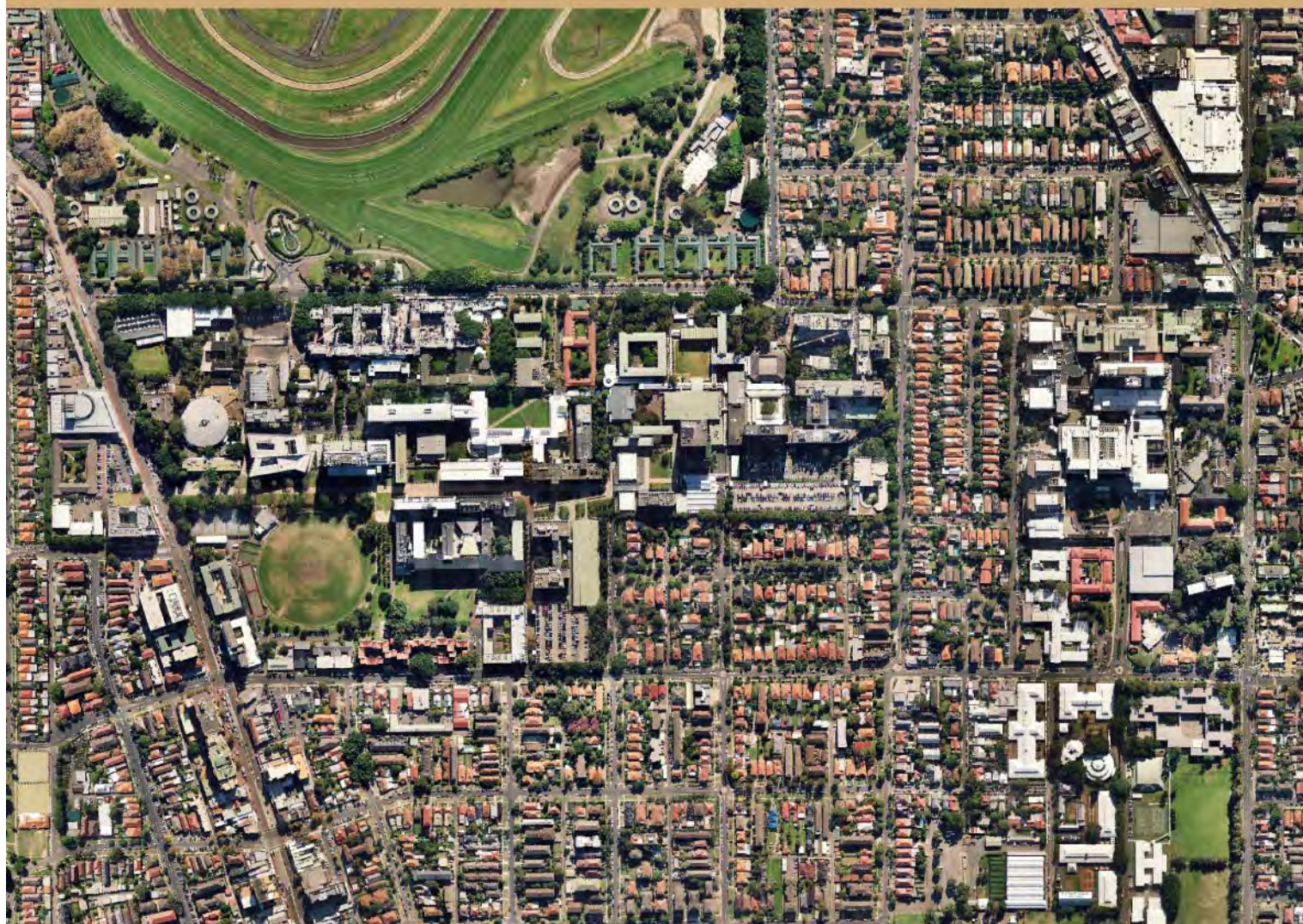




RANDWICK CITY COUNCIL

Randwick Education and Health Specialised Centre Discussion Paper

PART A: STRATEGY





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PART A: STRATEGY

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Executive summary

Overview

This Discussion Paper is one of six papers being prepared to inform Randwick City Council's preparation of a Comprehensive Local Environmental Plan (LEP) and Development Control Plan (DCP).

The Randwick Education and Health Specialised Centre, or 'the Centre', is located at the intersection of the suburbs of Randwick, Kensington and Kingsford within Randwick City, in Sydney's east. It sits equidistant between Sydney's CBD and Airport, six kilometres away.

The Centre is identified in the NSW Government's Sydney Metropolitan Strategy and draft East Subregional Strategy as a Specialised Centre, with a strong cluster of specialised health, education and research activities playing a vital economic and employment role within the Sydney region and beyond.

Several major institutions and destinations are located in the Centre, including the University of NSW, the Randwick Health Campus with four major hospitals, the Prince of Wales Medical Research Institute and Royal Randwick Racecourse.

The Centre is Randwick City's largest employment area, with almost 40 percent of its workforce, and with strong growth in health, research and education which is predicted to continue. This in turn is placing demands on housing, transport, services and other public infrastructure.

This Paper investigates and provides strategies to accommodate and direct this growth in ways that enhance the Centre and surrounds. It also suggests planning and design controls for the Comprehensive Local Environmental Plan (LEP) and Development Control Plan (DCP), which are considered likely to be the most significant changes within this comprehensive planning process.

The Discussion Paper has two parts

Part A describes the Centre, its key attributes and drivers, growth trends and likely demands over the next 20 years, and identifies a vision and broad strategies for its long term future.

Part B suggests design and planning principles for key precincts and sites, or 'investigation areas' within the Centre, and discusses options for the key planning controls that could be included in the Comprehensive LEP and DCP.

