brookvale as the Northern Beaches smart work hub.
- + Selling these assets beyond the region is key to achieving a sound economic base to be built on and evolved.

3. Create Value

Place, Infrastructure, Governance, Talent, Innovation, Trade

- + Create a definable place.
- + Deliver needed infrastructure.
- + Foster and harness existing talent, innovation and trade model.

4. Invest in People

Reskilling and providing training in industries compatible with the demographics of Brookvale is essential to reducing unemployment and enabling industries to grow.

- + Reskill and upskill workers, particularly in declining industries such as manufacturing.
- + Tie education programs to industry.
- + Cluster existing talent to enable Brookvale to flourish as an innovative employment hub.
- + Attract new talent through the intangible quality of the beach/ bush lifestyle.

5. Networks not Government

The age of government providing infrastructure is over. The future is centred around partnerships between multiple tiers of government, agencies and the private sector to secure a region.

- + Creating and enabling networks with industries and investors, and balancing the ownership of delivery, will result in effective collaboration and aid in achieving mutually beneficial outcomes for Brookvale.

6. Track what matters

Establishing a clear framework to access, measure and record change, is integral to ensuring change is aligned with strategic objectives.

- + Provide programs for recording.
- + Pin point technologies.
- + Revise strategies in response to change.



DEFINING THE INVESTIGATION AREA

The Brookvale Structure Plan has a 249ha investigation area centred on the suburb of Brookvale in the former Warringah Local Government Area. The investigation area is based on the Brookvale suburb boundary and also includes:

- + Land on both sides of Beacon Hill Road;
- + Land in the IN1 General Industrial and B5 Business Development zones to the east of Harbord Road where Fitness First and Office Works are located (which are not included in the Dee Why Town Centre Master Plan boundary);
- + Some land zoned R2 Low Density Residential to the south of Wattle Road (which acts as a buffer between the general industrial and low density residential areas).

The purpose of the investigation area is to provide an area within which to test the long term objectives of Brookvale as a contributor to Brookvale-Dee Why Strategic Centre. This investigation area is supported by an area of influence, a 1.5 kilometre radial area from the centre of the investigation area. The investigation area is bound by:

- + Brookvale suburb boundary to the north;
- + IN1 General Industrial zoning and Harbord Road to the east;
- + Amourin Street, Short Street, William Street, Warringah Mall, Smith Avenue and TAFE NSW Northern Beaches Campus to the south; and
- + IN1 General Industrial zoning and the south western side of Beacon Hill Road to the west.





BROOKVALE INVESTIGATION AREA AND BROOKVALE SUBURB





ENGAGEMENT

2.0

ENGAGEMENT



Enterprise Industrial Estate, 97 Old Pittwater Rd, Brookvale



2.0 Engagement Process and Outcomes

The development of the Brookvale Structure Plan is underpinned by an engagement strategy that involves key stakeholders and the community. The aim of the consultation process is to obtain a good understanding of stakeholder and community issues and aspirations for the area, to inform stakeholders and the community about the planning study and to provide opportunities for stakeholder and community collaboration in the development of the Brookvale Structure Plan.

Community engagement is an important element of the Brookvale Structure Plan process as it assists in achieving the following engagement objectives:

- + Capturing the aspirations for Brookvale.
- + Identifying emerging issues or needs.
- + Communicating future growth scenarios.
- + Determining a way forward for the future.

This section of the report describes the engagement stages and activities undertaken during October and November 2015 and March 2016, and highlights key outcomes from these sessions.

The Appendix to this report includes detailed community and stakeholder contributions to engagement.

2.1 Engagement Process

PRELIMINARY STAGE - PROJECT LAUNCH

The purpose of this stage was to inform the community and raise awareness about the project. Engagement activities undertaken included:

- + Launch of a project specific 'Your Say' page on Council's website including 'Frequently Asked Questions' and project registration capability to allow community and stakeholder registration for ongoing electronic updates about the project.
- + Use of Social Pinpoint tool (on line interactive tool) to allow lodgement of comments that can be general to the Investigation Area or specific to points within the Investigation Area.
- + Letters sent to all property owners in the identified Area of Influence.
- + Flyers delivered to all properties in the identified Area of Influence to ensure that, in addition to property owners, residents, business owners and workers are made aware of the project.
- + Notices via local media (Manly Daily).
- + Information about upcoming engagement events both on line and via notice in the Manly Daily.

Stage 1 Project definition and visioning

The purpose of this stage was to inform the community about the scope and objectives of the project and was focused on project definition and visioning. It sought input from participants about aims and aspirations for Brookvale.

This stage was launched with an 'Information Stall' at the Brookvale Show in October 2015 and was followed by 2 x 'Drop In Sessions' in November 2015 at the Brookvale Community Centre.

All sessions displayed information boards and mapping of the Investigation Area and Area of Influence. They also displayed historical information about the development of Brookvale. Participants were encouraged to make written comment about their vision and aspirations for Brookvale under a series of topic areas being:

- + Jobs and Businesses
- + Living in Brookvale
- + Transport and Access
- + Community and Open Space

At all sessions Council staff were available for 1:1 discussion.

There was also the opportunity for on line engagement using the Social Pinpoint tool and an on line feedback form.

Comments from Stage 1 informed the project aspirations identified in Part 3 of this report.

Stage 2 Targeted consultation

This stage sought involvement and collaboration from existing business owners and with key stakeholders. It consisted of an interactive workshop with business owners and operators, and owners of business land. It also included 1:1 meetings with various property owners and business representatives, State agencies, private sector community services providers and internal business areas of Council.

Key outcomes from Stage 1 engagement were utilised as a basis for the workshop discussion. Participants were encouraged to identify and elaborate on current and future business related issues in Brookvale. Specifically they considered the following topic areas:

- + Land uses and Planning Controls
- + Workforce in Brookvale
- + Physical and Social Infrastructure
- + Connectivity in Brookvale
- + Role of Housing in Brookvale

Comments from Stage 2 also informed the project aspirations in Part 3 of this report.

Stage 3 Draft Brookvale Structure Plan exhibition

Stage 3 is a future engagement stage. After endorsement by the Northern Beaches Council of the Draft Brookvale Structure Plan, public exhibition of the Draft Plan will be undertaken for a period of at least 28 days. During this period Council will receive submissions on the Draft Plan and will provide opportunities for the community to engage in 1:1 discussions with staff.



2.2 Engagement Outcomes

STAGE 1 - ENGAGEMENT OUTCOMES JOBS AND BUSINESSES

Brookvale performs a vital economic and employment role for both the Northern Beaches and metropolitan Sydney. With nearly 15,000 jobs currently provided, it will be important for Brookvale to maintain this role as Sydney grows.

- + Imagining the future Brookvale, what jobs and businesses do you think should be located in Brookvale in the next 20 years?
- + In the future Brookvale, what jobs and businesses are essential to be retained?

WHAT THE COMMUNITY SAID





LIVING IN BROOKVALE

Approximately 2,800 residents live in the Brookvale area, according to the Bureau of Transport Statistics (2014). Brookvale offers good amenity for residents – it is close to the beach, it is connected by public transport and major roads, plus it has everything you could ever need close by (restaurants, shops, household goods, automotive services, etc).

- + In the future Brookvale, what types of housing would you like to see available? (i.e. houses, semi-detached, terraces, townhouses, flats, seniors living, student accommodation)
- + In the future Brookvale, where will the community want to live?

WHAT THE COMMUNITY SAID



TRANSPORT AND ACCESS

Brookvale is situated on Pittwater Road. According to the 2011 census, approximately 82% of trips recorded for Brookvale were by private car, 8% were by public transport and 10% were by active transport (i.e. walking and cycling). The NSW Government is committed to delivering Bus Rapid Transit (B-Line) on Pittwater Road.

- + In the future Brookvale, how will people get around? How will people get to the shops? How will people get to work? How will visitors get to Brookvale?
- + In the future Brookvale, what will investment in transport infrastructure be focused on?

WHAT THE COMMUNITY SAID



COMMUNITY AND OPEN SPACE

Brookvale has many elements that shape its identity: its industrial landscape, its convenience and its major attractions including Warringah Mall and Brookvale Park. We have heard through the *yoursaywarringah.com.au* website that the community considers Brookvale to be vibrant, diverse and a convenient place to live.

WHAT THE COMMUNITY SAID

- + If you overheard someone talking about Brookvale in 20 years, what would you like them to say about it?
- + If you were going to meet someone in Brookvale who hadn't been to Brookvale before, where would you tell them to meet you?
- + In the future Brookvale, what public open space will the community use and what activities will they undertake?



STAGE 2 - SUMMARY OF WORKSHOP OUTCOMES

LAND USES AND PLANNING CONTROLS

What is working and is not working with the current zoning and planning controls?





WORKFORCE IN BROOKVALE

What changes are needed to engage and support industry?

Availability of workforce; future industries; required job types etc.



PHYSICAL AND SOCIAL INFRASTRUCTURE

Places for workers to eat and recreate; provision of high speed internet, etc.





CONNECTIVITY IN BROOKVALE

Public transport, road access, parking, cycling, walkability.



ROLE OF HOUSING IN BROOKVALE

In a jobs focused strategic centre? Location, density, diversity.



STAGE 3 - SUMMARY OF KEY STAKEHOLDERS DISCUSSIONS

The following is a summary of the main issues raised with Council in the key stakeholder meetings:

- + Brookvale needs revitalisation.
- + Mixed commercial/ residential development is seen as a means of maintaining viability of jobs in Brookvale.
- + Support for the objective of live, work and shop in local environment – mitigates movement needs.
- + Current height limits on Pittwater Road corridor limit revitalisation.
- + Connectivity with Dee Why is important.
- + Brookvale Park should be a sporting, community and cultural precinct.
- + Shared school and community use of appropriate infrastructure.
- + Connectivity of open spaces and green grid/ street planting is important.
- + Support for active transport initiatives to improve connectivity.
- + Businesses support sustainability but need more support.
- + Extended trading hours for appropriate businesses in appropriate locations to foster a night economy and business activation.
- + Flexibility/ greater range of land uses in industrial areas is important to facilitate future redevelopment.
- + Community health and aged care are booming service sectors.
- + Parking is a challenge to future expansions/ redevelopment.
- + Getting staff to Brookvale is a problem and impacts longevity of staff.
- + Affordable housing needed for workers in Brookvale.
- + Improved interface between industrial and residential areas.
- + Encourage the development and evolution of the automotive business sector.



ASPIRATIONS

3.0

SECURING A STRATEGIC CENTRE

3.0 Aspirations

This section identifies aspirations for the Brookvale Structure Plan. These aspirations respond to an analysis of the existing context, outcomes of consultation undertaken including the Community Strategic Plan as well as the the community engagement stages 1 & 2, carried out for the Brookvale Structure Plan. These aspirations also respond to the guidelines for Strategic Centres included in “A Plan for Growing Sydney”.

This is coupled with key elements that constitute urban design excellence for Strategic Centres such as place creation, identity, movement networks, land uses, future proofing and social, economic, environmental and governance sustainability.

The intent for the delivery of the Brookvale Structure Plan is described in the following aspirations as the first step to achieving a whole-of-project vision. This intent is then translated into future directions for the Brookvale investigation area.



ASPIRATION 01
**SECURE AND STRENGTHEN ECONOMIC
PERFORMANCE OF BROOKVALE
STRATEGIC CENTRE**



- + Leverage the role of Brookvale as the economic centre for the Northern Beaches.
- + Facilitate economic and physical self-containment
- + Consider new economic models, typologies and industries.
- + Clearly define the economic purpose of Brookvale.
- + Investigate catalyst/change agents.
- + Attract and cluster talent and jobs.
- + Respond to new and emerging industries.

ASPIRATION 02
ACHIEVE A SELF SUSTAINING CENTRE



- + Locate housing close to jobs.
- + Provide for a range of housing choice to better match demand to traditional blue collar workforce.
- + Enable a place to work, live, recreate, entertain and be healthy.

ASPIRATION 03
CREATE AN INTEGRATED ACTIVITY
CLUSTER



- + Leverage Warringah Mall.
- + Intensify and densify land uses.
- + Consider an innovation district.
- + Tie education to industry.
- + Deliver housing choice, diversity and affordability.

ASPIRATION 04
SHIFT AWAY FROM CAR DEPENDENCE



- + Introduce multi-modal public transport initiatives.
- + Design for pedestrians and cyclists.
- + Manage cars and vehicles.
- + Resolve complex regional road networks.
- + Leverage B-Line on Pittwater Rd and advocate for East/West B-Line on Warringah Rd



ASPIRATION 05 ENHANCE BROOKVALE'S IDENTITY



- + Strengthen role as the Northern Beaches “one stop shop”
- + Not Warringah Mall and an industrial park, but part of Brookvale-Dee Why Strategic Centre.
- + Make a consistent and definable character.
- + Integrate beach, bush, creeks and topography.
- + Value heritage and cultural diversity.
- + Engage with community and work with stakeholders.

ASPIRATION 06 BRING LIFE TO THE STREETS



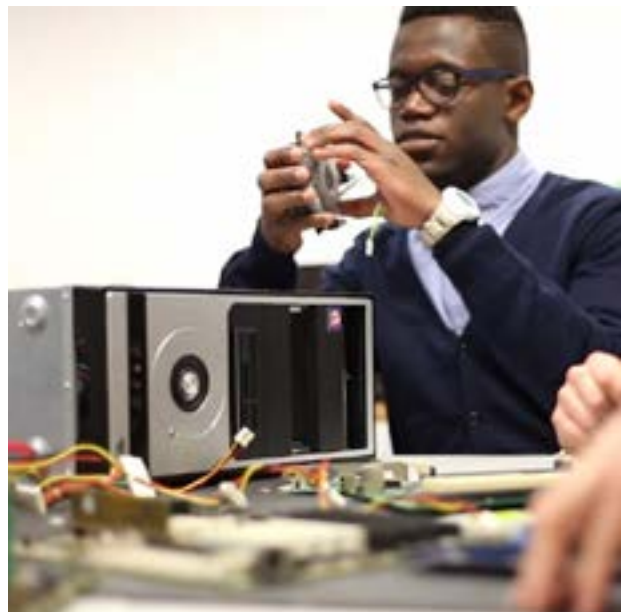
- + Encourage more cafes, restaurants, bars.
- + Create an events program.
- + Define a destination within Brookvale.
- + Embed recreation within the centre.
- + Enable day and night activation.

ASPIRATION 07 LINK BEACH TO THE BUSH



- + Reposition Brookvale to reveal its natural assets.
- + Respond to topography.
- + Integrate water management.
- + Enable a green grid.
- + Enhance native vegetation and wildlife corridors.
- + Ensure a 5 minute walk to open space.

