Draft Planning Strategy Kensington and Kingsford Town Centres

Public Consultation | January 2017

Randwick City Council
a sense of community

Your place, your future

Part A – Overview

1.0 Purpose

This draft Planning Strategy for Kensington and Kingsford has been prepared for public consultation and engagement to assist in understanding the issues facing the two town centres and allow discussion and debate to occur.

This is an ideal time to start this process and ensure Council and community goals are achieved. This draft Planning Strategy provides a firm basis to commence this community engagement.

This draft Planning Strategy sets out the vision, strategies and implementation actions to guide the sustainable growth and physical development of the Kensington and Kingsford town centres over the next 15 years.

It forms the basis for changes to land use and built form controls in the Randwick Local Environmental Plan 2012 (RLEP 2012)[1] and the Randwick Development Control Plan 2013 (DCP 2013), together with improvements to the public domain to enhance the liveability, sustainability and economic prosperity of both town centres.

The draft Planning Strategy has been informed by considerable background research and analysis, extensive community engagement, and an international K2K Urban Design Competition which identified innovative design ideas and concepts to support the betterment of these town centres.

It is consistent with the Randwick City Plan, in particular Action 4a to achieve Outcome 4 – Excellence in urban design and development.

2.0 Comprehensive Planning Review

2.1 Background

In early 2016, Council initiated a comprehensive planning review of the Kensington and Kingsford town centres to ensure the planning framework is up to date, robust and well-aligned to meet future needs.

Both town centres are presently facing considerable redevelopment pressure, reflected by an increase in the number of rezoning applications for various sites along Anzac Parade seeking substantial changes to the planning controls.

The town centres are also in the process of transition, stemming from the construction of the CBD to South East Light Rail network on Anzac Parade which forms the main spine of these centres.

The light rail will not only transform people's travel behaviour but will have a direct impact on the town centres' identity, accessibility, functionality and amenity. It is also likely to be a catalyst for urban renewal and growth as envisaged by the State Government's Metropolitan Planning objectives for key transport corridors in Sydney, and evidenced in other precincts and cities that have introduced such infrastructure.

[1]The RLEP 2012 is the result of a planning review undertaken over 2010-2012 to conform to the State Government's Standard LEP Instrument. As part of this process a comprehensive review of the planning controls for both Kensington and Kingsford town centres was earmarked for a separate study.

Part A – Overview

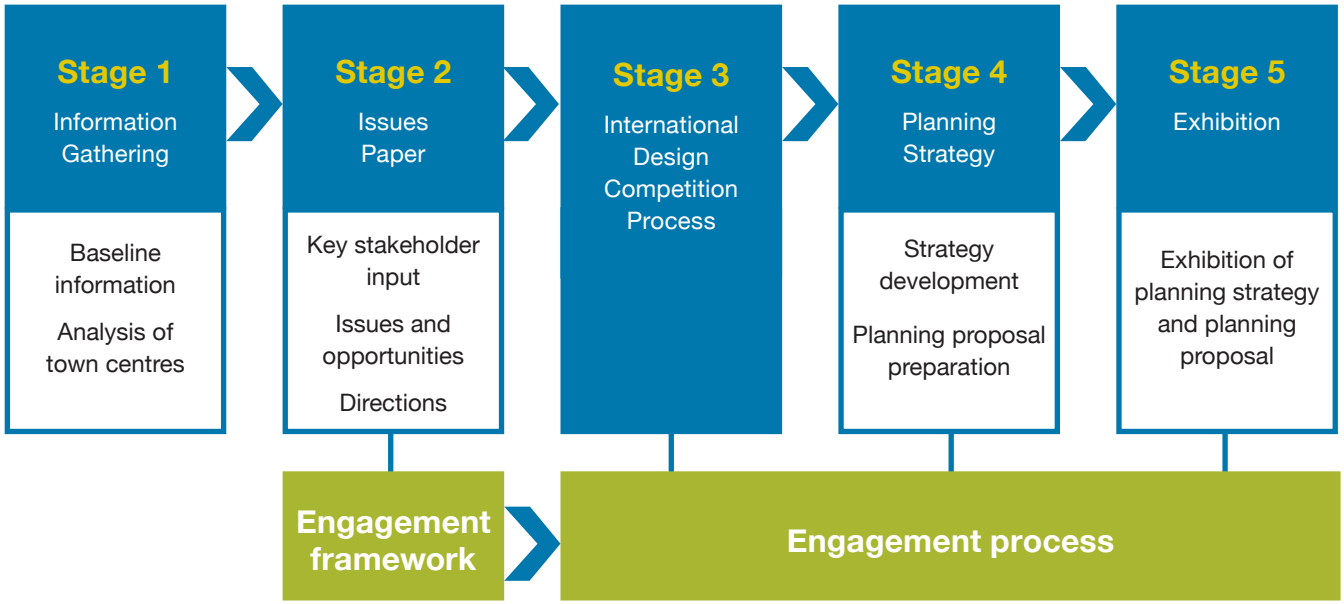
2.2 Planning Review Process

As a first step in the Planning Review, the Kensington/Kingsford Town Centre Issues Paper (draft Issues Paper) was prepared in March 2016, which should be read as the background report to this Planning Strategy. The draft Issues Paper provides a detailed overview of the study area, including the legislative context, existing conditions, and issues and opportunities. It identifies a number of pertinent planning, urban design and public domain challenges affecting the Kensington and Kingsford town centres, together with strategic directions to be addressed in the subsequent Strategy.

The next stage of the Review process was an International Urban Design Competition held between July and October 2016, which provided the opportunity for a creative visioning of the town centres as they face competing pressures and move through the current cycle of transition. Background to the Competition is discussed in further detail in Part A Section 5 – K2K Urban Design Competition. A comprehensive community consultation program was run throughout the Competition period which is further detailed in Part A Section 6 – Community Consultation.

The subject draft Planning Strategy comprises Stage 3 in the Planning Review process. It builds on the findings of the draft Issues Paper, and contains a range of objectives, strategies and actions to guide the future sustainable growth and development of the town centres.

The final stage of the Planning Review process will be the preparation of a Planning Proposal seeking amendments to the RLEP 2012 for each town centre. The Planning Proposal and draft Planning Strategy will be placed on public exhibition for an extensive community consultation and engagement process.



Part A – Overview

3.0 Key Drivers and Challenges

This draft Planning Strategy takes into account and responds to a number of drivers and challenges affecting the Kensington and Kingsford town centres which are summarised as follows.

3.1 Metropolitan Planning Directions

The NSW Government's long term Metropolitan Plan for Sydney – A Plan for Growing Sydney identifies a broad section of Anzac Parade (the main transport corridor for both Kensington and Kingsford town centres) as an area for urban renewal opportunities (see map below). Under this Plan identification of housing, services and jobs in proximity to the CBD to South East Light Rail network is earmarked as a priority.

Kensington and Kingsford town centres are located in proximity to the Randwick Education and Health Strategic Centre, comprising several major institutions and destinations, including the University of NSW, the Randwick Health Campus (with four major hospitals forming Australia's largest complex of teaching hospitals), and some of Australia's premier research institutions including Neuroscience Research Australia.

The Strategic Centre, as identified in the Plan, plays a vital economic role within Randwick City and the Sydney Metropolitan region. Collectively, the University and Health Campuses are the largest employers in Randwick City, with almost 40% of its workforce. The large workforce, students and visitors provide substantial local economic benefits to Kensington and Kingsford town centres.

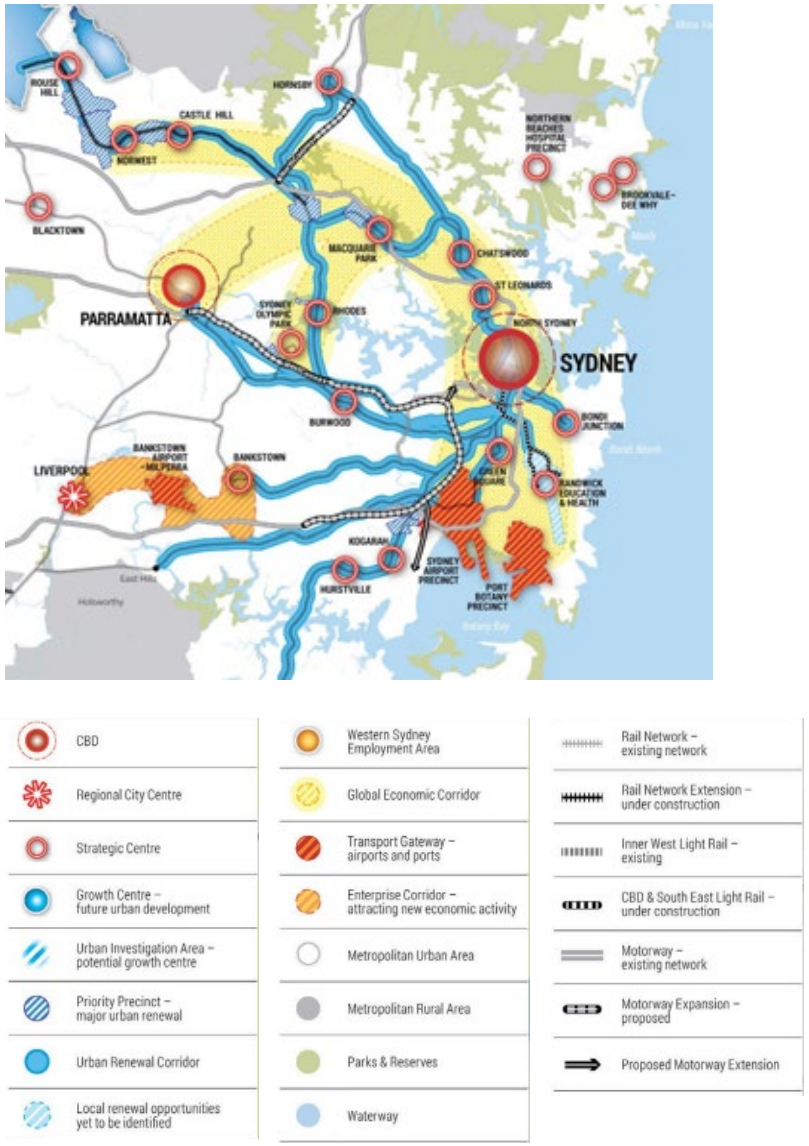


Figure 1: Metropolitan Sydney
Source: A Plan for Growing Sydney

Part A – Overview

3.2 District Planning Priorities

The draft District Plan for Greater Sydney's Central District[2] was released for consultation on 21 November 2016. This draft Plan sets out priorities and actions to give effect to A Plan for Growing Sydney and help realise the vision for the Central District to 2036. The draft Plan is centred on three key themes: A Productive City, A Liveable City and A Sustainable City.

The draft District Plan contains job targets for the Randwick Education and Health Strategic Centre and a five year housing target for Randwick Local Government Area (LGA). This five year housing target sets an additional 2,250 dwellings to be delivered by 2021 to meet projected population demands. The draft Plan also sets an action that councils will need to increase housing capacity across the district to ensure there is sufficient longer term capacity to deliver a minimum of 157,500 additional new dwellings across the Central District over the next 20 years. A 20 year strategic housing target is to be set in consultation with councils. All councils will need to prepare local housing strategies to demonstrate how additional capacity can be created to deliver supply and housing choice including affordable rental housing over the next 20 years. Planning for this growth is discussed in more detail under Part C Section 3 – Housing and Diversity.

In relation to the theme for A Sustainable City, the draft District Plan sets an action for councils to support the development of initiatives for sustainable low carbon future and deliver Sydney's Green Grid Project. The Green Grid Project aims to enhance access to open space, provide routes for walking and cycling, conserve natural areas and provide opportunities for active and passive recreation. It also aims to support the management of stormwater, flood risk and water quality, while improving Sydney's landscape value and urban amenity.

The draft Central District Plan is on public exhibition until March 2017.

3.3 Revised Population Projections

The NSW State Government has recently released revised[3] projections which indicate that the population of Randwick City is likely to increase by 23% resulting in an additional 33,900 people in the LGA by 2036.

While the draft District Plan sets a five year housing target, at the time of drafting the draft Issues Paper and preparing the subject draft Planning Strategy, a demand projection of 15,150[4] additional new dwellings by 2031 was adopted for this work to cater for the incoming population across the LGA.

A portion of these additional dwellings will be accommodated in the Kensington and Kingsford town centres given they are well serviced by public transport and are located in close proximity to employment hubs, as historically has been the case.

This is discussed in further detail in Part C Section 3 – Housing and Diversity and Part C Section 5 – Built Form.

3.4 CBD to South East Light Rail

As previously noted, the CBD and South East Light Rail project, due to be completed in 2019, will introduce a high capacity and high frequency service connecting Randwick City to Central Station and Sydney CBD, as well as the sporting facilities at Moore Park and Royal Randwick Racecourse. The light rail, however, will replace a number of current bus services.

The route will branch into two sections in Randwick City – to the Randwick Junction town centre, University of NSW and Health Campus on High Street and along Anzac Parade, through the Kensington town centre and terminating south of the nine ways intersection in Kingsford town centre.

Key pieces of new infrastructure to be introduced include a major terminus south of the nine-ways intersection in Kingsford town centre, the removal of the nine-ways round about and four new light rail stops (located adjacent to Carlton Street, Todman Avenue, UNSW in Kensington and Strachan Street in Kingsford town centre).

The light rail will also result in the creation of new urban spaces and movement patterns, increased levels of accessibility around the light rail stops, the relocation of on street parking in various locations and the undergrounding of overhead powerlines in the Kingsford town centre.

[2] The Central District includes the local government areas of Bayside, Burwood, Canada Bay, Inner West, Randwick, Strathfield, the City of Sydney, Waverley and Woollahra.
[3] Department of Planning & Environment, 2016, NSW LGA Population and household projections
[4] Department of Planning & Environment, 2014, NSW LGA Population and household projections

Part A – Overview

4.0 Study Area

The Planning Review Study Area is defined in the following Map. It includes the RLEP 2012 B2 Local Centre zoned land that makes up the Kensington and Kingsford town centres.

The study area also includes three residential zoned sites identified for inclusion in the Kingsford town centre (see Part C Section 10 – Zoning and Landuse for further detail on these sites).

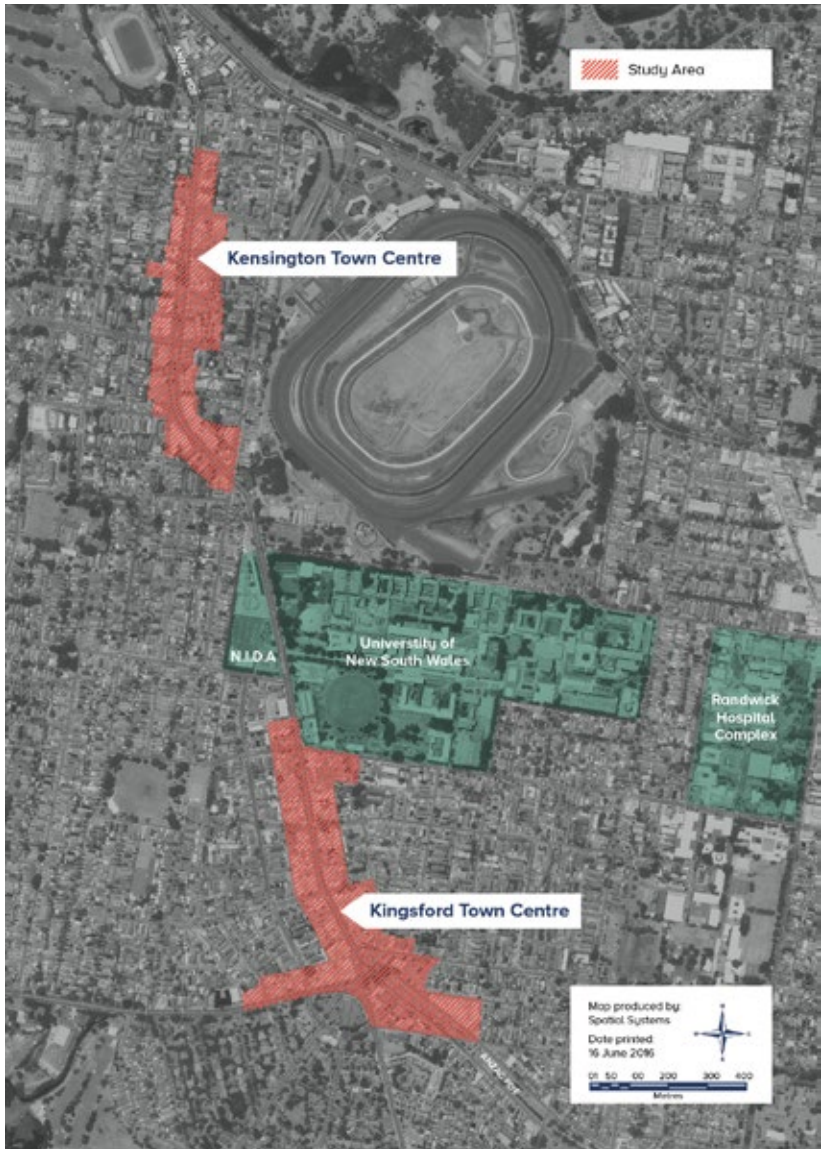


Figure 2: Planning Review Study Area
Source: Randwick City Council

Figure 3: CBD to South East Light Rail Route
Source: Transport NSW 2016 website

Part A – Overview

5.0 K2K Urban Design Competition

As noted earlier, this draft Planning Strategy has been informed, in part, by the K2K Urban Design Competition which was held between June and October 2016. The aim of the Competition was to identify an innovative urban design vision to enhance the livability, sustainability and economic vitality of the Kensington and Kingsford town centres.

Endorsed by the Australian Institute of Architects (AIA), the Competition was run as a two stage process, open to multi-disciplinary teams with demonstrated expertise in innovative solutions to urban design, sustainability and liveability challenges.

The Competition was underpinned by the following themes which also provide the overarching scope for the objectives, strategies and implementation actions identified in this document:

- Business and economy
- Public domain, streets, and open space
- Housing growth and diversity
- Sense of place and identity
- Urban design excellence
- Sustainability.

An Independent Jury Panel of pre-eminent professionals in the fields of architecture, planning, landscape architecture and urban design were tasked with reviewing submissions and selecting the Competition winner.

The winning entry was by JMD, Hill Thalis and Bennett and Trimble. Council has only utilised key ideas from this entry as they relate to the Kensington and Kingsford town centres along the Anzac Parade corridor. Ideas beyond the town centres do not form part of this strategy.

Consistent with Council's consultation priorities, the involvement of the community was integral to the Competition process. Community feedback enhanced the Competition Brief and also assisted in developing the vision for each town centre as detailed in Part C of this Strategy. The community was also invited to comment on the short-listed entries with feedback provided to the Independent Jury Panel for their consideration.

Further detail on community consultation undertaken during the Planning Review is provided in Part A Section 6 – Community Consultation.

K2K Competition -Ten 'Big Ideas'

Following the conclusion of the Competition, the four short-listed entries were reviewed by Council which has resulted in the identification of ten 'big ideas'. These ideas are considered suitable to the context of the town centres, with a focus on sustainability and improving the environmental amenity of the public domain.

The ten 'big ideas' are reflected in the strategies contained in Part C of this document and comprise the following:

1. Widen Anzac Parade to form a Boulevard: 'Anzac Parade For The People'
2. Integrate sustainability infrastructure into the precinct
3. Establish a "green grid" of walkable streets that link plazas and parks
4. Community spaces and a range of public benefits
5. Concentrate activity and built form at nodes
6. Nine-ways transformed into Kingsford Junction, as a new civic transport and urban hub
7. Prioritise walking, cycling and public transport
8. Increased provision of affordable housing
9. Leverage the university and health campus to foster innovation uses
10. Create new and reinvigorated plazas for people to gather.

Part A – Overview

6.0 Community Engagement

Community engagement has been an integral component of the Planning Review, informing all stages, as well as the overarching vision for the Kensington and Kingsford town centres.

A Communication Plan was prepared to engage and involve Council representatives, key stakeholders and the broader community to assist shaping the content and direction of the Planning Strategy. Entitled K2K – Your Place Your Future, this Communication Plan was underpinned by the following consultation principles:

- Multiple and meaningful opportunities for community input
- Involving all relevant stakeholders, including harder to reach sectors
- Strong customer focus and a respect for the community
- Acknowledge the community's right to be advocates for what they want or need
- An awareness and understanding by staff of how Council actions impact on the community
- Honesty and transparency in communication
- Accurate and timely information
- Clear explained decisions and actions of Council at all stages of the consultation process
- Actively listening and acknowledging other points of view
- Respecting individuals and cultural differences.

StraightTalk consultants were commissioned by Council for support in delivering a number of community engagement activities throughout the K2K Urban Design Competition. New approaches to consultation broadened the public conversation about the future of both town centres and gave the community ownership of the process to a greater extent than traditional engagement practices.

The key aims of engagement was to reach as many local residents and business owners as possible; to inform them about the Competition and to encourage participation in the process by giving feedback on what they valued and wanted in the town centres.

The community were given the opportunity to help develop the Competition Brief by outlining their aspirations for the town centres under a number of themes. This feedback was integrated into the Competition Brief provided to competitors participating in Stage 2 of the Competition. The community also provided feedback on the Competition entries, which was also reported to the jury for consideration in the judging process.

Key engagement activities undertaken during the K2K Competition are summarised in the following table:

Table 1: K2K Competition Community Engagement Activities

Activity	Detail
K2K Competition Project website www.K2K.sydney	Included information for competition entrants and tools for community feedback: online survey, interactive map and forum questions.
Fact sheets/letter to ratepayers Flyers	General information provided via mail informing local residents of the competition, timelines and how to get involved.
Table Talkers	Stand up flyers were distributed in the local area (restaurants and cafes) to encourage participation in the project; standard Chinese translation was included. It is intended that these will be active for the length of the project.
Pop up information stalls x3	Pop up stalls were conducted in three locations at Southern Cross Close in Kingsford, Anzac Parade opposite the UNSW entrance and Duke Street in Kensington. Each pop up featured; snacks, posters with information about the Competition, questions for people to answer about what they liked about the area and spare paper for people to comment about the Competition and provide general feedback.
Intercept interview sessions x3	Three roving intercept sessions were conducted where people were stopped along Anzac Parade and asked to participate in an intercept survey to get feedback on the six design themes.
Meeting with Kingsford Chamber of Commerce	A meeting was held to discuss details of the Competition and to gain an understanding of the broad attitude of the Chamber towards the cCompetition process.
Meeting with relevant Precinct Committee executive members	Meetings were held with the Kensington West Kingsford Precinct Committee and Kingsford South Precinct Committee and the UNSW Office of the Vice Chancellor to provide an overview of the Competition and to ascertain feedback on the future of the town centres.

Part A – Overview

Community feedback has identified important issues, opportunities, ideas and aspirations to help shape the future of the Kensington and Kingsford town centres.

This draft Planning Strategy has sought to respond to these issues and ideas, by providing strategies and actions on a range of considerations such as housing diversity, public domain improvements, pedestrian accessibility and sustainability.

7.0 Strategic Planning Framework

The draft Issues Paper provides a detailed overview of the state and local strategic planning framework guiding the Planning Review of the Kensington and Kingsford town centres.

The following documents, strategies and guidelines have provided background to, and helped informed the objectives, strategies and actions contained in this document:

- Sydney Metropolitan Strategy 'A Plan for Growing Sydney' 2014 (Department of Planning and Environment)
- Draft Central District Plan 2016 (Greater Sydney Commission)
- Randwick City Plan (Randwick City Council)
- Randwick Local Environmental Plan 2012
- Randwick Development Control Plan 2013
- Kingsford Town Centre Strategy 2013 (Randwick City Council)
- Kensington, Kingsford and Randwick Junction Economic Impact of Light Rail (stage 1 and 2 reports) 2016 (Macroplan Dimasi)
- Urban Design and Landscape Plan Kingsford 2016 (Transport NSW)
- Randwick Urban Design Guidelines 2014 (Randwick City Council)
- Kensington and Kingsford Town Centres Urban Design Report 2016 (Conybeare Morrison)
- A Cultural Randwick City 2009 (Randwick City Council)
- An Inclusive Randwick City 2010 (Randwick City Council)
- A Safer Randwick Plan 2003 (Randwick City Council)
- The Eastern Suburbs Low Carbon Futures Plan 2015 (Kinesis)
- High Performance Buildings Study 2016 (Kinesis)
- The Eastern Suburbs Regional Water Reduction Plan 2016 (Draft, Kinesis)
- Draft Policy for Architecture and Urban Design in NSW 2016 (Department of Planning and Environment)
- Anzac Parade Corridor Light Rail Analysis 2016 (EMM Consulting)
- Kensington and Kingsford Parking Controls Advice 2016 (ARUP)
- Kensington and Kingsford Planning Strategy Traffic Assessment 2016 (Stage 1, ARUP).

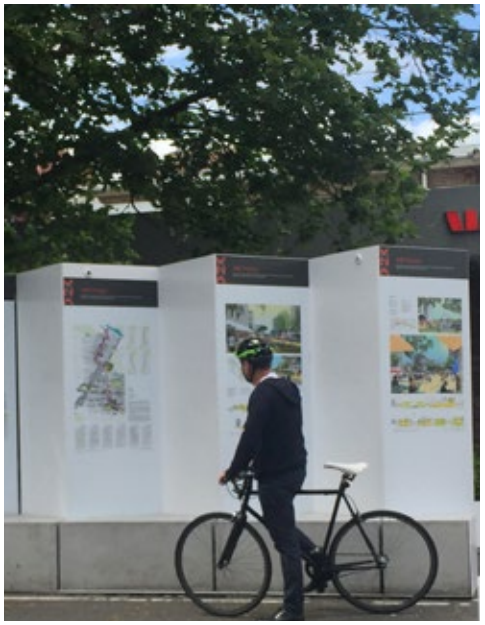


Figure 4: Community engagement activities
Source: Randwick City Council 2016

Part A – Overview

- Kensington to Kingsford Infrastructure Contribution Financial Feasibility Assessment 2016 (HillPDA)
- Randwick City Council Affordable Housing Strategy 2007 (Randwick City Council).

8.0 Planning Strategy Structure

The Planning Strategy is structured as follows:

Part A: Overview

This part provides an overview of the Planning Review process, including the methodology, key drivers, and outcomes of the K2K Urban Design Competition and community feedback.

Part B: The Town Centres

This Part provides a snapshot of the Kensington and Kingsford town centres including their regional/local context, key attributes, and scenarios for growth and change such as population/household growth projections, and key demographic and employment trends.

Part C: Vision and Themes

This Part establishes a vision for how Kensington and Kingsford town centres should grow and change over the next 15 year period, based on outcomes from community consultation.

A number of objectives, strategies and actions are set out, which are grouped under the following themes:

- Housing Growth and Diversity
- Business and Economy
- Built Form
- Heritage Conservation
- Sustainability and Transport
- Public Realm and Landscape
- Social Infrastructure
- Zoning and Land Use.

Under this Part, the objectives provide the aim or purpose for each theme, setting out what the Strategy intends to achieve. The strategies describe how the objectives are to be achieved. The actions provide more specific detail on what Council can do to implement the strategies, including statutory (e.g. through the RLEP 2012/ DCP2013) or non-statutory mechanisms (e.g. capital works, advocacy).

Maps are provided where relevant to illustrate how the strategies and actions can be implemented on the ground.

Part D: Precincts and Structure Plan

This Part contains Precinct Plans for the identified precincts consolidating relevant objectives, strategies and actions identified in this Strategy.

A Structure Plan is also provided to illustrate how the town centres relate to their surrounding context and future opportunities outside the centre boundaries.

Part E: Feasibility and Funding Infrastructure

This Part outlines a contributions scheme to support infrastructure improvements for the Kensington and Kingsford town centres. It also provides an overview of independent feasibility testing undertaken of proposed new built form controls and the recommended infrastructure funding mechanism.

Part F: Implementation Plan

This Part includes a summary of the Strategy's actions, including key timeframes for implementation.

Part B – The Town Centres

This section provides a snapshot of the Kensington and Kingsford town centres including key characteristics and scenarios for growth and change. A detailed assessment of the town centres' existing conditions and opportunities and challenges is included in the draft Issues Paper.

1.0 Regional and Local Context

The Kensington and Kingsford town centres are located along the Anzac Parade corridor in the northern suburbs of Randwick City. The town centres are located approximately 9km from the Sydney CBD and 6km from Sydney International Airport. Nearby centres include Bondi Junction 6km to the north-east and Maroubra Junction 3km to the south.

Key sites and destinations in proximity to the town centres include the University of NSW, National Institute of Dramatic Art, Randwick Hospitals Campus, the Royal Randwick Racecourse, Centennial Park and the eastern beaches of Clovelly, Coogee and Maroubra.

1.1 Kensington Town Centre: A Snapshot

Kensington town centre extends along Anzac Parade, and is bounded by Carlton Street to the north and Doncaster Avenue to the south.

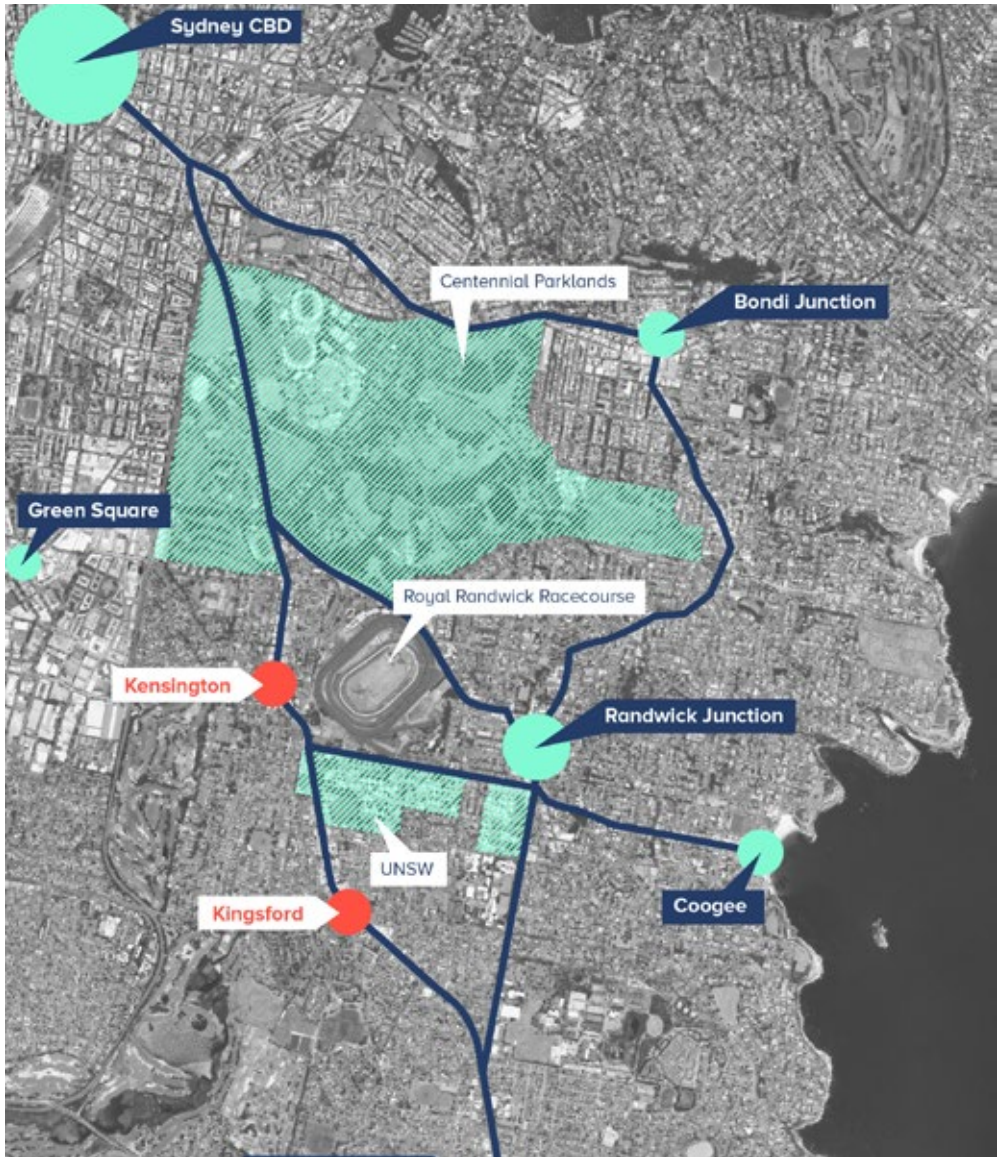


Figure 5: Regional Context
Source: Randwick City Council 2016

The town centre occupies a land area of around 60,200m² and has evolved as a traditional strip based centre with a distinctive retail and residential character. It has a localised catchment other than the Peter's of Kensington store which draws customers outside of Randwick Local Government Area (LGA).