The Centre

The Centre is defined by a broad one kilometre radial area focused on the university and health institutions. While its area of influence extends well beyond this defined location, for planning purposes, this Paper addresses only this part of Randwick City.

Strategic Context

NSW Government directions in the draft East Subregional Strategy call for a partnership approach with key landholders to develop a precinct plan for the Centre, bringing activities together to look at growth pressures, long term collaboration and opportunities to form a stronger, more intense node for education, health and research.

Accordingly, in partnership with the NSW Department of Planning, Randwick City Council established a Technical Working Group comprising landowners of the major sites (the institutions and racecourse) and state agencies in health, regional development and transport to broaden and strengthen relationships, to better understand the Centre's attributes, directions and needs, and to assist with input to this Paper.

The Paper is also supported by a number of studies undertaken for Council in relation to transport, heritage, recreation, economic activities, and feasible development scenarios for housing and health/related uses within the Centre.

Significance of the Centre

The Centre is one of nine specialised centres in the Sydney metropolitan region containing 'magnet infrastructure' in its university, research and health functions that act as catalysts for new investment, driving further knowledge, information exchange and innovation, crucial in maintaining Sydney's global competitiveness. There is scope to strengthen the collaboration between the University and Randwick Health Campus to optimise their leadership in their respective fields and to maximise their research capabilities.

The Centre's Growth

The Centre is a major economic and employment destination, attracting around 50,000 people daily. Around 13,200 people work here, primarily in education and health services but also in related and support services such as commercial and retail. This accounts for almost 40% of jobs within Randwick City. Employment growth is expected to continue, especially in the health fields as demands rise with an ageing population and with advances in health research and treatment. This growth is estimated at an additional 4,000 jobs by 2031, requiring an estimated 25% increase in employment floor space over this timeframe.

The Centre is also home to about 7,000 households and further housing to accommodate workers and students is critical, either within or close to the Centre, which will help address housing demand and minimise travel demands. The Centre is already experiencing public transport capacity issues and this Paper notes that planning for the Centre's growth must also be accompanied by public transport improvements and preferably rail mass transit.

Six key objectives are identified for the Centre

1. To enhance the Centre's identity, character and attractiveness for its community as a great place to live, study, play and work
2. To understand and plan for the current and future demands of this nationally significant cluster, especially in regard to employment and housing
3. To facilitate partnerships between the key stakeholders to encourage leadership in excellence and innovation
4. To identify and plan for the Centre's transport infrastructure and services needs
5. To encourage and support sustainable travel through safe walking and cycling networks linked to key destinations, public open space and recreation opportunities
6. To support sustainable development and opportunities to showcase environmental performance and technologies

Centre strategies

Key strategies and outcomes suggested in the Paper are, in summary:

- o Plan for growth and consolidation on the UNSW and Health campuses, with more open campuses that better relate to surrounding streets.
- o Provide for locations for future rail mass transit stations and interim bus improvements with major development in the Centre (focused on the southern corners of the racecourse site).
- o Recognise and enhance High Street as the 'spine' of the Centre. Enable uses related to education and health to spill out from the institutions onto the opposite sides of High Street, better activating and renewing this street.
- o Improve links between uses in the Centre and adjacent town centres, while ensuring complementary uses that do not compete with the town centres.
- o Enhance the cultural, entertainment and recreation potential of the Centre, especially in the area known as the 'west end'.
- o Support the long term viability of the Racecourse as a racing venue, by allowing a broader range of uses on its High street frontage.
- o Enhance the public domain, including pedestrian and cycle paths, with a dedicated off-road cycle path along High Street.
- o Require a Centre-wide approach to be taken on parking (public and private).
- o Establish a network body to collaborate and advocate on key issues for the Centre such as transport and parking.
- o Identify planning objectives for the Centre, appropriate land use zones, uses and controls for the Comprehensive LEP and DCP.
- o Provide specific principles for managing change and suggest design outcomes for 'investigation areas', primarily focused along High Street and Barker Street.
- o Suggest building envelopes for development in key locations along these streets, with height controls based on achieving economically feasible redevelopment and a high quality streetscape environment, particularly focused on High Street.
- o Proposed height controls relate to established street building heights existing on the UNSW campus, and to a lesser extent the Health Campus, being 24 metres generally (equating to 5-6 health/education storeys or 7-8 residential storeys). These heights exclude roof forms and plant equipment.
- o Provide for some flexibility in heights of developments within the central, non-street front areas of the major sites, subject to a design excellence process.
- o Identify varying street setbacks to provide for appropriate footpath capacity, space for cycle paths, street trees, and to ensure solar access and amenity along street frontages.
- o Recognise Barker Street as a transition area from the Health Campus which must scale back to a neighbourhood area and heritage area.
- o Demonstrate and showcase best practice environmental performance.

Next Steps

This Discussion Paper was reported to the Council on 14 September 2010, seeking endorsement to commence a consultation and exhibition process, for community feedback on its content and proposals.

Consultation:

This Paper is on public exhibition from Tuesday 5 October until Friday 3 December 2010.

The Council welcomes your written comments on the Paper.

Please send your comments, clearly marked 'Randwick Education and Health Specialised Centre Discussion Paper' to:

General Manager
Randwick City Council
31 Frances Street
Randwick NSW 2031

Or email:

general.manager@randwick.nsw.gov.au

For more information, see the Council's web site on www.randwick.nsw.gov.au

1 Introduction

1.1 The Paper and its Purpose

The University of NSW and Randwick Health Campus and nearby areas are identified as a “Specialised Centre” in the Sydney Metropolitan Strategy and draft East Subregional Strategy, specialising in health, education and research. These strategies provide a broad framework for the long term development of the area, to help guide government investment and link local and state planning issues. They also provide some detail to help guide preparation of Randwick’s Comprehensive Local Environmental Plan (LEP) and Development Control Plan (DCP).