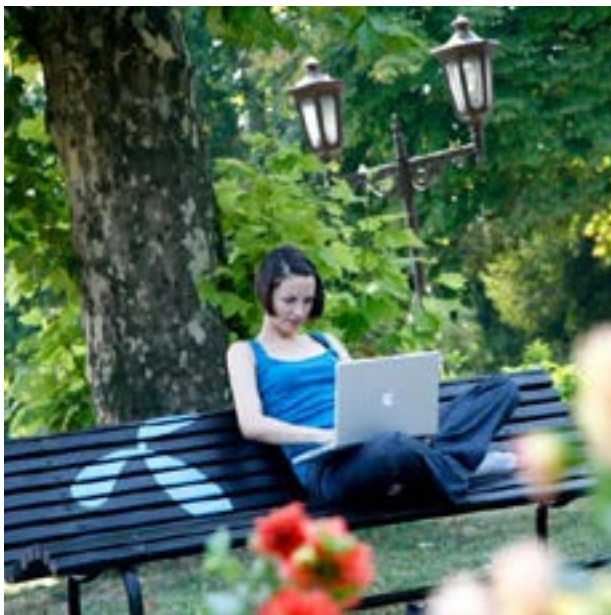
ASPIRATION 08 UPSKILL BROOKVALE



- + Reskill and upskill workers in declining industries
- + Incentivise growth in future industries, services, technologies and research.
- + Tie education (schools and TAFE) to industry.
- + Consider a future Northern Beaches University.
- + Consider an innovation district.



ASPIRATION 09 PROVIDE DIGITAL TECHNOLOGIES



- + Provide digital technologies to enable work from home.
- + Bring forward the delivery of the NBN.
- + Commit to other knowledge centres in Sydney, Australia and beyond.

ASPIRATION 10 DESIGN FOR FLEXIBILITY AND ADAPTABILITY



- + Manage infrastructure capacity.
- + Identify key sites.
- + Ensure staging and phasing.
- + Establish clear framework to access and measure pressures for change in the future.



DEVELOPMENT PRINCIPLES

4.0

TOWARDS A DEVELOPMENT FRAMEWORK

4.0 Development Principles

The following development principles have been identified to guide the formulation of a preferred Structure Plan for Brookvale, and to evolve Brookvale to be part of a competitive Strategic Centre for Northern Beaches and Metropolitan Sydney.

The principles are not mutually exclusive; they work together to establish a framework for change that can enable multiple development initiatives and relate to time and market opportunities.

The principles are intended to be flexible but robust. They establish criteria for the evaluation of a number of development scenarios (identified in section 6 of this report) that are based on projected demographic changes, urban economic drivers and traffic and transport initiatives.



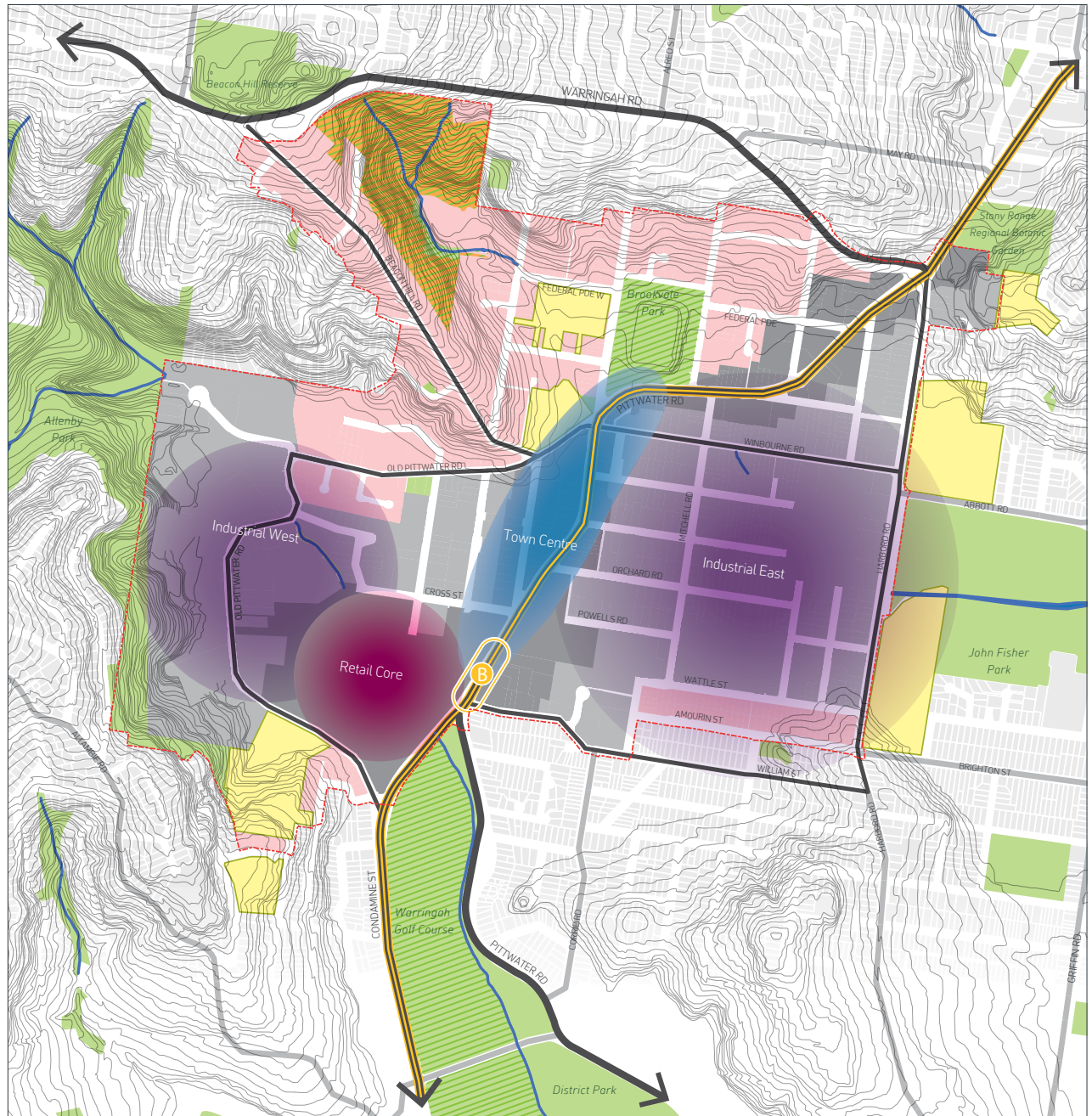
PRINCIPLE 01

RECOGNISE THE IMPORTANCE OF BROOKVALE'S EMPLOYMENT LANDS TO THE NORTHERN BEACHES

- + Recognise the contribution of Brookvale's employment lands to the economic viability of the Strategic Centre
- + Recognise the existing Brookvale Town Centre located along Pittwater Road and develop its role as a support area for surrounding employment lands
- + Maintain and support Warringah Mall as the major retail core for the Strategic Centre
- + Recognise and protect industrially zoned land
- + Ensure that traditional industrial uses are retained in the existing industrial zone east of Pittwater Road, while also responding to future changes in industry
- + Building on the existing character of the industrial zone west of Pittwater Road, encourage additional employment generating uses
- + Consider increased residential potential in locations that will not diminish employment opportunities, will support and enhance existing commercial functions and will be accessible to the B-Line stop
- + Create appropriate interfaces at land use boundaries
- + Integrate regional open space, riparian corridors, recreational assets and school facilities as part of the open space hierarchy for Brookvale
- + Work with topography and include topographical features as part of the identity of the place
- + Reinforce and work with the existing street network and structure



PRINCIPLE 01 RECOGNISE THE IMPORTANCE OF BROOKVALE'S EMPLOYMENT LANDS TO THE NORTHERN BEACHES



- | | |
|--------------------------------|-----------------------|
| Investigation Area Boundary | B-Line Stop |
| Public Open Space | B-Line Route |
| Open Space with limited access | 2m Contour Line |
| Retail & Commercial (Existing) | Existing Road Network |
| Industrial (Existing) | Creek (Existing) |
| Residential (Existing) | |
| Education | |
| Environmental Conservation | |



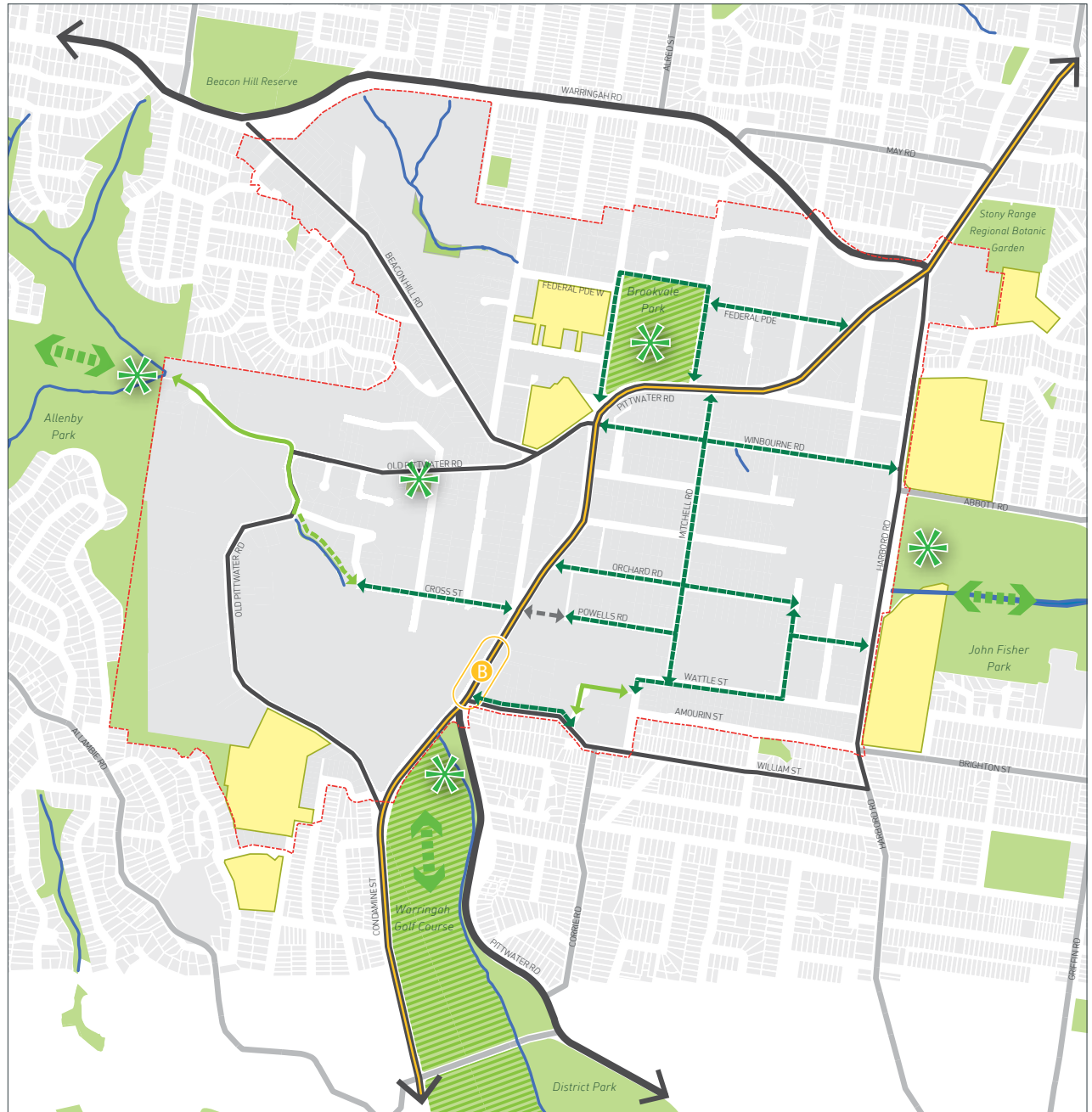
PRINCIPLE 02

CREATE GREEN LINKS AND GREEN DESTINATIONS

- + Define key recreational destinations and ensure they contribute to the green grid
- + Create workable green links through the centre, which link to green assets such as Brookvale Park, as well as community destinations such as Warringah Mall, Brookvale Town Centre and the B-Line stop
- + Create green streets that provide workable and attractive access for the east and west precincts of the Strategic Centre and also link the green grid assets across Brookvale
- + Integrate key pedestrian and cycle opportunities to encourage active living
- + Identify potential future links that can improve connectivity and access to local destinations
- + Connect Brookvale with the beach and bush



PRINCIPLE 02 CREATE GREEN LINKS AND GREEN DESTINATIONS



- Investigation Area Boundary
- Public Open Space
- Open Space with limited access
- Education
- Connect to bush/beach
- Green street
- Green link
- Potential green link
- Potential through site street
- B-Line Stop
- B-Line Route

- Green destination
- Existing Road Network
- Creek (Existing)

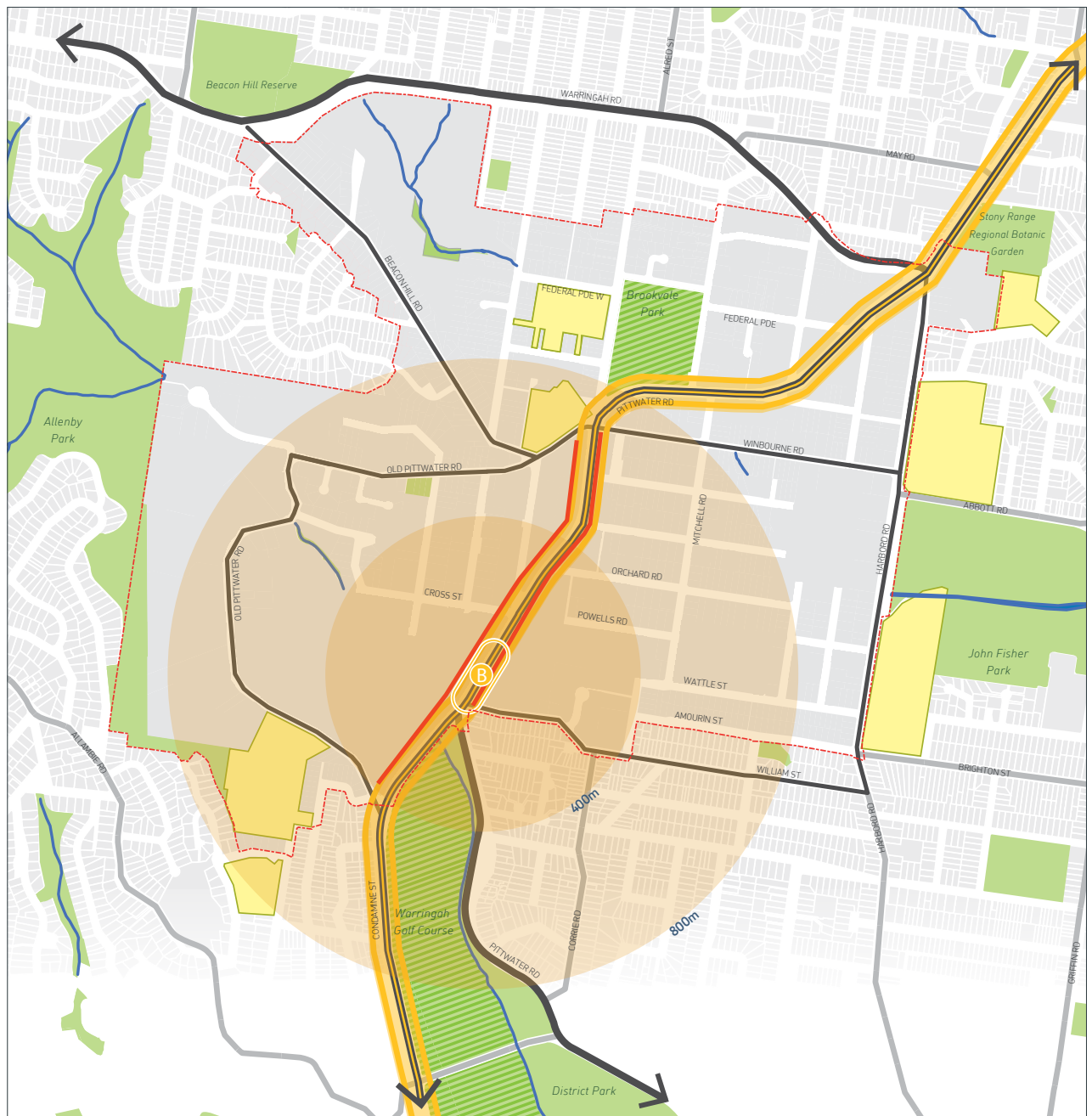


PRINCIPLE 03 LEVERAGE THE B-LINE

- + Respond to the proposed B-Line bus asset and in particular the B-Line stop located at Warringah Mall
- + Consider intensification of land uses within 800 metres of the B-Line stop
- + Consider uplift of R2 Low Density Residential zones within 400 metres of the B-Line stop
- + Recognise the B-Line stop and other bus stops when planning active transport routes and facilities
- + Encourage Warringah Mall to respond to the B-Line stop by activating its Pittwater Road frontage and providing workable and attractive linkages to the B-Line stop
- + Encourage activation of Pittwater Road street frontage, within the Brookvale town centre.