A variety of development typologies occupy the town centre including:

- Recently developed multi-storey mixed use developments (up to 6/7 storeys)
- Low rise two storey developments
- Single storey dwelling houses and 3-4 storey residential walk up flats.

The town centre is distinct from other centres in Randwick City in that a large portion (approximately 34%) of ground floor uses are currently for residential purposes (e.g. houses or walk-up flats). These residential components are largely located towards the northern and southern ends of the town centre.

The most dominant business activity in Kensington town centre is food services (17%), followed by retail trade (15%) and other services (7%). Kensington has a high ground floor vacancy rate of 12%, mostly clustered towards the northern part of the Centre.

Part B – The Town Centres

In terms of urban structure and fabric, Kensington town centre has a focus on Anzac Parade and with a grid street pattern. The street edge is affected by variations to building setbacks, street walls and period of developments.

Finer urban grain with consistent setbacks is generally visible where older shop-top housing typology has been retained; newer mixed use developments, on the other hand, are usually associated with large building floorplates, resulting in a coarser urban grain.

There are two local Heritage Items located near the southern entrance of the town centre, being the Doncaster Hotel (268 Anzac Parade) and the Masonic Temple (199 Anzac Parade).

There are also a number of contributory items identified along Anzac Parade which demonstrate a range of key architectural elements, scale and proportion which help define the streetscape character.

Key open spaces/recreational facilities in proximity to the town centre include Centennial and Moore Parklands, Kokoda Park and Royal Randwick Racecourse.

Figure 6: 159-171 Anzac Parade, Kensington Source: Google Streetview 2016

Figure 7: 76-82 Anzac Parade, Kensington Source: Google Streetview 2016

Figure 8: 112-124 Anzac Parade, Kensington Source: Google Streetview 2016

Figure 9: Map of Kensington town centre
Source: Randwick City Council 2016

Part B – The Town Centres

1.2 Kingsford Town Centre: A Snapshot

Kingsford town centre is based around the intersection of Anzac Parade, Gardeners Road, and Bunnerong Road on the south (commonly known as 'nine-ways'). It straddles both sides of Anzac Parade, extending from Barker Street on the north to the South's Juniors Club to the south, as well as east and west along Rainbow Street and Gardeners Road respectively.

The town centre occupies a land area of 96,962m^2 and is a traditional strip based centre with a distinctive retail and dining character, and strong evening economy stemming from its proximity to UNSW and its large student demography.

The town centre accommodates a variety of business and retail uses ranging from restaurants, cafes and takeaway food outlets to smaller office suites, shop top housing, small scale independent supermarkets, pubs and banks. The ground floor vacancy rate is relatively low and is 9% of all properties, mainly clustered along the southern end of the town centre along Gardeners Road.

Much of the established commercial area is concentrated towards the southern end of Anzac Parade and west along Gardeners Road and comprises small fragmented allotments with 'fine grain' two to three storey 'shop top' buildings. A number of these buildings have façades listed as 'contributory' in the DCP2013 as they demonstrate a range of key architectural elements, scale and proportion which help define the streetscape character.

Towards the north and centre of the town centre lies a greater concentration of taller, contemporary mixed commercial/residential developments with retail and commercial uses at the ground level and up to nine storeys of residential above. At the corner of Barker Street and Anzac Parade lies a service station and McDonalds restaurant development, both of which occupy a prominent position.

The town centre has three sites on the south that are separated from the remainder of the main commercial area due to the nine-ways roundabout and existing street structure.

These are:

- South's Juniors Club, which includes the standalone club building of considerable bulk and scale, together with a row of retail uses that fall outside the town centre boundary. These buildings comprise retail and restaurant uses that transition to a lower 2-3 storey scale and interface with the surrounding low density residential neighbourhood.
- Rainbow Street site (1-11 Rainbow St), which comprises a vacant site accommodating parking, and also used as a temporary works depot during construction of the light rail. This site has been identified as a potential site for a new integrated civic building and parking for Kingsford town centre.
- Kingsford Triangle site, which includes a variety of development types including low scale two storey strata titled residential flat buildings, single dwellings, a church, boarding house, childcare centre, a large drive in car wash centre and other business uses.

The town centre is located within walking distance to a number of open spaces including Paine Reserve, Kensington Park and Daceyville Gardens (City of Botany Bay LGA) on the south and west. There are a number of small public places in the centre which are underutilised (at Nine Ways roundabout, Southern Cross Laneway, Meeks Street, Borrodale Road and Strachan Street).

Part B – The Town Centres

Figure 10: 375-387 Anzac Parade, Kingsford
Source: Google Streetview 2016

Figure 11: 494 Anzac Parade, Kingsford
Source: Google Streetview 2016

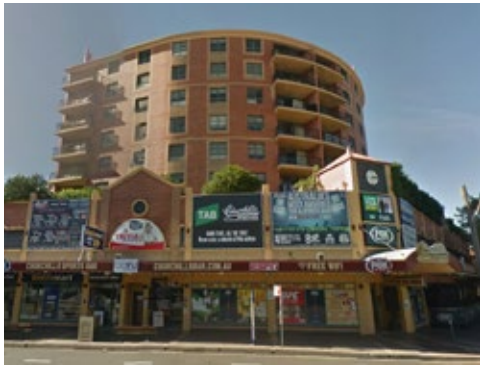


Figure 12: 532 Anzac Parade, Kingsford
Source: Google Streetview 2016

Figure 13: 277-291 Anzac Parade, Kingsford
Source: Google Streetview 2016

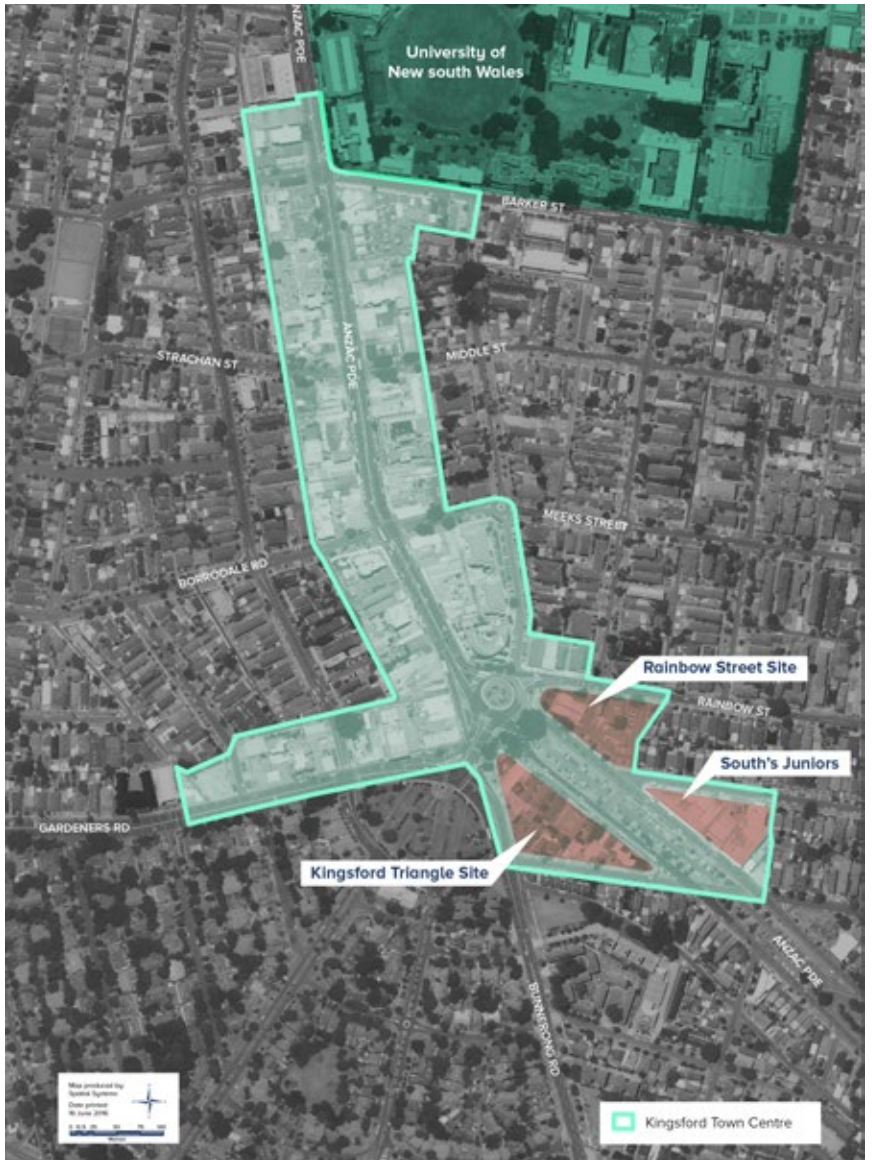


Figure 14: Map of Kingsford town centre
Source: Randwick City Council 2016

Part B – The Town Centres

1.3 Local Planning Framework

The Randwick Local Environmental Plan 2012 (RLEP 2012) is the statutory planning instrument that currently applies to all land in Randwick City. It regulates how land is used through land use zones and sets outs provisions for how land can be developed via principle development standards and key planning controls.

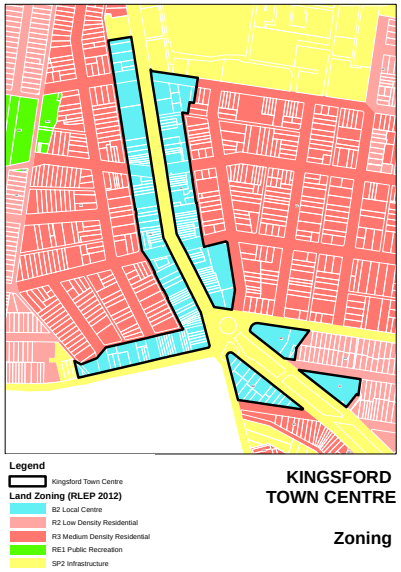
The RLEP 2012 is the result of a comprehensive planning review undertaken over 2010-2012 to bring the instrument in line with the State Government's Standard LEP Template. A review of the planning controls for Kensington and Kingsford town centres was flagged as a separate Study.

The following table outlines the main RLEP 2012 provisions applicable to the Kensington and Kingsford town centres.

Table 2: Key Applicable RLEP 2012 Planning Controls

	Kingsford	Kensington
Land Use Zone	B2 Local Centre	B2 Local Centre
Maximum Height	24m	9.5m 12m 21m 25m 31m
Maximum Floor Space Ratio	3:1	No FSR applies to land within the Centre – building envelope controls for each block are contained within Randwick DCP 2013 (Section D1)
Heritage	One (1) heritage item in the town centre O'Dea's Corner	Two (2) heritage items in the town centre Masonic Centre - Doncaster Hotel
Key Sites (Identified on the Key Sites Map of Randwick LEP 2012)	Kingsford Triangle Site Kingsford Market Site	No Key sites

Part B – The Town Centres



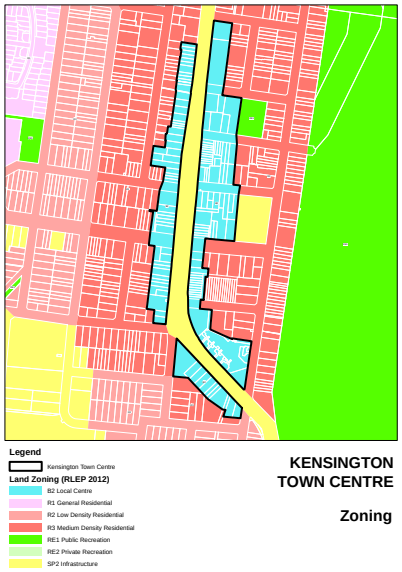
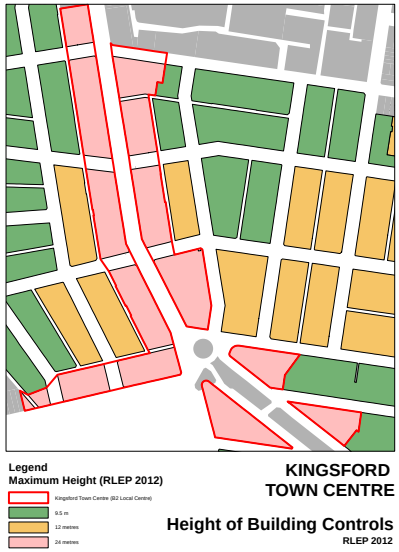


Figure 15: Existing Zoning – RLEP 2012
Source: RLEP 2012 (www.legislation.nsw.gov.au)



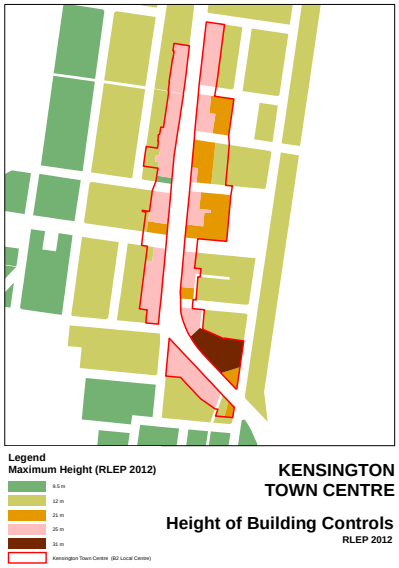


Figure 16: Existing Heights – RLEP 2012
Source: RLEP 2012 (www.legislation.nsw.gov.au)

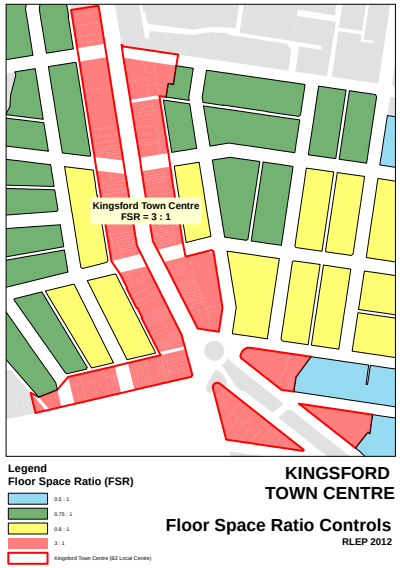
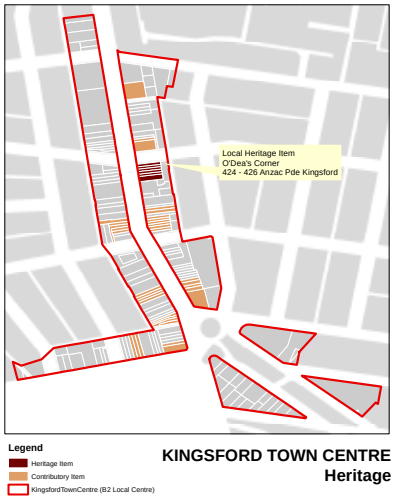


Figure 17: Existing Floorspace Ratio (Kingsford town centre) – RLEP 2012
Source: RLEP 2012 (www.legislation.nsw.gov.au)



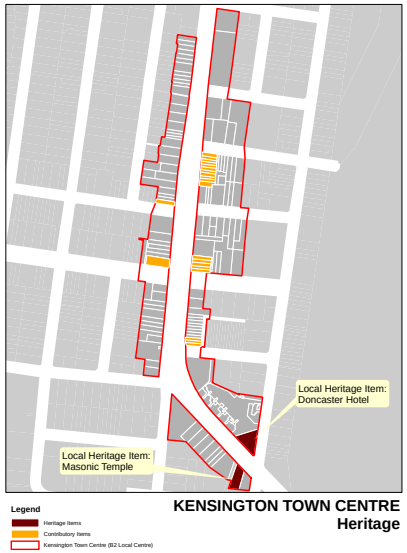


Figure 18: Existing heritage listed items and contributory buildings
Source: RLEP 2012 (www.legislation.nsw.gov.au) and RDCP 2013 (www.randwick.nsw.gov.au)

Part B – The Town Centres

1.4 Randwick Development Control Plan 2013

The Randwick Development Control Plan 2013 (DCP 2013) provides detailed planning and design guidance to supplement the provisions of the RLEP 2012. The DCP contains site specific chapters for the Kingsford town centre (section D2) and Kensington town centre (section D1) originating from the previous DCPs applying to these centres.

Kensington Town Centre

A major planning/design review for Kensington town centre was carried out in 2001/02, resulting in the introduction of building envelope controls based on the architectural character of the centre, articulation requirements and building heights. Site amalgamation is encouraged through bonuses to the building envelopes. The building envelope controls developed in 2002 have been transferred into the current DCP 2013 Section D1.

The DCP provides a broad vision statement for future development in the Centre and block by block controls for height, setbacks and building location zone. The controls aims to achieve 'innovative' design quality first envisaged for the 'Model Suburb of Kensington' in 189[5].

Kingsford Town Centre

The DCP for Kingsford town centre aims to achieve high quality building and urban design to promote economic employment opportunities. The DCP controls focus on site planning, building design, articulation, materials and finishes, through site links, and car parking.

The DCP also contains a requirement to prepare site specific controls for key sites being the Kingsford Triangle and Rainbow Street site. The site specific DCP controls are to address a range of considerations such as high quality architecture, dwelling mix, through site links, landscape and streetscape design to ensure that future development in these prominent locations are of high quality design and provide excellent amenity.

2.0 Planning for the Future of Kensington and Kingsford

The following section summarises a number of trends and indicators that provide the baseline for planning the future growth of Kensington and Kingsford town centres.

2.1 Population and Household Growth Projections

Current population growth projections indicate that the population of Randwick City will continue to grow to over 180,150 persons by 2036[6]. The distribution of population growth by age group is forecast to be in line with projected Greater Sydney averages, towards a significantly older population profile by 2036.

For Randwick City, the greatest proportional growth is forecast in the 85+ age group, which is expected to increase by 74% from 2016-2036[7]. Conversely, there will be 33% growth in school aged children (5-19 years) in Randwick City, which is one of the largest projections for a council area within the Greater Sydney Central District.

While single person households are projected to make up 31% of the total households in Randwick City by 2036, family households will continue to be the dominant household type, at around 59%[8] of the total households by 2036.

This demonstrates that there is a need for additional housing including diverse housing to meet increased population and changing household structure which is discussed in more detail under Part C Section 3 – Housing Growth and Diversity. The level of growth will place additional pressure on the Kensington and Kingsford town centres given their location to employment hubs, education and health services.

2.2 Demographic Trends

While the 2016 Australian Bureau of Statistics (ABS) Census Data has not yet been released, an analysis of ABS 2006 and 2011 Census Data has revealed key demographic trends for Kensington and Kingsford as summarised opposite:

Kingsford Town Centre

- Kingsford has a young population, with 31% of residents between the ages of 20 and 29 years in 2011, reflecting the area's high student population.
- In 2011, the average household size was 2.61 and increasing, probably due to increased group households, while Randwick City's average household size decreased over the same period.
- In 2011, there was a high proportion of households renting (46%), with an increasing rate of households with mortgages and a decreasing rate of households who own their homes.
- The suburb has a high and increasing rate of ethnic diversity, with 52% of persons speaking a language other than English at home and 52% of persons born overseas in 2011.
- There are increasing levels of education and growth in the number of jobs in the centre. In particular, there has been employment growth in education and training, healthcare and social assistance, professional, scientific and technical services, and arts and recreation services.

[5] Posters advertising the 1891 subdivision plan for the 'Model Suburb of Kensington'.
[6] Department of Planning and Environment (2016) NSW State and LGA Population and Household projections
[7] Greater Sydney Commission (November 2016) Draft Central District Plan (pg.81)
[8] Department of Planning and Environment (2016) NSW State and LGA Population and Household projections

Part B – The Town Centres

Kensington Town Centre

- Like Kingsford, Kensington's population is young, with 34% of people between the ages of 20 and 29 years, reflecting the area's high student population.
- The average household size in Kensington is 2.37, which stayed steady between 2006 and 2011, while Randwick City's household size decreased over the same period. There is a lower level of lone-person households compared to Randwick City, and an increasing number of group households.
- In 2011, almost half (49%) of all households were renting, with an increasing rate of households with mortgages and a decreasing rate of households who own their homes.
- Similar to Kingsford, there is a high rate of ethnic diversity, with 41.5% of people speaking a language other than English at home and 47% of residents in 2011 born overseas.
- There are increasing levels of education and growth in the number of jobs in the centre. In particular, there has been employment growth in education and training, healthcare and social assistance and professional, scientific and technical services.

2.3 Employment Trends

As identified in the draft Issues Paper, both Kensington and Kingsford town centres perform a localised role and function with local retail/commercial services.

The Kensington town centre is projected to grow from 1,540 jobs to 1,925 jobs by 2036, reflecting an increase of 25%. It is expected that 70% of the future jobs growth will occur in the industries of retail trade; accommodation and food services; education and training; and healthcare and social assistance.

Job numbers for the Kingsford town centre are projected to grow from 2,425 to around 3,000 by 2036, reflecting an increase of 24%. It is estimated that around 47% of the future jobs growth is expected to occur in the industries of accommodation and food services and healthcare and social assistance.

To ensure the town centres achieve the projected jobs growth adequate employment floor space should be generated within the town centres. The proximity to the Randwick Education and Health Strategic Centre will support an emerging innovation district which will stimulate economic activity and jobs growth.

The need to provide for adequate employment floor space within the town centres is discussed in more detail under Part C Section 4 – Business and Employment.

2.4 Strategic Precincts

The draft Issues Paper provides an analysis of existing floor space capacity and redevelopment potential of the Kensington and Kingsford town centres[9], resulting in the identification of a number of key opportunity sites.

These have been further refined in the development of this draft Strategy, and three distinct Precincts have been identified. The Precincts are based around strategic transport nodes being the Todman Avenue light rail stop in Kensington town centre, the the Strachan Street light rail stop and terminus in Kingsford town centre.

Existing development located in these Precincts are largely 1-2 storey shop-top housing or multi-business properties with moderate to significant remaining capacity[10] and are likely to be redeveloped in the short-medium term following possible lot consolidation.

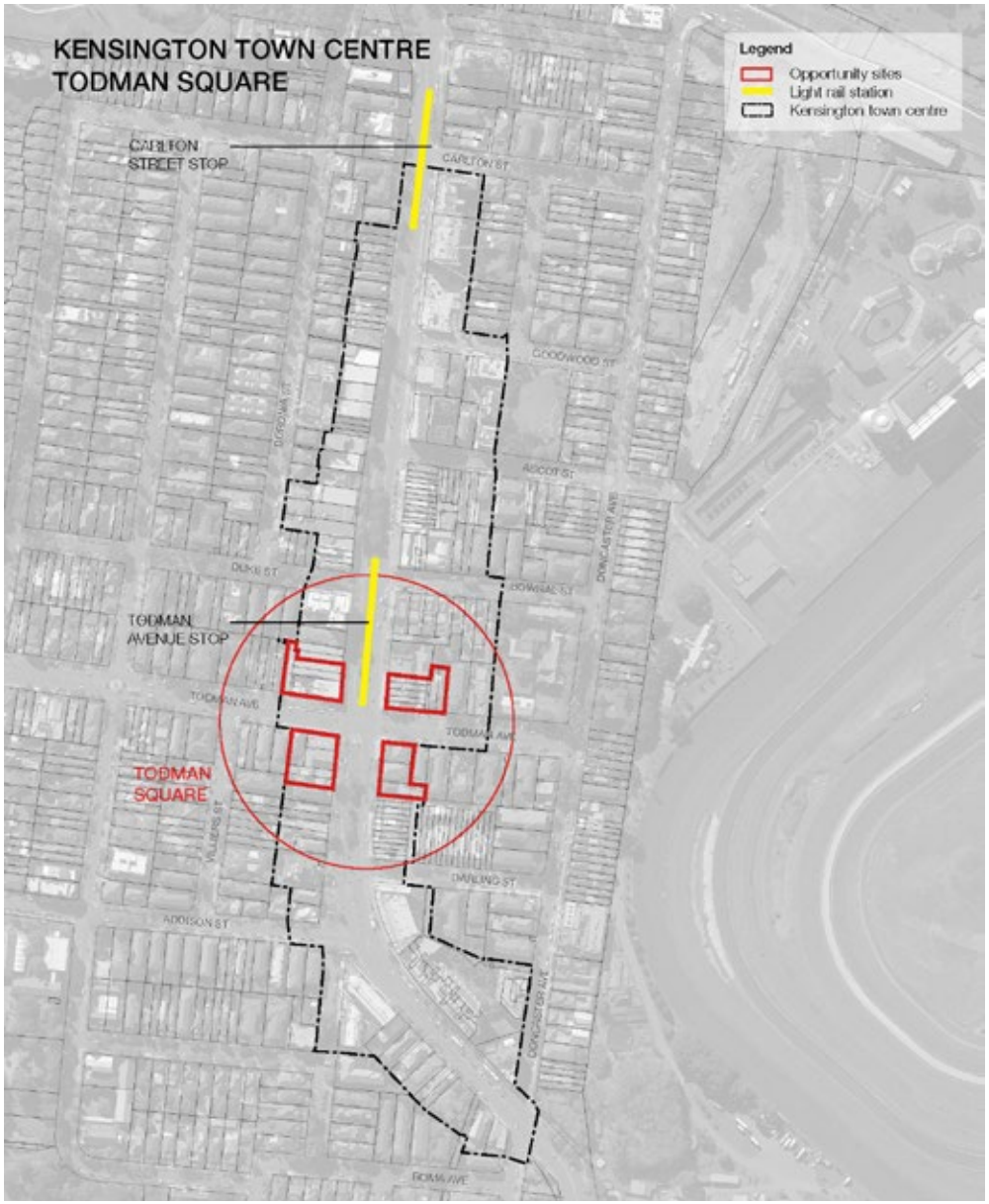
These Precincts have been selected on the basis that clustering appropriately scaled development around key transport nodes will support hubs of activity, contributing to business activation and vibrancy in the town centres.

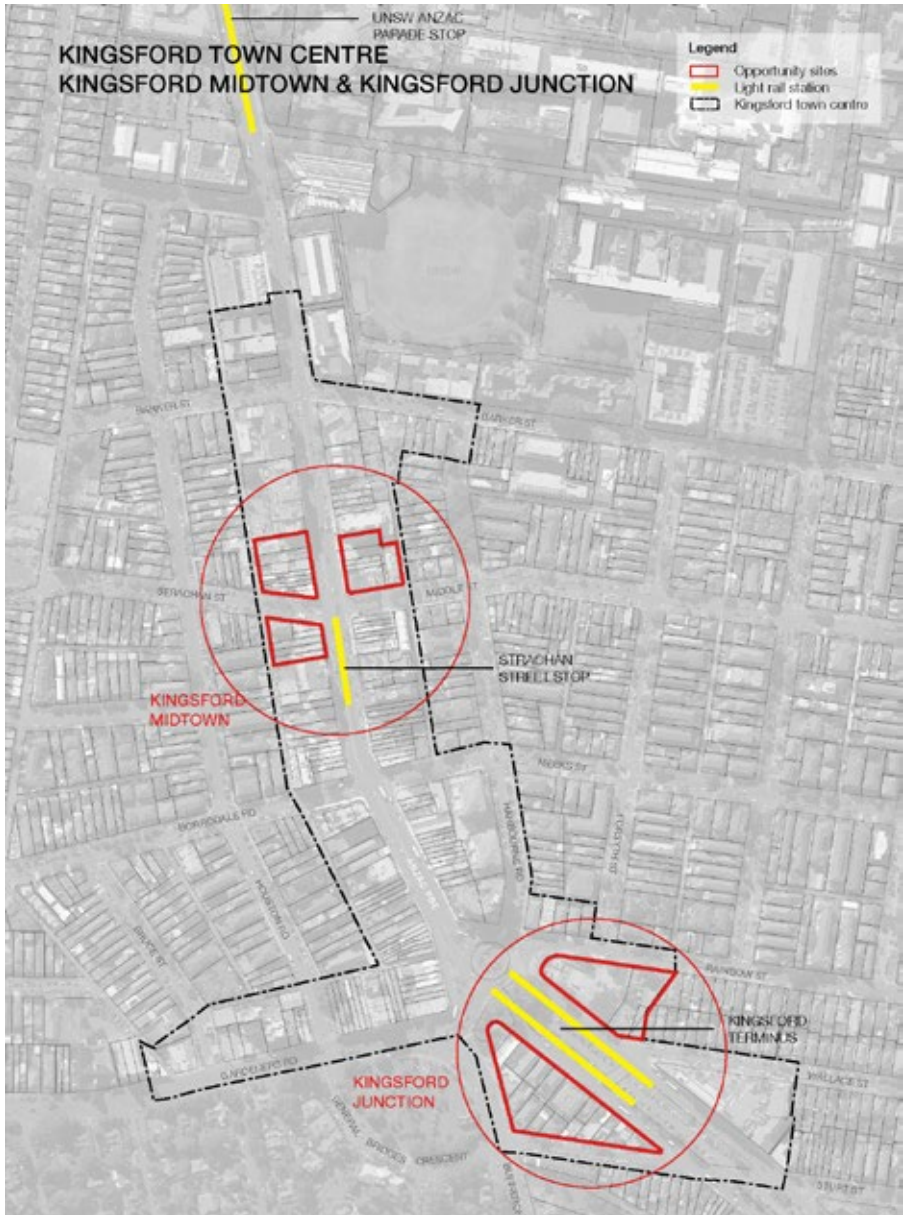
A precinct based approach provides the opportunity to accommodate a greater variety of housing in a 'live/work/play' environment, while making greater use of public transport and reducing car dependence. Importantly, it will allow greater opportunities to utilise the development process to deliver a range of public benefits to the community such as new plazas, and wider footpaths as outlined in this Strategy.

The Precincts are identified in the following maps and discussed in greater detail throughout this draft Strategy.

[9] Refer to the draft Issues Paper for a detailed outline of the methodology and assessment criteria for identifying the key opportunity sites.
[10] Our preliminary capacity analysis shows that the development capacity remaining at or near these key intersections is approximately 25,000m^2 GFA (see section on capacity analysis for details).