The Randwick Education & Health Specialised Centre Discussion Paper (the Paper) provides a framework for the long term growth and development of the Randwick Education and Health Specialised Centre. It responds to directions of the NSW Government to consolidate and strengthen the whole centre, and to develop a precinct plan - bringing together the major stakeholders to look at long term integration and coordination of activities and opportunities to form a more intense node for research, employment and business.

This Paper is structured in two parts. Part A: Strategy, describes the Centre, its key drivers and directions, and identifies a vision and strategies for its future. Part B: Planning Directions provides a more detailed investigation of key sites and areas in the Centre, and sets out specific planning principles and considerations for inclusion in Council’s Comprehensive LEP and DCP.

1.2 Objectives

1. To enhance the Centre’s identity, character and attractiveness for its community as a great place to live, study, play and work
2. To understand and plan for the current and future demands of this nationally significant cluster, especially in regard to employment and housing
3. To facilitate partnerships between the key stakeholders to encourage leadership in excellence and innovation
4. To identify and plan for the Centre’s transport infrastructure and services needs
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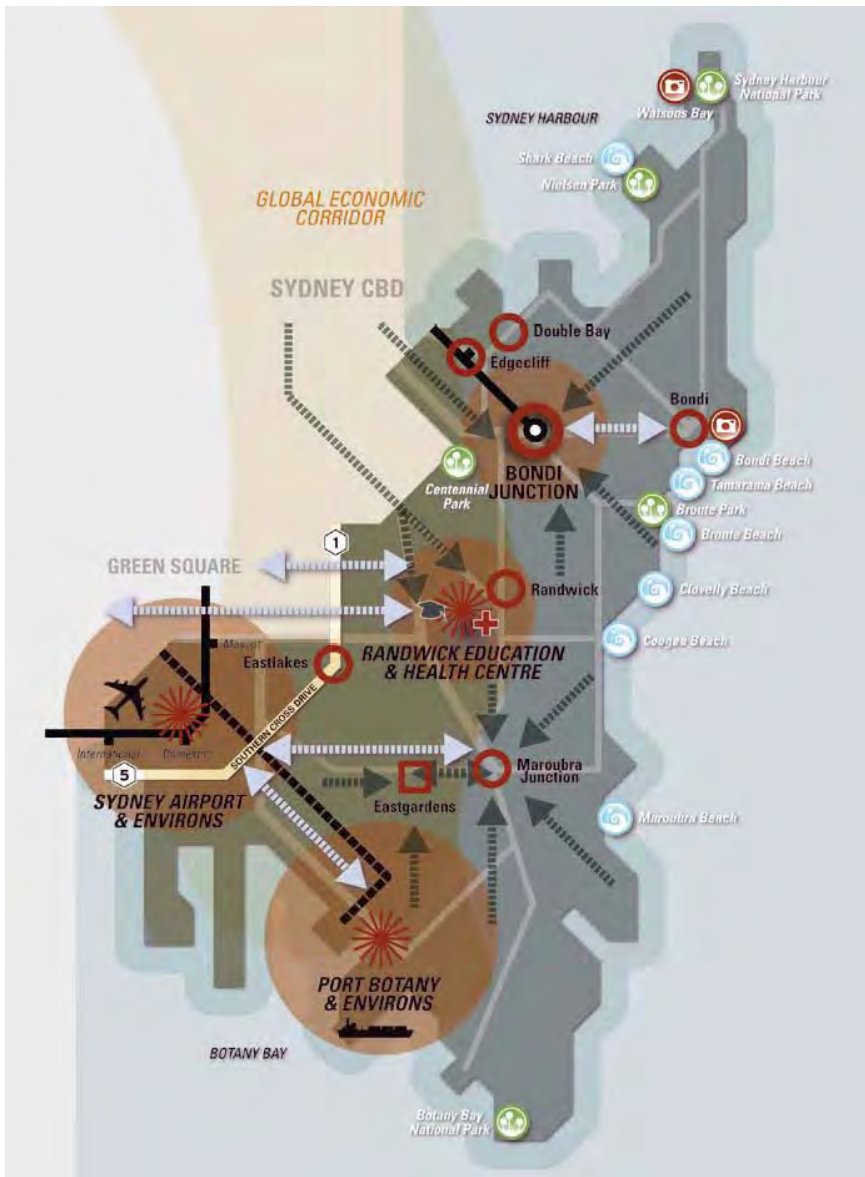
1.3 The Randwick Education & Health Specialised Centre

The Randwick Education & Health Specialised Centre ('the Centre') plays a key role in the East subregion of Sydney as one of three Specialised Centres; the other two being Port Botany and Sydney Airport.

It is located in the 'Global Arc', the corridor linking Macquarie Park in the north, Sydney CBD and Sydney Airport to the South. This corridor is Sydney's economic engine, which contains a concentration of knowledge – based business, industries and services and plays an important role in Sydney's wealth generation.

The Centre is located in the northern suburbs of Randwick City, in Sydney's inner east. It lies 6km south of the Sydney CBD and 6km from Sydney Airport. The major centre of Bondi Junction lies 3km to the north, and the residential growth area of Green Square is located 3km to the west.

It is surrounded by regional attractors including Centennial Parklands, the Moore Park entertainment and sporting complexes and the eastern beaches and coastline.



Sydney East Subregion (Draft East Subregional Strategy, 2007)

The Centre lies at the intersection of the suburbs of Kensington, Kingsford and Randwick. The draft East Subregional Strategy defines it by a broad 1km radial area centred on the key health and education institutions. While recognising that the Centre influences a much wider area in terms of activities and employment, this Paper focuses on the land use planning and development issues within this area.