PRINCIPLE 03 LEVERAGE THE B-LINE



- Investigation Area Boundary
- Public Open Space
- Open Space with limited access
- Education
- B-Line Stop
- B-Line Route

- Active Frontage
- 400m/800m distance from B-line stop
- Creek (Existing)
- Existing Road Network



PRINCIPLE 04

ACTIVATE THE BROOKVALE TOWN CENTRE

- + Encourage shop top housing to bring life into the centre
- + Reinforce the Town Centre as the commercial support area for the industrial lands
- + Encourage street activation and a night economy with after-hour uses such as restaurants, cafes and bars
- + Create green linkages to and from the centre by public domain landscaping and improvements
- + Encourage site amalgamations to facilitate improved design outcomes that address quality of architecture, open spaces and active public interfaces
- + Investigate edges of the Town Centre to improve opportunities for amalgamated development sites, which do not compromise employment lands
- + Create gateways that define the entrances to the Town Centre and create a sense of arrival and place for Brookvale
- + Ensure pedestrian and cycle network connect to the Town Centre





DEVELOPMENT FRAMEWORK

5.0

GUIDING THE FUTURE GROWTH

5.0 Development Framework

The Development Framework diagram for Brookvale is underpinned by the aspirations and development principles established for the project. It establishes a green grid linking to key open spaces. It illustrates a refined street hierarchy, identifying key streets for connectivity. It highlights the opportunity for density to be considered within 800m of the proposed B-Line stop and as part of activation of the Brookvale Town Centre.

The Development Framework is founded in the following project assumptions:

- + Brookvale and Dee Why, in combination, are a Strategic Centre for the Northern Beaches.
 - Brookvale primarily has an employment focus.
 - Dee Why primarily has a residential and civic focus.
- + Brookvale is divided by a main arterial road that carries a diverse range of traffic and trip types between Palm Beach and the Sydney CBD.
- + Growth potential within Brookvale is limited by the carrying capacity of Pittwater Road.
- + The B-Line is coming to the Pittwater Road corridor and will stop at Warringah Mall. Closest stop to the north is Dee Why and closest stop to the south is Manly Vale.
- + Warringah Mall is the retail core of the Strategic Centre and is expanding.

The key features of the Development Framework are:

An urban environment that is activated, connected and responds to sound principles for intensification of activity:

- + The B-Line stop will be a primary focus for intensification of land use activity.
- + Green linkages and spaces should be created through the area to link bush to beach and improve the connectivity and visual appeal of Brookvale.
- + Pedestrian and cycle links should be created to connect with the green grid and with the transport network.
- + The Brookvale Town Centre is to be invigorated and Warringah Mall reinforced as the main retail core of the Strategic Centre.

- + All new development will contribute to the continued economic viability of the Strategic Centre and not reduce employment opportunities.
- + Site amalgamations will be encouraged along Pittwater Road to create an urban environment that is interesting, attractive and connected to surrounding employment zones.
- + Market driven development and intensification in the industrial zones should be encouraged responding to future employment needs.

Retail and commercial activity that aligns with and reinforces existing land use patterns

- + Brookvale Town Centre will provide support services for nearby employment lands and will include mixed use development that includes opportunity for residential accommodation.
- + Warringah Mall is expanding and its role as the retail core will be reinforced.
- + Brookvale Town Centre and Warringah Mall will incorporate activation at street level and will encourage a night economy.

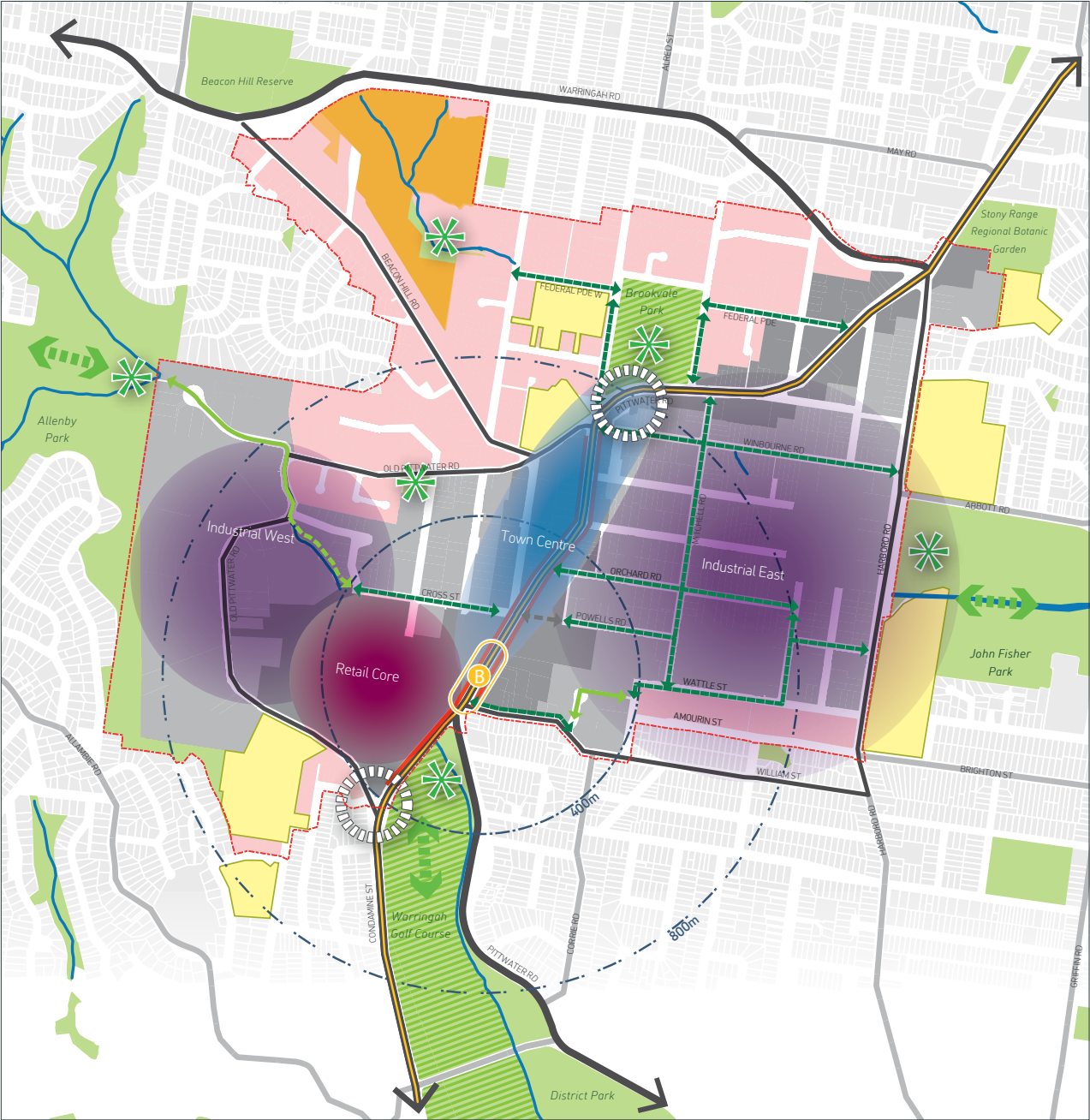
Industrial zones that are protected and supported to maintain and grow employment generating uses

- + Industrial areas west of Pittwater Road will become more flexible to include a greater range of employment generating land uses.
- + Industrial areas will not include land uses that would diminish employment opportunities.

Residential development that is accessible and brings life to Brookvale without impinging upon employment lands.

- + Encourage shop top housing within the Brookvale Town Centre to activate and enliven Brookvale while at the same time improving the economic viability of local businesses, which are used by the business owners and workers in the surrounding industrial zones.
- + Consider uplift of residentially zoned land within 400 metres of the B-Line stop or within the Brookvale Town Centre.

The Development Framework diagram is not a design, but a diagram that can underpin all development decisions and project testing across the delivery of the project. It provides guidance as to which areas are suitable for more detailed architectural typology and feasibility testing.



- Investigation Area Boundary
- Public Open Space
- Open Space with limited access
- Education
- Retail & Commercial (Existing)
- Connect to bush/beach
- Green street
- Green link
- Potential green link
- Potential through site street
- B-Line Stop
- B-Line Route
- Green destination
- Existing Road Network
- Gateway
- 400m/800m distance from B-line stop
- Creek (Existing)





DEVELOPMENT SCENARIOS 6.0

FINDING THE BALANCE - JOBS & HOUSING

6.0 Development Scenarios

In conjunction with the research and knowledge presented in the Analysis Report as well as input from the community, this section is underpinned by an understanding of land parcelisation, agreed project aspirations and established development principles. Coupled with the priorities for reinforcing a Strategic Centre identified by 'A Plan for Growing Sydney', four development scenarios are considered.

The following pages describe four development scenarios for the project. These represent four strategies, not designs. Underpinning each scenario is the common intention to strengthen the economic performance of Brookvale and achieve a self sustaining Strategic Centre for the Northern Beaches and metropolitan Sydney.

The four scenarios represent different options for management of the future land use mix in Brookvale; they do not represent a time based evolution of the area. The scenarios range from only employment growth to various shares of employment and residential growth.

- + **Scenario 1:** focuses solely on employment growth with an additional 3,000 jobs by 2031 in Brookvale.
- + **Scenario 2:** focuses on employment growth and some residential growth with an additional 2,400 jobs and 550 residents by 2031 in Brookvale.
- + **Scenario 3:** focuses on employment and residential growth with an additional 1,700 jobs and 1,200 residents by 2031 in Brookvale.
- + **Scenario 4:** focuses on high residential growth and employment growth, with an additional 1,300 jobs and 1,550 residents by 2031 in Brookvale.

The land use assessment for each growth option relies on future trend and market growth predictions.

The impact on the road network of various growth options has been considered by transport specialists to ensure that the infrastructure can support the development proposal.

To enable the growth to happen, public domain and place initiatives will ensure the best positioning for Brookvale as a competitive strategic centre for the 21st century. It is imperative to deliver best practice public realm to secure investment in the area and leverage future investment in Brookvale.

ESTABLISHING GROWTH PARAMETERS

Establishing a growth parameter is essential to initiate scenario testing. Brookvale - Dee Why is identified within the north subregion as a 'strategic centre' as follows:

Strategic Centres – the largest centres in the Sydney Metropolitan Area, when developed. They contain mixed-use activity of an amount, density and diversity that is of metropolitan significance, including commercial (office, business and retail), civic and cultural uses; government services; and higher density housing. They are typically on the passenger rail network or serviced by other high frequency public transport.

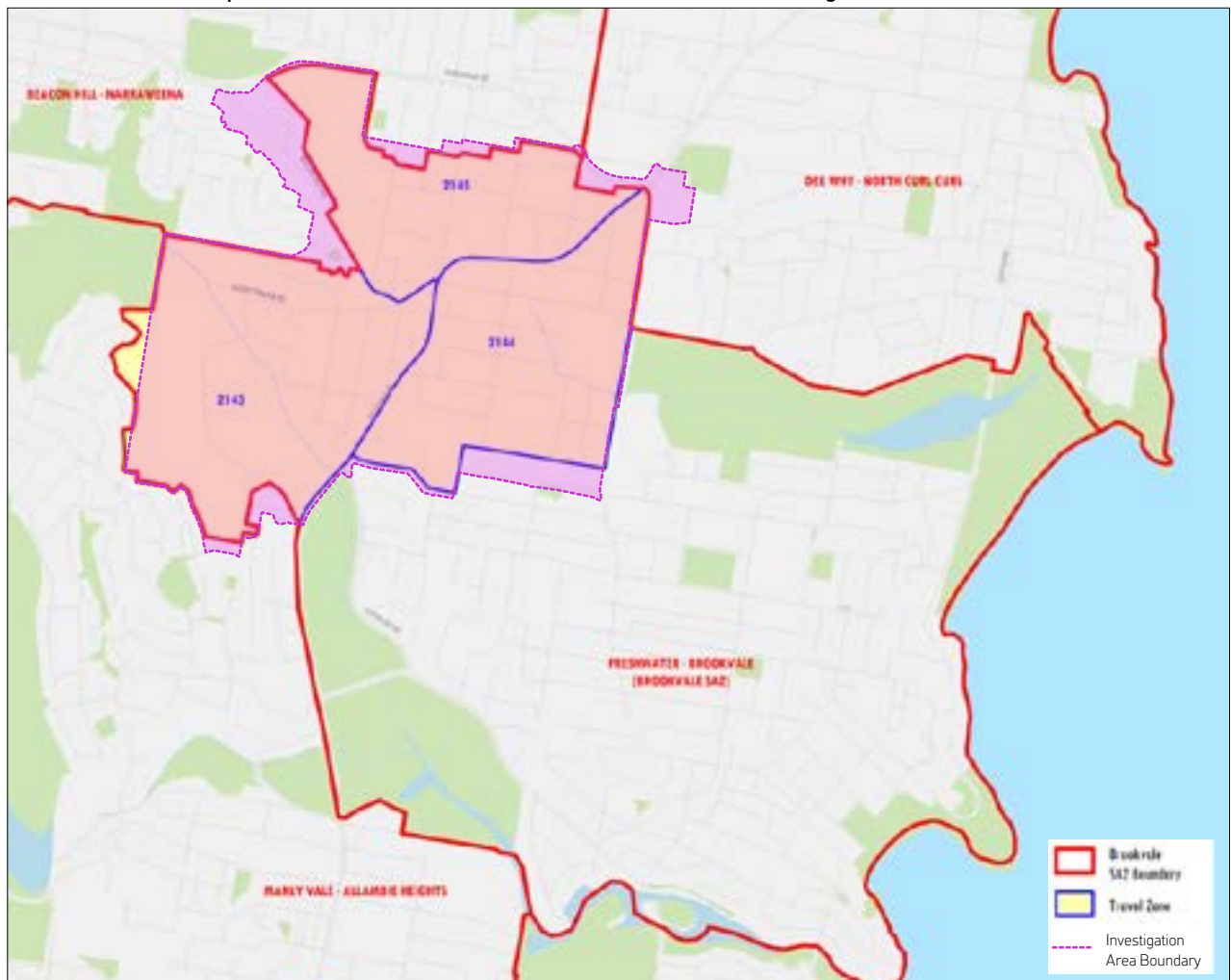
Strategic Centres typically contain at least 10,000 jobs, with the potential to accommodate ongoing jobs growth over the long-term. They are priority locations for employment and retail activity.