Part B – The Town Centres





Part C – Vision and Strategies

This section outlines the vision for the town centres of Kensington and Kingsford which has emerged from community feedback received throughout the duration of the Planning Review. A number of themes follow with strategies and actions to guide future development within each town centre.

1.0 Vision

An overarching vision for each town centre has been developed, informed by the extensive community consultations undertaken throughout the Planning Review process.

The vision for each town centre provides the basis for the themes, objectives, strategies and actions contained in this Planning Strategy. All proposals for development within each town centre will be expected to be consistent with the respective vision.

Vision for Kensington Town Centre

Kensington will evolve into a vibrant and dynamic town centre situated along Anzac Parade, Sydney's finest grand green boulevard.

The town centre will be well connected and highly accessible, capitalising on its proximity to key employment hubs including the Randwick Health and Education Super Precinct and the Sydney CBD.

Kensington town centre will offer an exciting city apartment lifestyle, with buildings designed to the highest quality and offering excellent amenity to residents. A range of housing types, including affordable housing, will be woven into the town centre's urban fabric to offer housing diversity and choice to a wide range of people including the elderly, students and families. The integrity of existing heritage and contributory buildings will be respected and integrated with the best contemporary architecture that enhances the character and layering of the town centre experience.

Kensington town centre will be a focus for creativity and innovation. A gallery/creative space at Todman Square will create a cultural anchor for the town centre, supported by a diverse range of cafes, restaurants and shopping options that attract visitors from across Sydney. Innovative startups will translate cutting edge research into real world business success.

The town centre will have a green identity, setting the bench mark for sustainability within the Local Government Area (LGA) through Ecologically Sustainable Development (ESD) targets, Water Sensitive Urban Design (WSUD) practices, high quality green public places with linkages to nearby parks, and sustainable transport modes such as the light rail, cycling and walking.

Vision for Kingsford Town Centre

Kingsford will develop into an exciting and dynamic town centre continuing to draw on its rich multicultural identity. The town centre will provide a diverse offer of restaurants, cafes and retail shopping, set within a rejuvenated public domain that supports activation and social interaction.

The town centre will be a safe and inclusive place to live, work and visit. Buildings will be designed to the highest quality incorporating a mix of apartments, laneway mews and affordable housing.

Highly connected and accessible, the town centre will foster hubs of activity focused around the terminus at Kingsford Junction and Kingsford Mid-Town, the old heart of the Kingsford.

The town centre will have a green focus and set a new performance benchmark for sustainability within the LGA through ESD targets, WSUD practices, public places with canopy trees and landscaping and support of sustainable transport modes such as the light rail, cycling and walking.

The integrity of existing heritage and contributory buildings will continue to be respected and integrated, through high quality architectural design. Innovative business start-ups will be encouraged to provide a 'bridge' between research and business.

2.0 Themes

The following themes have been derived from the vision for each town centre. These themes form the basis of the strategies and actions contained in this document:

- Housing Growth and Diversity
- Business and Economy
- Built Form
- Heritage Conservation
- Transport and Sustainability
- Public Realm and Landscape
- Social Infrastructure
- Zoning and Land Use.

Each theme includes a suite of 'objectives'- what we want to achieve, and 'strategies' – how we want to achieve the objectives, together with a series of specific actions.

Key points raised by the community during engagement activities are provided at the beginning of each theme.

Part C – Vision and Strategies

3.0 Housing Growth and Diversity

This section outlines a number of strategies and actions to facilitate sustainable housing growth within the Kensington and Kingsford town centres to meet future housing needs of a growing population. It identifies opportunities to increase the amount of affordable housing, recognising the critical challenge of decreasing housing affordability, while promoting housing diversity and choice for a wide demography and social mix.

The Kensington and Kingsford town centres are highly desirable areas to live given their proximity to key employment hubs including the Randwick Education and Health Strategic Centre and Sydney City CBD, and excellent access to frequent public transport services, retail and commercial facilities. As such, the town centres are expected to attract new residents and face continued pressure for growth in the years to come.

Future demand for housing in the Kensington and Kingsford town centres is likely to be driven by a number of changing socio-demographic influences, including smaller household sizes, high numbers of young people, and an ageing population. These factors combined with the locational attributes outlined above, and compounded with declining housing affordability is likely to further fuel the growth for urban living in both town centres.

In consideration of future housing provision, Randwick City's local planning policy has consistently promoted higher densities within the town centres as a sustainable approach, to make better use of existing infrastructure, facilities and services while maintaining the character of existing low density residential neighbourhoods.

Consistent with this approach, this draft Strategy provides the framework to achieving sustainable housing growth across both Kensington and Kingsford town centres recognising their strategic location, excellent access to services and capacity to accommodate change. Specific housing needs including the provision of affordable housing and fostering housing diversity and choice are key considerations in this draft Strategy.

- To accommodate sustainable housing growth and expected demographic changes
- To provide for well-located housing in proximity to transport, employment and services
- To encourage housing diversity and choice; and
- To provide for affordable housing.

The draft Issues Paper provides a comprehensive overview of demographic trends which have implications for future housing supply and specific housing needs in the Kensington and Kingsford town centres.

Key demographic trends affecting both town centres include:

- Moderate population growth
- A relatively young population reflecting the high number of students in the area
- An ageing population
- An increase in lone person households and group housing
- A higher number of apartments/ shop top housing
- A higher number of people in rental accommodation
- A diverse population including high numbers of people speaking a language other than English
- Increasing levels of education attainment.

Key challenges:

- The population of Randwick City is projected to increase by 26% resulting in 36,500 additional people residing in the LGA by 2031.
- Approximately 15,150 dwellings will be required to meet future housing needs by 2031.
- Future housing growth needs to occur in areas well serviced by public transport, and in proximity to employment, education, open space, and other services/facilities to ensure a safe and liveable environment.
- Ensuring sufficient housing supply in appropriate locations to address demand, while also managing the impact on neighbourhood character and amenity as development pressure intensifies are key factors which will play a crucial in future.
- Ensuring future housing growth provides for housing diversity including affordable housing.

Part C – Vision and Strategies

Community Feedback

Feedback received during consultations shows that people value high quality development that meets the housing needs of a diverse community. In summary, the community told us:

- Provide a range of housing types to suit different types of people and life stages
- Encourage a diverse community
- Provide more housing that is affordable; and
- Encourage more families to live in the area through high quality development with more bedrooms and bigger spaces.

3.1 Planning for Growth

Randwick City needs to plan for population and employment growth. As part of the State Government's metropolitan plan for Sydney (A Plan for Growing Sydney), the Council is required to demonstrate how population growth and dwelling demand can be met via its local planning framework.

The draft District Plan for Greater Sydney's Central District sets a five-year target of an additional 2,250 dwellings by 2021. This equates to around 450 dwellings per year which is on track with Council's historical development trends. To deliver the five-year housing target, Council will need to plan to provide sufficient capacity to support the delivery of housing to meet this target. The draft District Plan also sets the direction that Council will need to consider sufficient housing capacity over the next 20 years.

While longer term (i.e. 20 years) housing targets have not been set for each council area, the draft Plan directs councils to consider sufficient housing capacity over the next 20 years to help meet the Greater Sydney Commission's minimum housing target of an additional 157,500 new dwellings to be delivered across the Central district by 2036. As such, both the draft Issues paper and this Strategy have adopted the State Government's (2014) projected dwelling demand of 15,150 additional new dwellings by 2031 to help plan for this long term growth.

As part of the Council's approach to planning for growth, the Council is investigating opportunities to accommodate housing growth across the entire LGA to ensure an even and equitable distribution of housing delivery to meet future needs. Key considerations in determining where housing growth can be accommodated include historical development trends, estimated development capacity (which takes into consideration environmental constraints) and future planning policy implications.

Analysis of past development trends shows, our (major) town centres (of Kensington, Kingsford and Maroubra Junction) and key redevelopment sites (formerly master planned sites) have provided the majority of housing growth, followed by residential infill across the whole LGA.

However, more recently dwelling completions in the town centres have reduced (from approximately 45% to 33%). This reflects the take up of development capacity in these areas since the planning controls for these centres were introduced.

Similarly, most of Randwick's major redevelopment sites (typically on government land identified as surplus to need i.e. Prince Henry and Bundock Street for example) are either close to or have been completed. These key sites and/or areas have provided the majority of new housing growth over the last five years. However, housing growth from these redevelopment sites is not expected to remain at this level due to the limited supply of these large sites in the LGA, unless there is State Government-led renewal of some of its Land and Housing Estates corporation assets. The State Government has also identified the Anzac Parade corridor in A Plan for Growing Sydney as local renewal opportunity.

In relation to infill development, the State Government's proposed new draft Medium Density Code has the potential to increase densities in established residential areas significantly by allowing medium density housing types (i.e. dual occupancies, town houses, terraces and manor homes) as Complying Development in both the low and medium density residential zones. The draft Code will introduce two new building types including the manor house (a two-storey building containing three or four dwellings with common wall and/or floor) and terraces (three or more dwellings with frontage to a public road) as Complying Development, only if it is permissible in the land use zone.

The permissibility of these building types in the existing low and medium density residential zones has the potential to facilitate infill redevelopment and increase densities in these areas significantly, including adjoining residential areas to town centres. As such, it is expected that housing growth will increase in these established areas much more significantly than in the past.

Part C – Vision and Strategies

Based on these considerations, the following locational split is applied as a guide to help plan for future housing growth across the LGA.

Locational split for future growth (%)

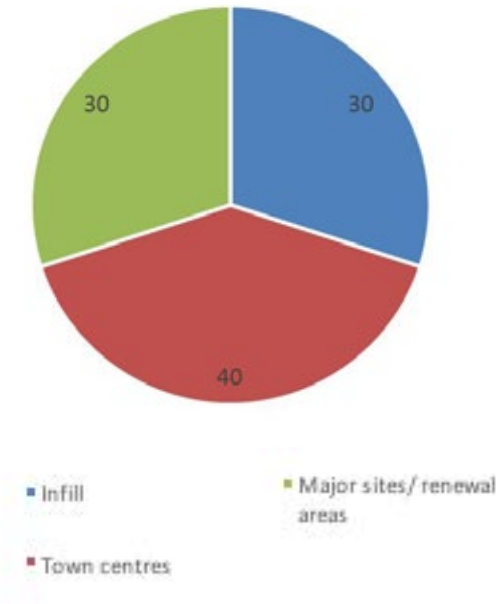


Figure 19: Locational Split of Future Housing Growth
Source: Randwick City Council 2016

This translates to approximately 60% of all future growth to be accommodated outside of our town centres; and is in keeping with Council's existing planning approach which focuses growth in and around centres with access to services, amenities and transport.

The locational split has also been applied to the State Government's (2014) projected dwelling demand of 15,150 additional new dwellings by 2031, which was adopted for the issues paper and is shown in Table 3. The table provides an indication on dwelling numbers that would need to be provided over the long term, to ensure we are meeting projected population demand.

This locational split for future growth also demonstrates a sustainable and balanced approach towards new housing growth across the LGA.

3.2 Considerations for Kensington and Kingsford Town Centres

While the draft Issues Paper noted that there is an estimated dwelling capacity across the two town centres of approximately 20-30% of the projected dwelling demand, based on the above locational split, the major town centres would need to increase their share of new (dwelling) growth in the order of 10% or an additional 1,515 dwellings (above the current capacity) to ensure they retain a share of at least 30-40% of the future dwelling growth for the LGA.

Table 3: Locational split for future growth

Dwelling demand projection 15,150 dwellings		
Town Centres (Major)	40%	6,060
Infill	30%	4,545
Major redevelopment sites and/or urban renewal areas	30%	4,545
TOTAL	**100%**	**15,150**

Table 4: Existing Dwelling Capacity and New Dwelling Capacity for Kensington and Kingsford

	Low	High
Existing dwelling capacity under existing planning controls	3,158	3,553
Additional new dwellings at 10% of the share of the projected dwelling demand	+ 1,515 new dwellings	
Therefore new dwelling capacity range*	4,700	5,100

*Note: These numbers have been rounded up for ease of application

Part C – Vision and Strategies

The Kensington and Kingsford town centres will be able to accommodate up to 5,100 in new dwellings given the:

- Investment of light rail in this corridor
- Identification of this portion of Anzac Parade in A Plan for Growing Sydney for urban renewal opportunities
- Proximity to major employment destinations (CBD, Randwick Education and Health Strategic Centre)
- Development interest and market demand
- Specialised urban design review and input; and
- International design competition to garner ideas.

The table on page 25 outlines the existing dwelling capacity, as identified in the draft Issues Paper, and a new dwelling capacity range incorporating the 10% share of the State Government's projected dwelling demand.

While this range provides a guide to ensure that a minimum dwelling yield is taken into consideration into the future planning and design of this corridor, a higher dwelling yield may be demonstrated through good design and planning strategy.

Future Capacity for Kensington and Kingsford Town Centres

The key challenge for accommodating projected housing growth in the Kensington and Kingsford town centres is to ensure it occurs in a sustainable way, in appropriate locations with sufficient infrastructure capacity, while maintaining residential amenity and the community's quality of life.

This draft Strategy outlines a number of changes to built form controls which will increase the capacity of the town centres to absorb additional growth. An analysis of floor space yields resulting from proposed changes to built form controls is provided in Part C Built Form Section 5.9 – Floorspace Capacity.

3.3 Housing Diversity and Choice

Planning for sustainable housing growth in Kensington and Kingsford town centres will need to ensure a suitable mix of housing stock in a range of sizes and designs to address declining housing affordability, and support the current and future needs of the community, which includes people of different age groups, cultures, lifestyles, incomes and life stages.

In particular there is a need to consider:

- The need for greater affordable housing options to meet the needs of the large student population, and to retain people with a mix of skills and occupations in the locality such as key workers and those in creative and service based industries
- Changing household composition recognising the growing trend of single person and group households
- Slow but growing demand from young families choosing to live in apartment buildings for affordability and lifestyle reasons; and
- Needs of the ageing population taking into account changing mobility needs and the desire to age in place.

Housing diversity is well recognised to help create sustainable and diverse communities. Providing housing choice will attract a diverse range of people to the town centres, contributing to social vibrancy.

A range of housing sizes also provides the opportunity for the existing community to remain in the area at different life stages. For instance, as people age, there is often preference to stay in the existing neighbourhoods that they know, where social networks have already been established. By providing safe, adaptable and accessible smaller housing in proximity to amenities for daily living and public transport nodes, the ageing population can down-size after children have moved out of home and still remain in the area. Well-located and smaller compact housing forms may also meet the housing needs of the increasing proportion of households comprising single persons, couples without children and single parent families.

The majority of units being developed in the Kensington and Kingsford town centres are predominantly one and two bedroom units. While these units may meet the needs for single persons, couples without children, they do not readily accommodate a family household. Family households are expected to make up at least 60% of all households[11] in Randwick by 2031.

[11] Based on the State Government's (2014) population and household projections

Part C – Vision and Strategies

3.4 Affordable Housing

The loss of affordable housing through the gentrification process and the limited ability for the private rental market to accommodate the needs of low to moderate income households at affordable levels now presents one of the most critical housing challenges facing Randwick City.

The issue of housing affordability is particularly pertinent for the Kensington and Kingsford town centres given their rising land values and desirable location compounded with the high number of students, key workers such as nurses and police and an ageing population – key groups that require more affordable housing options.

The Centre for Affordable Housing defines affordable housing as 'housing that is appropriate for the needs of a range of very low, low and moderate income households and priced so that these households are also able to meet other basic living costs such as food, clothing, transport, medical care and education'.

Affordable housing offers a number of economic, social and environmental benefits to the community. At the local level affordable housing is important because it:

- Promotes social integration and social diversity
- Meets the needs of the growing number of smaller households living in high cost areas
- Allows key workers (such as nurses, police etc.) and students to remain in the area close to work and educational establishments
- Provides direct economic benefits to local economies, including an increased demand for a range of goods and services which in turn can create employment opportunities; and
- Allows people to stay in the community that they know as they move through different life stages.

It is generally accepted that if housing costs exceed 30% of a low income household's (lowest 40% of households) gross income, the household is experiencing housing stress (30/40 rule). That is, housing is significantly unaffordable and housing costs consume disproportionately high amount of household income. When talking about affordable housing there is a focus on facilitating affordable rental housing, given that the private rental market is the most vulnerable to those very low to moderate income households on stock levels and rental price increases.

The Need for Affordable Housing

The impact of pressures on house prices (rent and purchase) over the past decade are widely illustrated with Sydney now classified as being one of the least affordable housing markets internationally. Randwick City is one of the most expensive areas in Sydney to rent and purchase a home.

As at June 2016, Randwick City had a median house valuation of $1,857,345 which is $908,194 higher than the median house valuation for Greater Sydney. And to rent, a median house rental of $950, $430 higher than the median house rental for Greater Sydney. In 2011, Kingsford had the highest proportion of people experiencing rental stress in Randwick City (36.9%) followed by Kensington (26%).

Moreover, Randwick City has continued to lose affordable housing stock. The proportion of affordable rental stock for low income households in Randwick has declined by more than 40% from June 2011 to December 2015. This is mainly due to increasing land and property values, increasing rents and the resultant loss of rental stock at the lower end of the market.

This has particular implications on the local businesses in the area ability to hire the essential key workers needed to support these businesses. Randwick's Hospitals Campus has noted the difficulty in filling job vacancies for specialist nurses (such as paediatric and neonatology nurses) who are highly desirable in terms of international competition for their skills and being priced out of living in the area.

The Randwick Education and Health Strategic Centre is Randwick's largest employment destination. The draft Central District Plan sets a job target range for the Strategic Centre of an additional 9,200 to 12,700 new jobs by 2036 as shown in the table below. This represents approximately a 40-55% increase in additional jobs required by 2036.

Table 5: Randwick Health and Education Strategic Centre Jobs Target

Centre	2016 Estimate	2036 Baseline Target	2036 Higher Target
Randwick Health & Education	22,800	32,000	35,500

Source: Greater Sydney Commission (November 2016) draft Central District Plan

Part C – Vision and Strategies

A projection in employment for this centre will not only generate demand for these specialist nurses, it will generate demand for services typically staffed by lower income earners, such as childcare workers and shop assistants.

The resulting loss of population diversity including lower income key workers, street life vibrancy and social authenticity will present a significant risk to Randwick City's economic productivity and success as a major contributor to Greater Sydney as a global city. Without provision of more affordable forms of housing, the market can be expected to continue to produce more expensive housing in the area, so that housing will only be affordable to households on relatively high incomes.

Existing Mechanisms to Encourage Affordable Housing

There are two key state planning policies aimed to facilitate and encourage affordable housing through the planning framework including the State Environmental Planning Policy (Affordable Rental Housing) 2009 (AHSEPP) and the State Environmental Planning Policy No70 (SEPP 70) Affordable Housing (Revised Schemes) (SEPP 70 Affordable Housing).

The AHSEPP is the main mechanism intended to increase the supply and diversity of affordable housing and social housing in NSW, and to protect existing stock. The AHSEPP covers housing types including infill affordable rental housing (villas, townhouses and apartments) that contain an affordable rental housing component, along with secondary dwellings (granny flats), new generation boarding houses, group homes, social housing and supportive accommodation.

The most common development types being built in Randwick City under this policy are new generation boarding houses and secondary dwellings. In relation to new generation boarding houses, the majority of boarding house rooms approved and developed (under the SEPP) are mostly to the north of Randwick City, around the UNSW. Anecdotal evidence suggests that the new generation boarding houses are meeting a demand for student accommodation being located close to the University and are being rented at levels not considered affordable to both students and key workers. While these development types are providing a form of diverse housing, they are in reality not delivering 'affordable housing' to those households in need.

The SEPP 70 enables councils listed by the SEPP to implement mandatory requirements for developers to contribute towards affordable housing either monetary or as complete dwellings. This policy is based on an inclusionary zoning based approach. Only two councils, the City of Sydney and Willoughby, are able to require contributions towards affordable housing under existing contribution schemes for Green Square, Ultimo/Pyrmont and Willoughby. Since the SEPP was introduced in 2009, no other council areas have been listed in the SEPP, despite worsening housing affordability.

At the local level, Randwick City Council is one of the state's more active councils on affordable housing. Council's Affordable Rental Housing Program and Strategy/ Action Plan 2008-2018 sets policies to retain existing stocks of affordable housing and facilitate development of new affordable housing stock for low to moderate income or key worker households in the community. To date, the Council has acquired 20 affordable housing units mainly via a negotiated planning agreement approach on large redevelopment sites required to demonstrate diverse housing including affordable housing on these sites. The Council's measures, while progressive for local Government, are having little influence on meeting the demand for affordable housing across the City, mainly due to the limited nature of the voluntary planning agreement approach and the limited number of large redevelopment sites in the LGA.

Part C – Vision and Strategies

Inclusionary Zoning for Affordable Housing

Academic research and best practice outline that the only reliable way for local councils to secure affordable housing supply is through mandatory provisions embedded within a legislative framework, via an inclusionary zoning mechanism. An inclusionary zoning based approach is also more equitable than the negotiated planning agreement approach and provides more certainty to the developer by making clear the requirements to contribute towards affordable housing upfront.

A mandatory approach based on inclusionary zoning provides greater certainty for the delivery of affordable housing within the Kensington and Kingsford town centres. This approach will help contribute towards the provision of affordable rental housing in high value areas such as Kensington and Kingsford town centres. This inclusionary zoning pathway has been chosen by Council and has received support from the Department of Planning and Environment for an amendment to SEPP 70 to include Randwick City.

The strategic location of these town centres to key employment centres such as the Randwick Education and Health Specialised Centre and the Sydney CBD makes the need to provide for affordable housing an essential consideration in the future planning of these areas.

To ensure that low to moderate income households can live in Kensington and Kingsford town centres, this Strategy proposes that future new development be required to provide a proportion of affordable housing. A staged approach is proposed which seeks an equivalent proportion of 3% increasing to 5% of the total residential floor area be dedicated as affordable housing in all new developments. This will provide more than 200 essential affordable housing dwellings for key workers in this area and is discussed in more detail in Part E – Funding Infrastructure.

The following strategies aim to address the prevailing housing issues affecting Kensington and Kingsford town centres, including providing for sustainable growth, housing diversity and choice including affordable housing in these centres.

Strategies	Actions
1. Direct housing growth into locations and sites that have the capacity to accommodate change	a) Amend the RLEP 2012 building height and floor space ratio controls for Kensington and Kingsford town centres, to provide for forecast dwelling growth (see Part C Section 5 – Built Form) b) Concentrate higher density housing growth within key Precincts and sites in walkable proximity to light rail stops/terminus (see Part C Section 5 – Built Form)
2. Encourage a diversity and mix of apartment sizes in the town centres having regard to changing demography, housing trends and affordability for a resident population	a) Consider new DCP controls requiring a mix of dwelling types, sizes and forms in all new major residential/mixed use development based on demographic trends and social mix
3. Encourage adaptable and accessible housing to enable the community to age in place	a) Continue to implement the universal accessible housing principles and controls contained in Part C1 of DCP 2013 for new developments
4. Provide for affordable housing options for students and key workers to enhance opportunities to live, work and learn together and to support the economic functions of the Randwick Education and Health Strategic Centre	a) Incorporate inclusionary zoning provisions within the RLEP 2012, based on a staged approach as described above b) Update Council's existing Affordable Housing Strategy, Policy, Programs and Procedures to address the Kensington and Kingsford town centres Affordable Housing Scheme (once adopted) c) Prepare a new Affordable Housing Plan for the town centres which will outline the operational and management details of the Affordable Housing Contributions Scheme
5. Encourage the development of family friendly apartments to facilitate social diversity in the community	a) Consider new DCP controls to encourage family friendly apartments including specific design requirements that address adequate storage and access to outdoor space where possible

Part C – Vision and Strategies

4.0 Business and Economy

This section considers the location and intensity of business-related land uses that make up the town centres of Kensington and Kingsford. It outlines a number of strategies to support the economic prosperity of both centres, capitalising on their existing character and future opportunities. This section also outlines a number of strategies to promote and support the emerging innovation centre at the UNSW and Randwick Hospitals Campus.

The future economic prosperity of the Kensington and Kingsford town centres will rely on their ability to attract and retain local businesses, support productivity and innovation, maintain a quality of life for residents and workers and ensure a high level of urban amenity.

Each town centre will benefit from preserving its mixed use character, protecting commercial floor space and leveraging opportunities to stimulate economic growth, such as localised activation around light rail stops along Anzac Parade which will help consolidate sprawl and provide a critical mass of economic activity. Emerging opportunities may include supermarkets, outdoor eateries and bars, local business services, medical facilities and banks.

Ensuring developments activate their street frontages throughout the town centre, and requiring a minimum quantity of commercial floor space around light rail stops will create a long spine with nodes of more intensified activity. These requirements will ensure adequate floor space is provided for future local services for the community.

The town centres should capitalise on their location adjoining the Randwick Education and Health Strategic Centre, and in particular, play a key role in supporting an emerging innovation district centred on the anchor institutions of the University of NSW and Randwick Hospitals Campus.

This emerging innovation district will stimulate economic activity and the creation of jobs through the further clustering of start-ups, business incubators and accelerators in a physically compact, accessible, amenity-rich, mixed use urban environment.

Objectives

- To promote the economic prosperity of each town centre and the wellbeing of the community
- To ensure that future development enhances the existing character and establishes a distinctive image for each town centre
- To promote convenient access to shops and services for residents and visitors
- To leverage the proximity to the UNSW and Randwick Health Campus and support the emerging innovation centre; and
- To grow the number of local jobs available to an increasing population.

Community Feedback

Feedback received during consultations for the K2K Urban Design Competition shows that people value a vibrant town centre containing local services to provide for the local community. In summary, the community told us:

- Create more jobs in the centre where they are close to transport
- Develop a viable town centre which promotes all types of local businesses and attracts people to visit
- Create vibrant town centres where people live, work and shop with open spaces to gather, sit down and relax or observe the world
- Create a sense of community by increasing the mix of businesses, cultural events and workers
- Activate Anzac Parade with more activities, businesses and late night shops so that the whole street is lively and safe
- Consider how parking will be accommodated in the town centre; and
- Have office spaces which attract a diverse range of workers to who spend and interact with the town centres and which provide employment space close to transport.

‘Kensington needs more basic shops, banks and a supermarket that are accessible.’

‘Strong local businesses make places for people to connect.’

‘Build-up businesses so students have access to internships and work experience.’

‘Create a heart and soul for Kensington: build a place for their community with a supermarket, marketplace, shops, bank and/or other necessary services.’

Part C – Vision and Strategies

4.1 A Vibrant Centre

A Centre with a Range of Uses

Successful cities are active and alive during the day, as well as in the evening and night. They contain a blend of activities which overlap and encourage people to mingle and attractive places where form and function are in balance. Anzac Parade will have more activities, facilities, businesses and late night shops so that the whole street is lively, safe and provides for the needs of the community.

Increased residential development within each town centre will help to drive localised activity within the precinct. This will help support both day and night-time activation for local businesses. A healthy ageing population also offers opportunities for businesses to provide additional activities for the population of the wider area.

The most dominant business activities in Kensington town centre are food services, retail trade and other services. Kensington's services tend towards health and fitness, with two gyms, a sports medicine clinic and two doctors' offices within the town centre.[12]

Kingsford town centre accommodates a variety of business and retail uses ranging from restaurants, cafes and takeaway food outlets to smaller office suites, shop top housing, small scale independent supermarkets, pubs and banks. The ground floor vacancy rate is relatively low (at approximately 9% of all properties[13]), mainly clustered along the southern end of the town centre along Gardeners Road. The vibrancy of both centres can be improved by improving their accessibility to UNSW, increasing the local resident population and creating a more pleasant public environment.

Figure 20: Existing retail in Kensington
Source: Randwick City Council 2016

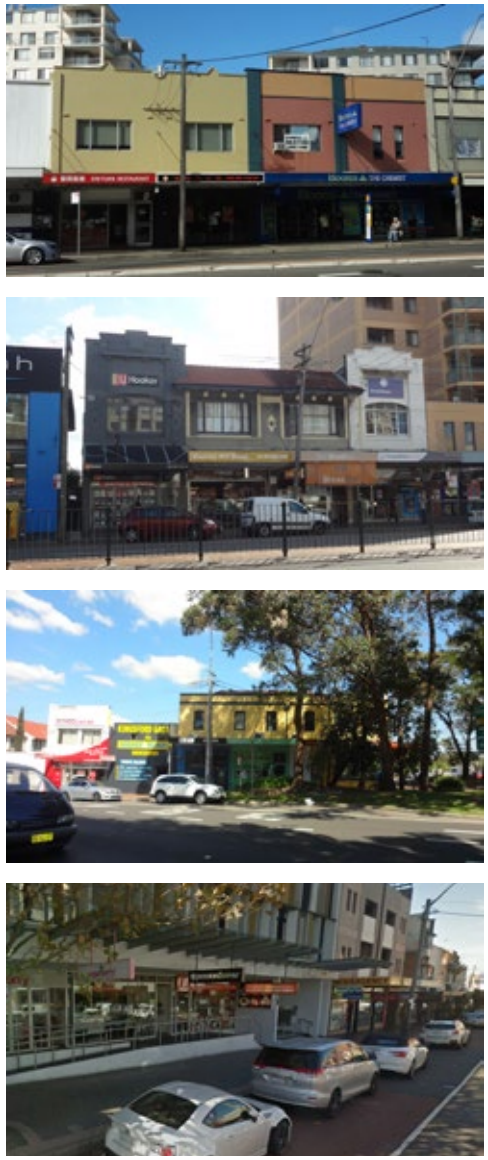


Figure 21: Existing retail in Kingsford
Source: Randwick City Council 2016

[12] Randwick City Council Survey 2015
[13] Randwick City Council Survey 2015

Part C – Vision and Strategies

Role of the Kensington Town Centre

Designated as a village centre in the Randwick Economic Development Strategy, Kensington performs a predominantly localised role with local retail and commercial services, with some destination/ unique attractors such as Peter's of Kensington. As detailed in Council's draft Issues Paper released in March 2016, accommodation and food services (17%) and retail trade (15%) categories account for around 32% of ground floor space in the centre. Almost all of the accommodation and food services category consists of food and beverages premises, with limited accommodation floor space in the centre[14]. There was an estimated 12% ground floor vacancy rate at the time of the Council's survey in 2016, showing there are opportunities to strengthen the existing economy.

Increased residential development will help drive localised activity within the precinct to help support local businesses and drive night-time activation. Other growing uses could include childcare, medical services and small commercial or innovation spaces. Larger sites should be investigated for the potential to enable a supermarket or other anchor as part of a mixed use development. Todman Avenue and Carlton Street will be key point of origin stations and ground level retail activation will be encouraged around these nodes to support local resident and business needs.

Improved east-west connections will help to strengthen and expand the role of the centre, such as increased tree planting and landscaping and footpath extensions on side streets and improved cycling infrastructure. There are opportunities to improve access between the Royal Randwick Racecourse and Kensington, which would bring increased people to the centre on race days.