Key sites within the Centre are:

- University of NSW
- Randwick Health Campus
- Royal Randwick Racecourse



Randwick Education and Health Specialised Centre (Draft East Subregional Strategy, 2007)

1.4 Role and Significance

Specialised Centres perform vital economic and employment roles across the whole Sydney metropolitan region. The Randwick Specialised Centre operates as a central place for health, education and research activities, and is one of the nine specialised centres in Sydney identified in the Metropolitan Strategy. The Centre generates significant flow-on benefits to employment in surrounding areas and economic prosperity in wider Sydney.

The Centre plays a major role in the economy of Randwick City and is recognised as a significant knowledge cluster with benefits to the metropolitan region and beyond. It contains the largest complex of teaching hospitals in Australia, an eminent research intensive university, some of Australia's premier research institutes and Sydney's oldest continually operating racecourse.

Collectively, the university and Health Campuses are the largest employers in Randwick City. The large workforce, students and visitors provide substantial local economic benefits through direct spending in the nearby commercial centres. In 2003, it was estimated by the UNSW School of Economics that the injection into Randwick's local economy from the UNSW and Health Campus was in the order of \$1 billion per annum.

For Randwick City itself, in addition to the employment and economic benefits generated by these institutions the Centre provides a variety of social, cultural and community facilities and services that are available to the local community, including:

- High level acute and emergency care services
- Community health outreach programs and outpatients services
- A broad range of tertiary education opportunities
- UNSW recreational facilities such as gymnasium, oval, pool and grounds
- Cultural activities provided by NIDA
- Public use of function centres, meeting and performance spaces such as the Scientia and John Clancy Auditorium

2 Background

2.1 Methodology and Consultation

This Paper is being prepared within a framework containing four broad stages of development and consultation:

Stage 1: Research and development

- Policy and statutory framework
- Key inputs
 - Technical Working Group
 - Commissioned research and studies, land use and site investigations

Stage 2: Initial consultation and drafting

- Stakeholder consultation
- Draft Paper

Stage 3: Public consultation and finalisation

1. Council briefing and report
2. Public Consultation
3. Finalisation



We are here

Next Steps

- Preparation of draft Comprehensive LEP and DCP
- This process will involve a further detailed consultation process

Technical Working Group

A Technical Working Group was established in response to a direction in the draft East Subregional Strategy to form a “planning partnership”, bringing key education and health stakeholders and government agencies together to form a basis for better coordination and integration of activities. This group is advisory in nature and co-chaired by the Department of Planning and Randwick City Council.

Its members also include:

- | | |
|--|--|
| • University of NSW | • Department of State and Regional Development |
| • Prince of Wales Hospital | • Sydney Children’s Hospital |
| • Australian Jockey Club | • Roads and Traffic Authority |
| • South Eastern Sydney Illawarra Area Health Service | • State Transit Authority |
| • Randwick TAFE | • Ministry of Transport |

A series of 5 facilitated workshops were held, seeking input on the trends, issues and opportunities faced by the education and health sectors, and generating discussion on possible future directions and strategies for the Centre. These also provided a platform for improved ongoing communication between major landholders and coordination of activities.

Endorsement

Following public consultation and reviews of feedback the final Paper will be reported to the Technical Working Group and the Council seeking endorsement for:

- Use in informing the Council's Comprehensive LEP and DCP
- In-principle agreement to strategies and their implementation subject to future funding and available resources

Public Consultation

To gauge community ideas and comments we are now seeking feedback on this draft document.

2.2 Planning Policy and Context

The key state and local government plans and strategies emphasise the importance of the Centre for employment, economic activity, service delivery in health and education, and strength in research.