EMPLOYMENT AND HOUSING GROWTH

Assessment considers the employment and housing growth potential of the Brookvale-Dee Why Strategic Centre, defined in area by BTS travel zones (TZ 2143, TZ 2144 and TZ 2145). These travel zones occupy the north-west corner of the larger Freshwater-Brookvale SA2 region. The BTS travel zones closely correlate with the defined Investigation Area for Brookvale as shown in the below plan.

The Bureau of Transport Statistics (BTS) is the leading source of transport data for the NSW transport system. BTS regularly publishes population and employment forecasts at the small area level for the Sydney Greater Metropolitan Area. These forecasts integrate the Department of Planning's official population projections and factor in major development and industry trends.

NSW Bureau of Transport Statistics (BTS) Area Boundaries and Brookvale Investigation Area



Current and projected population and employment numbers for the Brookvale Strategic Centre are provided below.

These projections form the 'base case' Scenario 1 with 100% jobs growth. Additional Scenarios are derived from variation in the share of population and employment growth for the Brookvale area.

POPULATION

The population of Brookvale in 2011 was 2,759 persons and is projected to increase to 4,420 by 2031 (i.e. an additional 1,661 persons at 2.4% growth per annum).

Based on current household densities, this growth represents an additional 664 dwellings to 2031.

**Table 6.01: Population and Dwellings Growth
- BTS Travel Zones (2011-2031)**

Year	Population	Dwellings
2011	2,759	1,104
2016	3,406	1,448
2021	3,896	1,339
2026	4,062	1,676
2031	4,420	1,768
Total Change	1,661	664
Annual Growth Rate	2.4%	2.4%

*Based on average household size of 2.5
Source BTS (2014) & MacroPlan Dimasi (2015)

EMPLOYMENT

In 2011 there were 15,224 jobs in the Brookvale precinct. This is projected to grow to 18,733 jobs in 2031 (an increase of 3,509 jobs, at an annual increase of 1.0%).

Notably, almost all of the projected employment growth is derived from the retail sector and wholesale sector. Health care, social assistance, education and training are other major contributors to jobs growth for Brookvale in the future. Manufacturing related employment growth is expected to decline.

**Table 6.02: Employment Growth
- BTS Travel Zones (2011-2031)**

Year	Employment
2011	15,224
2021	17,153
2031	18,733
Total Change	3,509
Annual Growth Rate	1.0%

Source BTS (2014) & MacroPlan Dimasi (2015)

ACCOMMODATING GROWTH

The Transport Management and Access Study (TMAS) undertaken by GHD in 2012 explored whether a 5,000 jobs target provided for in previous metropolitan strategies could be accommodated at Brookvale-Dee Why. It found that:

Travel demand [in the precinct] is likely to restrict the amount of development that can be achieved in Brookvale, due to the limited capacity along Pittwater Road between Condamine Street and Old Pittwater Road and the poor east-west connectivity between West Brookvale and Harbord/Freshwater. Congestion along these corridors is as much a result of increasing through traffic in the corridor as from traffic generation associated with additional jobs in Brookvale and Dee Why.

After accounting for a reduction in vehicle trips due to trip containment and multi-purpose trips, as well as a realistic 10% reduction in vehicle trips resulting from mode shift, the road network will be over capacity and will operate at very high levels of congestion (particularly in the evening peak period).

Based on rough sensitivity testing undertaken as a part of the study, it is estimated that growth in jobs of some 3,000 to 3,500 across Brookvale and Dee Why can be supported on the transport network at a manageable and serviceable Level of Service, before large-scale network upgrades are required.

At the time of the TMAS Study, the Warringah Road Bus Rapid Transit (B-Line) study was being prepared by TfNSW. Given the limited scope to fund and implement large scale road works through Brookvale study area, the TMAS Study recommended an integrated package of measures. This was to encompass infrastructure, service and policy responses to reduce travel demand and deliver a working transportation network that will serve the forecast growth.

The primary focus of the strategy will be to reduce vehicle demand, increasing mode share and implementing policies that reinforce a higher attraction to modes other than car.

The above recommended TMAS limits to jobs growth (3,000-3,500) is similar to the current BTS employment forecasts for Brookvale.

ASSUMPTIONS

Four scenarios for employment and residential growth in Brookvale have been hypothesised and tested. These scenarios take into consideration the traffic constraints outlined in the TMAS study and consider various mixes of land uses, each of which would approximate the traffic generation capacity limit suggested by the TMAS.

A number of assumptions have been applied:

- + Health care and social assistance, the retail trade, accommodation, food services, professional services and education and training will dominate employment growth going forward to 2031.
- + There will also be growth in industrial related uses including transport, postal and warehousing and the wholesale trade, associated with an increasing resident population. The scale of such employment growth is limited at Brookvale given that most available industrial stock is all-but fully occupied. We have therefore assumed that the majority of growth in industrial employment will be generated from an increased intensification of existing premises (consistent with the changing nature of industrial employment) and that a minor share only (25%) will involve new floorspace. Hence, we use a modified employment density for the anticipated growth in industry jobs.
- + Manufacturing jobs will continue to decline, consistent with the Greater Sydney and nationwide trend.
- + The Warringah Mall expansion includes an additional 8,000m² of retail floorspace, equating to an additional 320 jobs (an employment density of 25). A further expansion has been factored into the assessment prior to 2031 of an additional 5,000m² equating to a further 200 jobs. Overall 520 jobs and 13,000m² of the retail floorspace projections have and are expected to be accommodated at Warringah Mall. Total estimates do not change as these jobs and floorspace provisions are included in the maximum of 3,000 jobs for

6.1 Scenario 1: Employment Growth

The recent TMAS traffic assessment suggests that an additional 3,500 jobs could be accommodated at the combined centres of Dee Why and Brookvale, without substantial transport/traffic improvements. It is estimated that 500 of these jobs will be placed at Dee Why, which, of the two centres takes on a greater residential focus.

Scenario 1 assumes that all of the 3,000 jobs will be absorbed at Brookvale (100% job growth). Estimates have regard for, and include the recent addition of 320 retail jobs at Warringah Mall.

Approximately 84,026m² of additional employment floorspace is required to accommodate these jobs, primarily related to retail, accommodation and food services and office uses.

Currently, a quarter of all jobs in the former Warringah LGA, are located within the Brookvale employment precinct. This number equals approximately 15,224 jobs and floorspace area of 606,361m².

Under this scenario the overall allocated employment floor space for Brookvale centre will be approximately 690,387m² by 2031. .

Table 6.11 : Scenario 1 - Job Growth to 2031

Land Use	Jobs	Additional Floorspace (m ²)
Industrial	637	9,011
Office	364	10,184
Retail	1,238	30,948
Health Care	223	5,578
Education	196	4,897
Accommodation & Food Services	181	18,070
Fitness/Leisure/Arts	24	971
Other	137	4,366
Total	3,000	84,026

Source: MPD (2016)



6.2 Scenario 2: Primary Employment and Limited Residential Growth

This scenario considers a 20% growth in housing and a 80% growth in employment.

The focus is on employment growth with some residential growth to stimulate development and activate Brookvale.

Growth of 2,400 jobs is balanced against an increase of 550 residents or 305 dwellings (with an average household size of 1.8).

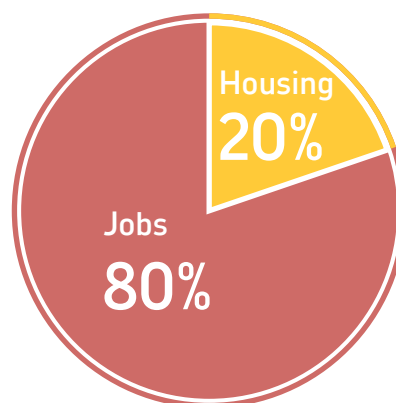
Utilising growth trends and typical employment densities, additional employment floorspace requirements of 68,469m² has been derived.

Under this Scenario the overall employment floor space for Brookvale centre will be approximately 674,830m² in 2031.

Table 6.21: Scenario 2 - Job Growth to 2031

Land Use	Jobs	Additional Floorspace (m ²)
Industrial	438	6,323
Office	269	7,527
Retail	1,066	26,653
Health Care	196	4,889
Education	167	4,171
Accommodation & Food Services	154	15,391
Fitness/Leisure/Arts	19	769
Other	91	2,744
Total	2,400	68,469

Source: MPD (2016)



6.3 Scenario 3: Primary Employment with Residential Growth

This scenario seeks to balance employment and residential growth at Brookvale. It allows for 60% of growth to occur in employment and 40% in residential.

This scenario tests an increase of 1,200 residents being introduced to the centre or 670 dwellings (average household size of 1.8). This is in addition to an increase of 1,700 jobs, which equals an additional 50,319m² of floor space required to be accommodated in the strategic centre of Brookvale.

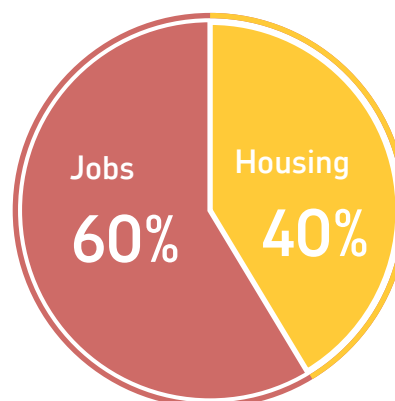
In this scenario population growth is relatively larger to support Brookvale-Dee Why as a self sustaining centre.

The overall employment floor space for Brookvale centre will be approximately 656,680m² in 2031.

Table 6.31: Scenario 3- Job Growth to 2031

Land Use	Jobs	Additional Floorspace (m ²)
Industrial	206	3,188
Office	158	4,428
Retail	866	21,642
Health Care	163	4,086
Education	133	3,324
Accommodation & Food Services	123	12,266
Fitness/Leisure/Arts	13	533
Other	38	852
Total	1,700	50,319

Source: MPD (2016)



6.4 Scenario 4: Shared Residential and Employment Growth

This scenario considers greater housing growth (55%) than employment growth (45%). It assumes employment growth of 1,300 jobs and 1,550 residents or 860 dwellings (average household size of 1.8).

Assuming typical employment densities. In this scenario, an additional floorspace is required for employment of 39,948m².

This scenario focuses on increasing the density of urban settlement and adding more residents to the area while ensuring sustainable jobs growth.

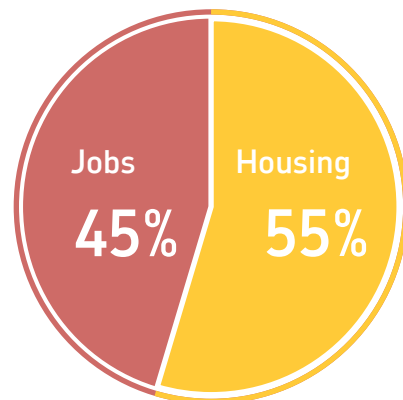
This scenario forecasts that 1,550 residents could be introduced to the centre. This number is in addition to an increase of 1,300 jobs, which equals an additional 39,948m² of floor space required to be accommodated in the strategic centre of Brookvale.

Under this Scenario the overall employment floor space for Brookvale centre will be approximately 646,309m² in 2031.

Table 6.41: Scenario 1 - Job Growth to 2031

Land Use	Jobs	Additional Floorspace (m ²)
Industrial	73	1,396
Office	95	2,657
Retail	751	18,779
Health Care	145	3,627
Education	114	2,840
Accommodation & Food Services	105	10,480
Fitness/Leisure/Arts	10	398
Other	8	-229
Total	1,300	39,948

Source: MPD (2016)





GROWTH SCENARIO ASSESSMENT

7.0

FEASIBILITY TESTING

7.0 Growth Scenario Assessment

The preceding section outlined four development scenarios for Brookvale and the assumptions behind these. Table 7.01 is a summary table of the four scenarios.

The scenarios include an employment only base case and a range of employment and residential outcomes. They assume that 500 of the 3,500 jobs limit identified by TMAS will locate in Dee Why and 100% of the remaining 3,000 jobs will locate in Brookvale. These assumptions are in line with BTS forecasts.

They are also underpinned by the Aspirations and Development Principles respectively described in Sections 3.0 and 4.0 of this report.

This section examines the feasibility of the four scenarios and identifies the preferred development option for the purposes of informing the development of the Brookvale Structure Plan.

The preferred way forward has been determined to be development of Scenario 3 consisting of 60% employment growth and 40% residential growth. The basis for this assessment is outlined in this section.

Table 7.01: Four Assessed Growth Scenarios for Brookvale

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Employment	84,026 m2	68,469 m2	50,319 m2	39,948 m2
Workers	3,000	2,400	1,700	1,300
Dwellings	-	305	670	860
Residents	-	550	1200	1550

7.1 Scenario Evaluation

SCENARIO EVALUATION

Consideration of the four growth scenarios for Brookvale is underpinned by the following factors:

- The role of Brookvale within the Brookvale - Dee Why Strategic Centre is primarily an employment one. Historically, this has been the case and remains so to date;
- Brookvale is a successful employment centre, currently accommodating approximately 15,000 jobs;
- Brookvale remains a preferred location for jobs to support the Northern Beaches community in the future.

The growth scenarios are based on the findings of the TMAS and BTS. The scenario assessments include recognition of the allocation of job types provided by the BTS to 2036 and provides a market/economic assessment of the likelihood of achievement of the quantum and type of employment floorspace required to support this growth.