Figure 22: Local services
Sources: (www.centralwest.com; www.sbs.com.au)

[14]Kingsford and Kensington Town Centre Review Draft Issues Paper 2016

Part C – Vision and Strategies

Role of the Kingsford Town Centre

Like Kensington, Kingsford is also designated as a village centre and performs a localised role with local retail and commercial services. The centre is very popular with students from UNSW given the close proximity to the campus. As detailed in the draft Issues Paper released in March 2016, accommodation and food services (35%) and retail trade (28%) account for around 63% of ground floor space in the centre, which is twice that of Kensington, reinforcing the higher level of patronage in Kingsford[15]. Almost all of the accommodation and food services category consists of food and beverages premises, with limited accommodation floor space. There was an estimated 9% ground floor vacancy rate at the time of the Council's survey in 2016[16].

Increased residential development will help drive localised activity within the precinct to help support local businesses and drive night-time activation. The town centre should be investigated to identify opportunities for student housing, co-working and innovation space, and larger sites suitable for a supermarket.

4.2 Future Commercial Uses

Supermarkets

Neither the Kensington nor Kingsford town centres contain a full line supermarket to fulfil the roles of the centres in providing for the regular needs of residents. In Kensington, the Foodworks is very small (200m^2) and performs as a convenience shop. Kingsford contains only a small IGA supermarket (approximately 400m^2) and several small Asian supermarkets. Both town centres would benefit from the development of a neighbourhood supermarket shopping centre, fulfilling local day-to-day shopping needs with the provision of groceries, fresh food and other convenience items.

The nearest centres with supermarkets are Randwick Junction, Maroubra Junction and East Village. Randwick Junction hosts a Woolworths of 1,400m^2 and a Coles supermarket of 3,080m^2, along a range of specialty shops. Maroubra Junction, a very strong town centre, has a full-line Coles supermarket of 3,600m^2 an Aldi supermarket of around 1,400m^2, and a range of specialty shops including a green grocer.

Figure 23: East Village shopping centre at Victoria Square
Source: www.payce.com.au

Figure 24: East Village shopping centre at Victoria Square
Source: www. ayce.com.au

Figure 25: Pacific Square Maroubra
Source: www.excelbm.com.au

[15]Ibid
[16]Ibid

Part C – Vision and Strategies

The current planning framework provides for the establishment of a supermarket within each centre. In particular, the Randwick DCP identifies locations where a supermarket would be suitable within the Kensington town centre. There is currently no development containing a supermarket, and this may be due to land constraints, the cost of parking provision and trends in online shopping.

With the increased population within the town centres, and the improved connectivity arising from the light rail and active transport improvements outlined in Part C Section 7 – Sustainability and Transport, there will be increased demand for a supermarket to provide for the everyday needs of residents. Subject to suitable site amalgamation, sites in each town centre have the potential for redevelopment as a neighbourhood supermarket shopping centre. A supermarket would act as an anchor to a new development, supporting ancillary retail and commercial tenancies.

The light rail stops will be key nodes of activity, providing an opportunity for increased levels of commercial and retail tenancies. In Kensington, the Todman Avenue light rail stop in particular will be a key node providing an opportunity to provide a supermarket, convenience retail, dining and take-away food facilities. In Kingsford, the Kingsford Terminus or Strachan Street stop will each provide opportunities for a supermarket, along with other convenience retail, dining and take-away food facilities.

If land size provides an obstacle, there is opportunity for a half-size or an express size supermarket. Across Sydney, both Woolworths and Coles are establishing local convenience supermarkets close to public transport, and Kensington and Kingsford both have suitable locations for such a development[17].

Figure 26: Chatswood interchange shops and mall
Source: www.coxarchitecture.com.au

Figure 27: Madison Avenue mixed use district, NYC
Source: www1.nyc.gov

[17]C&I Convenience and Impulse Retailing (2015) (http://c-store.com.au)

Part C – Vision and Strategies

Night Time Economy

Providing more diverse attractions and more “routine” activities (i.e visiting a supermarket, chemist, hairdresser or gym) into the evening and night attract a broader population onto the streets. Having people on the streets, in shops or in restaurants can establish passive surveillance, increasing the feeling of perceived safety.

The type of business mix determines the people attracted to town centre, and currently neither Kensington nor Kingsford have a strong night-time economy. Providing more diverse attractions and routine activities, such as visiting a supermarket, gym or outdoor plaza in the evening attracts a broader population into the area which promotes social cohesion, vibrancy and deters crime[18]. Retail and local services in the town centres are generally only open during business hours. During the evening, food and beverage premises stimulate activity, in Kingsford more than Kensington, but the town centres have little-to-none night time trade once the dinner service ends.

With Australians working longer days, there is likely to be demand for longer trading hours. The diversity of employment opportunities in the town centres and the education and health precinct may lead to a greater mix of businesses open into the evening. Improved and creative lighting, as detailed in Section 8 – Public Realm and Landscape can encourage a sense of safety and security for those moving around the centre at night.

Figure 28: Gym, a potential night-time use
Source: www.visitomaha.com

Figure 29: Active laneway in Melbourne
Source: www.traveller.com

[18] Hadfield, P. (2011) Night-Time Economy Management: International research and Practice. A Review for the City of Sydney.

Part C – Vision and Strategies

Strategy	Action
1. Support and strengthen the existing retail and services within the town centres to provide for the regular needs of residents	a) Support local precinct shopping programs such as "shop local" by developing an app for Kensington and Kingsford that connects people to what's on and what's open near them b) Continue work to lift the aesthetic standards of Anzac Parade by investigating grant opportunities for shopfront improvements c) Improve activation by providing more spaces suitable to outdoor dining in appropriate places d) Amend the DCP 2013 to encourage fine grain retail and laneways activation to create opportunities for diverse and interesting shopfronts and premises e) Continue to investigate opportunities for regular evening events such as the night food markets in Meek Street Plaza and other locations within the centres
2. Support the establishment of a night time economy in Kensington and Kingsford	a) Ensure that new development create opportunities for appropriate retail uses at street level that trade into the evening b) Identify opportunities for decorative/feature lighting in outdoor dining areas to support the night time economy

4.3 Innovation Districts

What are Innovation Districts?

Innovation districts are dense enclaves that merge the innovation and employment potential of research-oriented anchor institutions, high-growth firms, and tech and creative start-ups in well-designed, amenity-rich residential and commercial environments[19]. Economic benefits of innovation districts are described in the Brookings Paper, as facilitating the creation and commercialisation of new ideas and supporting metropolitan economies by growing jobs in ways that leverage their distinct economic attributes. These districts build on and revalue the intrinsic qualities of cities: proximity, density, authenticity, and vibrant places[20].

While their form and function varies, all innovation districts contain economic, physical, and networking assets. When these three assets combine with a supportive, risk-taking culture they create an innovation ecosystem—a synergistic relationship between people, firms and place (the physical geography of the district) that facilitates idea generation and accelerates commercialisation[21].

Sydney's tech startup ecosystem is in the early stages of development and the needs of tech startups are very different to those of small businesses[22]. Entrepreneurs and tech startup companies need a local environment that provides support networks, business and entrepreneurship education, infrastructure and financing opportunities[23].

The Changing Innovation Landscape

Innovation is firmly on the Federal Government agenda, with The National Innovation and Science Agenda a $1.1 billion program over four years aiming to drive smart ideas that create business growth, local jobs and global success. The National Innovation and Science Agenda will focus on four key pillars:

- Culture and Capital
- Collaboration
- Talent and Skills
- Government as an exemplar.

In particular, the Federal Government will support incubators which play a crucial role in the innovation ecosystem to ensure startups have access to the resources, knowledge and networks necessary to transform their ideas into globally scalable new businesses.

[19] Brookings (2014) The Rise of Innovation Districts: A New Geography of Innovation
[20] Ibid
[21] Ibid
[22] City of Sydney (2013) OPEN Sydney: Strategy and Action Plan 2013-2030
[23] Ibid

Part C – Vision and Strategies

In October 2015, UNSW published its strategy for the next decade. The 2025 Strategy commits UNSW to work with government, industry and the community to translate research advances into social progress and economic prosperity. UNSW aspires to be increasingly known for its focus on innovation, the scale and extent of interactions involving staff, students and alumni with industry, business, government and with community partners. UNSW will build upon an existing track record as one of Australia's leading knowledge exchange universities to achieve a step change in the translation of research into economic and social outcomes.

In 2016, UNSW opened the Michael Crouch Innovation Centre, which provides students, alumni, staff and industry partners with resources to nurture student and academic innovation. In addition, UNSW has partnered with China's 'Torch' innovation system to develop a science and technology precinct in close proximity to the UNSW campus. In phase one of the venture, the Chinese companies will establish outposts in "incubators" already being set up on UNSW's main Kensington campus. In phase two, they will shift to the Torch precinct planned for a site in Randwick. This provides Council with a unique opportunity to capitalise on UNSW's growing innovation culture and establish Kensington and Kingsford as a niche innovation precinct.

Fostering an Innovation District

In order to utilise the potential for innovation districts to growth within the Kensington and Kingsford town centres, the components of an innovation ecosystem must be understood and fostered. Innovation districts uniquely contain three categories of assets: economic assets, physical assets, and networking assets, known together as an innovation ecosystem:

1. Economic assets are the firms, institutions and organisations that drive, cultivate or support an innovation-rich environment

2. Physical assets are the public and privately-owned spaces – buildings, open spaces, streets and other infrastructure – designed and organised to stimulate new and higher levels of connectivity, collaboration, and innovation

3. Networking assets are the relationships between actors – such as between individuals, firms, and institutions – that have the potential to generate, sharpen, and/or accelerate the advancement of ideas[24].

The Kensington and Kingsford town centres have a significant number of characteristics making them attractive to innovation spaces and start-ups. Both UNSW and the Randwick Hospitals Campus act as anchors, attracting and generating research and innovation uses. The light rail both provides a frequent and reliable public transport link into the CBD and will act as a catalyst for establishing Kensington and Kingsford town centres as vibrant and diverse mixed use centres. The combined actions outlined in this draft Strategy will increase the walkability, vitality and liveability of the centres, increasing the attractiveness of the centres to start-ups and innovators.

[24] Brookings (2014) The Rise of Innovation Districts: A New Geography of Innovation

Part C – Vision and Strategies

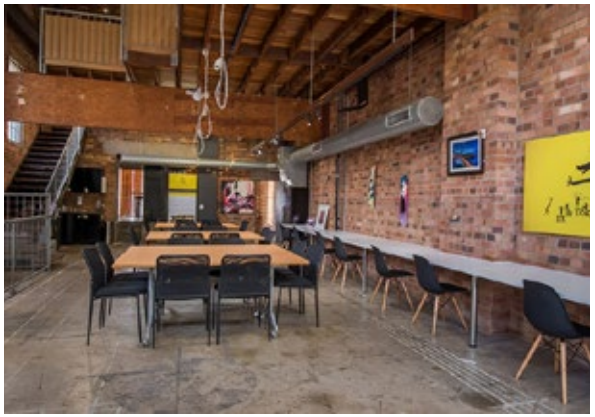


Figure 30: A range of innovation spaces and events
Source: www.fishburners.org; www.fishburners.org; www.littletokyotwo.com; www.littletokyotwo.com; www.startupdaily.net; www.iaccelerate.com.au

Part C – Vision and Strategies

Strategy	Action
1. Nurture opportunities to establish small, start-up or creative enterprises both in new developments and in vacant premises	a) Use a community infrastructure contributions scheme to obtain Council-owned innovation spaces (such as co-working facilities and affordable office spaces) b) Provide an online guide to applying for planning consent for establishing a co-working space, incubator, accelerator or creative workshop
2. Use planning regulation to encourage the provision of commercial office space which can be used by co-working operators, incubators and accelerators	a) Amend the RLEP 2012 to implement a minimum non-residential FSR at key sites to ensure first floor commercial space is provided in new developments b) Work with innovation organisations to identify the technology infrastructure required to support innovation uses
3. Use public domain improvements to make the centres attractive to innovation industries	a) Establish free public Wi-Fi b) See Part C Section 8 – Public Realm and Landscape
4. Leverage the close proximity to the UNSW and health campuses to encourage startups and innovation spaces to locate in the Kensington and Kingsford town centres	a) Continue partnering with UNSW to provide support for their innovation program b) Utilise partnerships with UNSW and the Hospitals Campus establish UNSW incubators within the centres c) Use branding and advertising to promote Kensington and Kingsford as a place for innovation and creative uses to locate

4.4 Commercial Floor Space and Jobs Growth

The Draft Central District Plan

The Draft Central District Plan[25] identifies opportunities which should be leveraged to drive economic activity and diversity. Kensington and Kingsford town centres can take advantage of several of these opportunities, including:

- The Randwick health and education super precinct in close proximity
- The CBD and South East Light Rail which will improve connectivity
- Sydney's growing, young and well-educated population.

Notwithstanding these opportunities, the Draft Central District Plan also recognises challenges facing strategic centres, such as pressure on commercial floor space in strategy centres. Pressure on commercial floor space can be seen in the Kensington and Kingsford town centres, as developers prioritise residential floor space over commercial.

[25] Draft Central District Plan, November 2016

Part C – Vision and Strategies

Projected Employment Change

The Kensington, Kingsford and Randwick centres have an important economic role, with around 62% of jobs in The Randwick LGA located in these centres and their surrounding catchments (including UNSW)[26]. The importance of these centres is expected to grow, with almost 70% of future jobs growth to 2036 accommodated within this economic triangle. The projected increase in jobs for Kensington and Kingsford is outlined in Table 6, with Kensington expected to accommodate a slightly higher proportion than Kingsford. Kingsford will continue to provide a greater share of jobs overall.

Table 6: Projected increase in employment in Kensington and Kingsford town centres[27]

Future Employment Growth				
Town Centres	2016	2036	Change	
			No.	%
Kensington	1,540	1,925	385	25
Kingsford	2,425	3,000	575	24

Kensington Town Centre

Projected jobs growth

As identified in Table 6, the Kensington village centre is estimated to grow from 1,540 jobs to around 1,925 jobs by 2036, an increase of 25%. Table 7 presents a detailed projection of jobs growth, by industry, for the Kensington village centre. As shown, 70% of the future jobs growth is expected to occur in the industries of retail, education and healthcare.

Figure 31: Union Square mixed use precinct, NYC
Source: (www1.nyc.gov)

Figure 32: Sharedway at Kiaora Place, Double Bay
Source: www. rooksalinger.com

Figure 33: Mixed use development in Surry Hills Source: www.sjb.com.au

[26] Macroplan Dimasi (2016) Kensington, Kingsford & Randwick Junction Economic Impact of Light Rail Stage 2 Report.
[27] Ibid

Table 7: Projected increase in employment and floorspace demand for Kensington town centre

Industry/land use	Jobs 2016	Jobs 2036	Jobs 16-36	Share in centre (%)	Ratio (sq.m/ job)	Est. floorspace demand 2016	Est. floorspace demand 2036	Est. floorspace demand 16-36
Based on NSW BTS projections								
Office/commercial	195	233	39	90%	30	5,255	6,296	1,041
Accommodation	50	61	11	95%	100	4,757	5,762	1,004
Retail/F&B	470	558	88	95%	25	11,169	13,260	2,090
Education	270	363	93	10%	30	810	1,088	278
Health/medical	150	207	57	25%	30	1,123	1,551	428
Manufacturing/blue collar	161	202	41	10%	75	1,205	1,515	310
Arts/other services	202	215	12	90%	50	9,111	9,672	560
Other	42	51	9	n.a	n.a	n.a	n.a	n.a
Total	**1,540**	**1,890**	**349**			**33,432**	**39,143**	**5,712**
Potential 'uplift' from light rail								
Uplift factor	**10%**	**on growth**		Uplift factor	**10%**	**on growth**		
Total jobs	1,540	1,924	384	Total floorspace	33,432	39,714	6,283	
Difference	**0**	**35**	**35**	**Difference**	**0**	**571**	**571**	

Notes
1. Office/commercial includes industries J, K, L, M, N, O
2. Accommodation includes approx. 25% of Accommodation and food services
3. Retail/F&B includes 75% of Accommodation and food services and 100% Retail trade
4. Education includes Education and Training
5. Health/medical includes Health care and social assistance
6. Manufacturing/blue collar includes industries A, B, C, D, E, F, I
7. Arts/other services includes Arts and recreation and Other services
8. Other is not stated/inadequate data.
Source: NSW Bureau of Transport Statistics (2014); MacroPlan Dimasi

Source: Macroplan Dimasi 2016

Projected Floor Space Growth

Including vacant floor space, there is currently an estimated 36,000-37,000m² of employment generating floor space within the Kensington town centre. Taking into account projected employment growth and the potential increase in demand arising from the light rail, employment floor space demand 'in-centre' is estimated to grow by around 6,000-6,500m² by 2036. Of the projected demand for floorspace, 2,100m² is projected to be retail or food services, 1,050m² is projected to be office or commercial, and 1,000m² is projected to be accommodation.

Analysis by Macroplan Dimasi recommended that around 6,000-6,500m² additional floor space be allowed for within the Kensington centre, to sufficiently accommodate jobs targets and enable the development of additional convenience-based retail facilities, including a supermarket. This floor space growth will be enabled through implementing an active frontages clause throughout the town centres and a minimum non-residential FSR at the nodes, as will be detailed later in this chapter.

Part C – Vision and Strategies

Kingsford Town Centre

Projected jobs growth

As identified in Table 5, Kingsford town centre is estimated to grow from 2,425 jobs to 3,001 jobs by 2036, an increase of around 24%. Table 8 presents a detailed projection of jobs growth, by industry, for the Kingsford town centre based on NSW BTS data. As shown, 55% of the future jobs growth is expected to occur in the industries of retail, food services and healthcare.

Projected Floor Space Growth

Including vacant floor space, there is currently an estimated 54,000m^2 employment generating floor space within the Kingsford town centre. Taking into account projected employment growth and the potential increase in demand arising from the light rail, employment floor space demand 'in-centre' is estimated to grow by around 10,000-10,500m^2 by 2036. Of the projected demand for floor space, 2,000m^2 is projected to be office/commercial, 3,000m^2 is projected to be retail or food services, and 1,100m^2 is projected to be health services.

Figure 34: Kiaora Place retail precinct with public library
Source: rooksalinger.com

Figure 35: East Village mixed use development
Source: payce.com.au

Table 8: Projected increase in employment and floorspace demand for Kingsford town centre

Industry/land use	Jobs 2016	Jobs 2036	Jobs 16-36	Share in centre (%)	Ratio (sq.m/ job)	Est. floorspace demand 2016	Est. floorspace demand 2036	Est. floorspace demand 16-36
Based on NSW BTS projections								
Office/commercial	467	547	80	85%	30	11,909	13,945	2,035
Accommodation/pub	114	138	24	85%	75	7,286	8,824	1,538
Retail/F&B	709	848	139	85%	25	15,072	18,030	2,958
Education	104	140	36	10%	30	313	420	107
Health/medical	326	450	124	30%	30	2,934	4,053	1,119
Manufacturing/blue collar	403	485	83	10%	75	3,019	3,638	619
Arts/other services	225	247	22	85%	50	9,544	10,496	951
Other	77	93	16	n.a	n.a	n.a	n.a	n.a
Total	**2,425**	**2,949**	**524**			**50,078**	**59,407**	**9,328**
Potential 'uplift' from light rail								
Uplift factor	**10%**	**on growth**		Uplift factor		**10%**	**on growth**	
Total jobs	2,425	3,001	576	Total floorspace		50,078	60,339	10,261
Difference	**0**	**52**	**52**	**Difference**		**0**	**933**	**933**

Notes
1. Office/commercial includes industries J, K, L, M, N, O
2. Accommodation includes approx. 25% of Accommodation and food services
3. Retail/F&B includes 75% of Accommodation and food services and 100% Retail trade
4. Education includes Education and Training
5. Health/medical includes Health care and social assistance
6. Manufacturing/blue collar includes industries A, B, C, D, E, F, I
7. Arts/other services includes Arts and recreation and Other services
8. Other is not stated/inadequate data
Source: NSW Bureau of Transport Statistics (2014); MacroPlan Dimasi

Source: Macroplan Dimasi 2016

The report recommended that around 10,000-10,500m² additional floor space be allowed for within the Kingsford centre, to sufficiently accommodate jobs targets and enable the development of additional convenience-based retail facilities, including a supermarket. This floor space growth will be enabled through implementing an active frontages clause throughout the town centres and a minimum non-residential Floor Space Ratio (FSR) at the nodes, as will be detailed later in this chapter.

Commercial Floor Space Trends

A desktop analysis of approved Development Applications (DAs) was conducted to identify the quantity of commercial floor space in mixed-use buildings on Anzac Parade built since 2000.

In recent mixed use developments on Anzac Parade, the ground floor commonly provides for pedestrian access and a lobby for the residential units, vehicular ramps to access the car parking, a loading dock, waste storage and utilities. The proportion of the ground floor used for commercial or retail tenancies varies, with larger sites having the opportunity to provide a greater proportion of the ground floor for commercial premises.

The analysis of floorplans revealed that on average, only 27% of the site, on the ground floor, is used for commercial floor space. In general, this is a significantly lower quantity of commercial floor space than was on the site prior to redevelopment. This means that over time, as new developments occur, each centre is undergoing a net loss of commercial floor space.

Supply-Demand Gap

If current trends continue, where only around 27% of the ground floor of developments is used as commercial floor space, when each centre is fully developed, there will be a supply deficit of approximately 18,500m² in Kingsford and 24,000m² in Kensington, or 42,500m² across the two centres. This would be a significant reduction of existing commercial floor space and is inconsistent with the role of the centres, as identified in A Plan for Growing Sydney.

Part C – Vision and Strategies

Given the significant sale price differential between residential floor space and commercial floor space, residential floor space is significantly more profitable to developers than commercial. This means that the trend outlined above, of a cumulative net loss of commercial floor space, is unlikely to change. Therefore, action, as proposed as part of this Strategy, is required to ensure the continued and growing role of Kensington and Kingsford as local centres.

Supporting Commercial Floor Space Growth

An active frontages clause within the RLEP 2012 applying to the town centre will ensure that every site provides commercial or retail floor space, as identified in figures 38 and 39. This LEP provision, and the associated map, will ensure retail and commercial floor space is provided throughout the centre, and that streets and plazas have activity to provide vibrancy and passive surveillance. A DCP control will also be provided, to encourage developments to provide active frontages to mid-block links, secondary streets and laneways.

Market intervention is required to ensure adequate floor space is delivered within the town centres to provide local retail and commercial services for residents of the centres. A minimum non-residential FSR in the RLEP 2012 applying at the key nodes of Todman Square, Kingsford Midtown and Kingsford Junction Precincts, as identified in figures 40 and 41, are a market intervention to counteract current trends favouring residential floor space.

The minimum requirement for non-residential floor space will ensure floor space is available for supermarkets, retail, childcare centres, local services, shared working spaces and innovation hubs. This minimum quantity of retail or commercial floor space will ensure the light rail stops become nodes of commercial and retail activity within the centres.

Figure 36: Active street frontages
Source: www.dlaaust.com

Figure 37: Active street frontages
Source: www.mustdobrisbane.com

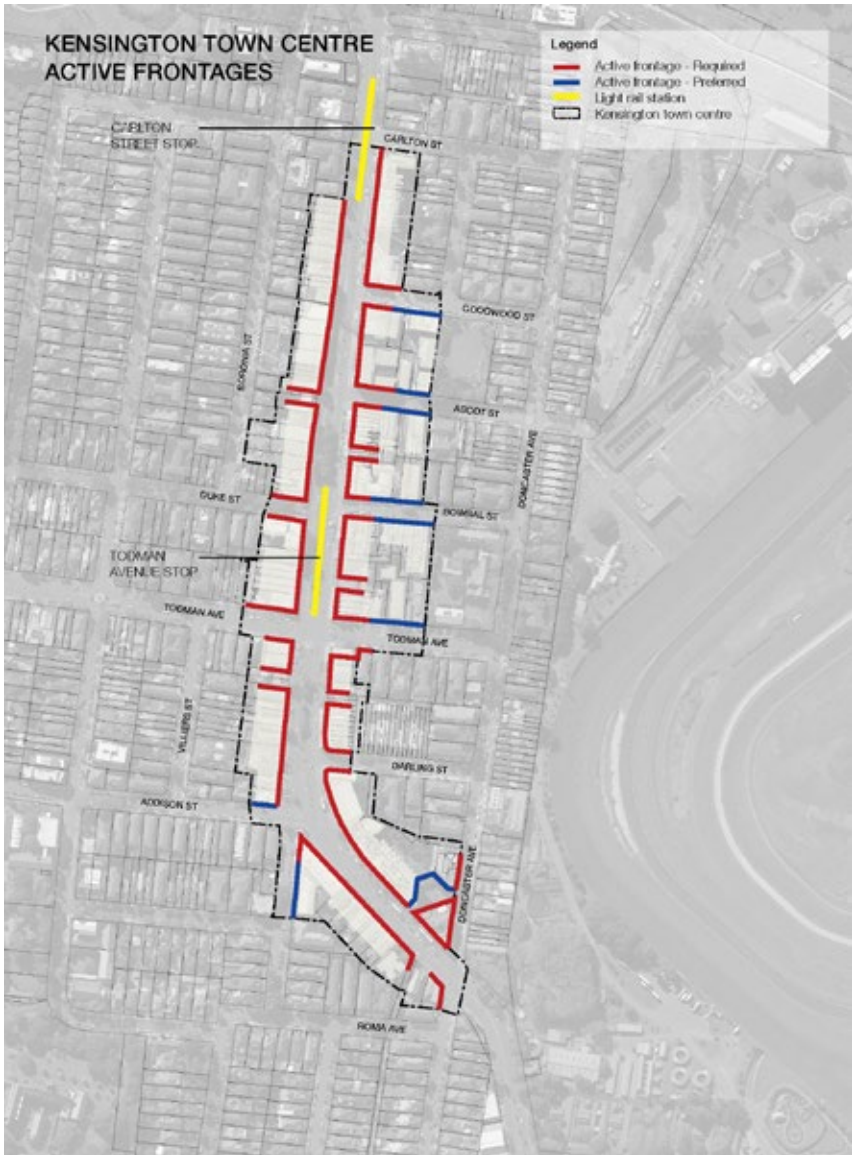


Figure 38: Active street frontages map – Kensington town centre
Source: Conybeare Morrison 2016

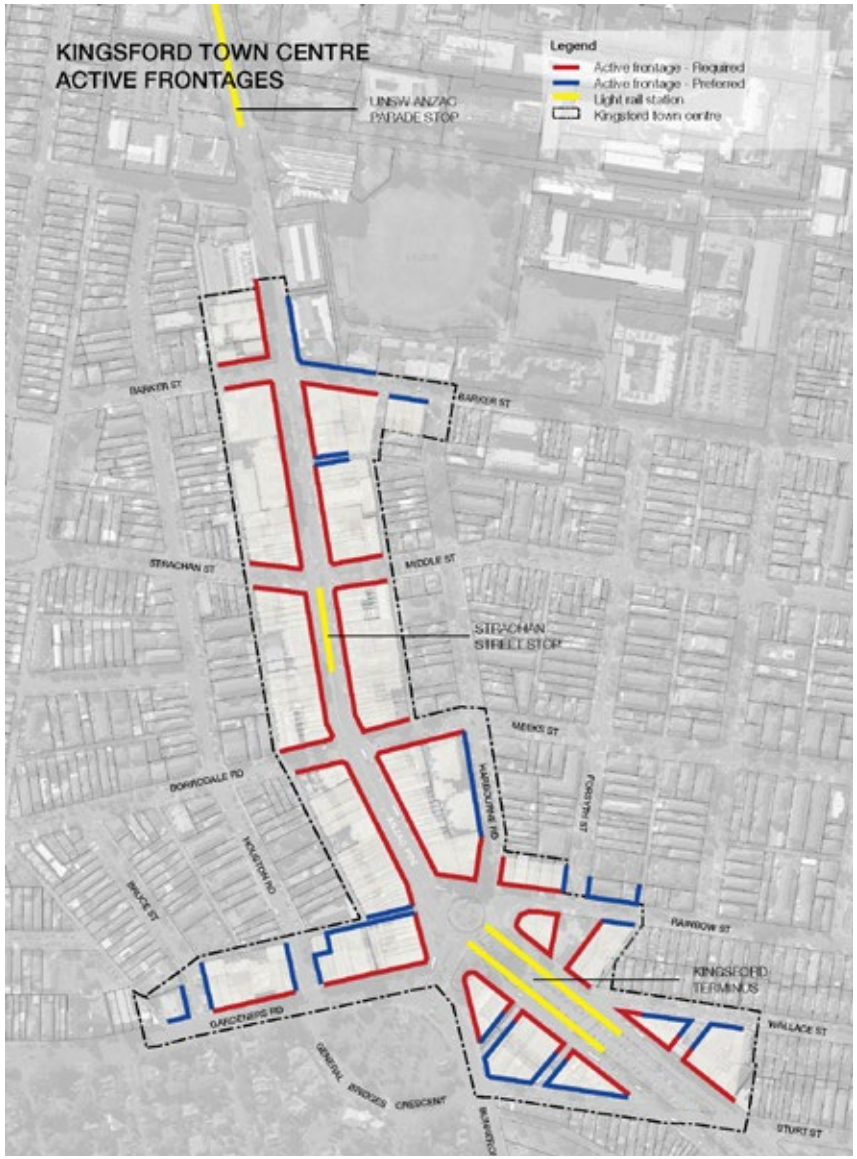


Figure 39: Active street frontages map – Kingsford town centre
Source: Conybeare Morrison 2016

Figure 40: Minimum non-residential floorspace map – Kensington town centre
Source: Conybeare Morrison 2016

Figure 41: Minimum Non-Residential Floor Space Map – Kingsford town centre
Source: Conybeare Morrison 2016

Part C – Vision and Strategies

Strategy	Action
1. Ensure new developments provide for businesses fronting streets to ensure streets are vibrant and safe	a) Amend the RLEP 2012 to implement an active frontage provision to require active building frontages at street level throughout the centre, as identified on the active frontages map (Figure 38 and 39) b) Amend the DCP 2013 to encourage retail and commercial uses to address laneways and secondary streets, as identified on the active frontages map (Figure 38 and 39)
2. Provide adequate retail and commercial space to ensure future employment needs can be accommodated and the town centres can provide retail and other services to residents and visitors	a) Amend the RLEP 2012 to implement a minimum non-residential FSR applying to sites at key nodes, as identified in Figures 40 and 41, to ensure adequate space is available for the provision of local retail and services and for the provision of innovation spaces

Part C – Vision and Strategies

5.0 Built Form

This section looks at the 'three dimensional' form of the Kensington and Kingsford town centres. Strategies focus on achieving an appropriate scale for new development, a positive relationship between built form and the public realm, and a high standard of urban design and amenity within the town centres.

The character of a town centre is strongly influenced by the design of its urban environment: the street layout and pedestrian linkages, the aesthetic quality, scale, and functionality of individual buildings, the relationship between built form and the public realm, and the condition and extent of public spaces.

Planning and built form controls, including land use zoning, height, floor space ratio and setbacks, play an important role in defining the character of a town centre, controlling the intensity of development and helping to establish a desirable built form.

In the context of Kensington and Kingsford town centres, the interplay between geographical and physical attributes including their inner city location, excellent access to employment hubs, services and recreational opportunities, and new light rail infrastructure lend support to urban consolidation and revitalisation. New built form controls are required to guide the design of future development and to ensure that a reasonable amount of floor space can be accommodated to meet future needs.