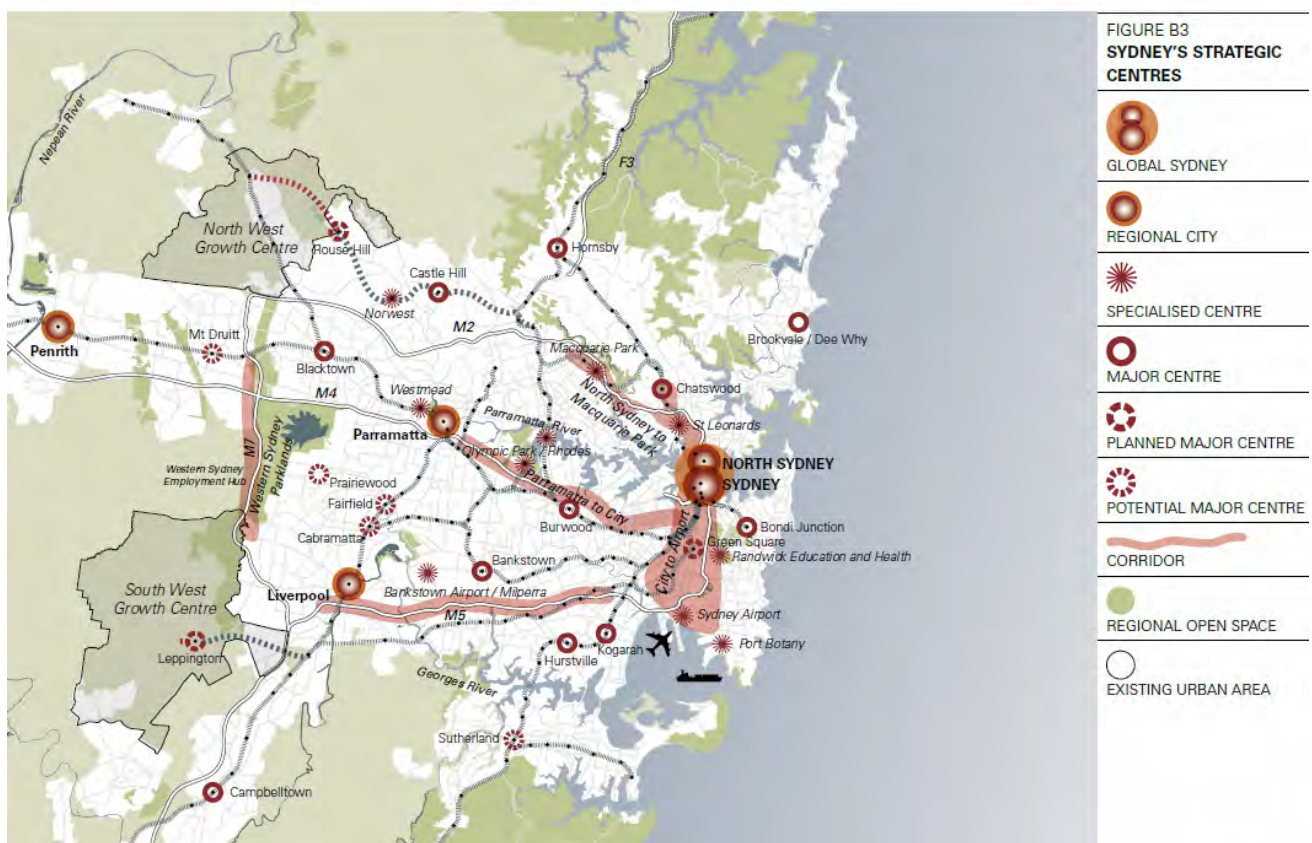
State Plans

NSW State Plan (2006)

The State Plan identifies how the NSW government will address challenges and opportunities facing communities in NSW. A number of priorities are relevant to the Specialised Centre including improving access to health care, an effective transport system, increasing business investment, maintaining and investing in infrastructure, participation in education, jobs closer to home and housing affordability. The document outlines a commitment to implement the Metropolitan Strategy to achieve these priorities.

Sydney Metropolitan Strategy (2005) and draft Review (2010)

The Metropolitan Strategy (2005) aims to manage the growth and development of Sydney to 2031, and retain its position as Australia's global city. It identifies a global arc; an economic corridor that stretches from Macquarie Park to Sydney Airport and Port Botany. This corridor is characterised by globally competitive industries exhibiting strong economic and employment growth. The Strategy identifies a hierarchy of centres and aims to concentrate development within or near them. Specialised Centres have a vital economic and employment role, generating metropolitan-wide benefits and include major airports, ports, hospitals, universities, research and business activities. The Centre is one of nine Specialised Centres in Sydney, and one of five related to health or education, including St Leonards, Westmead, and Macquarie Park. Our Centre's location within this global economic corridor and standing as a Specialised Centre emphasises its strategic importance and global connections.



Sydney's Strategic Centres (Metropolitan Strategy 2005)

East Region Draft Subregional Strategy (2007)

Sub-regional strategies translate the broad Metropolitan Strategy objectives into more detailed actions and targets at a local level. The East Subregion is made up of the Randwick, Botany Bay, Waverley and Woollahra local government areas. Strengthening the Randwick Education and Health Specialised Centre is identified as a key direction in the draft East Subregional Strategy.

Urban Transport Statement (2006) and draft Metropolitan Transport Plan (2010)

The Urban Transport Statement identifies the Centre as being on key transport corridors, connecting to Sydney CBD and major Centres. It nominates four strategic bus routes with an associated program of efficiency measures. The initiatives are designed to improve existing transport systems including local bus infrastructure, operations, reliability and connections between centres, thereby facilitating accessibility and promoting sustainable transport.

State Environmental Planning Policies (SEPPs)

A number of State policies apply to the Centre including the Affordable Rental Housing SEPP, Infrastructure SEPP and Major Projects SEPP. These policies and their implications for the Centre are described further in Part B of the Paper.

Local Plans

The Randwick City Plan (2006) and recent update (2010)

The Randwick City Plan sets a 20 year strategic direction for Randwick City. The Plan consists of 5 broad interrelated themes: A Sense of Community; Places for People; A Prospering City; Moving Around; and Looking After Our Environment. The 'Prospering City' theme focuses on employment, economic growth and management. One way the Council will achieve this outcome is to: 'review the University/Hospital Precinct to recognise and support its growth and service role for the community and associated housing opportunities in the vicinity'.

Randwick Local Environmental Plan

Randwick Local Environmental Plan 1998 (Consolidation) (RLEP) is the statutory planning instrument that currently applies across the City, via land uses zones and planning controls.

Randwick City Council will be preparing a new Comprehensive Local Environmental Plan (LEP) and Development Control Plan (DCP) in line with State Government requirements. All zonings will be modified to meet the State Government's standard LEP template requirements. This Paper forms the basis for a review of zones and planning controls within the Centre. Separate Discussion Papers will be prepared for Town Centres/Commercial Uses and Residential Uses as part of the Comprehensive LEP/DCP review process.

Development Control Plans (DCPs)

Existing DCPs provide detailed planning and design controls, and guidelines for development for specific issues and locations within the Centre including:

- Randwick Junction, The Spot, Kingsford and Kensington town centres
- Royal Randwick Racecourse
- The University of NSW
- Parking

While there is no DCP for the Randwick Health Campus the South Eastern Illawarra Area Health Service has endorsed a set of master planning principles for the campus.