Assessment also includes review of the traffic implications of mixing employment and residential development.

It recognises that in terms of the Development Principles established in Section 4.0:

- The B-Line will bring improved public transport to Brookvale supporting both employment and residential needs.
- Reinforcement of the existing development framework and revitalisation of the Brookvale Town Centre will benefit from growth in the housing sector that is located in proximity to a variety of employment land uses and to the B-Line stop.

TRAFFIC IMPLICATIONS TESTED

Arup has undertaken transport and traffic analysis to test the land use scenarios for Brookvale. This analysis uses the RMS Guide to Traffic Generating Developments to ascertain the likely traffic generation of the base case (i.e. Scenario 1 - 3,000 jobs at Brookvale or 100% employment), and then inform the development mix of scenarios 2-4 to keep within this rate.

Arup's analysis uses the assumption of 1.8 persons per dwelling, in line with future development around a transport node (in this case the B-Line stop). Arup has applied a traffic generation rate of 0.29 trips per unit in line with high density residential metropolitan sub-regional centres.

The development mix that Arup considers to stay within the traffic generation of the base case scenario and the variations on growth split between employment and residential is outlined below:

Table 7.21: Trip Generation and Development Mix

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Employment GFA (m²)	84,026	68,469	50,319	39,948
Workers	3,000	2,400	1,700	1,300
Dwellings at 1.8 persons per dwelling	-	289	639	833
Residents (1.8)	-	520	1,150	1,500

Table 7.22: Traffic Generation

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Employment trip generation (AM peak)	437	356	262	208
Employment trip generation (PM peak)	471	383	282	224
Residential trip generation (AM peak) - 1.8 persons per dwelling	-	84	185	242
Residential trip generation (PM peak) - 1.8 persons per dwelling	-	84	185	242
Total Trip Generation	907	907	914	915

Table 7.23: Four Growth Scenarios for Brookvale Ranging from 'Employment Only' to 55% Residential Development

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Forecast dwellings (1.8 persons)	-	305	670	860
Attainable dwellings (1.8 persons)	-	289	639	833
Difference in dwellings	-	-16	-31	-27
Forecast number of residents	-	550	1,200	1,550
Attainable number of residents	-	520	1,150	1,500
Difference in Residents (people)	-	-30	-50	-50

The provision of frequent public transport services along Pittwater Road, facilitated by the B-Line, should be taken into consideration when reviewing the traffic generation tendencies of the scenarios. New residents are likely to display different travel behaviours to the residential areas located away from bus rapid transit services, as they are able to more readily make use of these services, and in turn generate lower levels of private transport.

Arup's assessment of the likely traffic implications demonstrates that four scenario options of different mixes of employment to residential ratios can be adopted within the traffic generation limit of what the TMAS identified for the Brookvale Dee Why area. Evaluation confirms that a range of mixed-use outcomes at Brookvale each have an equivalent traffic impact and are therefore able to be considered in the context of the local transport network limitations identified by TMAS.

MARKET DEMAND AND FEASIBILITY

To further test the likelihood of a particular mixed-use format being delivered by the market, a range of feasibility assessments have been undertaken for a theoretical 3,000m² site. This analysis demonstrates that a residential component is required if redevelopment and employment growth is to occur. Assessment also shows that project viability is improved with an increase in the scale of the residential offer. Whilst this may seem contrary to the promotion of Brookvale as an employment destination, it importantly confirms the view that employment generation is more likely to occur if incorporated as part of a mixed-use project.

Mixed use development is most likely to occur along Pittwater Road than anywhere else in the catchment, primarily because this road will be serviced by the bus rapid transit and is therefore attractive to employment-generating and new residential provisions. It is noted however, that the B-Line stop (hence access to the B-Line) is located at the southern extent of the Brookvale Town Centre.

In acknowledging the important employment role that Brookvale performs, our study has determined that no less than 60% of new floorspace should be allocated to retail/commercial needs across the suggested mixed-use areas, i.e. that Scenario 3 of the above land use mix scenarios sets an appropriate limit with respect to the amount of commercial floorspace expected of new development along Pittwater Road.

The feasibility assessments that have been undertaken assume a 100% commercial floorspace allocation as a base case (Option A, Table 7.2.4), and variations of a 60% commercial/40% residential provision to test project viability for a range of different building configurations (Options B-C, Table 7.2.4).

It should be noted that the feasibility analysis that has been undertaken is based on a theoretical development of a 3,000m²

lot. The current fabric of lot sizes and dimensions across the study area is varied, as is their availability for development. It is not expected that all land at Brookvale will immediately redevelop if the opportunity arises from a change in zoning. Also, not all redevelopment is likely to be of a similar scale – some development may involve a modest provision of shop-top housing on a small allotment, whilst other projects will amalgamate sites to maximise yields. In other cases, existing development will remain until it nears the end of its economic life.

Over a 10-15 year period the anticipated outcome is likely to involve a range of new and old development formats of varying sizes. It is possible, for instance, that some larger parcels will look to redevelop early, but follow-up activity that is dependent on the amalgamation of smaller land parcels will come to market over the medium-long term.

This will allow for the monitoring of development and its employment dividend and for consideration to be given to the advent of traffic solutions and/or the modal shift to public transport that may occur over this period.

In summary, the economic analysis undertaken below in Table 7.24:

- + Has regard for the intention that Brookvale remains relevant as an employment centre of note;
- + Considers BTS and other employment projections for Brookvale and the likelihood for such projections to be achieved;
- + Forms the view that jobs growth is unlikely to occur at Brookvale in the employment sectors projected by BTS in the absence of complementary residential development; and
- + Provides a feasibility assessment to define the planning parameters that are needed for this type of outcome.

Table 7.24: Option A-D Theoretical Redevelopment Feasibility - Pittwater Road, Brookvale.

	Option A	Option B	Option C	Option D
Assumed Site Area	3,000m ²	3,000m ²	3,000m ²	3,000m ²
Retail (yield)	-	774 m ² GFA	1,148 m ² GFA	1,148 m ² GFA
Office (yield)	2,700 m ² GFA	651 m ² GFA	1,980 m ² GFA	3,853 m ² GFA
Residential (yield)	-	950 m ² GFA	2,079 m ² GFA	3,334 m ² GFA
Total Revenue	49%	77%	105%	120%
Total Development Cost	100%	100%	100%	100%
Net Profit/Loss	-51%	-24%	5%	20%
20% Profit Target Achieved	X	X	X	✓
Number of Storeys	2	3	5-6	6

Table 7.25: Observations of Growth Scenarios

Scenario 1	Scenario 2	Scenario 3	Scenario 4
Jobs growth requires an increase of 637 industrial jobs and (9,011 m ²) additional floor space. Existing employment lands are mainly industrial and are fully developed.	Residential growth will help support demand for additional retail floor space, however 20% growth locally (or 550 people) is inadequate for the expected retail growth of 26,653m ² .	Employment growth is predicted by BTS to be mainly in retail and wholesale sector. Health care and education are the next major contributors. Industrial manufacturing is expected to decline in rate of growth.	Residential growth of 1,550 residents will support demand for an additional 1,300m ² of general retail, 500-700m ² of supermarket floor space (small IGA) and 300-400m ² of food retail, providing a catalyst for other development.
Employment growth in this sector can only be accommodated through greater efficiencies of industrial lands. Parking requirements impede achievement of further land use efficiencies.	If the majority of new demand for retail services comes from outside Brookvale, significant parking provisions will impact on project feasibility.	In this scenario, large scale retail and commercial development can occur with the co-location of residential. This supports parking provisions for employment uses associated with housing.	The co-location of residential and retail/commercial uses will make redevelopment more attractive and parking provisions more feasible.
Rezoning of residential land to industrial land to accommodate jobs growth is not feasible.	This option falls short of providing local housing near jobs.	Residential component can provide for activation of the area and the opportunity for local live work development.	Brookvale and Dee Why, in combination are a Strategic Centre. Brookvale must have primarily an employment focus; while Dee Why has primarily a residential and civic focus.
Retail, accommodation and food services growth comes in response to increased foot traffic. Without associated residential development, new jobs growth in these sectors is unlikely to occur.	Some residential growth (20%) begins to assist in the economic feasibility of new commercial development, but development of commercial premises is still unlikely.	Economic viability of redevelopment of commercial lands is improved by providing for 40% residential development. The residential component contributes to the required project feasibility.	Whilst a mix of employment and residential development is supported, this scenario is heavily skewed in favour of residential development and as a result is not consistent with growing Brookvale's employment opportunities.
X	X		X
Outcomes Summary			
100% jobs growth cannot be fulfilled. A better way of 'growing' Brookvale will be through a mix of employment and residential development.	Insufficient incentive to redevelop in this option will hinder Brookvale's growth as an economic centre for the Northern Beaches. A self-sustaining centre is not attainable.	This combination of jobs and residential growth will best achieve Brookvale's continued development with employment focus; retaining a commercial and industrial employment base.	A higher percentage of residential growth than jobs growth is not consistent with growing Brookvale's employment opportunities, and is not consistent with growing Brookvale - Dee Why Strategic Centre.

PREFERRED SCENARIO

Analysis demonstrates that jobs growth at Brookvale is dependent on the physical redevelopment of sites/premises and that such redevelopment will not occur without a complementary residential inclusion. As a result, in order to grow and evolve Brookvale's employment diversity, some mixed-use development should be enabled to occur. Scenario 3 represents an appropriate balance whereby mixed commercial/residential redevelopment can be viable and at the same time, such redevelopment assists in retaining the employment focus for Brookvale.

Mixed use development generally located along the Pittwater Road corridor and within the Brookvale Town Centre is identified as a logical place for this to occur and is consistent with the Development Principle in Part 4.0 of this report. It would build on Brookvale's existing established development framework; it will positively contribute the viability and sustainability of the existing centre and it will be well located for accessing the B-Line.

BUILT OUTCOME

In relation to planning parameters and best practice built form outcomes for Brookvale, feasibility assessment suggests that the additional growth should predominantly be a minimum building height of 6 floors concentrated around Pittwater Road in Brookvale Town Centre. This should comprise of a 2 storey podium (maximum 3 storey podium with third level setback) along Pittwater Road, with active frontage at ground level of either retail or office with commercial use on second level. Above the retail/commercial podium, development of 3-4 levels of residential apartments/shop-top-housing can support the mixed-use format that will include a reasonable amount of non-residential floorspace. In transition areas between mixed use development and industrial or sensitive lands, lower residential heights up to total of 4 storeys (including active podium level) will be required.

This in turn will involve a change in current building heights that apply to the study area. The mixed-use format that is tested will also involve a change of part of the Pittwater Road corridor to a B4 Mixed Use zone.

Urban elements to be further considered in the refinement of Development Scenario 3 in the subsequent Structure Plan Report include public transport corridors and hubs, strategic car parking strategy, pedestrian connectivity and amenity, anchor development, built form type and scale, infrastructure needs, accessibility, residential density, streetscape quality, road and traffic management, open space, land use clustering, precinct connectivity, architectural considerations, land ownership and sustainability.

STRATEGIC MERIT

The expected maturation of Brookvale as an employment centre of the future will involve new business investment that will elevate the attractiveness of Brookvale as a place to work and live.

The assessment undertaken assumes that the rate of new development in the precinct will be gradual and that it will be necessary to revisit the rate of redevelopment in the context of new local traffic works that may be undertaken and the level of modal shift to bus transport that may be achieved across the precinct and broader catchments. A 10-year review is suggested which may then incorporate other important key strategic sites for development.

These matters will frame any subsequent review of zoning and other land use parameters to ensure the ongoing relevance of Brookvale as an employment destination.

Future considerations will have regard for:

- + Policy consistency – the extent to which intended policy relating to reducing private travel demand is being achieved.
- + Changing trends and circumstances – the degree of public transport usage achieved from new development and/or new employment trends relevant to the Northern Beaches.
- + Site specific merit – individual circumstances relating to specific sites, including the state of disrepair of current buildings and site context (e.g. relationship to adjoining land).

CONCLUSION

Assessment concludes that jobs growth is unlikely to eventuate at Brookvale except through a mix of employment and residential development. Residential development improves the likelihood/feasibility of redevelopment occurring and helps to defray the cost of additional car parking facilities required of employment generating development on its own.

A mixed-use format also presents a more likely situation for 'new' employment growth to occur, especially in those sectors anticipated to account for most growth (i.e. accommodation, professional services, health care and assistance). These forms of new employment are unlikely to occur in a traditional IN2 industrial zoning. They are more likely to occur in rezoned mixed-use setting.

Mixed use commercial/residential development located in the Brookvale Town Centre is consistent with the Development Principles and the Development Framework established respectively in Section 4.0 and 5.0 of this report.

Mixed use in the Town Centre also supports the retention of existing IN1 General Industrial zoned land for industrial activities and the introduction of suitable additional employment generating uses in industrial lands.





WAY FORWARD

8.0

DELIVERING A STRUCTURE PLAN

8.0 Way Forward

This Scenarios Report is underpinned by urban economics, strategic traffic and transport recommendations and best practice urban design establishing guidance for future development and assurance of the continuation of Brookvale as a Strategic Centre with an employment focus.

Following on from this report, the Structure Plan Report will provide the basis for the long term delivery of Brookvale-Dee Why Strategic Centre. It will guide future development while protecting employment lands and managing housing diversity and affordability.

The Structure Plan will leverage opportunities for the development of a well defined Mixed-use town centre for Brookvale; a strong retail core at Warringah Mall and maintenance of a wide range of employment generating land uses throughout Brookvale.