For Kensington and Kingsford town centres to evolve as highly attractive, liveable and sustainable places, it is integral that all future development delivers a good urban design outcome with a high level of amenity, while balancing growth and appropriate density.

All new development will be expected to make a positive contribution to the architectural quality of the town centres, be appropriate to their locational context, fit sensitively into the streetscape and help create a sense of place. New areas of increased height should also provide clues to the structure of the town centres highlighting nodes of activity and accessibility.

Objectives

- To foster an attractive urban environment with a strong sense of place and identity
- To ensure that development is of an appropriate scale and responsive to the surrounding context
- To ensure that buildings are characterised by design excellence and achieve a high level of amenity
- To encourage landmark buildings that define strategic locations, support activation and contribute to an interesting and harmonious skyline
- To support the integration of transport and land use; and
- To conserve and protect heritage items and building façades that reflect the historical development of the town centres.

Community Feedback

Community feedback received acknowledges the town centres as valued places, while highlighting the need to improve urban design and the quality of buildings to establish a sense of place.

In summary the community said:

- Create vibrant town centres where people want to live, work and visit
- Provide a mix of building heights to create an interesting urban form, rather than focusing on high rise development
- Encourage stand out buildings to mark a sense of arrival in the town centres
- Ensure the town centres are creative, green and aesthetically pleasing
- Create a sense of place through building design, making residents proud to live in the town centres
- Line Anzac Parade with trees to create a continuous boulevard into the City
- Set back development to allow trees to grow undisturbed into maturity
- Make the town centres more than just rows of businesses along a busy road
- Unify street level design; have awning levels and colours that complement each other; consider glass structures and futuristic design
- Ensure the light rail does not infringe on available public spaces
- Consider that high rise developments cast shadows on parks and public areas and create a feeling of disconnection
- Modernise the look and feeling of buildings at street level; and
- Create spaces between buildings to facilitate a laneway culture or courtyards.

Part C – Vision and Strategies

5.1 Built Form Study

Conybeare Morrison urban design consultants were engaged to assist Council in reviewing the built form controls for Kensington and Kingsford town centres. The aim of the study was to determine how projected growth in residential and employment floor space could be accommodated, while ensuring a good design outcome and high level of amenity in the town centres.

The study included the following components:

- A comprehensive analysis of existing built form and condition assessment of the public domain
- Identification of redevelopment opportunities and constraints within the town centres
- Preparation and testing of options to identify the appropriateness of potential built form scenarios in terms of urban design and amenity; and
- Development of detailed built form controls having regard to:
  - An appropriate bulk, scale and massing
  - Relationship and response to surrounding development and public domain including solar access considerations
  - Environmental constraints including overshadowing and aircraft noise limitations (see Appendix 1 for further detail)
  - Capacity to accommodate additional floor space to meet future demand.
  - Requirements of State Environmental Planning Policy – 65 and Apartment Design Guide
  - Economic feasibility including development yield and viability.

This section of the Strategy focuses on the preferred development option for the Kensington and Kingsford town centres as identified in the K2K Urban Design Competition Report 2016.

The suggested changes to built form controls, if adopted, will result in amendments to the RLEP 2012 and DCP 2013.

Urban Design Principles for the Town Centres

As a basis for preparing new built form controls for the Kensington and Kingsford town centres, the following urban design principles have been established to help define the future character of the town centres and provide guidance for growth and development:

- Reinforce a boulevard character along Anzac Parade by strengthening the built form edge
- Focus on achieving a dominant typology of mid-rise mixed use buildings throughout the town centres
- Permit taller landmark buildings in prominent highly accessible locations in conjunction with the delivery of substantial public benefits established through a design excellence process
- Achieve a sensitive transition in relation to recently constructed development and surrounding established lower scaled residential neighbourhoods
- Create a positive street level environment through built form that allows solar access, permeability and maintains human scale
- Ensure that new infill development respects the fine grained character of contributory buildings
- Establish building setback controls which provide for the creation of wider footpaths and street tree planting
- Achieve urban design and architectural excellence, including best practice environmental design; and
- Encourage active frontages along Anzac Parade, continuing down side streets.

Part C – Vision and Strategies

5.2 Built Form Controls

The following suggested built form controls have been developed following detailed consideration of future planning and growth parameters, individual sites' context, environmental constraints, the relationship with surrounding development and opportunities to enhance the public realm.

Building Heights

As noted earlier, Kensington and Kingsford town centres are expected to accommodate additional housing and employment floor space to meet future needs, requiring a change to the built form controls for development. Building height is a key determinant of building form.

The town centres have an established maximum height limit of 24m (Kensington) and 25m (Kingsford) delivering buildings of 6 to 7/8 storeys under the RLEP 2012.

Building height is measured from the natural ground level to the top of the roof under the RLEP 2012.

For both town centres there is scope to accommodate moderate increases in permissible building height to meet projected demands in housing/employment floor space.

Built form modelling of each town centre demonstrates that additional housing/ employment floor space can be achieved within a mid-scale urban environment with some taller buildings clustered at strategic nodes to facilitate activation and the delivery of improved public domain (such as wider footpaths and plazas).

Notably, a mid-rise built form for the town centres (and surrounding areas) is a key design concept of the K2K Urban Design Competition winning entry.

"Studies of great urban streets, from around the world, tend to exhibit a number of common characteristics:

- Mixed-use buildings, with tall, transparent, ground-floor commercial spaces
- A common setback or build-to line (with occasional interruptions)
- An average height of buildings that is approximately as high as the street is wide
- Generous tree-lined footpaths
- Good public transportation
- Buildings that frame the street, without overpowering the space or depriving it of access to natural light.

Mid-Rise Symposium (2005) – A Great City of Avenues

Part C – Vision and Strategies

This Strategy recommends an overall mid-rise height limit of 31 metres (equating to nine storeys) for new development throughout both town centres.

From an urban design perspective, the spreading of density mainly through mid-rise buildings provides a more human scaled built form that supports a comfortable pedestrian environment while also enhancing opportunities for solar access.

The suggested 31m (nine storey) height limit is considered to respond well to the proportions of Anzac Parade and other streets within the study area. It also provides an appropriate scale transition to recently constructed buildings (approved under existing planning controls), while respecting the character of surrounding lower scaled residential neighbourhoods.

Taller Building Forms

While the future built form character will be primarily mid-rise, development will not remain homogenous throughout the town centres.

Within both town centres there are a number of prominent sites located at strategic nodes (Precincts) that could accommodate taller, slender buildings. A higher rise building typology in these locations would help create a distinctive urban form within the town centres, while facilitating activation around the light rail infrastructure.

It is important to note that additional uplift afforded to these strategic sites will only be achieved in conjunction with the delivery of public benefits identified in this Strategy, such as larger setbacks to facilitate footpath widening, public plazas, through-site links and/or social infrastructure, together with demonstrated design excellence.

These 'trade-offs' are to be built into planning controls where predetermined public benefits are identified, as discussed throughout this Strategy.

Case Study: Toronto Canada

The City of Toronto has identified mid-rise buildings (5-11 storeys) as a means to addressing the future growth of the city.

The mid-rise building typology has been promoted as the desirable form for intensification along the identified routes in the city.

Toronto's Urbanising Avenues Policy identifies almost 300km of street frontages that are currently underutilised and which could accommodate mid-height buildings.

The policy notes that if half of the sites along the identified street frontages are developed into mid-rise mixed use developments, around 250,000 new residents could be accommodated while maintaining a high level of liveability in these areas.

Avenues and Mid Rise Building Study 2010

Figure 42: Mid-rise Parisian boulevard, France
Source: www.architectureanddesign.com.au

Figure 44: Example of a nine storey building, 8 Parramatta Road, Strathfield Source: Google Streetview 2016

Figure 46: Example of a nine storey apartment building, Box Hill, Melbourne Source: www. centralgardensboxhill.com.au

Figure 43: Mid-rise streetscape, Toronto, Canada
Source: www.streetcar.ca

Figure 45: 'Cloud 9', Barcelona 'World Building of the Year 2011', World Architecture Festival Awards Source: www.bustler.net

Todman Square Precinct

A height limit of 54m (equivalent to 16 storeys, or a maximum 18 storeys with demonstrated design excellence) is proposed for the four corner sites adjacent to the Todman Avenue light rail stop in Kensington town centre.

Taller building forms would help define the prominent corners at this strategic location, facilitating a hub of intensive activity around the light rail stop, and creating a much needed heart for Kensington town centre. The provision of a new plaza and a gallery/creative space have been identified as priorities for this location. See Part D-Precinct Plan for further detail.

Kingsford Mid-Town Precinct

A height limit of 54m (equivalent to 16 storeys, or a maximum of 18 storeys with demonstrated design excellence) is proposed for three corner sites adjacent to the Strachan Street light rail stop. Additional uplift is not proposed for O'Deas Corner (424-436 Anzac Parade) as the site is heritage listed under the RLEP 2012.

The allowance of higher building forms will express the prominence of these corner sites in the old heart of Kingsford town centre.

See Part D Section 1 – Precinct Plan for further detail.

Kingsford Junction Precinct

Key opportunity sites adjacent to the new light rail terminus in Kingsford town centre include the Rainbow Street site (earmarked as a potential local government civic centre) and the Kingsford Triangle. These sites have the capacity to accommodate taller landmark buildings to define the gateway to the town centre, together with generous public spaces to create a sense of place.

A height limit of 51m (equivalent to 15 storeys, or a maximum of 17 storeys with demonstrated design excellence) is considered appropriate for these sites, stepping down to a transitional height where they adjoin residential areas (see discussion below). The clustering of landmark buildings in this location will create a defining character precinct and intensive hub of activity around this important transit node.

See Part D Section 1 – Precinct Plan for further detail.

Figure 47: Nine storey apartment building, Melbourne Source:www.one9apartments.com.au

Figure 49: Example of a taller building form, Bondi Junction Source: www.vuebondi.com.au

Figure 48: Nine storey apartment building, Berlin Source: www.sustainablecitiescollective.com

Figure 50: 'Eliza' 17 storey building, Elizabeth Street, Sydney Source: www.theurbandeveloper.com

Built Form Transition

Both Kensington and Kingsford town centres adjoin lower scaled residential neighbourhoods, requiring a built form transition to minimise amenity impacts on adjacent residential properties (e.g. adverse overshadowing or excessive building bulk). A transition will also achieve a defined edge to these town centres.

Two built form transition approaches have been identified, taking into account the different urban structure of each town centre, particularly allotment size/ configuration and layout.

For Kingsford town centre, where allotments are generally deeper, there is scope to apply a lower building height limit of 19m (five storeys) to the rear of sites adjoining residential areas (NB: a higher height limit would still apply to the front of the site). This could encourage a 'mews' style development typology, taking advantage of the laneway network running parallel to Anzac Parade which could facilitate shared access in the future. This secondary height limit proposed would be applied as a DCP control, whereas building heights discussed in sections 5.4.1 and 5.4.2 above will apply as an LEP control.

For Kensington town centre, where allotments are generally shallow, a transition could be achieved through the establishment of laneway/shared zones as part of the redevelopment of relevant sites. This would serve the dual purpose of establishing separation between the taller built form of town centre development and the lower scale of adjoining residential areas, while providing opportunities for rear lane access. In those circumstances where allotments are deeper, there is opportunity to encourage mews style developments in conjunction with a laneway/shared zone.

The proposed DCP building height transition strategy for Kensington and Kingsford town centres is illustrated on the following maps (Figures 58 and 59).

> "Mews are narrow, intimate streets that balance the access and service functions of a lane with active building frontages, accessory uses, and a street space shared by cars and pedestrians".
>
> East Village Redevelopment Plan for Calgary, Alberta, Canada (2010)

Figure 51: 18 storey concept for hotel, Glasgow
Source: www.eveningtimes.co.uk

Figure 52: Axis Tower Manchester
Source: www.e-architect.co.uk

Figure 53: BIDV Da Nang Tower 18 storey (plus 2 level basement) building in Da Nang, Vietnam
Source: www.ardorarch.com

Part C – Vision and Strategies

Figure 54: Example of ‘mews’ development Kensington Street, Chippendale
Source: www.domain.com.au

Figure 55: Example of ‘mews’ development Kiaora lane
Source: www.domain.com.au

Part C – Vision and Strategies

Figure 56: Proposed RLEP 2012 building height limits for Kensington town centre
Source: Conybeare Morrison 2016

Figure 57: Proposed RLEP 2012 building height limits for Kingsford town centre
Source: Conybeare Morrison 2016

Part C – Vision and Strategies

Figure 58: Proposed DCP 2013 built form transition for Kensington town centre
Source: Conybeare Morrison 2016

Figure 59: Proposed DCP 2013 built form transition for Kingsford town centre
Source: Conybeare Morrison 2016

Part C – Vision and Strategies

5.3 Street Walls

The ‘street wall’ refers to the front façade of the building that is built at or close to the street boundary. It is an important urban design element, providing an interface to the street, helping to create a sense of enclosure and defining the public realm.

This draft Strategy proposes a four storey continuous street wall to achieve a cohesive streetscape, reinforce a pedestrian scale and reduce the visual impact of building bulk within both town centres.

A four storey street wall will be achieved by stepping back four metres at the fourth storey of a building and would be applied as a DCP control.

Figure 60: Example of four storey street wall development
Source: Avenues & Mid-Rise Buildings Study. Credit: BMI (Brook McIlroy Planning & Urban Design)

Figure 61: Four storey street wall, Double Bay Sydney
Source: Google Streetview 2016

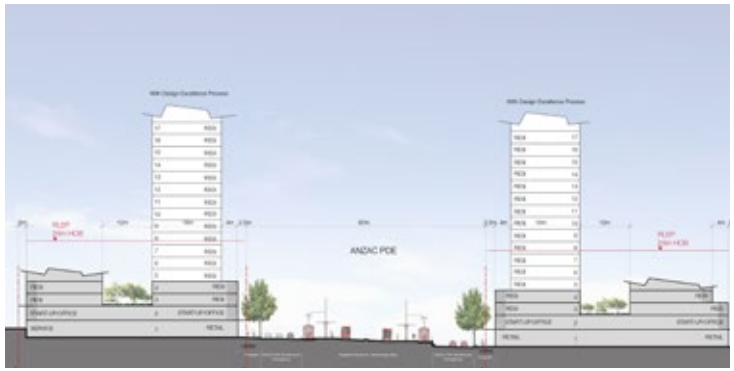


Figure 62: Section showing nine storey building typology with four storey street wall and mews development at the rear.
Source: Conybeare Morrison 2016

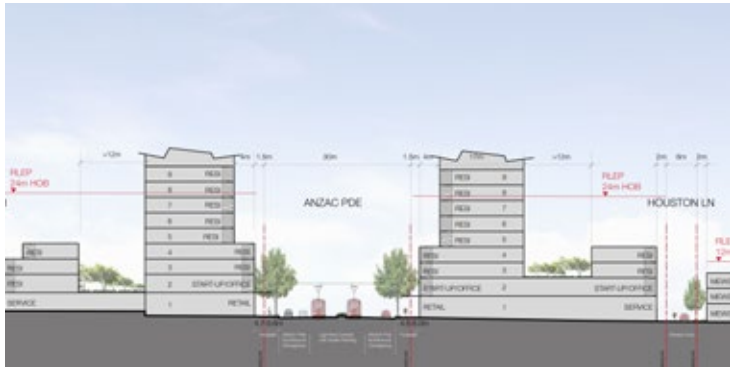


Figure 63: Section of Kingsford Junction showing 17 storey building typology with four storey street wall and mews development at the rear.
Source: Conybeare Morrison 2016

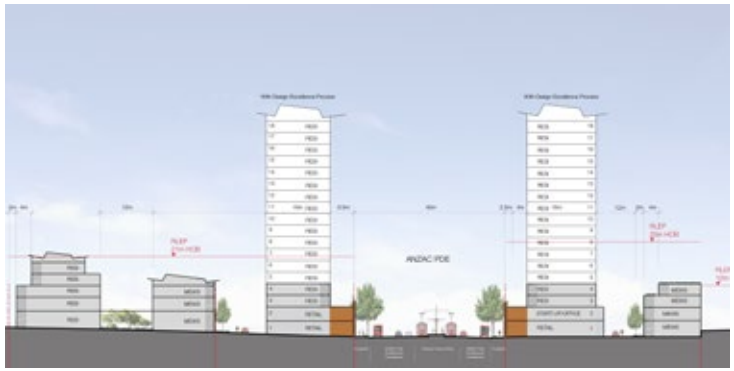


Figure 64: Section of Todman Square showing 18 storey building typology with four storey street wall and mews development at the rear.
Source: Conybeare Morrison 2016

5.4 Floor Space Ratio

Floor space ratio (FSR) is the ratio of the gross floor area (GFA) of a development in relation its site area.

It is commonly used in the calculation of development yield and rentable area and is useful in determining how much floor space is required to meet future needs in an area.

FSR controls work with other controls such as heights, building setbacks, articulation and landscaped area to determine the bulk and scale of a development.

Kingsford town centre currently has an applicable FSR of 3:1 included in the RLEP 2012. Kensington town centre does not have an applicable FSR, with the overall building envelope of development determined by maximum height controls in the RLEP 2012 in conjunction with DCP 2013 controls (e.g. no of storeys, setbacks etc.).

The K2K Urban Design Review investigated an appropriate FSR that would work in conjunction with the proposed revised building heights and still achieve a good urban design outcome for the town centres.

The RLEP 2012 defines gross floor area as being:"the sum of the floor area of each floor of a building measured from the internal face of external walls and includes:

- the area of a mezzanine
- habitable rooms in a basement or an attic
- any shop, auditorium, cinema, and the like, in a basement or attic. but excludes:
  - any area for common vertical circulation, such as lifts and stairs
  - any basement, storage area or voids
  - vehicular access, loading areas, garbage and services
  - car parking to meet any requirements of the consent authority (including access)
  - terraces and balconies with outer walls less than 1.4 metres high.

Based on the outcomes of built form modelling, the following FSRs are proposed (See Table 9 and Figures 65 and 66). It should be noted that these FSRs are maximums and the application of other controls (such as building setbacks and design criteria in the SEPP 65 – Apartment Design Guide) will further refine the building envelope.

A non-residential FSR component is proposed for key sites in the town centres (see Part C Section 4 – Business and Economy for further detail).

Table 9: Proposed Floor Space Ratio

Site	Proposed FSR
Sites accommodating 9 storey buildings	4:1
Precinct sites	5:1

Part C – Vision and Strategies

Figure 65: Proposed Florr Space Ratios – Kensington town centre
Source: Conybeare Morrison 2016

Figure 66: Proposed Florr Space Ratios – Kingsford town centre
Source: Conybeare Morrison 2016

Part C – Vision and Strategies

5.5 Setbacks

Setbacks define the outer extremities of a building in relation to the street and adjoining properties. It is a critical control in defining the building envelope, impacting on bulk and scale of development, as well as overshadowing and amenity of the public domain.

Typically buildings in town centres have little or no setback from the street alignment to establish a well-defined street edge and continuous built form. Accordingly the DCP 2013 setback controls for Kensington and Kingsford town centres generally require a zero ground floor level setback, stepping back after the fourth level (for buildings in Kensington town centre) to create a four storey street wall.

The introduction of light rail along Anzac Parade has required a review of the carrying capacity of the footpaths in the Kensington and Kingsford town centres to ensure adequate footpath space is available to accommodate light rail infrastructure (e.g. smart poles), as well as pedestrian circulation, awnings, street trees and urban furniture. In addition, the removal of kerbside parking has also increased the need for more generous footpaths.

It is considered that the introduction of setbacks to development will considerably improve pedestrian safety and amenity of the public domain by distancing pedestrians from traffic, encouraging the growth of street trees, providing opportunities for outdoor dining (where appropriate), while reducing the perceived bulk and scale of buildings.

This Strategy recommends that a setback of 1.5m be introduced for new nine storey development.

In Precincts where there is likely to be more intensive activity, such as around the Todman Avenue and Strahan Street light rail stops and the Kingsford terminus, a setback of 2.5m for adjoining sites will help improve the carrying capacity of footpaths and provide opportunities for new plazas and public spaces.

For heritage listed properties and contributory buildings, a nil setback should be retained recognising the ground floor of these sites are unlikely to be redeveloped given their historic significance. An additional setback of 6.5m would still apply where additional levels are proposed to contributory buildings to reduce the visual bulk and scale of development.

Setbacks of 2m are proposed on the eastern and western edges of the Kingsford town centre to align with existing DCP controls and provide adequate landscaping area to support mews type developments.

The new setbacks proposed will provide for footpath widths of 4.5m to 6m across both town centres.

The proposed setbacks for the town centres will be applied as a DCP control and are illustrated in the following diagrams and maps (Figures 67-71).

Note: A development feasibility analysis undertaken has found that any loss in GFA resulting from proposed setbacks is offset by additional development capacity gained from increased building heights. See Part E – Funding Infrastructure for further details.

Part C – Vision and Strategies

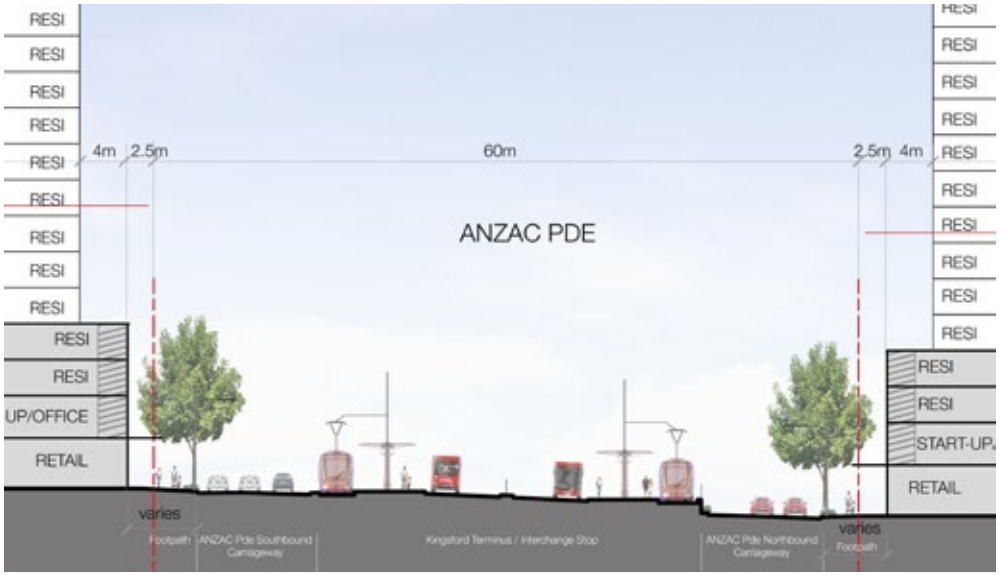


Figure 67: Section showing proposed 1.5m setback adjacent to nine storey building
Source: Conybeare Morrison 2016

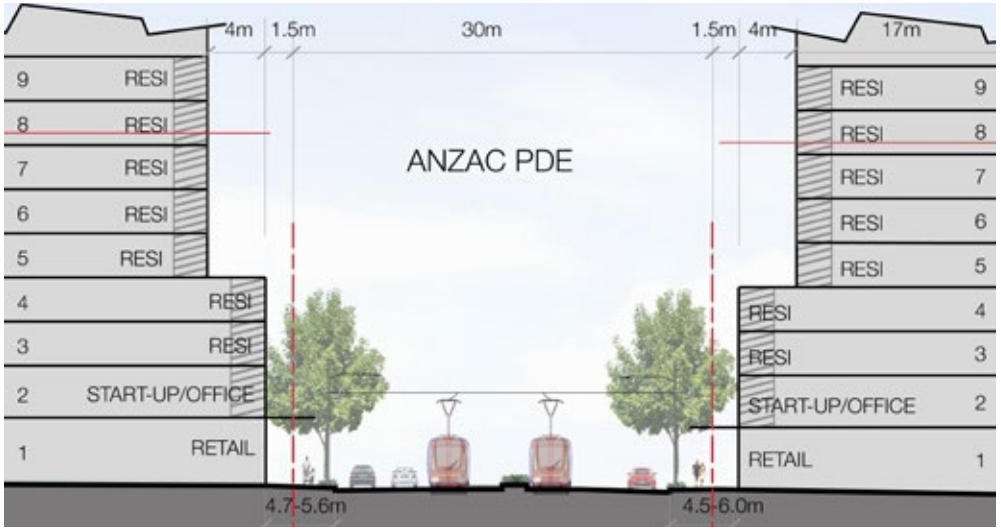


Figure 68: Section showing proposed nil setback for heritage/contributory buildings.
Source: Conybeare Morrison 2016

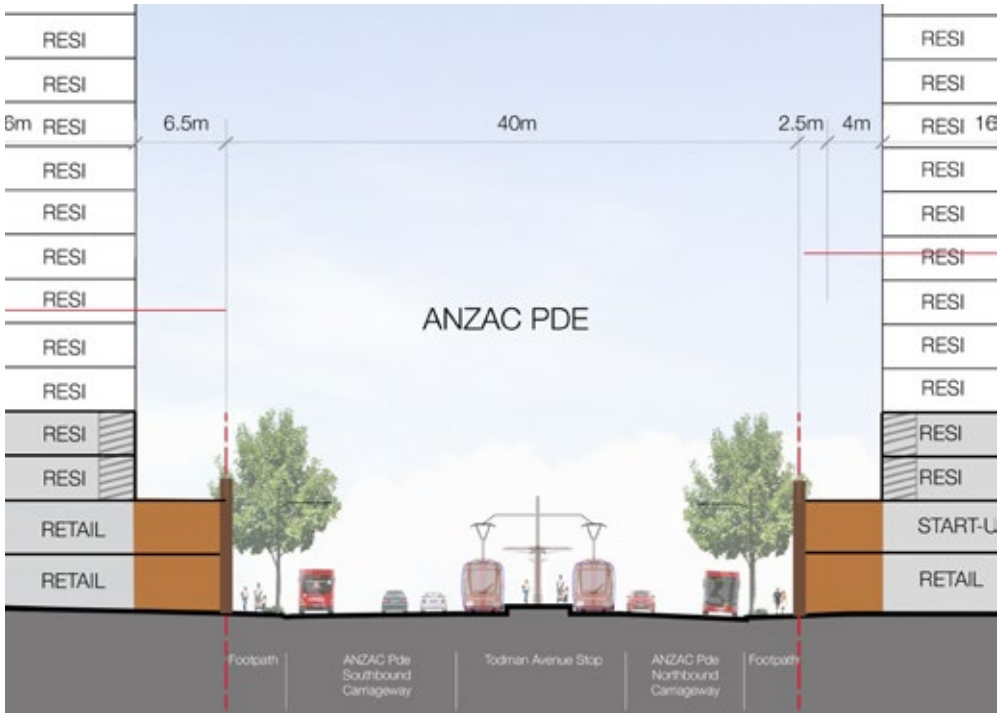


Figure 69: Section showing proposed 2.5m setback at Kingsford Junction
Source: Conybeare Morrison 2016

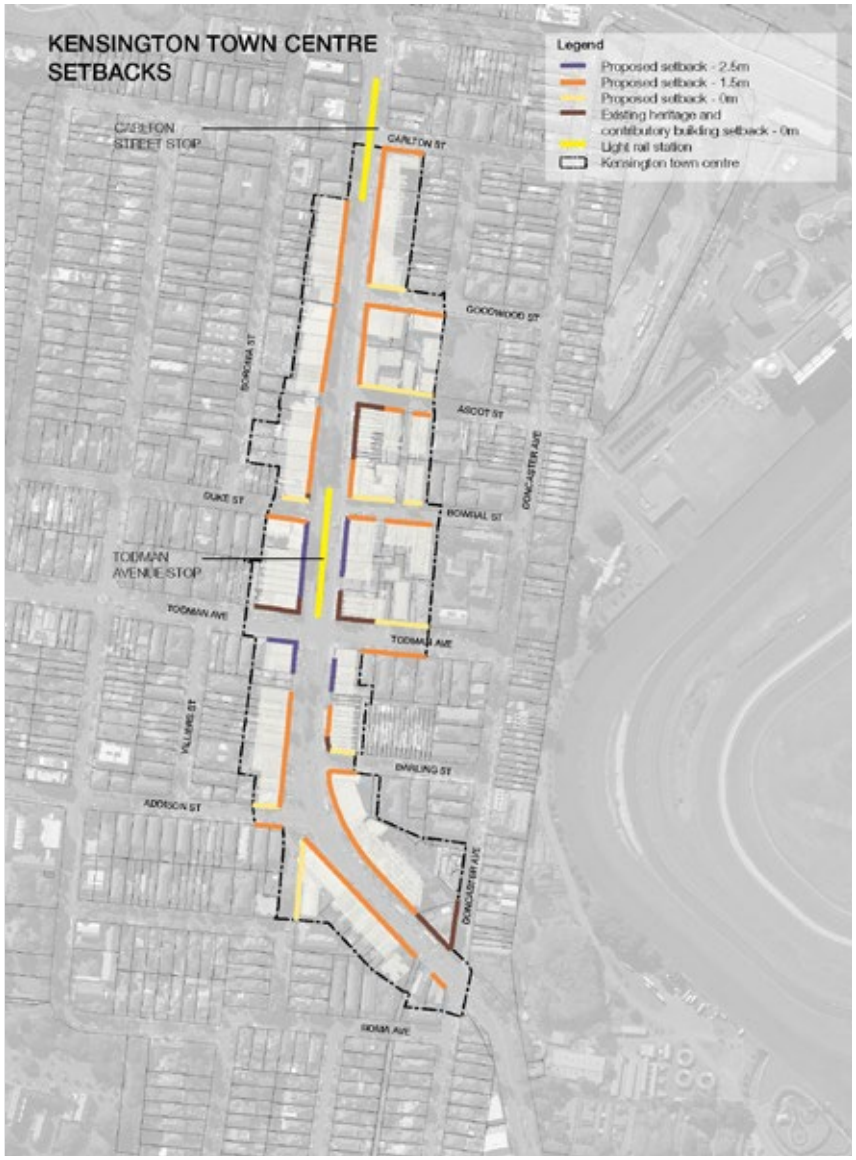


Figure 70: Proposed setbacks – Kensington town centre
Source: Conybeare Morrison 2016

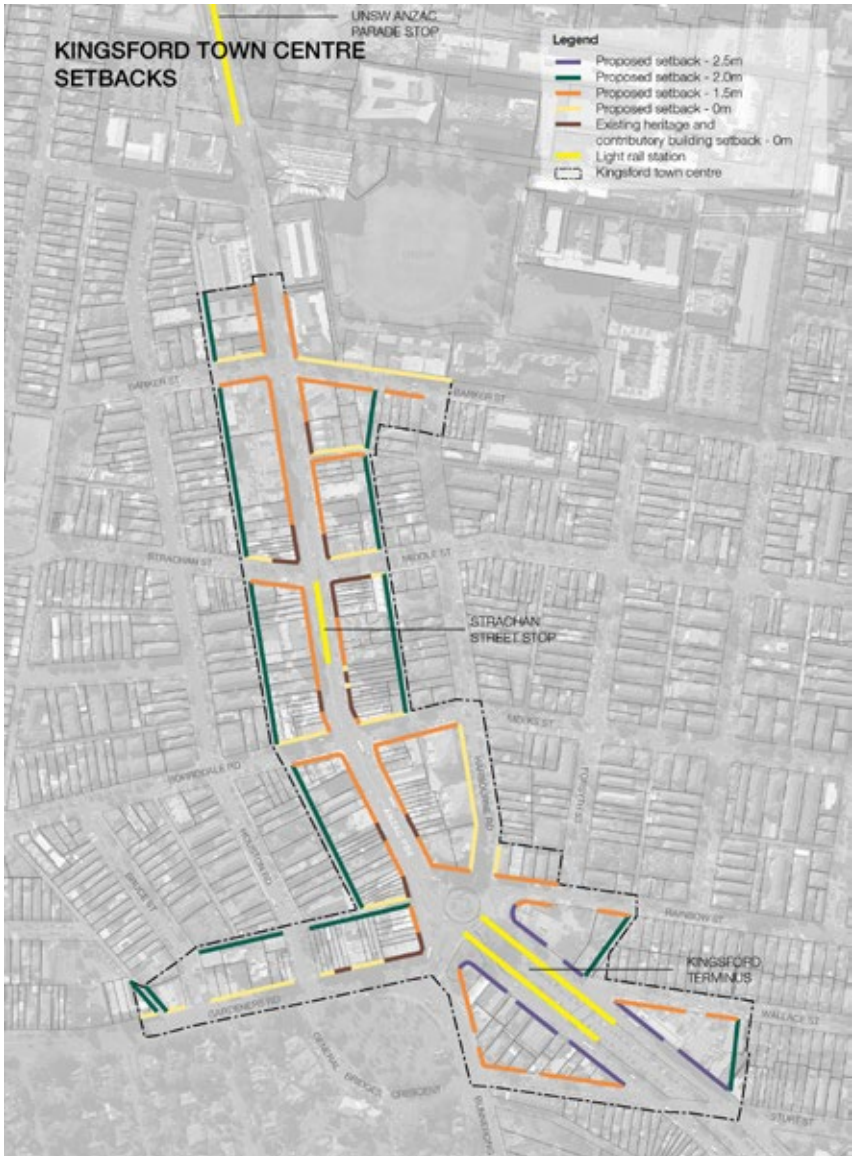


Figure 71: Proposed setbacks – Kingsford town centre
Source: Conybeare Morrison 2016

5.6 Solar Access

Solar access is an important consideration in determining an appropriate level of density in town centres. New buildings should be sited, orientated and configured to receive adequate solar access and natural light, while also ensuring that overshadowing impacts onto neighbouring properties and the public realm is minimised.