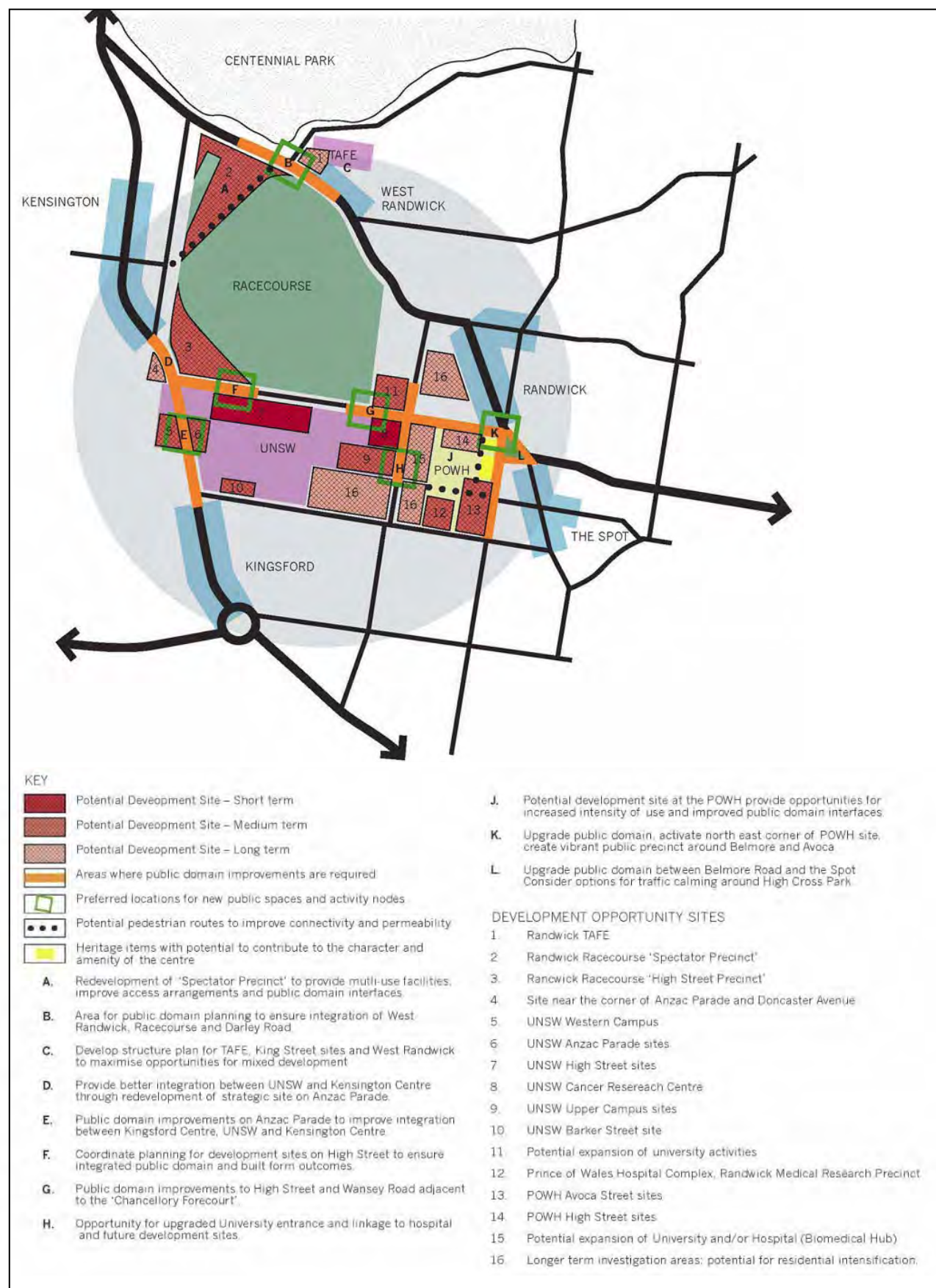
Council research/studies

City Wide Transport Study (2003)

This study examined the transport needs across Randwick City over 20 years, noting that the existing bus based system will not sufficiently address needs for sustainable travel for the City's 20 year growth. It provides options for introducing mass rail transit and addresses city wide travel, parking, cycling and pedestrian needs and opportunities.

Randwick City Economic Development Strategy (2009)

This Strategy, prepared by SGS Economics and Planning for Randwick City Council identifies key strategies and actions to develop and support local businesses and tourism and promote economic activity across our town centres and retail, commercial and industrial sectors. Principles are suggested for the Specialised Centre, illustrated below:



Randwick Recreation Needs Study (2008)

This study analyses the provision of open space and recreation within Randwick city, considers current trends and future demands, and sets strategies for provision and management of open space and recreation resources across the local government area.

Randwick City Economic Activity Study (2008)

This study analyses past and likely trends in key economic activities and employment within Randwick City, with a focus on the Specialised Centre, town centres and industrial land, and makes recommendations to plan for and enhance these economic activities over the long term. Principles from this study were incorporated into and endorsed by the Council in the Randwick Economic Development Strategy (2009).

Specialised Centre Residential Study (2009)

This study reviews the residential zoned land within and near the Centre, to estimate the dwelling potential under the current planning controls and feasible scenarios for additional dwelling potential in suitable locations within and around the Centre.

Health, Medical and Related Uses Analysis (2010)

This study addresses the current and likely future demand for health and medical related uses throughout the Specialised Centre. In particular, it considers the role and relationships of uses outside the Health Campus, investigating the possible benefits of clustering activities, identifying possible locations for growth and developing feasible development scenarios.

2.3 Historical Context

The Centre has played an integral role in shaping the identity and historical development of Randwick City. Its urban environment reflects this history with key institutions and sites displaying aesthetic, associative and social heritage significance.

Prior to European settlement, the area known as Randwick today comprised sand hills, shrubs, heath and swamps occupied by the Cadigal people (the saltwater clans) whose territory extended through Randwick City from South Head to Botany Bay. At the time of European settlement an overland route from Sydney Cove to Botany Bay was created and is possibly the oldest road in Sydney, today's Avoca Street and Frenchman's Road.