APPENDIX- ENGAGEMENT RESPONSE

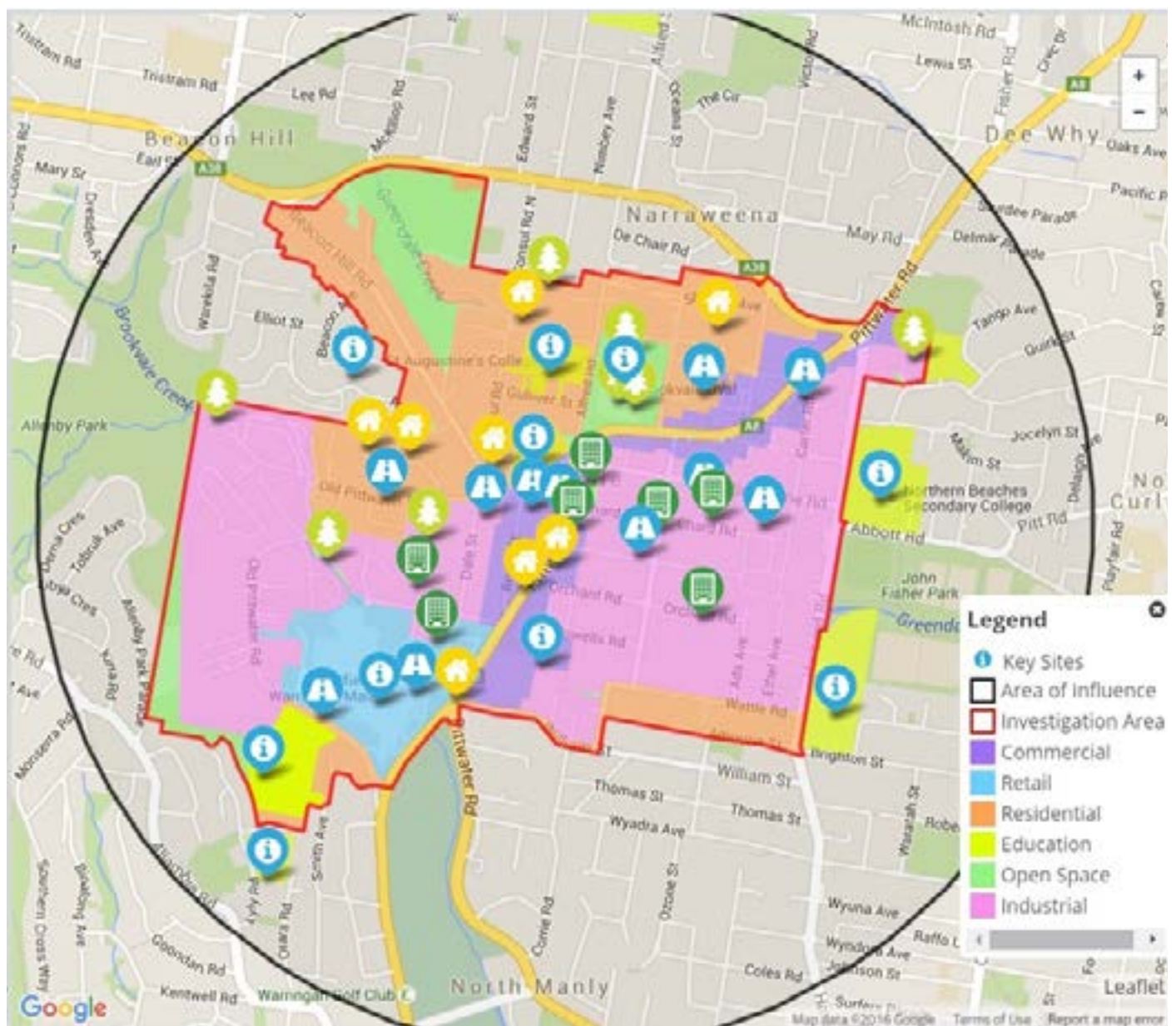
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APPENDIX - ENGAGEMENT RESPONSE

9.0 Engagement Responses

As discussed in Section 2.0 Engagement Outcomes, the development of the Brookvale Structure Plan is underpinned by an engagement strategy that involves key stakeholders and the community. The aim of the consultation process is to obtain a good understanding of stakeholder and community issues and aspirations for the area, to inform stakeholders and the community about the planning study and to provide opportunities for stakeholder and community participation in the preparation of the Brookvale Structure Plan.

9.1 Stage 1 Engagement Responses



Jobs and Businesses

- + Job creation via land uses.
- + Centrelink facility.
- + Need to retain & strengthen the Mall. Its 's an important for employment.
- + HATE! The new W logo. It looks like "Big W" bring back the Flannel Flower!
- + Industry changing Fibre factories.
- + Brookvale lacks a café & restaurant precinct.
- + More local jobs in Dee Why/ Brookvale area – encourage small businesses to stay in the area.
- + Restaurant & night life.
- + More restaurant /eating precinct.
- + Certification and farmers market.
- + Keep jobs in Brookvale.
- + Keep enough parking for local business whilst somehow implementing a rapid transport system, not losing parkland, keep the hill at Brookie Oval.
- + Give high priority to local employment and services.
- + Redevelop the industrial to attract more businesses.
- + More services & jobs Brookvale should keep jobs.
- + Keep industry in Brookvale! Don't build out with units.
- + Additional tertiary facilities & training.
- + Industrial area "dual use" boutique shopfronts on secondary frontages.
- + Maintain employment precinct.
- + Free WIFI.
- + More businesses that provide affordable food particularly for large families.
- + Make things more affordable. It's hard if you have a big family. This council is sooo expensive.
- + Good range of industries in Brookie don't change that.
- + Lower the rent for businesses + their fees – it will then trickle down to us!
- + Relocate H&G.
- + Taking bus to city to work every day – more local employment please!
- + Micro brewery's , cafes / restaurants.
- + Upgrade the strip where the shops are, it looks shabby.
- + Café and restaurant precinct.
- + More support services for community , financial, children's learning disability, community activities.
- + Retain light industry – the 'Machine of the North'.
- + Independent cinema.
- + Services everything for everyone.
- + Local services like car repairs, fabrication as well as health services and wholesalers.

Living in Brookvale

- + More parks.
- + Create units/ shops underneath on main roads , keep back areas for commercial space
- + Free WIFI.
- + Public High School.
- + Keep it low.
- + Affordable units & houses
- + Opportunities for affordable housing.
- + Density around BRT timetable-less BRT operation safe & enjoyable pedestrian of cycle routes with short cuts not available to vehicles, spaces for people, enjoyment & design. Non-vehicular access – 1km to schools.
- + Micro brewers/bars aka Newtown & Marrickville.
- + No high rise on our parkland.
- + Keep open spaces.
- + PUBLIC non selective High Schools.
- + No high rise , Keep Sea Eagles at Brookie at all costs.
- + More open space – parks & playgrounds.
- + Residential high limit.
- + To much development, long term parking FREE!! Council amalgamation BIG is not better.

- + A new (non-selective) High School.
- + Keep for the services for locals.
- + Mixed industrial & residential living.
- + Nothing above 3 storeys- commercial & residential.
- + Recycling/fixing for second hand use.
- + More schools – particularly high schools.
- + Explore warehouse conversions for student housing.
- + Waterpark, more restaurants , upgrade Brookie Oval, more cafes, more families with kids, market every second Sunday, a University , more things to do, parking on Pine Avenue, sign on of double yellow lines.
- + More affordable for young families to buy – every thing is more expensive over here I try to shop in south west for food.
- + Suitable affordable housing with appropriate infrastructure.
- + People to live in Dee Why (Not Brooky).
- + More families with kids, waterpark/pool area, restaurants, markets, girls high school, University, more parking.
- + I'm moving from the area because this area is too expensive but there isn't even a strong of community. It's a beautiful place but the community is disconnected + financially. Make it more affordable.
- + After "redevelopment" small businesses can't afford the new rents.
- + Local library.
- + Public High School.
- + Green spaces, privacy increased building separation.
- + No high rise density.
- + As limited as possible, the jobs are needed. Keep any housing as affordable as possible to keep blue collars living local.

Community and Open Space

- + More off leash dog areas.
- + Rainforest Allenby Park.
- + Make Brookvale the best park on the peninsular, more trees, more kids parks, more exercise equipment.
- + Connect the open space , the Masterplan shows it all disconnected.
- + More – uses for Brookvale Oval.
- + Adaptive – reuse of brick works.
- + Rugby league Sundays only, parking great in industrial area.
- + Keep the oval low & local.
- + Keep Brookvale Park as public open space.
- + Keep Brookvale Park as open public open space.
- + Keep our open spaces.
- + Peak hour traffic issues for Beacon Hill Rd. Save Brookvale Oval for MWSE.
- + Large community rooms that are affordable.
- + Develop Brookvale Oval.
- + Waterways – creek , Rehabilitate – Brookvale Industry.
- + Pedestrian green space (market shared space) keep Brookvale Park for the kids of the future.
- + Town Centre with market place.
- + Daytime care facilities for older people.
- + Topography of open space v steep Tri-pabiude agreement – RR2
- + Another creative space like at Curl Curl
- + Tell the Sea Eagles to pay their rent!
- + Remember our youth are our future. Invest more into moulding them into nicer hard working, happy educated people!
- + Entertainment area.
- + More of a community vibe – hubs, playgrounds, transport, mental health support, more affordable social inclusion activities.
- + I like the vibe that sports brings to the community. I don't follow footy but I like the vibe it gives.
- + More uses for the Brookvale Oval.
- + Flying fox playground, BBQ facilities, duck pond.
- + Keep public land public! Brookvale Park.
- + A network of space through the rivers + lagoons + drainage areas 'activate'.
- + Spit Bridge tunnel.

- + More cultural stuff!
- + More shade in Dale St park.
- + More services for teenagers – youth centre's, drop-ins, classes, activities + support.
- + Retain quality cafes, parks, market place.
- + Brooky Oval to include accommodation.
- + Use river corridors as recreational links.
- + Don't take away dog parks! This is an iconic thing of this area! Dogs, coffees & parks!
- + Waterpark – nature is good we like the parks and open space!
- + Not multicultural enough.
- + Semi industrial grunge, gentrified café scene.
- + Brooky Oval to be used as organic/produce market.
- + More organised activities ran regularly for teens.
- + A new non selective High School.
- + More open space.
- + Gest Westfield to have more public open space.
- + Expand/intensify Curl Curl.
- + Redevelop Brookvale Oval into a more inclusive park. Could do so much without the stadium.
- + Green, safe, easy, accessible area.

Transport and Access

- + Improve transport along Pittwater Road.
- + Add traffic lights at Vinnies – it's painful!
- + More buses – light rail?
- + Are there going to be more bike paths to connect Brookvale with other bike paths eg Narrabeen.
- + Infrastructure to correspond with new housing
- + Park & Ride – City & North Sydney.
- + Spit Bridge Tunnel.
- + Gives us a TRAIN! to the city.
- + Park & Ride.
- + Needs public transport links both North/South and East/West.
- + Fix parking.
- + Cycle lanes clarity.
- + All day parking at the Ferry (Public transport city).
- + Transport to rail.
- + Either: 1. Rail transport or 2. Rapid Bus Transport.
- + Rapid Bus System.
- + Public transport – shuttle buses e.g. from mall, to beach, industrial area.
- + Better connection from Brookvale along Warringah Road, Chatswood and City.
- + Entertainment venues need to include better access for older people.
- + Create clearer sign posted cycle ways e.g Pittwater Rd opposite Nolan Park.
- + Improve the transport, more parking, more community events.
- + Footpaths are not adequate for aging population – more access to shops.
- + More cycle ways.
- + Perhaps a free bus like Manly has.. People travel free.
- + Parking, Parking, Parking.
- + Free parking at the beaches or maybe \$5 per day.
- + Park and ride Brookvale Bus Depot.
- + Commuter parking! How many cars do we want off the road? Make space for them next to transport hubs with frequent express.
- + Better flow of football attendance traffic (foot & car).
- + Bus access – we need to compensate increase of transport if we are to develop.
- + BRT for Pittwater Light rail extensions into the city/North Sydney by 2031.
- + Buses, cycle lands (on Pittwater Rd – necessity), tram system to the city.

COMMUNITY DROP IN SESSIONS

Jobs and Businesses

- + Rezone the southern side of Old Pittwater Road to Industrial.
- + Weekend Farmers Markets.
- + Pop up shops like this in Dalstone in Hackney (London).
- + More small boutique type clothes shops/furniture shops.
- + More artist studios and gallery in industrial areas.
- + Centre for craft and art activities.
- + Art gallery.
- + Consider multi temporal use of recreational & commercial spaces e.g. car park during weekdays, skate park on weekends, golf course 3 days per week, 4 days per week. Music venues in the industrial areas at night, light industrial by day.
- + Retail shops in industrial areas.
- + Restaurant activation (not offered by Mall).
- + Northern Beaches used to be known for good music venues (Manly Vale, Narrabeen) and others (all gone now). Venues like this encourage foot traffic – that in turn supports other business. Understandably, good public transit ought to make this easy.
- + Would a light industry/mixed area like Brookvale support music venues because it isn't just residential?
- + Mixed use residential/shops.
- + Mixed use buildings – commercial, retail, hospitality, education with residential above.
- + An area with good parking facilities to attract café/coffee roasting businesses, micro breweries, fashion. More retail industrial use.
- + Coffee places in Old Pittwater Rd.
- + Encourage foot traffic business off the Pittwater Road route and into the side routes.
- + Keep industrial area separate from residential. Maybe a shopping area or two.
- + Save jobs and local industry.
- + Upgrade current industrial site to be modern 2 to 3 storey factories.
- + Keep the employment zones. Local job.
- + Accommodate local residents that wish to work local = office.
- + More local small businesses x2.
- + Save local mechanics.
- + Be aware of small business owners in the local area.
- + Big factories won't come back. Small business needs to stay.
- + Restaurant & cafes, small businesses.
- + Retain employment hub.
- + Safety – more street lighting in industrial areas.
- + Residential would increase land values and conflict with employment uses and opportunities.
- + Change business zones – introduce shops/cafes/warehouse markets.
- + Increase floor space ratio, high rise, factory units.
- + Brookvale – residential. Belrose – Industrial.
- + Brookvale – Retail, residential. Cromer & Belrose – industrial.
- + Certainly business is an important part of Brookvale and growth. One too so many residents also me included. I would not like to see factories, including emissions and chemical run off. Also, please enforce fair sociable hours. Clearview Place still has deliveries and reverse alarms at 4am.
- + Increase height limit in industrial areas – needs to be higher than 11m.
- + Small factories – 6 storey high rise factories.
- + Plaza/corso area with residential cafes and shops.
- + More cafes that are opened on the weekend so residents can enjoy as you don't always want to go to the Mall.
- + More culture i.e galleries, theatre, cafes, cinema etc.
- + More night dining.
- + More eating places at night once the housing is increased along Pittwater Rd.
- + Recycling depot and repair centre e.g. Marrickville Centre.
- + Hotel/conference venues (near Harbord Rd, close to parks, beach & businesses) activation away from residential.
- + Tourism, hotels, hostel, event spaces.