A shadow analysis of neighbouring properties, streets and public places was undertaken as part of the K2K Built Form Study to help shape the desired outcome of future potential building envelopes in both centres.

The modelling demonstrates that due to the north-south orientation of the town centres, development will achieve a minimum of two hours of solar access to 70% of dwellings during mid-winter, consistent with the NSW Apartment Design Guide design criteria for development in dense urban areas. All future development will need to demonstrate that adequate solar access can be achieved as part of the development process.

In relation to public spaces, a key outcome of this draft Strategy (as discussed in Part C Section 8 - Public Realm and Landscape) is the creation of new plazas and an overall net increase in public domain. These public spaces are likely to be more intensively used as the population grows, and are key to the liveability of the town centres.

To ensure that new development does not result in adverse overshadowing of the public realm, new DCP controls are recommended to require that new buildings do not contribute to a significant net loss in solar access to these spaces.

At the mid-winter solstice, significant public places are to be protected by a two tier standard, reflecting the relevant significance of the space and based on a practical assessment of what is a reasonable level of sunshine that should be protected in locations that are sometimes in a built up urban context:

- Major Public Places – Development cannot contribute to any more than a 10% net loss of solar access to these spaces at Winter Solstice, between 12 noon and 2:00pm e.g. Dacey Gardens, School Playground areas.
- Key Public Places – New development should retain solar access to a minimum of 50% of any given public place for a minimum of three hours at Winter Solstice (22 June).

Further detail on the location of key public places to which this proposed DCP sun plane clause would apply are identified in Part C Section 8 – Public Realm and Landscape (Figures 132 and 133).

5.7 Mid-Block Links

Large sites or the consolidation of smaller sites may have the effect of reducing the permeability within the block structure. The latter issue is particularly pertinent to the Kensington town centre which already has reduced levels of permeability resulting from the lack of laneways and mid-block links.

Mid-block links provide key access routes for pedestrians and should be established in larger key sites and in those parts of the town centres where site consolidation is likely.

This could be addressed via new DCP controls requiring that mid-block links be established on identified sites (e.g. key sites located within the Precincts). Mid-block links should preferably be dedicated as public land so that they can be managed for the benefit of the community.

Indicative locations for mid-block links are shown in the following map (Figures 72 and 73).

Pedestrian accessibility, including the provision of mid-block links is also addressed in Part C Section 8.5 – Pedestrian Network.

Figure 72: Example of mid-block link
Source: Essentials of Urban Design (2015)
Mark Sheppard

Figure 73: Covered mid-block retail lane
Source: Essentials of Urban Design (2015)
Mark Sheppard

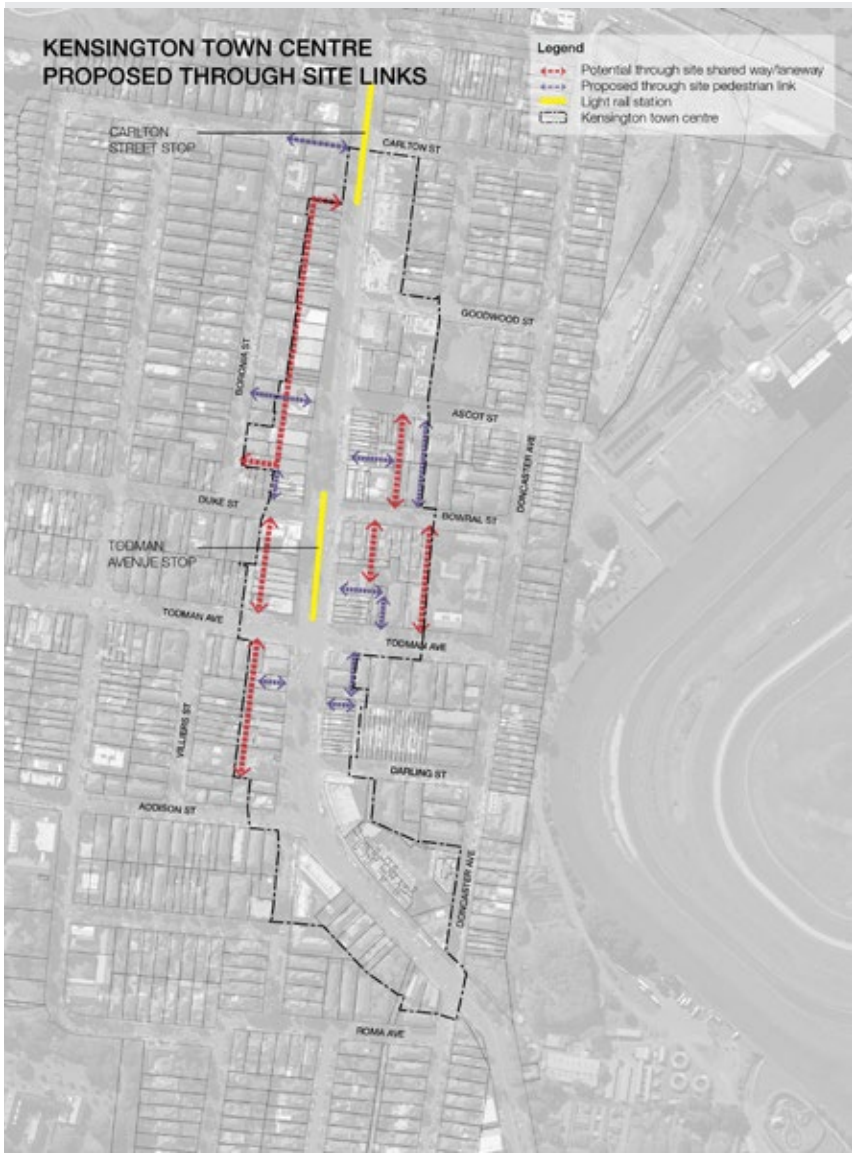


Figure 74: Proposed mid-block links – Kensington town centre
Source: Conybeare Morrison 2016

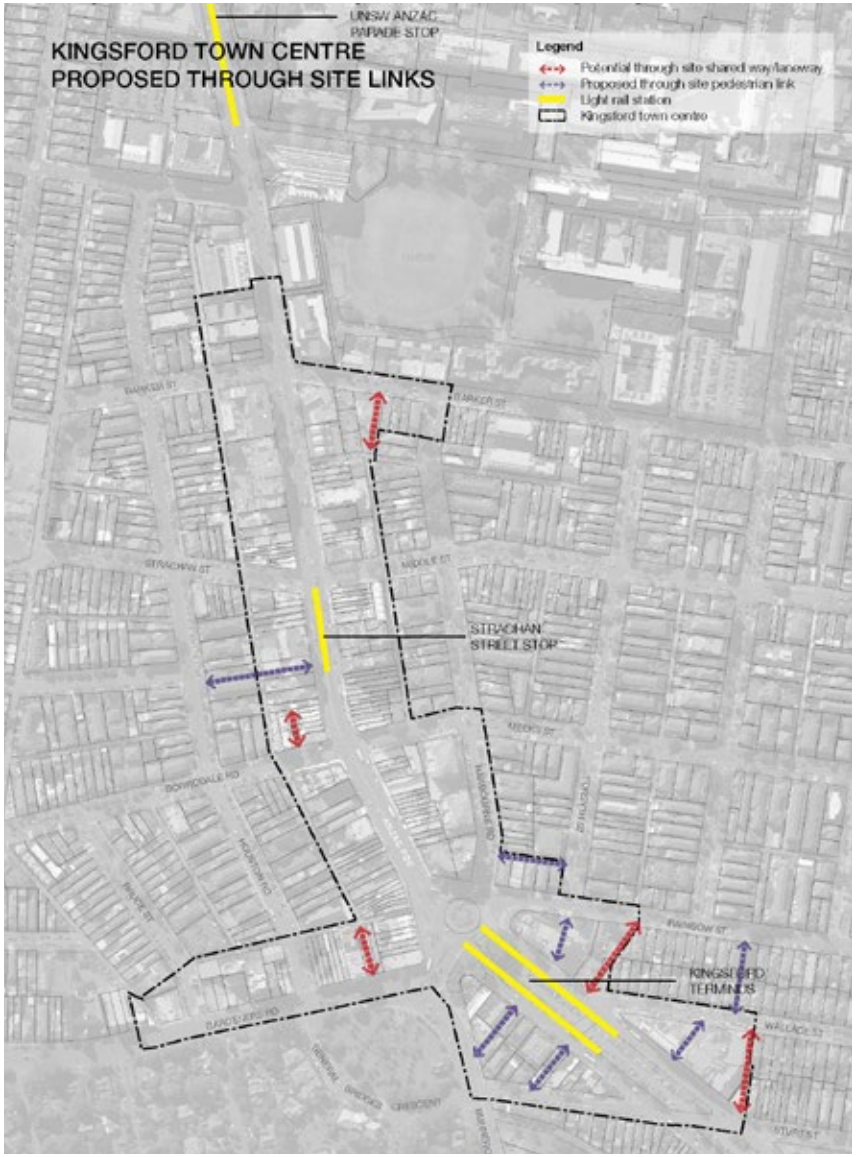


Figure 75: Proposed mid-block links – Kingsford town centre
Source: Conybeare Morrison 2016

Part C – Vision and Strategies

5.8 Design Excellence

All new development will be expected to deliver a high standard of architectural design to contribute to an enriched experience of the Kensington and Kingsford town centres. Accordingly, 'design excellence' has been established as a driving urban design principle for future development in these centres.

The consideration of 'design excellence' is currently a requirement under RLEP 2012 (clause 6.11) for proposals involving buildings over 15m in height, or for sites that are over 10,000m^2 in size or for land where a site specific development control plan is required (e.g. Kingsford Triangle site). Development consent cannot be granted under the RLEP design excellence provisions, unless the consent authority is satisfied that the proposal exhibits design excellence.

Key matters for consideration include a high standard of architectural design, response to site context and surrounding development, sustainable design principles in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency, and any potential impacts on view corridors and landmarks.

While the RLEP 2012 design excellence provisions will apply to most sites within the town centres, it is considered that the key sites located within the identified Precincts should achieve a performance benchmark in design innovation and sustainability beyond what is presently required. These sites will accommodate taller building forms that have a greater degree of visibility being located at key transit nodes as well as additional floor space. Future development on these key sites should therefore be required to demonstrate a high level of design excellence.

It is proposed that future proposals on these sites be informed by an 'architectural design alternatives competition" undertaken by the proponent prior to the lodgement of a formal development application. A similar approach has been adopted by the City of Sydney which has resulted in a number of successful design outcomes.

As part of this process, architectural firms with demonstrated experience in the design of high quality buildings would be invited by the proponent to submit design solutions that:

- Demonstrate a high level of design excellence in accordance with criteria established in the RLEP 2012
- Achieve a minimum green star certification rating of 5
- Deliver public benefits consistent with site specific DCP requirements (e.g. public plazas, through-site links, social infrastructure and/or innovation centre floor space requirements)
- Provide high quality materials and finishes; and
- Ensure development feasibility.

The proponent will determine the final outcome of the selection process by selecting the proposal that best meet the considerations above as well as a Council endorsed Design Excellence Strategy. At least one independent expert will appointed by Council to act as an observer to ensure that the procedural requirements have been adhered to appropriately.

Part C – Vision and Strategies

For proposals that successfully demonstrate design excellence, the following design based trade-offs may result:

An additional building height to a maximum of two storeys (to achieve maximum height in controls); and

Exclusion of identified social infrastructure/ innovation centre floor space requirements from the total gross floor area calculation.

The benefits of a design excellence competition approach is that it will help optimise design outcomes for identified key sites, stimulating creativity, driving innovation and improving design quality.

Importantly such an approach will ensure that any uplift afforded under the planning controls will only be granted where design excellence is clearly demonstrated, in conjunction with the delivery of substantial public benefits to the community.

Strategies

1) Ensure the form and scale of development is appropriate to its location and contributes to a positive urban design outcome in the town centres

Actions

a) Amend RLEP 2012 to establish building heights appropriate to each part of the town centres as shown in the building heights map (Figures 56 and 57):
- Establish a mid-scale 31m (9 storey) maximum height limit
- Allow higher scale in Key Precincts as follows:
- Todman Square – 54m (16 storeys, or 18 storeys with demonstrated design excellence)
- Kingsford Mid-Town – 54m (16 storeys, or 18 storeys with demonstrated design excellence)
- Kingsford Junction (Rainbow Street and Kingsford Triangle sites) – 51m (15 storeys, or 17 storeys with demonstrated design excellen22*NB: increased height will be in conjunction with the provision of increased setbacks, through site links and/or plazas identified in this Strategy.*

b) Amend the DCP 2013 to introduce a secondary height limit to facilitate mews style developments for the sites indicated on the DCP Height Transition Map (Figures 58 and 59)

c) Amend the DCP 2013 introduce a shared zone/laneway in locations identified on the DCP DCP Height Transition Map (Figures 58 and 59)

d) Amend the RLEP 2012 to establish maximum FSRs appropriate to each part of the town centres as shown on the FSR map (Figures 65 and 66):
- Sites accommodating 9 storeys: FSR 4:1
- Precinct sites: FSR 5:1

e) Amend the DCP 2013 to establish building setbacks in each part of the town centres as shown on the Building Setback Map (Figures 70 and 71):
- Require a 1.5m setback of the street wall for 9 storey buildings
- Require a 2m setback of the street wall at the rear of identified sites in Kingsford town centre.
- Require a 2.5m setback of the street wall for identified sites at Todman Square, Kingsford Midtown and

Heritage and Contributory Buildings
- Require a zero setback of the street wall for heritage items and contributory buildings and a 6.5m upper level setback where additional levels are proposed to these buildings

f) Amend the DCP 2013 requiring that development establish a 4 storey street wall by stepping back at the fourth storey to a minimum depth of 4m to achieve a visual separation between the lower and upper levels of a building

Part C – Vision and Strategies

Strategies

2) Ensure that reasonable solar access is maintained to neighbouring properties and streets and public space

Actions

a) See Part C Section 8 – Public Realm and Landscape, Action 7(e)

Strategies

3) Achieve a high level of accessibility and permeability within the town centres

Actions

a) Amend the DCP 2013 to require that development on identified sites provide mid-block links to facilitate permeability in the block structure (Figures 74 and 75)

Strategies

4) Encourage a high standard of architectural design to make a positive contribution to the aesthetic quality, functionality and amenity of the urban environment

Actions

a) Continue to require that all new development involving the construction of a new building or external alterations to an existing building meet the requirements of RLEP 2012 (clause 6.11) relating to design excellence

b) Amend RLEP 2012 to require that all new development involving the construction of a new building in the following Precincts be subject to an architectural design alternatives competition process:
- Todman Square Precinct
- Kingsford Midtown Precinct
- Kingsford Junction Precinct

Strategies

5) Recognise building roofs as a strong visual landmark element in built form design and the town centres' skyline

Actions

a) Amend RLEP 2012 to include the Standard LEP Instrument model provision on 'architectural roof features'*

*this model LEP clause allows flexibility in building height to accommodate architectural roof features. The architectural roof feature must not comprise an advertising structure or include floor space or be capable of modification to include floor space.

Part C – Vision and Strategies

Figure 76: Aerial view looking north-east over Kensington town centre.
Source: Conybeare Morrison 2016

Figure 78: Artist's impression looking south from Anzac Parade near Ascot Street, Kensington town centre. Source: Conybeare Morrison 2016

Figure 77: Artist's impression looking south from Anzac Parade towards Todman Avenue, Kensington town centre. Source: Conybeare Morrison 2016

Figure 79: Aerial view looking north-east over Kingsford town centre.
Source: Conybeare Morrison 2016

Figure 80: Artist's impression looking north along Anzac Parade, near Meeks Street Plaza in Kingsford town centre
Source: Conybeare Morrison 2016

Figure 81: Artist's impression Looking south on Anzac Parade, towards nine-ways (Kingsford Junction), Kingsford town centre
Source: Conybeare Morrison 2016

Part C – Vision and Strategies

5.9 Floorspace Capacity

The K2K Urban Design Report investigated floor space yields that could be delivered as a result of proposed changes to built form controls and in response to the need to deliver floor space capacity to support future employment and population growth. The strategic justification on planning for growth is discussed in Part C Section 3 – Housing Growth and Diversity.

The indicative development yield and break down of dwelling typologies for both centres is provided in the following table. It shows that under the revised built form controls a net residential dwelling yield of between 1,150 to 1,480[28] additional new dwellings could be achieved. But most importantly, the revised built form controls unlocks the existing development capacity to support the delivery of approximately between 4,100 to 5,280 new dwellings and 54,486m² of commercial floor space across both town centres.

Independent land economic advice sought as part of this Strategy, suggested that to encourage redevelopment along the Corridor, there is a need to increase FSRs and building heights within the study area.

The floor space yields demonstrates that both Kensington and Kingsford town centres are capable of accommodating sufficient dwelling and employment floor space required to meet projected needs, while also providing for a liveable and vibrant environment.

Table 10: Floorspace Capacity for Kensington and Kingsford town centres

	Current @ 3.0:1	@4.0:1 & 5.0:1	Uplift
Total K+K	**296,139m² 251,718m²**	**424,658m² 374,723m²**	
Commercial Space @ 30%	29,614m²		
Commercial Space @ 30% site and 1:1 @ nodes		54,486m²	24,872m²
Residential GFA			103,675m²
Residential (average dwelling GFA 70m²)	3,808 dwellings	5,288 dwellings	1,481 dwellings
Residential (average dwelling GFA 80m²)	3,332 dwellings	4,627 dwellings	1,296 dwellings
Residential (average dwelling GFA 90m²)	2,961 dwellings	4,113 dwellings	1,152 dwellings

[28] Note these figures provides a range based on the lowest (70sqm) and highest (90sqm) GFA and have been rounded for ease of application

Part C – Vision and Strategies

6.0 Heritage Conservation

The Kensington and Kingsford town centres have evolved since the early 20th Century as traditional retail/commercial centres, with their linear urban form highly influenced by the extension of the original tram line along Anzac Parade. Early development comprised fine grain retail/commercial shopfronts generally focused on Anzac Parade with some housing attached at the rear and upper levels.

The town centres have seen considerable change to their historic fabric over time, such as demolition of older shopfronts and irreversible alterations to building facades. Nevertheless, the historical development of the town centres is still evidenced through a small number of buildings listed as Heritage Items in the RLEP 2012.

A number contributory buildings are also retained, which, through their largely intact architectural style, scale, form and detailing attest to the early history of the town centres. While these buildings do not demonstrate a level of heritage significance that would warrant heritage listing under the RLEP 2012, the DCP 2013 requires that they be retained to ensure a sense of historical continuity and to enhance streetscape character so the town centres remain recognisable over time.

Figure 82: Development on the eastern side of Anzac Parade 1946
Source: www.trove.nla.gov.au

Figure 83: Buildings to the western side of Anzac Parade erected during the Inter War years 1946
Source: www.trove.nla.gov.au

Heritage Items

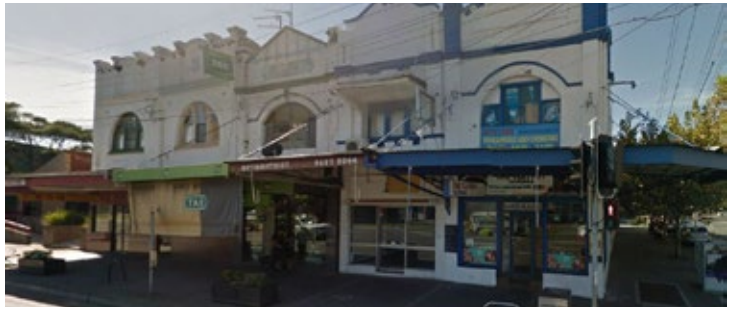
Doncaster Hotel, Kensington
268-270 Anzac Parade, Kensington

Masonic Temple, Kensington
199-201 Anzac Parade Kensington

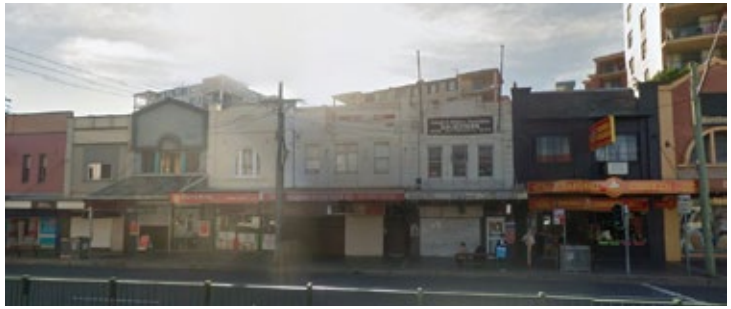
O'Deas Corner, Kingsford
424-436 Anzac Parade Kingsford

Examples of Contributory Buildings

126-146 Anzac Parade, Kensington



172-180 Anzac Parade, Kensington



522-532 Anzac Parade, Kingsford

Figure 84: Heritage Items in the Study Area
Source: Google Streetview 2016

Part C – Vision and Strategies

6.1 Infill Development and Contributory Buildings

The draft Issues Paper identifies that in Kensington town centre, new infill development has largely been sympathetic to the streetscape values of existing contributory buildings.

In the context of Kingsford town centre, however, there are frequent examples of later buildings that are unsympathetic to the historic fabric of surrounding contributory buildings. These include multi-storey buildings without a base element relating to the predominant two to three storey fine grain scale of the town centre, or where podiums are provided that are lower than the traditional facades and do not effectively define the Anzac Parade street walls.

In respect to Kensington and Kingsford town centres, the different outcomes pertaining to infill development (and its relationship to existing contributory buildings) can be attributed in part to the DCP controls which differ for each centre. Unlike heritage listing in the RLEP 2012 (which provides strong statutory protection against demolition), contributory façade listing is not based on defined heritage significance criteria and established conservation standards such as the Burra Charter. Consequently, the retention of contributory buildings and their historic fabric depends entirely on the strength of the DCP controls.

The existing DCP 2013 controls for Kensington town centre are more stringent than Kingsford town centre, requiring the conservation, retention and sensitive adaptation of contributory buildings (for example through mews style development) and the avoidance of 'façadism' (the retention of only the outer skin of a building). The DCP controls specifically require the involvement of a heritage/conservation specialist and the submission of a Heritage Impact Statement addressing impacts on heritage significance/fabric as part of the development process.

In contrast, the DCP controls for Kingsford town centre require that contributory facades be retained as much as practicable, or reinterpreted as guiding examples in the design of new development. There is therefore somewhat of an inconsistency between the controls for contributory buildings and infill development in the town centres.

6.2 Heritage Review of Kingsford Town Centre

Colin Brady Heritage Consultant was engaged in early 2016 to undertake a heritage review of the Kingsford town centre to evaluate the status and condition of the existing Heritage Item (O'Deas Corner at 424-436 Anzac Parade, Kingsford), contributory façades (and any other buildings not previously identified) and to make recommendations relating to DCP 2013 controls.

This is the first heritage review of Kingsford town centre undertaken since the original Randwick Heritage Study was carried out over 25 years ago. A peer review of the Kensington town centre heritage controls was undertaken in 2002, hence a further study was not warranted as part of this process.

Review findings confirm that Kingsford town centre is culturally significant as a setting of early 20th Century retail and commercial street front buildings, with many constructed as shop/residences in the years immediate to the First World War and retaining detailing, form and groupings representative of later Federation and Inter-War architecture.

A condition assessment of the heritage listed building group at O'Deas Corner (424-436 Anzac Parade, Kingsford) reaffirms its heritage significance as a well detailed example of Federation shop/residence development and for its associations with Frank O'Dea – bookmaker, real estate developer and promoter of cultural activities in the foundation years of South Kensington, later renamed Kingsford.

The Review identifies opportunities to strengthen DCP controls for infill development to minimise adverse impacts on the historic built fabric and curtilage of existing contributory buildings.

The review also identifies four buildings that may have contributory value based on their form and detailing: 279-187, 357, 394 and 528 Anzac Parade, Kingsford. These have been carefully considered in terms of future economic objectives, urban design and public domain outcomes for the Kingsford town centre (particularly in terms of increased setbacks needed to facilitate wider footpaths). Accordingly, 279-278 Anzac Parade, Kingsford is proposed to be included on the schedule of contributory buildings in the DCP 2013 (NB: 528 Anzac Parade is already listed in the Schedule).

The following strategies reflect review findings and aim to strengthen DCP 2013 controls to ensure that new infill development is sympathetic to existing contributory buildings and respects the historical development of the town centres.

Part C – Vision and Strategies

Strategies	Actions
1. Protect the heritage character and fabric of buildings that reflect the historical development of the town centres	a) Continue to protect the heritage significance of heritage items and contributory buildings through the consistent and rigorous application of relevant RLEP 2012 heritage provisions and DCP 2013 guidelines for heritage conservation b) Update the heritage inventory sheet for O'Deas Corner (424-436 Anzac Parade) with key findings from the heritage condition assessment c) Amend the DCP 2013 to add the following to the list of contributory buildings to be conserved and retained in Kingsford town centre: • 279-287 Anzac Parade, Kingsford d) Amend the DCP 2013 to introduce a 6.5m upper level setback for contributory buildings e) Amend the DCP 2013 for Kingsford town centre to incorporate additional controls for contributory buildings (currently applicable to Kensington town centre) including the requirement for the submission of a Heritage Impact Statement
2. Integrate heritage and contributory buildings into redevelopment	a) Require the retention and adaptive reuse of historic shopfronts b) Strengthen DCP 2013 controls for contributory buildings in Kingsford town centre by requiring that new works: • Avoid 'facadism' and retain the form and articulation of historic street frontages (such as the first structural bay/or first room to preserve inset verandas) • Involve the commensurate reinstatement/restoration of historic fabric to balance the impact of larger works set back from the original fabric • Retain original fabric/features including original lighting and historic signage • Incorporate sympathetic colour schemes
3. Ensure that new infill development respects the height, scale, siting, character and proportions of contributory buildings	a) Amend the DCP 2013 for Kingsford town centre to require that new infill development/works: • Have regard to the scale, character and proportions of heritage and contributory buildings • Reflect segmented frontages of historic building groups through facades that are broken into smaller vertical sections and articulation • Provide consistent heights and alignment of street awnings with existing contributory forms • Retain the profile and massing of exposed side elevations • Provide podiums that reference the principle influence line of historic streetscapes and are cohesive with the established street frontage

Part C – Vision and Strategies

7.0 Sustainability and Transport

This section considers the environmental sustainability of the town centres, including at both a buildings and precinct level. It contains strategies and actions to reduce water consumption, energy use and greenhouse gas emissions, improve stormwater quality, reduce traffic congestion and improve walking and cycling access.

A vibrant and visitor-friendly town centre is also a sustainable town centre. A centre that is easy to walk or cycle around, that provides for a strong mix of retail, residential and commercial experiences, connects to its surrounding green spaces and public transport, and manages excessive car use and parking. All of this contributes to a high quality and long lasting urban fabric, a centre that can thrive and continue into the future. Both the research and practice confirms the sustainability of a town centre provides for the physical, mental and social well-being of its inhabitants.

Sustainability is highlighted as one of the Draft NSW Architecture and Urban Design Policy's seven key principles[29] at both a building and precinct level. It features as a key component of ensuring Kensington and Kingsford become resilient, best-practice environmentally sustainable town centres. Sustainability is no longer an optional extra, but a fundamental aspect of functional, liveable design.

This draft Strategy outlines a sustainability framework for Kensington and Kingsford to inform the design of individual buildings, and the integration of precinct-wide innovative systems. Council is committed to strive for best practice architectural and environmentally sensitive design, with a focus on energy efficiency, water conservation, waste and resource minimisation. These principles and their related actions are outlined in Council's 20 Year Randwick City Plan, including encouraging design excellence and sustainability across all development[30]. This draft Strategy also commits to the principles of travel demand management, reducing reliance on private vehicles and providing for enhanced public transport, pedestrian and cycle networks to facilitate user-friendly access to the town centres and surrounding destinations.

Objectives

To establish Kensington and Kingsford as a best-practice environmentally sustainable district that provides for the physical, mental and social wellbeing of its residents and visitors

To provide a safe, integrated and accessible network of pedestrian and cycling access

To enhance amenity by reducing pollution and congestion arising from private vehicle use and encourage active transport and public transport

To adopt sustainable design techniques in the lighting, stormwater collection, and landscaping of the public realm

To improve the quality of stormwater prior to its release into iconic waterways such as Botany wetlands and Botany Bay; and

To provide innovative waste solutions capable of reducing litter and increasing re-use, recycling and recovery of waste.

7.1 Sustainability and Buildings

The international and national commitment to reducing carbon emissions

In December 2015, 195 countries, including Australia, agreed on the United Nations Paris Agreement on climate change. The key objectives of the Paris Agreement include:

- A goal to limit the increase in global temperatures to well below 2 degrees and pursue efforts to limit the rise to 1.5 degrees
- A commitment to achieve net-zero emissions, globally, by the second half of the century
- A five year review and ratchet process which is likely to lead to more ambitious commitments from countries in the future.

The Commonwealth Government has now signed and ratified the Paris Agreement.