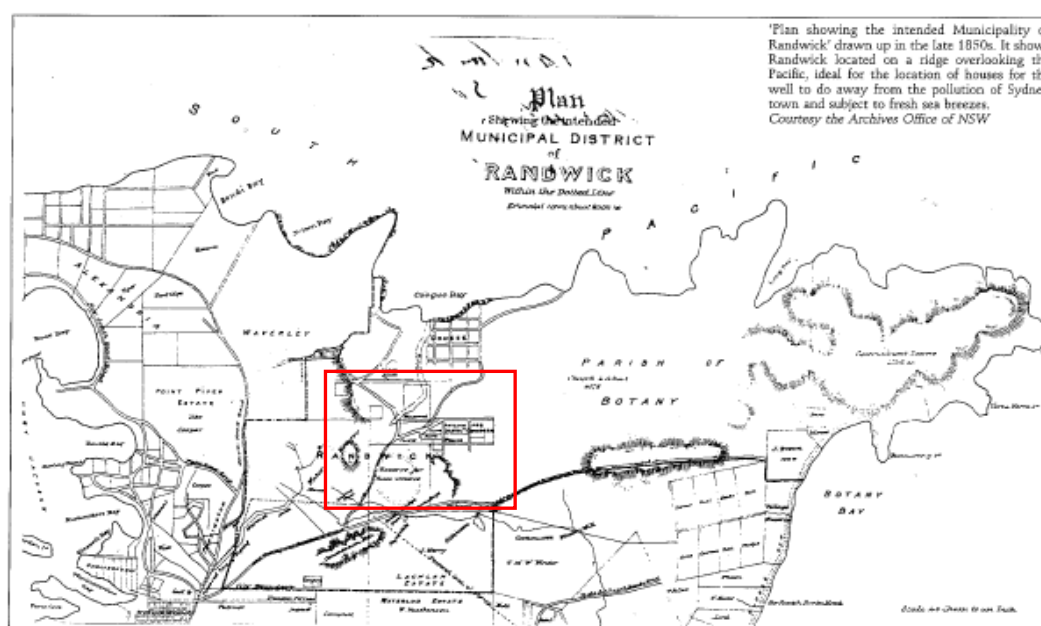
Randwick was Sydney's first suburban municipality, established in 1859, and described as a beautiful seaside suburb. It transformed from a village with poor access in the 1840s to a suburb with trams by the 1880s. Many consider the vision and passion of a prominent resident landowner and later Chairman of the first Council, Simeon Henry Pearce as having the greatest influence on its establishment and early growth.

Pearce's vision was for a model village with an ideal physical, social and economic structure. He advocated for the name 'Randwick' to be used (after his home village in Gloucestershire, England), and supported improvements to the area such as the telegraph (1875), postal service (1878), gas lighting (1879) and tram service (1880).

Two significant phases of population growth in Randwick have occurred with the opening of the tram service (1880s) and the flat boom of the 1920s and 1930s with Randwick being the most densely populated Municipality at this time. The baby boom of the 1960s and 1970s further concentrated flat development.

The area has experienced extraordinary change since the first racecourse was established in Randwick in 1833. The racing industry is believed to be the first major employer of the Municipality. From as early as the 1850s hospital/institutional services as well as recreational and educational activities have also shaped the suburb.

Avoca Street was the original focus for transport movement, with large sandstone public buildings being built such as the Town Hall, churches and Destitute Children's Asylum, now part of Prince of Wales Hospital. Randwick City's built environment reflects this rich and diverse history. The Specialised Centre as the first settled part of the LGA, contains the highest concentration of heritage items and conservation areas in our City.



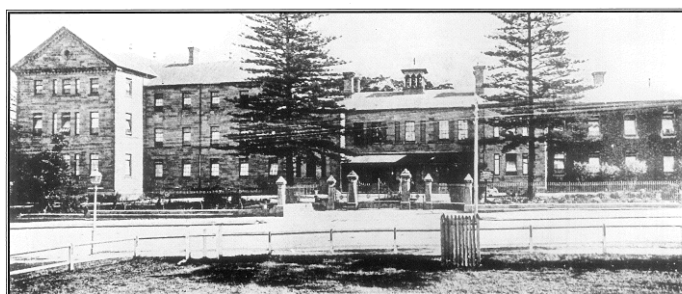
Randwick Municipality in the 1850s showing early roads, racecourse and the Destitute Children's Asylum (Simeon Pearce's Randwick: Dream and Reality)

Chronology

Pre Colonial (pre 1820s)		Cadigal people's territory relied on local swamps and vegetation. Earth pathways (or 'maru') to coastal areas were created
Early Colonial (1820s-50s)	1820s 1823 1830s 1842 1848 1850	Landscape radically altered by timber cutters and hunters First land grants in Randwick Coogee beach attracted visitors from Sydney Australian Jockey Club formed Blenheim House completed by Simeon Pearce Struggletown dwellings constructed
Suburbanisation (1850s-80s)	1850s 1858 1856 1859 1865 1867	Sydney Omnibus Company operated horse buses 4 times daily to Randwick Some 30 houses existed in Randwick Construction of the first building on the Randwick Health Campus: by Edmund Blackett and used as the Destitute Children's Asylum Randwick declared a suburban municipality, first in Australia First derby day at Randwick Racecourse attended by 12,000 people Catherine Hayes Hospital construction - First Hospital on the Randwick Health Campus
Victorian (1880s-1900)	1891 1874 1880 1883 1888	Population 6,200 First statue of Captain Cook erected in Australia Cnr Belmore Rd and Avoca St Steam trams operated to Randwick, transforming the area Randwick Public School opened Centennial Park opened
Federation (1900-1920s)	1901 1906 1921 1910 1915 1918	Population: 9,700 First public cycle track in NSW opened through Moore Park, Centennial Park Tram service from Central Railway to Maroubra via Anzac Parade Members Stand built at Royal Randwick Racecourse Destitute Children's Asylum became a military and repatriation hospital William Inglis & Sons acquired Newmarket



Randwick Racecourse
(Early Colonial 1820s - 1850s)



An early view of the Destitute Children's Asylum
(Suburbanisation 1850s - 1890s)