Living in Brookvale

- + More affordable housing to younger generation x2.
- + Cost effective housing.
- + Affordable housing to allow for diversity.
- + Cheap affordable housing x 4.
- + Affordable housing provision as part of every development with more than 6 apartment/homes.
- + More units. Cheap housing.
- + Cheap housing for next generation.
- + More residential.
- + Need to look at demographics of the area for assessment of housing types.
- + Keep a mix of residential and industrial.
- + More residential mixed use.
- + Integrate housing into industrial area.
- + Modernising factory areas with lots of green spaces.
- + Brookvale for housing and clean air. None industrial.
- + Living in a mixed residential/industrial area - shouldn't exclude normal rights to privacy and noise. But being that mix, perhaps those residents should be a tad more tolerant of a mix that might be more noisy.
- + Should residents have to put up with constant noise from the Mall? E.g. maintenance vehicles 'beep, beep, beeping' in reverse all night? Can't they compromise and do it before midnight?
- + High rise apartments x2.
- + Higher density residential along main bus ways but building heights kept consistent to avoid eyesores sticking out.
- + Medium and high density around the Mall.
- + More density/housing around Mall x2.
- + More residential around mall and commercial areas to feel safer.
- + Safety an issue around Mall.
- + Medium density housing and mixed use.
- + Terraces and townhouses.
- + Avoid high rise.
- + No high rise developments especially near existing residential.
- + No high rise x 6.
- + No high rises at the Oval.
- + Rezone area adjacent to Brookvale Oval and east of it as medium density residential.
- + Rezone Victor & Warringah Rd for multi-residential units.
- + Could see medium rise 3 storeys x 2.
- + Keep residential 3 storeys.
- + Not higher than 4-6 storeys.
- + Low rise apartments.
- + 2 storeys is sufficient.
- + Shop top affordable housing.
- + Shop top housing 3 to 4 storeys.
- + Shop top housing 6 to 8 storeys.
- + Wouldn't mind shop top housing above local businesses x2.
- + A lot of medium density in Brookvale. Limited scope for increased residential developments due to lack of social infrastructure, open space etc.
- + Federal Parade & Federal Parade west to be medium density/townhouses.
- + Low rise buildings/home/apartments. Introduce more green space.
- + Low rise apartments.
- + Residences, houses
- + Leagues Club - low rise apartments with café area & local shops with traffic funnelled onto Pittwater Rd.
- + Housing above business.
- + More density around certain industrial areas for surveillance.
- + Streets feel unsafe in industrial areas.
- + Housing in industrial area.
- + Current industrial area is a mess.
- + Blend industrial with community spaces e.g. fitness, restaurants, markets.
- + More density residential in NW will result in more funky bars & cafes in industrial area
- + Clean up the unattractive buildings.

- + Save industrial zoned workshops for mechanical repairs.
- + Save me one local workshop!
- + Rooftop housing and boarding houses.
- + Harbord Road residential.
- + High rise apartments on Harbord Rd.
- + Get creative! Roof top gardens, brewery, colour, identity quirky.
- + Good opportunity for creative spaces in interesting buildings.
- + More art spaces, more public art.
- + Incentive to amalgamate lots to do development of merit.
- + Spruce up Pittwater Road.
- + Add residential mix on Pittwater Rd.
- + Can do more shop top housing e.g. on Pittwater Rd.
- + Medium/high density near transport route/BRT & main roads.
- + Ensure zoning is commercially viable e.g. attract development.
- + No more units without infrastructure.
- + Integrate sustainability: green roofs, walls, solar, water sensitive urban design
- + No main street. Needs a café culture.
- + Music venues please x 2.
- + Maybe some sort of Corso looking area. Outdoor cinema.
- + Retain character - "beachy", aesthetically attractive e.g. Alexandria, adaptive reuse, "funky feel"
- + Market culture - keep.
- + Currently there is no sense of community.
- + Community gardens is important.
- + Funky office cooperatives e.g. like the Lifestyle Building, just more colourful and funky.
- + More night time activities in areas with less people to activate area.
- + More retirement centres.
- + Aged care.
- + Townhouses including over 55s housing.
- + No where nice to walk to Beach.
- + Townhouses popular.
- + At the intersection of Old Pittwater Rd & Beacon Hill Rd - would like high density as this is a significant corner.
- + Internet access (Brookvale Ave).
- + NBN date of provision.
- + Access to NBN asap.
- + I feel the most rounded communities are a mix of houses, townhouses and units. I would like to see height restrictions remain. In line with more housing, community gathering places and parks will balance the population rise. Thank you for the path and bike ways to the beach and shopping hubs - Curl Curl, Dee Why etc.
- + The Mall is the heart of Brookvale.
- + No culture e.g. cafes, retail

Community and Open Space

- + The small green spaces need maintenance and at least a few swings etc. for kids (e.g. Ankali Place Park at the end of Robert Ave). Why would young families move into this mix without a few well maintained facilities?
- + More family friendly spaces - parks, bike lanes
- + High quality open space (good street furniture, trees, ambience)
- + More picnic BBQ areas.
- + More sports fields for soccer.
- + Save Brookvale Oval.
- + Brookvale Oval - retain. Not too high.
- + Keep the track around Brookvale Oval.
- + Keep Brookvale Oval x 5.
- + Brookvale Oval must stay.
- + Brookvale Park & Sea Eagles should stay.
- + No residential on Brookvale Park.
- + Brookvale Oval - dog friendly.
- + Promote Brookvale Oval for community use.
- + Retain Brookvale Oval as is - no expansion.

- + Brookvale Oval - keep as public use x 2.
- + We own Brookvale Oval - use for open space outside of footy season.
- + Use Brookvale Oval for other uses than rugby league.
- + Concerts for young and old at Brookvale Oval.
- + Use Oval more.
- + Café/kiosk at Brookvale Park.
- + Council buy back for green space.
- + Open space is fantastic.
- + Open space is sufficient.
- + Keep the parks. More spaces for kids to play.
- + Retain parkland.
- + More green spaces x 5.
- + Retain open space.
- + Open space corridor and community garden.
- + Green links to public parks.
- + Green linkages between the bush reserves to the west (Beacon Hill) and Curl Curl lagoon - for wildlife and recreation
- + Create better pedestrian access across Brookvale (E-W). It is currently dirty, noisy & unsafe.
- + Bike, walking track from reservoir at Allambie Heights to Brookvale through green space behind Old Pittwater Rd.
- + Need facilitated walking access through Greendale Creek - underused green space (including paved path/steps) e.g. from Warringah Rd near Lascelles Rd down to Brookvale.
- + Bike paths.
- + Want nice walking tracks around Westfield Warringah Mall and surrounds.
- + Make area more attractive - outdoor areas/parks.
- + Appreciate the tree canopy in Old Pittwater Rd.
- + Trees, trees, trees.
- + More trees along Pittwater Road.
- + Street trees and gardens are important.
- + Protect steep bushland in NW.
- + Protect remnant bushland at top of Curl Curl Lagoon Catchment.
- + Better protection for bushland escarpment including behind Old Pittwater Road.
- + Bushfire access to Allenby Park and park south of Warringah Rd. Share with community.
- + Better access to Allenby Park for residents - paved paths and parking and seats.
- + Enhance, restore creek corridors - Brookvale and Greendale and tributaries.
- + Brookvale Show - keep.
- + Would like a growers market.
- + Organic farmers' markets at Brookvale Oval on Saturday or Sunday mornings.
- + Keep education, schools, preschools.
- + Keep schools.
- + Upgrade schools in future.
- + Local schools at capacity. Plan for future education needs.
- + Support place for people with mental disabilities.
- + More outdoor sculptures and drinking fountains.
- + Better lighting at night for safety and bike paths.
- + Save dog parks.
- + More dog parks.
- + In the 8 years I have lived at Old Pittwater Rd, the number of families has increased. Also companion animals who are as dear as children too many. Please make community and open space a priority with a spotlight on dog friendly parks. Please keep the reserves and national parks and bushland in the area protected for humans and wildlife alike!
- + Quirky spaces - laneway, art, cafes, music, breweries, ID entity.
- + Enhance the outdoors with (more of it) Art e.g. Water tank.
- + Use west end of John Fisher Park for night time recreation if units are built above industrial.
- + Better cycle connection from residential in NW to John Fisher Park and to District Park.
- + Warringah Mall provides a big community space for the area.
- + Protect water to Curl Curl Lagoon.
- + Overall Brookvale needs a makeover. That is, a zoning plan that encourages development but with consistency and improved community values/spaces

Transport and Access

- + More parking x 4.
- + Park and ride to City.
- + Underground car park.
- + Not enough parking around Warringah Mall.
- + Parking around St Augustines College is difficult.
- + Commuter parking.
- + Commuter parking at major bus stop x 2.
- + Make car parking near Blaine/BRT cheaper in less busy Mon-Fri times.
- + Multi storey car park above bus depot for park & ride during week and possible market area on weekends.
- + Traffic fix - tunnel.
- + Tunnels to City.
- + Light rail to Manly.
- + Have tram line to Manly (Mona Vale to Manly) to use ferries (rather than to City).
- + Light rail from Mona Vale to Manly.
- + Trams along Pittwater Road.
- + Light rail x 3.
- + More ferries.
- + Extra ferries across to City and Balmain.
- + Ferry connects to buses.
- + Need rapid bus line.
- + Better transport - buses, light rail.
- + Need better bus stops.
- + Train line.
- + More buses x 3.
- + Better feeder transport e.g. Blaine/BRT from e.g. Narrabeena, Manly Vale, Freshwater
- + New bus stop (BRT) at Mall.
- + Bus stop at Old Pittwater Rd for residents and workers.
- + Public transport - better access to Frenchs Forest, Chatswood, North Sydney
- + Frequent and reliable public transport.
- + More reliable buses.
- + Public transport.
- + More frequent and reliable bus services to ease traffic x 2. Especially on weekends. Route 139 only goes hourly and they are not early I work in Manly as a nurse and there are no buses.
- + Shuttle buses for Brookvale including industrial areas.
- + More bus services for all areas - public buses to Chatswood.
- + For fast buses to City - widen Narrabeen and Spit Bridges.
- + Bus connections are good.
- + Good services to city and more planned.
- + 24 hours bus lane on main road both ways.
- + I think Brookvale could become a major non-car hub in the area.
- + 40km/h school zone to be taken off all main roads only in side roads.
- + More bike paths that don't compete with major road arteries. Bike parks in local pockets of community - not just (but also) Brookvale-Dee Why, Brookvale-Manly, Brookvale-Queenscliff.
- + More bicycle paths that are linked.
- + Off-road cycleways through industrial area.
- + Need cycle connection along golf course.
- + Safe pedestrian and cycleway corridor.
- + Bike parking facilities important and paths.
- + Off-road bike path between John Fisher Park & Warringah Mall.
- + Cycleways - better ways to cycle around Brookvale to Dee Why, Manly x 2.
- + Provide bike lanes - keep bikes off main roads.
- + All industry up escarpment away from Brookvale - only 2 unsafe roads down (Beacon Hill & Warringah Roads).
- + Roads too narrow in residential areas.
- + Decent footpaths.
- + Wheelchair accessible.
- + Access for elderly - hop skip, jump re: retirement villages.
- + Warringah and Pittwater Road are bottlenecks.

- + More infrastructure to support increasing population.
- + Prevent cars from 'rat running' through residential streets.
- + Local streets around Brookvale Park. Local residents only parking.
- + We see lots of use of footpaths in area along Old Pittwater Rd for dog walking.
- + Redo the road on Old Pittwater Rd, it is old and has a lot of high rise.
- + Parking in medium density residential an issue.
- + More foot traffic management around bus stops.
- + Warringah Mall bus stop now has a large sign saying 'Westfield' whereas the buses say 'Warringah Mall'. Need to bring old sign back.
- + Connection between state buses and local taxis/uber for final destination leg on same ticket/reasonable surcharge.
- + Improve traffic flow by more one way flow systems in Brookvale East industrial area.
- + With an increase in business and residents, transport will quickly become an issue. Already buses stopping along the main road is often chaotic. Move all transport to a central off-road location such as the bus garage...close but away from busy traffic. I believe Westfield Warringah Mall should be contributing and instrumental.
- + Pedestrian bridge over Pittwater Rd at bus stops.
- + Widen the roads.
- + Bad traffic on Beacon Hill Rd.

SOCIAL PIN POINT MAP COMMENTS

Jobs and Businesses

- + We must retain our industrial parks (No more housing).
- + We have moved away from Dirty industries to those of light manufacturing, storage & distribution & service. we should maintain our current stance. Seniors living in the style of the totem type complex should be encouraged.
- + Services to be retained include building supplies and services, vehicle services, and various other trades. A diversity of jobs and businesses is an advantage, including health services.
- + Industrial areas are not desirable for residential use due to truck movement, noise etc. If land values increase e.g. due to mixed use residential, many trade services are likely to relocate, as property would be less affordable. Brookvale is an employment hub on the Northern Beaches, so benefits from a range of services. Few locations on the Northern Beaches are available / suitable for industrial use and trade services. Residential would put at risk existing employment and services in Brookvale. Retain opportunities and floor space for commercial use in Brookvale e.g. along Pittwater Road. Brookvale would be suitable as a central location for a recycling depot, workshop and training centre for trades e.g. carpentry, as well as a source for arts and crafts products and materials. Arts and crafts venues contribute to diversity to Brookvale. Educational and training facilities to provide for local and regional purposes e.g. schools and TAFE.
- + Brookvale has found a niche with a lot of automotive businesses (e.g. panel beaters, mechanic shops etc). These businesses need a scale of similar business around them to remain viable. Council should encourage these businesses and remove red tape to keep them thriving.
- + Brookvale is dense and crowded. If it is going to get more developed, it seems the new residents and workers will need new parks to alleviate some of the heat, congestion and crowding of such a busy urban area. It would be great also to see better infrastructure for walking and biking. It's flat and central, and is perfect for low-impact, human-powered transportation.
- + A revitalized Brookvale Oval providing modern entertainment facilities such as food/bar outlets with other commercial/retail/entertainment opportunities would add greatly to the local economy by providing employment for local people and businesses. Food, hotels and restaurants surrounding a renovated Brookvale Oval, particularly one with the capacity to host finals games would also benefit from the large crowds regularly attending sports events such as Manly Sea Eagles home games.

Living in Brookvale

- + No more housing in Brookvale or The Northern Beaches for that matter. There hasn't been a major piece of road infrastructure on the Northern Beaches since the Burnt Bridge Bypass in 1985 and the widening to 4 lanes of Forest Way also back in the 80's. If you want to get out of the Beaches for work, there are still only 3 ways (Spit Bridge, Roseville Bridge & Mona Vale Rd) and they are getting thicker with traffic as every day goes by.
- + Tasteful construction based on good design & at least 5 storeys close to the transit corridor, the commercial developments on Pittwater Rd lends itself to be shop top construction. Accommodating Café style communities.
- + Parts of Brookvale have been identified for medium density housing. However, there have been few parks to compensate for the increase in residential development that has occurred.
- + Parks and community gardens would provide local open space to compensate for increased development that has occurred in recent decades – including medium density housing and infill development in the form of dual occupancy. Housing should be restricted to existing residential areas.
- + Avoid high rise residential development in Brookvale.
- + No senior living. There is huge developments around Cromer and Collaroy Plateau for retirement homes.
- + Changing space of Brookvales industrial area to mix use zone to match Waterloo or Alexandria area would work well.
- + Brookvale residential should be high density given the public transport links and closeness to the mall.
- + We should not turn any of the industrial or commercial areas into residential or the local economy will suffer as a result. We also can't have new residents complaining about noise from the industrial area and killing it off.
- + I have lived in Brookvale now for 3 years having lived in the Manly area for several years beforehand. Brookvale is vibrant, interesting, close to shops, beaches and transport links. I would love the space to stay as is, but I realise that medium density living is essential now for younger people to afford property. My main concern is squeezing too many units into what is a small area. Not another Dee Why please. There are great open spaces which is appealing to young families, so whatever is built needs to be sympathetic to its surroundings, have a strong "green" focus and be supported by sufficient transport links and roads.