The current interim targets are:

- Carbon emissions to be five% below 2000 levels by 2020
- Carbon emissions to be 26 to 28% below 2005 levels by 2030.

The 2030 target is equivalent to a 50% reduction in per capita emissions and a 65% reduction in the emissions intensity of the economy (NSW Climate Change Policy framework). The agreement's review and ratchet mechanism means that Australia's interim emissions reduction targets are likely to become more ambitious over time, with the first review due in 2017.

[29] Draft Architecture and Design Policy 2016
[30] The Randwick City Plan: A 20 yYear Plan 2006

Part C – Vision and Strategies

Climate Change and Buildings

The built environment is a major contributor to greenhouse gas emissions and energy consumption in Australia, accounting for approximately 22% of the nation's total greenhouse emissions[31]. Much of this is attributed to the resources and materials used in building construction, as well as pollution and waste resulting from development activity. The actual operation of a building can also contribute significantly to energy and water consumption.

New buildings have a crucial role to play in reducing cities carbon emissions and ensuring a sustainable future[32]. Business-as-usual design results in emissions-intensive buildings, whereas smart and efficient design can deliver net zero emissions buildings[33].

Current Development Standards – Residential Buildings

Since 2004, all new residential dwellings in NSW must be designed in line with the Building Sustainability Index (BASIX), a NSW Government environmental planning instrument. BASIX mandates sustainability standards in residential developments by assessing the consumption of mains-supplied water, energy and thermal performance[34].

Draft NSW Architecture and Urban Design Policy 2016

Design Principle 2 – Sustainable, efficient and durable:

Design excellence must incorporate environmental sustainability and responsiveness in its construction and usage, meeting the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, liveable design.

BASIX currently requires detached and semi-detached houses to emit 40% less greenhouse gases than the NSW per capita benchmark, whereas high-rise apartment buildings are only required to emit 20% less greenhouse gases[35].

BASIX, which establishes energy and water requirements for new residential dwellings, is recognised as in need of updating to achieve best practice design outcomes. Furthermore, under the NSW Government legislation, Council's local plans cannot require energy or water efficiency, greenhouse gas emissions or thermal comfort different or beyond the BASIX standard.

Non-Residential Buildings

There are state government standards, such as BASIX, applying to non-residential development. The Randwick DCP 2013 requires that new commercial premises and hotel and motel accommodation with a floor area of 1,000m^2 or more must achieve a minimum 4 star National Australian Built Environment Rating System (NABERS) rating and undertake a Commitment Agreement. Development Applications must include an Ecological Sustainable Development Statement prepared by an accredited professional demonstrating that the required NABERS rating can be achieved.

In addition to the Randwick DCP, The National Construction Code (NCC) is a standard for all non-residential development in NSW which requires buildings meet minimum energy efficiency requirements under its Section J Energy Efficiency provisions[36]. The requirements of Section J of the NCC is equivalent to approximately NABERS Energy 4-star and NABERS Water 3-star. Current requirements address the following:

- Building Fabric (thermal design) and glazing
- Air-conditioning and Ventilation Systems
- Lighting
- Heated Water Supply
- Energy Monitoring
- Additional energy demands, such as plug-in appliance loads are not addressed.

[31] COAG (2009) National Strategy on Energy Efficiency
[32] UN-Habitat (2011) Hot Cities: battle-ground for climate change Report
[33] Climate Change Authority (2012) Australia's emission outlook
[34] NSW Building Sustainability Index 2016 (www.basix.nsw.gov.au)
[35] City of Sydney Residential Apartments Sustainability Plan (2015)
[36] Kinesis (2016) Eastern Suburbs Low Carbon Future Plan – High Performance Building Study

Environmental Performance of Existing Buildings

A review of NSW Department of Planning and Environment BASIX data for the Eastern Suburbs region highlights the following:

In 2013/14, approximately 25% of apartments and nearly 40% of single dwellings exceeded BASIX Energy compliance by 4 or more points[37].

This indicates that there are opportunities for improvements to apartment design as a new high rise apartment block built only to the required BASIX Energy target of 20 performs worse than the average existing housing stock.

Benchmarks for Sustainable Buildings

In the Randwick DCP 2013, a sustainable building is one that is "environmentally responsible and resource efficient throughout its life cycle, while reducing the overall impact on the environment and human health"[38]. Buildings that are sustainable use environmentally friendly construction materials and fittings, are energy and water smart, have healthy and comfortable indoor environments, and yield considerable cost savings to property owners and tenancies. The Green Star – Multi Unit Residential Business Case Report showed green buildings, built for high energy and water efficiency, consume 26% less energy than the average building.

New major developments could include capacity to generate a minimum 15% of their total energy onsite using renewable energy sources. This would offset common area electricity use and subsequently result in a reduction of building strata fees.

The Green Star Rating System

The Green Star rating system, managed by the Green Building Council of Australia, is a voluntary environmental rating system that evaluates the environmental design and construction of buildings. Figure 85 outlines the rating system, where a 4-star rating signifies 'Best Practice' in environmentally sustainable design and/or construction, a 5-star rating indicates Australian excellence and 6-star demonstrates World Leadership[39].

The Green Building Council of Australia administers the rating system to evaluate the environmental impact of the design, construction and operation of buildings and building-related communities. There are a number of rating tools developed for particular building types, including office buildings, shopping centres and multi-unit residential buildings. The rating tool covers nine performance categories, as identified in Figure 86.

Figure 85: Green Star rating system
Source: www.gbca.org.au

[37] Ibid
[38] Randwick City Council Development Control Plan 2013 Part B
[39] Green Building Council of Australia (www.gbca.org.au)

Part C – Vision and Strategies

A study of the environmental benefits and cost-savings of building to Green Star estimated that the annual savings on energy and water bills for a 12-storey building are as follows:

- For a 4 star building, an annual saving of $9,078
- For a 5 or 6 star building, an annual saving of $14,691.

This is equivalent to a $95-155 saving per person per year[40].

Figure 86: Green star performance categories
Source: www.new.gbca.org.au

[40] ARUP (2016) Waverley Council Sustainable Building Incentives Business Case

Green Star for Apartments

Green Star 4 star Rating

10% improvement on BASIX energy requirements through:

- Upgraded façade to high performing single glazed or double glazed units
- Improved energy efficiency rating for air-conditioning units
- Environmentally considerate management practices, including commissioning, metering and monitoring requirements
- Improved ventilation and increased acoustic performance between tenancies
- Facilities that promote sustainable transport options, including cyclist parking/ amenities and reduced car parking
- Efficient water fixtures and fittings, reuse of fire test water and systems that minimise potable demand for irrigation purposes
- Considered material selection for products such as concrete, steel and timber.

Green Star 5 star Rating

20% improvement on BASIX energy requirements through:

- Installation of renewables such as solar thermal for domestic hot water heating and photovoltaics to offset electrical demand
- Installation of high energy star rated appliances such as fridges, clothes washers and dryers
- Implementing a Climate Adaptation Plan
- Maximising daylight within units and upgrading lighting systems to improve surface illumination in rooms
- Specifying products with high sustainability credentials, including Environmental Product Declarations, Third-party certified and with Stewardship programs in place
- Site layouts that include high areas of landscaping or green roofs.

Green Star 6 star

- Highest reduction targets for stormwater pollution
- Onsite innovations during construction including a High Performance Site Office and Contractor Education.

National Australian Built Environment Rating System (NABERS)

For commercial development, NABERS can be used to measure the environmental performance of the construction and ongoing operation. The Eastern Suburbs Low Carbon Futures Plan, prepared for Randwick City Council in partnership with Waverley and Woollahra Councils, outlines best practice performance for commercial buildings and shopping centres is approximately equivalent to NABERS 5-star Energy and NABERS 4-star Water (where recycled water is not available) or 5-star with a recycled water system[41].

Based on analysis completed to date, best practice performance for commercial buildings and shopping centres, as outlined above, could be met at a marginal capital cost of approximately $15 to $35 per square metre. This would result in a 15-20% reduction in greenhouse gas emissions compared to the current controls. In addition, NABERS 4-star construction can lead to a 10-20% reduction in water consumption, and if there is a local recycled water system, water consumption can be reduced by up to 60%. A local water recycling scheme will be investigated, as detailed later in this strategy.

Implementation costs

The July 2016 Green Star Financial Transparency Paper prepared by the Green Building Council of Australia reported that building costs for the average multi-unit residential development were an extra $150 per m^2 or an extra 4% of overall project cost[42]. This includes cost of materials and installation required to meet the green star credits and the associated costs for documenting the materials used and certification, which is on average 0.7% of overall project cost.

A separate study commissioned by Waverley Council found that for a 12-storey (ground floor retail and multi-floor residential) building it is estimated that there would be approximately a 4-6% cost premium on standard building practices to a Green Star rated building[43].

Green Star tends to become more affordable with a greater scale of development as the Green Star costs represent a smaller percentage of the overall building project contract value compared to low rise and single dwellings[44].

[41]Kinesis (2016) Eastern Suburbs Low Carbon Future Plan - High Performance Building Study
[42]Green Building Council Australia (2016) Green Star Financial Transparency Research Paper
[43]ARUP (2016) Waverley Council Sustainable Building Incentives Business Case
[44]Ibid

Part C – Vision and Strategies

Ensuring Sustainable Buildings

While Council cannot require through its planning controls environmental performance above that required by BASIX, Council can encourage and/or offer incentives for the voluntary adoption of sustainability measures. All developments are encouraged to use the Green Star tools to improve the environmental attributes of their proposed building. This would result in an increase in 'green' buildings through better application of sustainable building techniques, materials and technologies which reduce the ongoing environmental impact of buildings.

On key sites within the Kensington and Kingsford town centres where they receive the highest planning uplift, 5-star green star performance will be established within the LEP as criteria for achieving design excellence. These key sites will become iconic buildings, not just for their design, but also for demonstrating best practice in sustainable construction and operation.

In addition to new buildings, Randwick City Council has partnered with Woollahra and Waverley Councils on various sustainability research and initiatives. For sustainability of existing apartments, the three-Council project is designing a program for apartments which will address electricity and water consumption issues. Initiatives may include funding for audits of common areas to identify opportunities for energy reduction through changes to lighting. Existing developments within the Kensington and Kingsford town centres will be encouraged to participate in any future program identifying opportunities for energy and water efficiencies.

Strategies	Actions
1. Encourage higher performance ratings for residential development through Green Star accreditation	a) Include 5-star green star performance in the RLEP 2012 as a criteria for achieving design excellence on key sites b) Amend the DCP 2013 to encourage all other sites within Kensington and Kingsford town centres to achieve green star accreditation
2. Ensure commercial development is built to best-practice sustainability standards	a) Amend the DCP 2013 to require that new commercial premises and hotel and motel accommodation with a floor area of 1,000m^2 or more must achieve a minimum NABERS 5-star Energy and NABERS 4-star or 5-star Water rating
3. Encourage existing buildings to improve their energy and water consumption performance	a) Continue participating with Woollahra and Waverley Councils in the 3-Council project to improve the environmental performance of existing residential flat buildings and shop top housing

7.2 Water Management

The Botany Sands Aquifer

The Botany Sands Aquifer is a large volume of underground water present in the sandy ground surrounding Botany Bay and covering an area of approximately 141km^2 including the majority of the Randwick LGA.

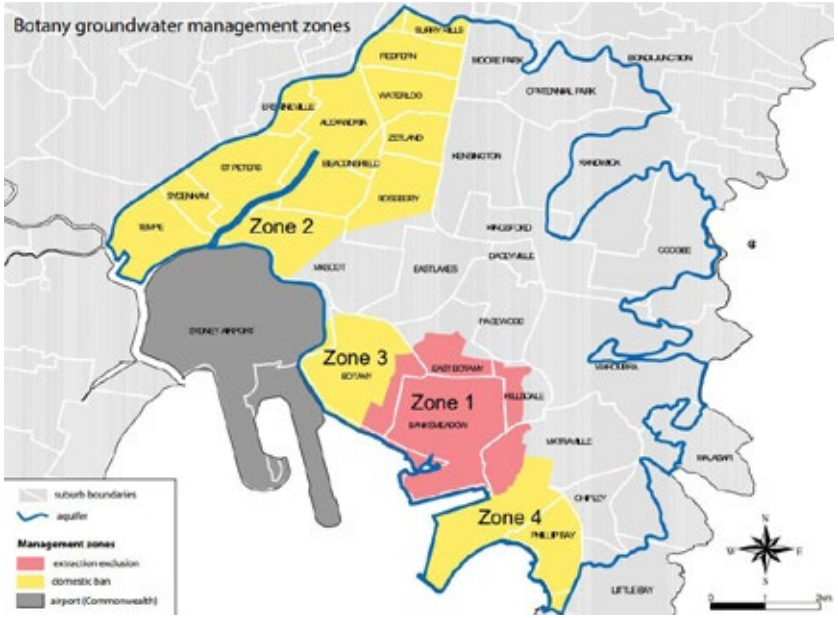


Figure 87: Extent and management zones for the Botany Sands Aquifer
Source: www.water.nsw.gov.au

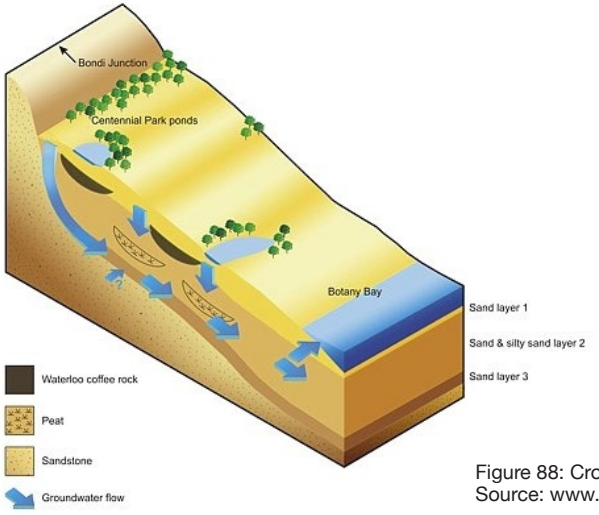


Figure 88: Cross section of the Botany Sands Aquifer
Source: www.centennialparklands.com.au

The aquifer is recharged by rainwater percolating through sand and sandstone strata which act as natural filters to remove solid litter, silt and harmful nutrients. The water-holding capacity of the sand aquifer is enormous and has been estimated to contain up to 300 litres of water per cubic metre of sand[45]. The Australian National Water Commission estimates that the aquifer can sustainably supply 22,500ML/yr. of groundwater. Currently only approximately 6,000ML/yr. is allocated for use[46].

The level of the aquifer can vary with seasonal conditions, and in some areas is quite close to the surface. As a consequence developments in locations within the Botany Sands Aquifer area need to consider groundwater flows during the design and construction process.

Development and Groundwater Procedures

Groundwater is the water contained within rocks and sediments below the ground's surface in the saturated zone[47]. In NSW, groundwater is managed under the Water Management Act 2000.

When proposed developments are likely to experience seepage water issues or extend into the ground water table, Council places stringent conditions in the development consent to ensure impacts are appropriately managed. All development applications received by Council that are likely to interfere with the aquifer either through dewatering activities or through the construction of a basement carpark are referred to Water NSW as Integrated Development, as required under Part 4 of the Environmental Planning and Assessment Act 1979.

The long term cumulative impacts of basements are assessed by the Water NSW when referred to them as Integrated Development. Side setbacks for basements and deep soil planting areas, as required under Council's DCP, in addition to roads and footpaths provide breaks between basements built on private land.

Water NSW manages over 3000 monitoring bores and uses computer-based groundwater modelling to better understand groundwater flow systems and make decisions on development applications. Water NSW reviews each development application against the latest aquifer information and issues development-specific general terms of approval that must be applied to the development as conditions of consent. In addition to these requirements, Council also has standard development conditions that can be applied to the development consent to minimise impacts on the aquifer movement and directional flows.

Comprehensive and robust conditions are applied to development to ensure developments are not adversely impacted by groundwater flows and that groundwater flows are not adversely impacted by development. Specifically, conditions are applied to ensure:

- The quantity and method of groundwater extraction during the construction process is appropriate and executed with authorisation from Water NSW
- The basement is be designed and constructed to be waterproof
- Sufficient permanent drainage is provided beneath and around the outside of the watertight structure to ensure that natural groundwater flow is not impeded.

In addition, conditions are applied to ensure documentation and reports are provided from the applicant of a development with information including measurements of groundwater levels, a map of the site including the water table, details of the present and potential groundwater flow paths and hydraulic gradients in and around the site. Monitoring and data is required by Water NSW at several stages throughout the construction process both to monitor potential adverse impacts and to inform their understanding of the groundwater flows.

History of the Millstream

Centennial Parklands ponds in the north of Randwick form the upper catchment of the Botany Wetlands, an interconnected chain of ponds and dams which lie approximately six kilometres downstream, where they eventually empty into Botany Bay.

The Millstream was once Sydney's main water source after the Tank Stream and The Tunnel (Busby's Bore)[48]. Between 1856 and 1886, a steam-powered Botany Water Pumping Station was used to pump water

[45] Australian Government National Water Commission Botany Sands Aquifer Case Study (www.wetrocks.com.au)
[46] Ibid
[47] NSW Department of Primary Industries Water (http://www.water.nsw.gov.au/water-management/groundwater)

from the Botany/Lachlan Swamps up to the Paddington Reservoir and Crown Street Reservoir, which is still in use today.

As the Millstream once ran through Kensington and Kingsford, following the contours of the land, parts of Kensington and Kingsford are now flood-affected to varying degrees.

As part of the Kensington Centennial Park Floodplain Risk Management Study and Plan, Council is investigating potential improvements throughout Kensington and Kingsford to alleviate flooding impacts. There are also additional opportunities through using water sensitive urban design throughout the town centres and surrounding areas.

Water Sensitive Urban Design

Randwick's water infrastructure has coped well with population and development growth since the time they were laid. Most drainage infrastructure has a capacity ranging between the 1 year and 10 year storm event but a significant number of pipes exceed capacity in events as small as the 1 year storm[49].

Water sensitive urban design offers an alternative to the traditional conveyance approach to stormwater management by acting to capture water at the source, and thereby reducing the required size of the structural stormwater system. It seeks to minimise impervious surfaces and thus enable infiltration, reuse water on site, incorporate retention basins to reduce peak flows, and incorporate treatment systems to remove pollutants.

The social and environmental benefits of water sensitive urban design systems are widely recognised and include:

- improved water quality of stormwater
- greener open spaces and enhanced urban landscapes
- reduced localised flooding
- increased infiltration to refill the aquifer
- improved amenity in our local communities
- alternative water supply option[50].

There are opportunities to implement raingardens, swales, tree pits and other water sensitive urban design measures within the Kensington and Kingsford town centres to achieve a range of benefits, particularly improving water quality, localised flooding improvements and greening of the town centres.

Figure 89: Water sensitive urban design at Victoria Park
Source: www.landcom.com.au

[48]NSW Office of Environment and Heritage - Heritage Places and Items, Botany Water Reserves (www.environment.nsw.gov.au)
[49]Randwick City Council (2016) Kensington Centennial Floodplain Risk Management Study and Plan
[50]Water sensitive urban design life cycle costing, Melbourne Water 2013.

Case Study – Bio Swale at Prince Henry

The Prince Henry development at Little Bay is a residential development in the eastern suburbs of Sydney. The total site area is approximately 84 hectares of which 34 hectares is being redeveloped into a mix of residential and community use.

The WSUD objectives for the site developed during the master planning process in 2003 are:

- Promotion of stormwater reuse to reduce the demand on potable water supply
- Ensure that no existing stormwater reuse is disadvantaged because of the development
- Restoration of the riparian zones and creek lines of two waterways on site, identified as the Central and Southern Watercourses.
- Use less water for landscaping through careful design and selection of plants and irrigation methods suitable to the soil type and location.

Figure 90: Bio swales integrated into public open space at Prince Henry
Source: www.landcom.com.au

Levels of Water Consumption

Randwick City Council, with Waverley and Woollahra Councils have initiated the Eastern Suburbs Regional Water Reduction Plan to complement Council's Low Carbon Future Plan and develop strategies that respond to water consumption issues in light of the specific climate, geomorphology and built form of the region.

In December 2015, Stage 1 of the Eastern Suburbs Regional Water Reduction Plan, prepared by Kinesis outlined water consumption and urban form for the region. The analysis identified residential use was the highest consumer of water in the region as irrigation of open space and industrial water use utilise a variety of groundwater and treated stormwater sources (see Figure 91).

Not all water consumption requires potable (drinkable) water as toilet flushing and irrigation can use a lower grade of water than that required for drinking. A breakdown of water consumption by water grade estimates that that 44% of residential water use can be provided by non-potable water standard[51] (see Figure 91). This means there is an opportunity for a residential recycled water scheme and alternate forms of water re-use in the Kensington and Kingsford town centres.

[51] Kinesis 2016, The Eastern Suburbs Regional Water Reduction Plan

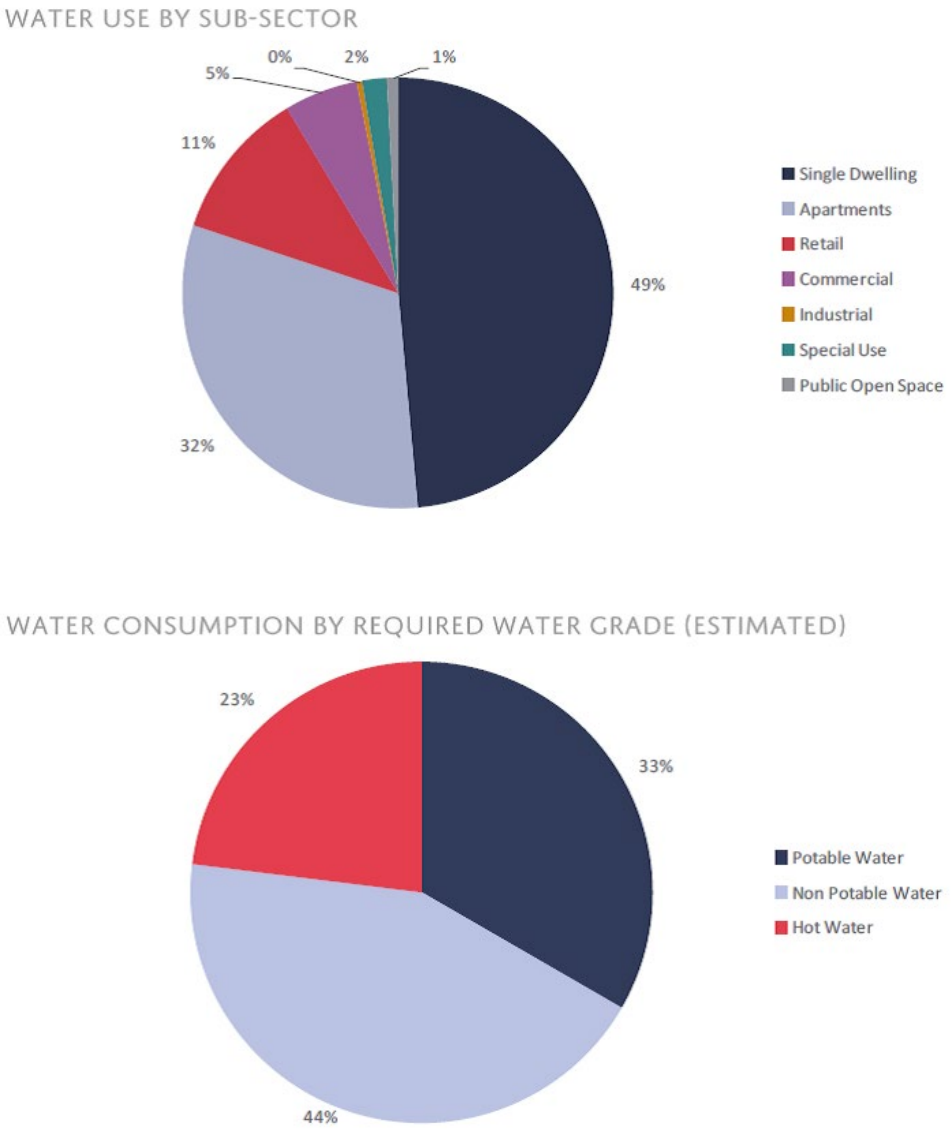


Figure 91: Water consumption in the Eastern Suburbs
Source: Eastern Suburbs Regional Water Reduction Plan Stage 1 Report

Recycled Water Networks in Urban renewal Developments

Recycled water and water reuse, including greywater, blackwater, stormwater and rainwater reuse, provides an alternative to traditional infrastructure. A building connected to recycled water for both internal and external uses can reduce its potable water by up to 50% and reduces demands on sewer outfall into our oceans by treating and reusing sewage.

The Eastern Suburbs Regional Water Reduction Plan notes that recycled trunk water infrastructure is delivered as part of any major corridor renewal and proposes that the South East Light Rail provides the three Councils with the single biggest opportunity to facilitate recycled water in the region.

There are a range of opportunities to implement water recycling within the Kensington and Kingsford town centres. For example, water sensitive urban design interventions can be combined with a harvest stormwater for re-use in the public domain.

Case Study: Green Square recycled water network

Green Square Water harvests stormwater passing through the Green Square precinct. Green Square Water has a network of decentralised water pipes which capture the water and take it back to the local recycled water centre in the heart of Green Square. Once there, water undergoes five purification processes to remove impurities and clean the water.

This water recycling system is owned and run by Green Square Water, a private local sustainable water utility. The system harvests and purifies 900kL of stormwater every day at full capacity - the equivalent of 150 Olympic swimming pools of stormwater every year[52].

Figure 92: Diagram demonstrating the water recycling system at Green Square
Source: Green Square Water

[52] Flow Systems (2016) www.flowsystems.com.au/communities/green-square-water

7.3 Waste Collection

Benefits of An Automated Waste Collection System

There are major opportunities to better improve the waste collection process and increase the rate of recycling, particularly in commercial and public spaces[53]. The Environmental Panel Position Paper, which informed the Draft Central District Plan, identified a need for best practice infrastructure and programs at individual building and regional planning levels to cater for the reduction, re-using, recycling or proper safe disposal of waste.

The 2016 Southern Sydney Regional Organisation of Councils report, Our Places Recreation and Retail, A Litter Prevention Plan for the southern Sydney Region, identified town centres and sports and recreation areas as regional litter hotspots. The lack of appropriate infrastructure was identified as a significant contributor to litter hotspots in public areas.

Automated waste collection systems provide an opportunity for a more sustainable, efficient, convenient and hygienic method of collecting and removing waste in mixed land use areas such as the Kensington and Kingsford town centres. Such a system, as demonstrated in Figure 11, connects buildings and public street bins to a collection point via underground suction pipes, removing the need for trucks to collect waste from individual buildings. Automated waste collection systems are in use across Europe and Asia and in Australia a system is being implemented by Sunshine Coast Council for a section of Maroochydore's central business district, SunCentral, at a cost of $21 million[54].

The benefits of such a system include:

- Improved aesthetics by removing the need for bins to line streets awaiting collection
- Reduced truck movements, resulting in reduced greenhouse gas emissions and improved air quality and traffic congestion
- Reduced collection operational costs
- Better hygiene – no odour and no pests
- No waste storage rooms needed within developments – more efficient use of space.

An automated waste collection system offers many opportunities, and it is suggested that Council further investigate the feasibility and suitability of such a system for the Kensington and Kingsford town centres. Funding has been allocated within the Infrastructure Schedule for a concept design, feasibility study and implementation of such a system.

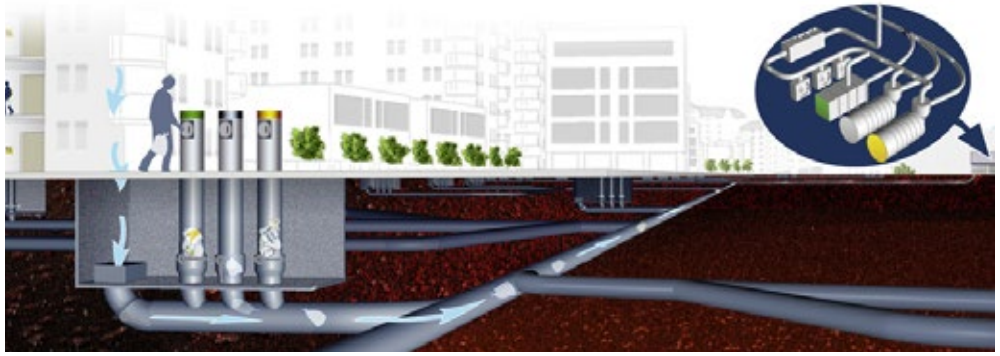


Figure 93: Diagram of an automated waste collection system
Source: www.envacgroup.com

[53] Environmental Panel Advisory Paper for the Greater Sydney Commission 2016
[54] Sunshine Coast Council 2016 (www.sunshinecoast.qld.gov.au/Council/News-Centre/Maroochydore-City-Centre-leads-waste-revolution-210916

Figure 94: An automated waste collection point in a public open space
Source: www.envacgroup.com

Figure 95: An underground waste storage system installed in Darlinghurst, Sydney
Source: www.smartbin.com

Figure 96: Visual clutter of garbage bins on streets in Randwick LGA
Source: Randwick City Council 2016

7.4 Renewable energy sources

Decentralised Energy Sources

Renewable and decentralised energy is a rapidly evolving technology sector which can offer a multitude of benefits for the Kensington and Kingsford town centres. The benefits include:

- Efficiency and cost savings: Local or decentralised renewable electricity generation avoids the high costs of transporting electricity from the country to the city. These transport costs currently make up more than half of the average electricity bill[55]
- Reducing greenhouse gas emissions: Renewable energy can play a large role in reducing the need to burn coal and increasing our energy independence in addition to health benefits from reduced air pollutants within urban communities[56]
- Resilient cities: Centralised systems can be disrupted by natural disasters and other extreme events, while because of their geographic dispersal, decentralised systems are less likely to be affected[57].

As detailed The City of Sydney Decentralised Energy Master Plan estimated that costs for decentralised energy solutions such as integrated and precinct-scale renewable electricity technologies are cheaper than most renewable electricity technologies through utility companies. This is primarily due to the rising costs of transmission and distribution network charges which can be reduced or avoided where renewable electricity is generated within the city[58].

Art and Renewable Energy Opportunities

As detailed earlier in this chapter, buildings required to achieve five star Green Star will integrate renewable energy sources into the design of the building. Recent advances in renewable energy production within urban areas demonstrate opportunities to enhance public spaces whilst incorporating best practice green and environmental sustainability technologies.

For example, the “wind trees” installed in Paris and the wind turbines installed above a residential flat building in New York, as outlined in the case studies below, both demonstrate pilot programs which combine aesthetics and practicality to harness wind power. The cycleway outlined in the case study below demonstrates an opportunity to sustainably light cycle ways or other public spaces within the Kensington and Kingsford town centres without the need for external lighting and the associated energy consumption. The small-scale scale aesthetically pleasing sustainability initiatives can be designed to fulfil artistic requirements as well as providing a renewable energy source within the Kensington and Kingsford town centres.

[55] City of Sydney (2013) Decentralised Energy Master Plan
[56] Ibid
[57] Ibid
[58] Ibid

Case Study: Wind Trees

In December 2015, two “wind trees” were installed in a plaza in Paris, where they operate silently to capture wind and generate up to 2,400 kilowatts of energy annually. Developed by a French company, New Wind, the “trees” have plastic green “leaves” that soundlessly harness the wind[59].