Community and Open Space

- + I would love to see that Warringah Mall hasn't got any bigger. This newest round of development there is going to make the traffic coming out of Cross St onto Pittwater Rd absolute Chaos. I can't believe council approved it.
- + We have plenty of space & we are close to the beach in fact probably 15-20 minute walk. council improvements such as walking paths Bike tracks & current green space is good. the changes made at Curl Curl beach are wonderful.
- + Future planning in Brookvale should respect its natural assets, including bushland escarpments and creek corridors. Future planning should protect and complement rather than encroach upon these natural assets.
- + Protect Brookvale escarpment which is highly visible from a wide area. Protect remnant bushland, which provides scenic amenity and waterways. Provision of parks

and open space as a relief from built up areas.

- + Retain and restore creek corridors e.g. Brookvale Creek between Mall and Allenby Park.
- + Landscape setback for buildings to improve visual amenity.
- + Support the rehabilitation of the open creek section, which provides a window to Greendale Creek, next to the Scout hall in Winbourne Road.
- + Introduce measures to improve water quality in Greendale and Brookvale Creeks
- + There are better places on the northern beaches for open space. Brookvale is better as an industrial/commercial hub.
- + I would love to hear in 20 years. I am so pleased Warringah council listened to its community and ensured Brookvale maintained its open, innovative and green environment. The mix of housing versus community facilities is just right. Whilst the other areas on the northern beaches are over developed Brookvale has a great balance and I hope my grandkids move here soon.
- + What great parks it has! What a great place to live and work.
- + That Brookvale Oval is a major entertainment precinct for residents of the northern beaches, and visitors to the area to enjoy national & regional level sporting events such as NRL, A-League Soccer, Rugby etc. A revitalised Brookvale Oval could bring the best of both worlds - modern entertainment experiences such as food/bar outlets with other commercial/retail/entertainment opportunities at the southern end and a 'park like' experience at the northern end. Manly Sea Eagle games would continue to be the highlight community events regularly held on the Northern Beaches throughout the year but can grow and develop into a much more inclusive and popular occasions.
- + More trees and pocket parks to off set impacts of Roads and Industrial.
- + Even though I am a Manly supporter, I would like to see Brookvale Oval developed as an area that offers a greater benefit to the broader community than 800 minutes of rugby league every season that < 14,000 people watch. Development of that area as a park (look at the family-friendly US model for inspiration) that could be connected to a revamped John Fisher Park via walk ways and bridges extending all the way to the beach and even adding tree-lined walking and cycle paths that link Allenby Park, a grassed area on the fringe of the Mall, Manly Dam reserve and David Thomas Reserve. It would be possible to create an urban walking/cycling paradise.
- + In twenty years time I would like to see that Brookvale changed the way we viewed the way we live, and the way we engage in our environment. That we respected the space, and embraced a new attitude to how we live and interact in it. And completed re thought our urban architecture.
- + Now Brookvale is a place to work. In 20 years I would hope that people would say that it is a good place to live AND work. To say that they loved the community spirit and the commercial diversity. That parking is so much easier now than it was in 2015. More could be done to enhance areas adjacent to Greendale Creek, west of Harbord Road. Perhaps this is where additional recreation areas could be established.
- + Again, I feel that this is overselling the residential potential and underselling the employment potential and need.

Transport and Access

- + I would like to see the STOP sign at the top of Victor Rd (behind the Leagues Club) changed to a Give Way sign, because it would be safe to do so, and virtually no-one stops at it now.
- + As a Beacon Hill resident of almost 40 years, I would love to see the traffic lights at the top of Beacon Hill Rd (for turning left into Warringah Rd heading to French's Forest) removed, like they used to be, to remove that constant trail of cars heading up Beacon Hill Rd in peak times. I know it now allows pedestrians to cross to the small traffic island but I have never actually seen anyone use it in what I estimate would be about 30,000 trips I have made through those lights.
- + Greater dependence on public transport, local shuttle buses and active transport. Visitors will get to Brookvale via regional links, including BRT. Investment in transport infrastructure should be focussed on transport nodes and interchanges e.g. between regional and local bus services, safe off-road cycling links and attractive walking routes between key destinations.
- + Shuttle bus services for Warringah Mall, and surrounding industrial and residential areas.
- + BRT will not necessarily ease local traffic congestion due to workers, residents and shoppers. Park and ride facility for BRT could contribute to local traffic generation and congestion.
- + The high number of vehicles, especially trucks, makes the light industrial areas unpleasant and generally unsafe for pedestrians and cyclists.
- + Community Health Centre: Provision for regional bus stop, waiting area and services
- + Safe corridors and crossings for pedestrian and off-road cycle access. Pedestrian and off-road cycle access from John Fisher Park to Mall and Brookvale Oval.
- + Additional public bus services to key sites e.g. high schools and traversing industrial areas.
- + High water table is a constraint for underground car parking.
- + State and local government need to continue to invest in public transport options. The biggest bottleneck is spit junction which holds up traffic back to Brookvale. This needs to be addressed. There should be 24 hour bus lanes between Mona vale and the City. There should be more parking available.
- + Brookvale needs more express/limited stops services to other key destinations such as North Sydney.
- + It's ideal for active transport, which also reduces the costs of a large, busy population.
- + We need more public transport services. Every time I know I will be back late I have to drive to Brookvale and leave my car there, because there are buses going to the Mall, but none to my suburb. I'd rather leave the car at home, but I need some way to get

back that doesn't involve waiting for one hour for the next bus. I know I'm not the only one with this issue.

- + The other strong recommendation I want to make is for more cycling lanes. I ride to work a few times per week, and the coming back is particularly dangerous, on Pittwater Rd after 7pm (bus lanes no longer operating and cars parked, forcing me to ride either on the middle lane or illegally on the footpath). Warringah Rd is very dangerous at any time of day. I attempted it a few times and had some near misses. Riding uphill is hard enough. I should not have to worry about getting ran over. For some reason motorists along this road fail to react when I'm riding. And it's not that they can't see me, as I always have a blinking red light on and wear a high-vis jacket. But they don't change lanes, they pass too close. Please provide safe cycling lanes!
- + BRT hopefully, walking for getting to work and private car for school runs and taxi for leisure time.
- + As a cyclist, a dedicated cycle loop extending from the northern end of the Burnt Bridge Creek Deviation to Dee Why Parade and following Griffin Rd and Oliver St would be great. Harbord Rd and Winbourne/Abbott Rd might work as alternatives or additional paths or as dedicated walkways. As a light industrial hub, Brookvale's primary purpose is to facilitate the efficient movement of products and services for customers and suppliers. This would be improved by creating a one way system and reviewing parking options. Public transport, as the statistics indicate, should focus upon moving commuters in and out of Brookvale efficiently rather than moving within Brookvale.
- + The NSW Government and Councils of the Northern Beaches need to push for better transport - there is too much consideration for Brookvale being a hub, for example trains to Warringah Mall. There should be more consideration to divert transport via train links for the mid to Northern end of the beaches via Chatswood i.e. train links from Mona Vale. Brookvale has a major bus station and easy access to Manly Ferries - you need to reduce traffic coming from Collaroy, Mona Vale etc coming through Pittwater Road, Spit Bridge etc. Why should the southern end of the Northern Beaches take all the strain.
- + Put parking underground. Emphasis on bus, and bicycle. Make extensive bicycle paths linking the mall, the beaches, the parks. Think Holland, think Denmark.
- + Brookvale has buses on the main roads but nothing serving the central north - south spine (Mitchell Road). Old Pittwater Road also needs a bus service. Improving the local bus service would reduce the number of cars coming into the area.
- + The road network in Brookvale (i.e. in the general area where McDonald is located) consists of a north - south spine and long east - west blocks. To aid walking and perhaps cycling, there is a need for mid block connections, either as dedicated paths or access through properties, from one east - west street to another.
- + The statistics quoted reflect the reality. Brookvale is today not well served by public transport other than to and from the Mall. The Mall stop is at the "wrong end" of Brookvale from the perspective of much of the appropriate residential development area.

Other Comments

- + Something has to happen to Brookly Oval to make it more commercially viable. It is the worst footy ground I have EVER visited for a major sporting event, hence the reason I have to be dragged along there by mates to watch a game. Build decent stands for 20,000 and a big underground carpark (for commuter use also) and business suites along Pittwater Rd, and make The Sea Eagles pay to use the ground.
- + Retain discrete and separate areas for light industrial and residential. Protect and restore natural areas where possible: escarpments, bushland, waterways and wetlands. Retain historical features and provide museum space to house historical items etc. Provide a public library and storage for archival material, as this is not available at other libraries. Document the history of Brookvale, and its land use. For example: Low lying land in creek valleys used previously for market gardens. Land use controls included generous setbacks from waterways e.g. to allow for flooding. In recent decades development has encroached on flood plains, within setbacks adjacent to creeks and on steep bushland escarpments. Future development should respect the natural features and topography of the area.
- + Brookvale is a vital industrial area. We need to have policy that focuses on ensuring that this is preserved and can grow and thrive.
- + Brookvale already has a "maker" feel about it. With all those warehouses and factories, it's a great place for the new economy to take hold in the Northern Beaches. Brookvale: The Brooklyn of Sydney.
- + Lets make Brookvale Oval the defining part of the area, a showpiece that the whole of the Northern Beaches is attracted to regularly for major sporting events and an attractive all round entertainment, active and passive leisure facility.

9.2 Stage 2 Engagement Responses

WORKSHOP COMMENTS BOARD

Physical and Social Infrastructure

- + Better transport to places other than the city – e.g. to the Manly ferry.
- + Requirement for car parking is a problem for providing cheap housing. E.g. Less car parking more scooters.
- + SEPP 65 is a problem for providing cheap housing.
- + Weekday clearways during peak hours only e.g. 6.30-9.30am and 3.30-7pm.
- + Clearways on Saturday – car parking is easier on weekends for customers as businesses are closed.
- + B Line stops around residential and school areas.
- + Bus to Manly Ferry.
- + Public car park (multistorey) Chard Road.
- + Improve infrastructure at major intersections.
- + Create own "Grounds of Alexandria" around Chard Road.
- + Brookvale Oval is underdeveloped.
- + University.
- + Scattered cafes – not just concentrated in Chard Road.
- + Brookvale internet is currently useless – high speed, high level internet could be a big attractor for Brookvale.
- + More landscaping in areas to create better amenity – will work if height increases.

Workforce

- + Need to attract big companies – this will impact on other businesses in the area.
- + Localised employment.
- + Find ways to attract employees from outside the area.
- + Attract white collar workers to Brookvale.
- + Need a bulky retail district – use Harbord Road not Pittwater Road.
- + Eastern side of Brookvale not zoned to increase growth – need office style zoning.
- + Market forces do not determine Brookvale – the zoning does.
- + Zoning needs to be more flexible.
- + Commercial development around Brookvale oval makes sense.
- + Underutilised commercially: around the Mall, Brookvale Oval and Pittwater Road.
- + White collar workers do live in the Northern Beaches area.
- + Units above businesses can encourage consolidation.
- + Low cost workers housing near oval to bring blue collar workers in.
- + Transport improvements in order to increase workforce with ease of travel.
- + Should heavy industry move out?
- + More high tech industry capacity.
- + Will business owners age out and businesses die? What next?
- + Change image of living above industry.
- + Consolidated sites made more intensive with high tech.
- + Eastern side of Pittwater more of a hub.
- + More highly educated workers in the future.
- + Every business still has lower skilled workers.
- + Brookvale too constrained
- + Older trades not attracting younger workers
- + Amalgamate landowners somehow e.g. panel beaters.
- + Changing work typologies.
- + More affordable housing to attract workers.
- + Getting away from small business to big land consolidation.
- + Provide 'boarding housing' in warehouses/factories. Workers can reside here during week and go home on weekends.
- + Affordable housing.
- + Innovative solutions for cheap accommodations for workers.
- + Housing – need more flexibility around design/ parking.

Role of Housing

- + Industrial land around Warringah mall – mixed use.
- + Housing near transport and shops.
- + Higher density in industrial areas e.g. 15-20 storeys.
- + Build affordable housing around TAFE.
- + Old Pittwater Road is a good ring road for residential and commercial use.
- + Old Pittwater road leads to Brookvale oval – create new BRT stop.
- + Increase housing without compromising.
- + Housing affordability.
- + Industry and business on east side of Pittwater Road.
- + High density housing near medical centre.
- + Keep amenity.
- + High density at B Line stops.
- + Residential on one side of Pittwater Road.
- + High density along Pittwater Road in clusters.

Land Use and Planning Control

- + Faster processing of development applications.
- + Need a free shuttle bus.
- + Leave as is – improve roads etc.
- + Plan where future schools/universities should be located.
- + Improve living amenity.
- + Commercial developments require large amounts of parking.
- + Brookvale oval is underutilised.
- + Brookvale bus depot site ripe for development above.
- + Residential zoning close to transport.
- + More pedestrian hotspots and access.
- + Activate pedestrian areas.
- + Shift from industrial to mixed use.
- + Locating café/entertainment hub and transport nodes.
- + Should be medium density housing to south of B Line stop.
- + Consider car free zones – pedestrian malls.
- + Industrial land running out in Brookvale.
- + IT type uses are more high density employment compared to warehouse type.
- + Height limit needs to be raised by at least 5 metres over the current 11 metres to make redevelopment viable.
- + Large proportion of real estate in Brookvale owned by Northern Beaches locals.
- + Cheaper housing needed to attract employees.
- + No available land in industrial area – only 1-2% vacancy rate.
- + Increased height limit makes it more likely smaller sites will be purchased and consolidated.
- + Lifestyle choice to rent/buy in Brookvale despite high cost.
- + Residential combined with industrial land – cheaper, crime reduction, passive surveillance, traffic reduction, customers for business and employees.
- + Incentivised FSR's – e.g. 2000m² = 2.1 FSR.
- + FSR based on site consolidation e.g. Parramatta.
- + More units create more workers.
- + Huge demand for small industrial units.
- + Parking controls create problems for redevelopment.

Connectivity

- + There aren't any real clearways.
- + Pair road redevelopment with redevelopment.
- + Too many different types of parking.
- + People come from Central Coast to work.
- + Pittwater Road underground tunnel.
- + There are no lights on Pittwater Road
- + No loading zones.
- + Smaller lots are not capable of providing parking in redevelopment.
- + Make roads bigger.
- + Closing streets like in Dee Why to connect open space.
- + New industrial land.
- + Bus depot.
- + Green space linkages.
- + Pedestrian friendly.
- + Connect coast to Pittwater Road.
- + "main street" – Condamine Road?
- + Sprawl out from Warringah mall.
- + Walking/cycling separation.
- + Need more reasons to come to Brookvale – e.g. leisure, work, education.
- + Employment area has high turnover.