New Wind estimates this would meet half of the average French household’s annual energy needs, run a small, low-consumption office for 12 months, or charge an electric car for 10,000 miles each year.

Figure 97: Wind turbines which have taken inspiration from nature
Source: www.qz.com

Case Study: Urban Wind Turbines

In 2014, three wind turbines were installed above a new apartment building in Queens, New York by UGE. The turbines capture 3,500 kilowatts of energy annually, which offsets the common areas in the building, including the lobby, hallways, gym, and roof lounge.

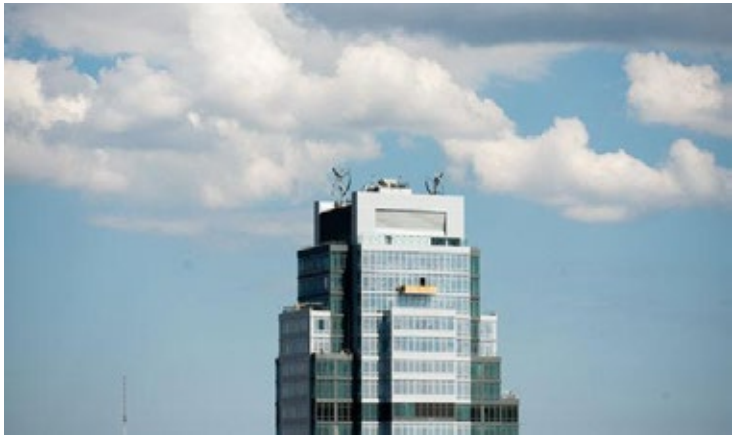


Figure 98: Urban Wind Turbines
Source: www.ugei.com

[59] Quartz 2016
www.qz.com/763715/wind-trees-mini-turbines-that-can-power-homes

Case Study: Luminescent bicycle lane

Created by designer Daan Roosegaarde and Heijmans Infrastructure, the Van Gogh-Roosegaarde bicycle path is made of thousands small stones inspired by 'Starry Night'. The path combines innovation with cultural heritage in the town of Nuenen Netherlands, the place where Van Gogh lived in 1883. The stones, called 'luminophores' charge at day-time, and glow at night for eight hours, sustainably lighting the bicycle path.

Figure 99: Luminescent bicycle lane
Source: www.studioroosegaarde.net

Strategies	Actions
1. Integrate more vegetation into the town centres to slow down and filter pollutants from stormwater, improve localised flooding impacts and protect the waterways by implementing water sensitive urban design	a) Investigate a recycled water system for maintenance of landscaping in public spaces where possible b) Where possible, in the landscape concept plan, choose low water species for landscaping
2. Reduce mains water demand by recycled or alternative non-potable water generated from local water resources within the public domain of Kensington and Kingsford town centres	a) Investigate a recycled water system for maintenance of landscaping in public spaces where possible b) Where possible, in the landscape concept plan, choose low water species for landscaping
3. Incorporate renewable energy and energy-efficient technologies in the public realm to further cultivate the image of the town centres as best practice environmentally sustainable precincts	a) Implement energy-efficient LED lighting on Anzac Parade and throughout the town centres b) Investigate commissioning public art which can also demonstrate environmental sustainability innovation
4. Investigate and if feasible, implement an automated underground waste collection system to reduce the visual clutter caused by garbage bins on streets and reduce litter within the town centres	a) Undertake a concept design and feasibility study for an automated underground waste collection system within the town centres b) Amend the DCP 2013 to require developments within the town centres to be capable of connecting to an automated underground waste collection system c) Allocate funding for the relevant studies and implementation of an automated underground waste collection system

Part C – Vision and Strategies

7.5 Transport

The location, layout and density of development in cities should maximise accessibility and support sustainable transport modes including walking, cycling and access to public transport[60]. There are many opportunities to reduce congestion and carbon emissions in Kensington and Kingsford by promoting active transport.

Reducing private car usage will be an important measure in containing congestion in Kensington and Kingsford as the population grows. Research has indicated that neighbourhoods with higher population densities, good land use mix, high connectivity and good provision of walking and cycling facilities are more likely to encourage walking and cycling for transportation[61].

Residents within Kensington and Kingsford are higher users of public transport and adopt walking and cycling activities[62]. Given the proximity to a range of business, recreation and employment destinations, there are opportunities to leverage the accessibility and limit the undesirable economic, social and environmental costs of motor vehicle use.

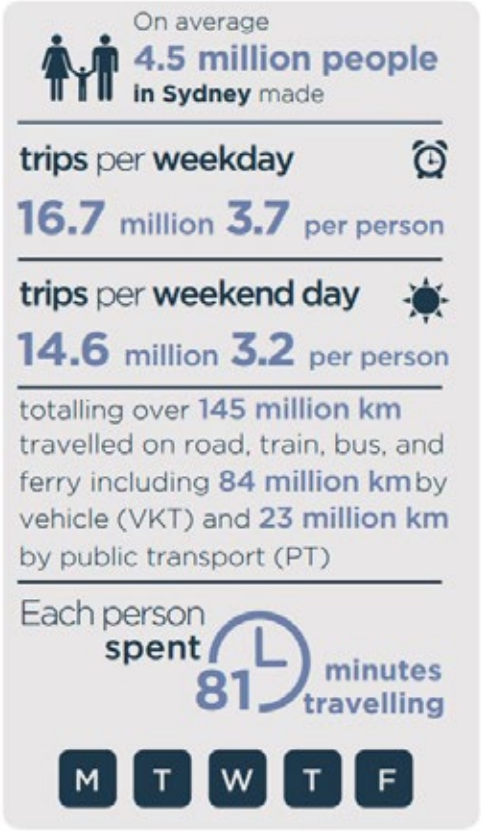


Figure 100: Travel trends of Sydney residents and workers
Source: Transport for NSW

Trends in Car Usage

Recent data on travel behaviour indicates that Sydney residents are relying less on private motor vehicles to commute to work than in the past. In 2012/13, over four and a half million Sydney residents each spent an average of 81 minutes travelling every weekday[63] (Figure 100). Over the decade to 2012/13, population growth increased by 13% while weekday trips grew by only 7% and weekend trips grew by only 10%, showing total trips grew at a slower rate than population[64].

Over the same decade to 2012/13, total Vehicle Kilometres Travelled (VKT), which is the total distance travelled by all vehicles, grew by 10.2% while per capita VKT decreased 2.1% in the same period[65]. The reduction in per-capita vehicle kilometres travelled can be linked to the growth in public transport usage, which increased 21% (350,000 trips) in the same time period[66]. Such trends are positive for the long term sustainable growth of Sydney and have implications for transport planning.

[60]Draft NSW Architecture and Urban Design Policy (2016)
[61]Healthy Places and Spaces, A National guide to designing places for healthy living (2009)
[62]Transport for NSW (2014) 2012/13 Key Transport Indicators for Sydney
[63]Ibid
[64]Ibid
[65]Ibid
[66]Ibid

Kensington and Kingsford Car Trends

As shown in Figures 101 and 102, Kensington and Kingsford have lower car ownership levels than both the Randwick LGA area and Greater Sydney. In Kingsford there is on average 0.97 cars per household, with 26% of households having no car in 2011[67]. Kensington has on average 1.04 cars per household and 19% of households have no car[68]. Based on 2011 census data, on average 38% of high density unit dwellers don't own a car in Kingsford, compared to 31% in Kensington and 25.7% overall for the Randwick LGA[69].

The low levels of car ownership in Kensington and particularly Kingsford, is likely linked to the high proportion of students and young people. Statistics show that in NSW, along with many other cities in Australia and around the world, people in their 20s and early 30s are less likely to have a drivers licence than people in their mid-30s to late-60s[70]. In addition, younger age groups (below 40 years) are increasingly walking and using public transport, while the over 60 age groups are relying more on car use[71].

Both Kensington and Kingsford have a decreasing proportion of residents driving to work, which is particularly noteworthy given the greater Sydney trend of an increasing proportion of people driving to work (Figure 103). The trend in Kensington and Kingsford is accompanied by an increasing percentage of residents using buses, walking or cycling to work which has increased for both these town centres between 2006 and 2011 by 2.9% and 4.8% respectively. This correlates with the low vehicle ownership rates in Kensington and Kingsford.

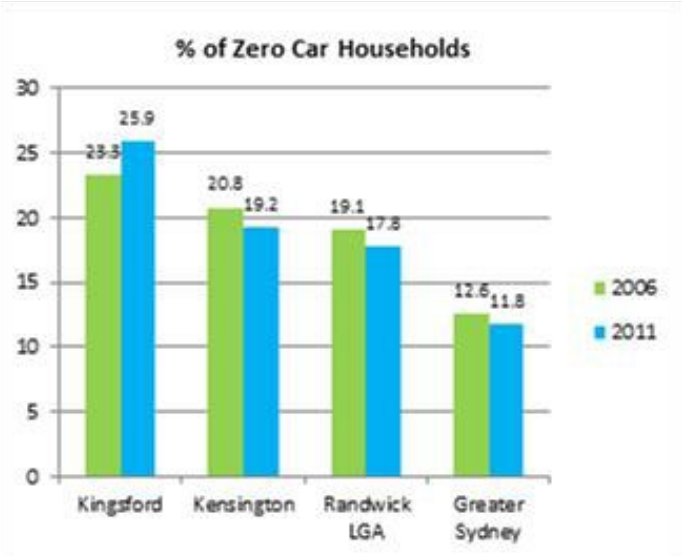


Figure 101: Percentage of households which don't own a car, 2006 and 2011 compared
Data source: Australian Bureau of Statistics 2016, 2006 and 2011 Census

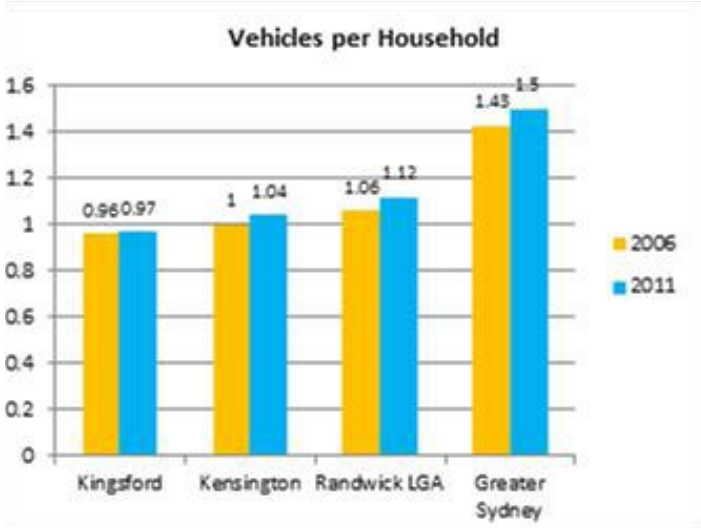


Figure 102: Number of vehicles per household, 2006 and 2011 compared
Data source: Australian Bureau of Statistics 2016, 2006 and 2011 Census

[67]Australian Bureau of Statistics, 2006 Census and 2011 Census
[68]Transport for NSW (2014) 2012/13 Key Transport Indicators for Sydney
[69]Ibid
[70]Charting Transport (2015) Trends in driver's license ownership in Australia
[71]Transport for NSW (2014) 2012/13 Key Transport Indicators for Sydney

Part C – Vision and Strategies

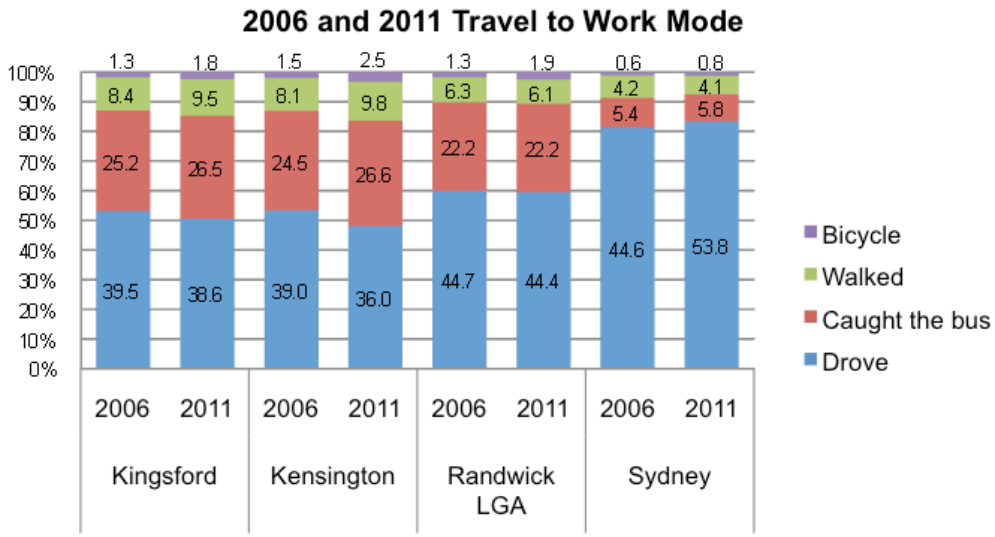


Figure 103: Mode of commute to work, comparison between Kingsford, Kensington, the Randwick LGA and the wider Sydney average
Data source: Australian Bureau of Statistics 2016, 2006 and 2011 Census

Transport Technologies and Innovations

Electric Vehicles

While currently a small portion of the Australian car sales market, electric vehicles hold significant potential to reduce greenhouse gas emissions. The transport sector accounted for 17% of Australia's emissions in 2013-14, with Passenger and Light Commercial vehicles contributing 62% of the sector's total emissions[72]. When linked to a cleaner supply of electricity, electric vehicles can provide emission reductions and a broader range of economic and air quality benefits[73].

Electric vehicle sales in Australia in 2014 totalled 94822 representing less than 0.09% of the Australian market[74]. To identify obstacles to electric vehicle ownership, Randwick, Woollahra and Waverley Councils conducted an online survey of 406 residents and commuters of Sydney's east in early 2016.

As evidenced in Figure 104, this survey revealed that a majority of survey participants would consider buying an electric vehicle.

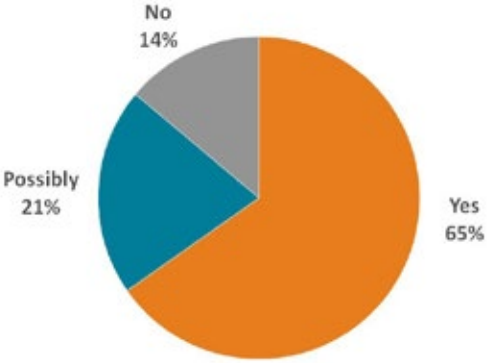


Figure 104: Survey response to Would you consider buying an electric vehicle?
Source: Randwick City, Waverley and Woollahra Councils electric vehicle survey 2016

[72]Climate Works Australia (2016) The Path Forward for Electric Vehicles in Australia
[73]Ibid
[74]Ibid

Part C – Vision and Strategies

Electric Vehicle Charging Infrastructure

In response to the survey, the three Councils are now investigating appropriate sites within Council carparks and public spaces to install public charging stations. Given close proximity of the Kensington to Kingsford precinct to the light rail stations, locations within the town centres and on the UNSW campus will be investigated for public charging stations for Electric Vehicles.

In the Council survey, lack of charging station availability was raised as the highest barrier in the survey to electric vehicle uptake as shown in Figures 105 and 106. Electric Vehicle charging infrastructure includes basic electrical provisioning, commuter charging facilities in workplaces, and publicly-accessible charging facilities of varying charging speeds and capacities. Given the relatively higher cost of retrofitting electric vehicle charging infrastructure, it is more economical to incorporate electric vehicle charging through the design and construction stage, and this will be included in the DCP.

Figure 105: Public carpark electric vehicle charging station, Washington
Source: www.greenlight-solar.com

Figure 106: Footpath electric vehicle charging station in Paris
Source: www.france24.com

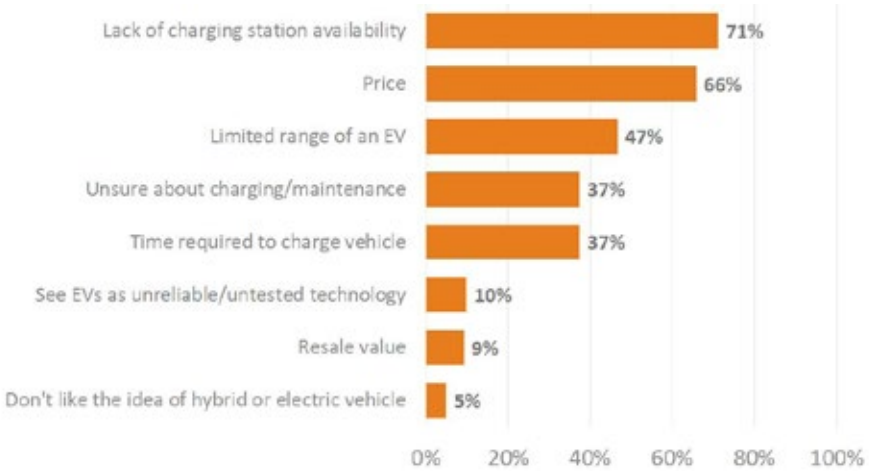


Figure 107: Barriers to EV uptake
Source: Randwick City, Waverley and Woollahra Councils electric vehicle survey 2016

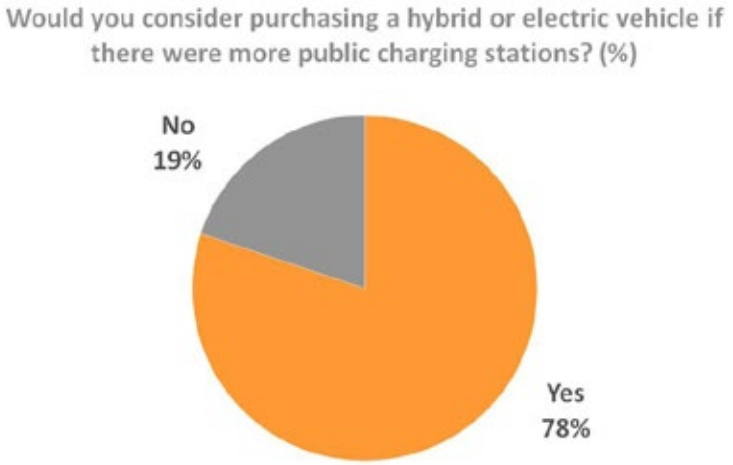


Figure 108: Survey question: Would charging infrastructure make a difference?
Source: Randwick City, Waverley and Woollahra Councils electric vehicle survey 2016

Ride sourcing

Ride sourcing, where an app is used to connect a driver with a paying customer, such as Uber, is a rapidly growing service[75]. It has been suggested that these on-demand services will act as a further disincentive to private car ownership for younger generations. Recent market research found that 22% of people who have used Uber in the last six months say Uber's availability meant they delayed their purchase of a new car[76].

Shared ride sourcing services is an emerging development within the United States, which gives an indication of a future opportunity for Sydney. UberPool and Lyftline have both been running in San Francisco since 2014[77] where users of each service can indicate they are willing to share their ride. This offers a more economical option which may also reduce greenhouse gas emissions by servicing multiple trips at one time.

While there are unanswered questions regarding the impact of ride-sourcing services on taxi and public transport use, the prevalence of these services is an important tool to limit reliance on private vehicles.

[75]Institute for Sensible Transport (2016) Emerging transport technologies: Assessing the impact and implications for the City of Melbourne
[76]Ibid
[77]Ibid

7.6 CBD and South East Light Rail

Light Rail Capacity

The CBD and South East Light Rail (CSELR) through the Kensington and Kingsford town centres will provide a reliable and fast public transport infrastructure aimed to change people's travel behaviour. As identified in Figure 109, there will be two stops in each town centre, including a terminus and bus interchange south of the nine ways intersection.

At opening, the Kensington/Kingsford branch will have a capacity of approximately 3,500 passengers per hour in the AM peak, based on a proposed service frequency of every eight minutes, and vehicle capacity of 466 passengers. The CSELR is designed to have a maximum frequency of every 6.5 minutes on the Kensington/Kingsford branch, which provides for a maximum capacity of 4,300 passengers per hour in each direction.

Future Light Rail Capacity

A study by EMM consulting analysed the CSELR system capacity, light rail stop capacity and predicted population growth to identify appropriate levels of future public transport commuter services for the Anzac Parade corridor.

Analysis for the year 2020, which is the proposed first full year of operation of the Light rail system in the corridor, assumes the future Light rail system is operating at its proposed initial frequency for the corridor which is one tram every eight minutes in each direction. This provides an interim peak hour directional capacity for the light rail system of 3,495 passengers per hour based on the stated design capacity of 466 persons per tram.

The longer term analysis for the year 2031, which takes into consideration population in the corridor, assumes the future light rail system is operating at its proposed maximum frequency for the Anzac Parade corridor which is one tram every six and a half minutes in each direction. This provides a future maximum peak hour directional capacity for the light rail system of 4,300 passengers per hour based on the stated design capacity of 466 persons per tram.

The combined future transport capacity for the Anzac parade corridor public transport system linking to the CBD will be the combination of the CSELR capacity and the proportion of the existing bus services (primarily express buses) which are to be retained.

Figure 109: CBD and South East Light Rail route
Source: Transport for NSW

Part C – Vision and Strategies

Current level of Public Transport Service

Currently, in the one hour morning peak period, Anzac Parade between Kensington and Kingsford carries a total of 81 city-bound buses per hour, of which thirty were denoted as X (express) or L (limited stop) services. According to the EMM model calculations, in 2011, which is the latest available data, the corridor bus services had a morning peak hour crowding level of less than 71.4%.

The Randwick LGA has historically had a relatively high proportion of public transport journey to work travel, for an area without direct access to the heavy rail network. The Anzac Parade corridor has as high if not higher public transport proportional usage (between 30% and 40%) than many areas of Sydney which do have direct access to heavy rail services.

Maintaining reasonable levels of public transport crowding at peak is essential to ensure public transport is maintained as an attractive choice of mode for commuters and reducing the traffic congestion impacts of private car ownership. It is recommended that the average one hour morning peak passenger crowding level should be maintained at an upper limit of 80%, to ensure existing levels of passenger comfort are maintained.

Future Public Transport Corridor Capacity Requirements

The table below outlines the future morning peak hour travel demand to the Sydney CBD.

In 2020, with the future Randwick LGA dwelling growth expectation over the four year period from 2016 to 2020, approximately 26 of the existing 80 morning peak hour peak direction bus services will need to be maintained to provide an acceptable level of service.

Table 11: Future bus system capacity requirements

Year of future system operations analysis	Future one hour peak average crowding level	424,658m2 374,723m2	Required corridor hourly capacity	Light Rail system capacity	Residual bus system capacity Number of buses per hour
2020	80%	5,056	3,495	1,561	26
2031	80%	6,426	4,300	2,126	35

Part C – Vision and Strategies

In 2031, with the future Randwick LGA dwelling growth expectation of 15,150 dwellings to be accommodated over a fifteen year period to 2031, just under half of the existing morning peak hour peak direction bus services (35 hourly bus services compared to 81 currently) will need to be maintained.

If adequate bus services are not provided with the future light rail services, the future peak hour passenger crowding levels on the public transport system will significantly worsen in comparison to the current levels. This will potentially cause a decline in the future use of public transport by new residents moving to the area, which would be contrary to the objectives of the improved public transport system and the objectives of this Strategy. Inadequate provision of public transport will also limit the capacity of the area to accommodate population and employment growth.

The analysis concluded the currently proposed dwelling targets for the LGA and the Kensington to Kingsford corridor are achievable subject to the provision that significant proportions of the existing corridor bus based public transport system are retained for the existing corridor average morning peak hour passenger crowding levels to be generally maintained.

Light Rail Stop Access and Crowding

For the Kingsford Terminus, Todman Avenue and Carlton Street, the predicted passenger crowding levels for the proposed platform areas at the two stations and the signalised pedestrian crossing areas are assessed. The assessment was done according to the level of service capacity standards for ‘movement’ and ‘waiting’ areas.

For the Randwick Anzac Parade corridor light rail system, the maximum recommended level of crowding for the design of the station platforms and pedestrian crossing areas is Level of Service C. The analysis in the EMM report concluded the future proposed light rail station design and passenger capacity for pedestrian crossings at stations will be adequate to meet the proposed demand.

7.7 Future Mass Transit

The intention of the CSELR was to reduce the number of buses entering the Sydney CBD and thus congestion during peak hour. As detailed above, by 2031, up to 40 buses travelling northbound during the morning peak hour will be required to supplement the CSELR capacity. That is almost half the existing 80 buses currently travelling along the Anzac Parade corridor during the morning peak hour.

Analysis by EMM states predicted increased bus congestion on Elizabeth Street in the City will make it desirable to limit the future number of peak hour bus services from Randwick LGA. Ultimately, mass transit is recommended to increase the public transport access capacity for the Randwick LGA.

The Draft Central District Plan 2016 included an action to investigate into a mass transit corridor between the Sydney CMD and Randwick LGA. Mass transit, such as a metro line, could stop at Kingsford, and then continue further south towards Maroubra, Little Bay, and all the way to La Perouse. This would alleviate localised congestion and congestion in the CBD arising from a significant number of buses operating in conjunction with the CSELR.

There is potential for access to a mass transit stop at the proposed Town Square plaza in Kingsford, which would further activate the Kingsford Junction Precinct and provide convenient interchange between the metro line, the light rail, and local buses.

7.8 Congestion and Parking Impacts

A high-level parking and traffic assessment was conducted for Council by ARUP to analyse the impact of the proposed changes to planning controls, road closures and footpath widenings within the Kensington and Kingsford town centres on traffic movements and capacity. The assessment was based on the projected quantity of residents and employees, including their predicted distribution across the town centres.

The traffic assessment determined the anticipated level of traffic should be able to be accommodated both from traffic capacity and environmental capacity viewpoints[78]. This analysis is based on the modest increase in dwelling capacity and predicted increase in employment within the Kensington and Kingsford town centres and the typical traffic generation rates outlined by the RMS Guide to Traffic Generating Development. The existing mode of travel was adjusted for development in the Kensington and Kingsford corridor, recognising the transit oriented development with transfer of mode from both car and bus expected to light rail. The expectation is that residents moving into this highly accessible corridor and employees working in the mixed use developments will reduce their car mode to around 35%. This rate is consistent with RMS traffic generation rates.

Additional transport modelling will be undertaken as a stage 2 to assess the impacts of all proposed public domain upgrades, including footpath extensions and plazas. The traffic modelling and on-street parking impacts will be taken into consideration in assessing whether all proposed public domain improvements are to proceed.

[78]ARUP (2016) Kensington and Kingsford Planning Strategy Traffic Assessment

7.9 Encouraging Active Transport

The design of a place can influence a person's motivation and opportunity to use active transport such as walking or cycling. Places designed around private car use can limit a person's opportunities and desire to be physically active[79]. Our sedentary, car-dependent lifestyles are significant contributing factors to the prevalence of preventable health issues and Building habitual active transport into daily routines has been identified as a means to increase physical activity[80].

Improved Walking Connectivity

Improved walking connectivity and people-friendly spaces, which improve access to public transport and provide increased walking and cycling opportunities can help to promote health. Section 8 – Public Realm and Landscape has outlined proposed improvements to pedestrian connectivity and the public domain which will make Kensington and Kingsford safer and easier places to walk to and around.

7.10 Bicycle Infrastructure

Cycle Way Works

As determined by Randwick City Council's Works Committee in February 2015, the priority bicycle infrastructure for the LGA are cycle paths connecting to the light rail stops.

As shown in Figure 110, the following cycleway works are proposed for the Kensington and Kingsford areas over the next twelve months:

- Todman Ave and Lenthall Street
- Doncaster Ave, Day Ave and Houston Road
- Sturt Street.

Bicycle Storage Facility

As part of the construction of the light rail, there will be a bicycle storage rack at each light rail stop. At the Kingsford Terminus, there will be approximately secure storage cages with capacity for approximately 30 bicycles.

Investigation will be undertaken to assess demand for bicycle storage, to determine whether additional bicycle storage is required. If additional bicycle storage is required at the Kingsford terminus, an underground bicycle storage system, such as the one pictured at Figure 111, will be investigated. An underground bicycle storage system is advantageous due to its capacity for a large number of bicycles, while having a small above-ground footprint for the bicycle access booth. Funding will be allocated for investigations and construction of an additional bicycle storage facility, if required.

[79]Healthy Places and Spaces, A National guide to designing places for healthy living 2009
[80]Giles-Corti, B et. al. 2012 Increasing density in Australia: maximising the health benefits and minimising harm

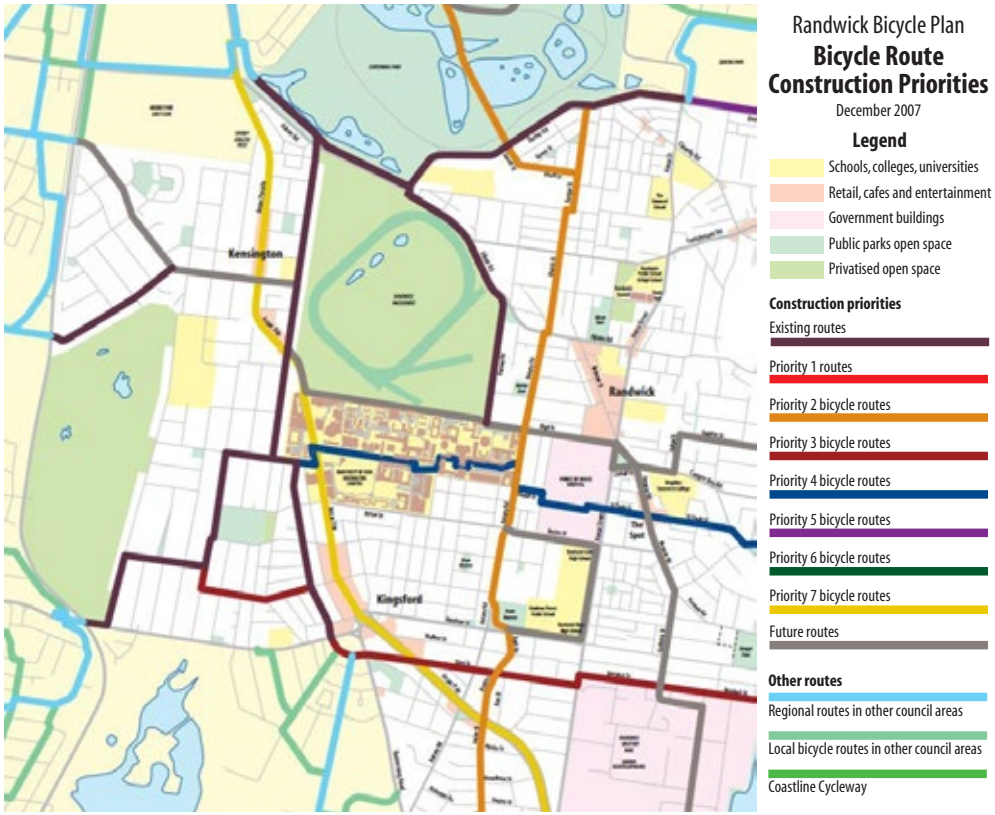


Figure 110: Proposed cycle way network
Source: Randwick City Council 2007

Figure 111: Underground bicycle storage system
Source: www.giken.com