Inter war (1920s-30s)	1920s-30s	Population 51,000 (1921) - 79,000 (1933) 55% increase in 12 years Largest municipality in population outside City of Sydney Flat construction boom Conversion of large Victorian houses to flats and boarding houses Significant population increase and new subdivisions for 'garden suburbs' of Kingsford and Kensington
Post war (1950s)	1960 1949 1953 1950s 1950s	Population: 100,000 University of NSW founded on the old Kensington Racecourse Military and repatriation hospital renamed Prince of Wales Hospital Expansion of suburbs south of Maroubra Increased overseas migration. Migrant Hostel on the Old Tote site UNSW
Baby Boom (1960s/70s)	1976 1960s 1961 1965 1976	Population 123,000 Large scale unit development predominantly in Randwick, Kingsford, Kensington and Coogee, replacing single dwellings. Last tram ran along Anzac Parade replaced by bus services 393, 394, 395, 396 Randwick TAFE established The Sydney Children's Hospital was established at Randwick Health Campus
1980s/1990s	1980s 1987 1990 1993 1997	Population decline across municipality, mainly due to lower household size NIDA relocates to new premises on Anzac Parade Randwick Municipality was proclaimed a City Major redevelopment of the Randwick Health Campus Women's Hospital relocates to Prince of Wales Campus
2000 - Present	2009 2001 2000s 2010	Population 125,000 Prince Henry Hospital relocates to Prince of Wales Hospital Development of medical research institutions on Randwick Health Campus Frank Lowy Cancer Research Centre, UNSW, opened by Prime Minister and Premier



High Street/High Cross Park (Post War 1950s)



UNSW Kensington campus, 1955

3 The Centre

This Section provides a snapshot of the Centre and identifies a range of attributes that contribute to its identity and key function as an education, health and research precinct. The Centre's three largest sites strongly influence its character and activities.



3.1 Activities

University of NSW

The University consistently ranks as one of the best universities in Australia and the Asia-Pacific and is listed in the world's top 100 universities. It outperforms other Australian universities in rankings for engineering, business, economics and law. A founding member of the prestigious Group of Eight (Go8) research intensive universities in Australia, UNSW received the maximum five-star rating in many key performance indicators (well above any other Go8 University) in the Australian 2010 Good Universities Guide. The UK Times World University Ranking ranked the Faculty of Engineering and AGSM Program the best in Australia.

UNSW aspires to be 'a leading research intensive University in the Asia-Pacific region, focussing on contemporary and social issues through defined strengths in professional and scientific fields-a peer in good standing with the best globally'. The strategic objectives of the University focus on research, the student experience and community engagement.

Founded on the present site of the former Kensington Racecourse in 1949, the University began with just 46 students. Today the University extends over a 38ha site, has over 42,000 students and 5,200 staff. The campus accommodates 8 faculties with 54 schools, 10 residential colleges with 3100 students, and associated teaching, research, administrative and support buildings. The total floor space on campus is around 500,000 square metres.

UNSW has 6 core research areas and accommodates almost 100 research, teaching and community programs including the National Centre in HIV Epidemiology and Research, Centre for Advanced Silicon Photovoltaics and Photonics and Brain Sciences UNSW. The University won more research grants in 2008 than any other Australian tertiary institution from the National Health and Medical Research Council (NHMRC). This includes the largest Australian grant in history, \$17.7M for HIV and hepatitis C research. Grants from the Federal Economic Stimulus Program and philanthropic donations are also significant, with \$75M of federal funding for the Tyree Energy Technology Building, and a \$20M donation for the Lowy Cancer Centre.

The University has strong regional and global connections including Universitas 21 (international universities consortium), NSW Innovations Pty Ltd, Global Consulting, Social Policy Research Centre and Climate Change Research Centre.

The UNSW Kensington Campus, with its relatively small footprint, has been developed in line with strong master-planning principles for over 20 years focussing on enhancing the campus experience for students and staff. Now at a mature stage of development, a focus of the University is planning for renewal of its building stock and continuing to provide a legible, high quality spatial network.

Randwick Health Campus

The Randwick Health Campus comprises the largest complex of teaching hospitals in Australia, providing comprehensive health services ranging from state-wide specialist tertiary referral services to metropolitan and local community healthcare.

Four major hospitals comprise the Randwick Health Campus: the Prince of Wales Hospital; the Royal Hospital for Women; Sydney Children's Hospital; and the Prince of Wales Private Hospital. Collectively they treat over 70,000 acute and emergency patients per year and deliver close to 4,500 babies. Significantly over 1.2 million outpatients are treated per year including community health and outreach programs. There are 1000 hospital beds across the campus.

State-wide referral services include hyperbaric medicine, lithotripsy, spinal injury, epilepsy, neuropsychiatry, mood disorders, and the Sydney Cord Blood Bank. The public hospitals have strong outpatient departments and chronic treatment units for the community including aged care, dermatology, endocrinology, infectious disease treatment, neurology, plastic surgery, rheumatology, genetics, diabetes, pain management, physiotherapy and respiratory medicine.

The public hospitals are administered by the Illawarra and South Eastern Sydney Illawarra Area Health Service (SESIAHS). The seven primary strategic directions for the SESIAHS relate to disease prevention, providing better services, strengthening primary and community care, improving regional and other partnerships, managing costs, building a sustainable workforce and readiness for risks and opportunities.

The Campus covers an area of 13.3ha, with total floor space of around 235,000 square metres. Its hospitals, research centres, accommodation and ancillary services have a total of around 5,600 staff across 20 different employers.

The Health Campus has undergone many stages of development since the first building, the Destitute Children's Asylum, was constructed fronting Avoca Street in 1856. This Edmund Blackett designed building was later used as a hospital to treat military personnel from about 1915 to the 1950s. The adjacent Catherine Hayes Hospital was the first hospital on the site, established in 1867 (with the plans apparently approved by Florence Nightingale) to care for the Asylum's children.

Major building development on the Campus took place in the 1950s when the repatriation hospital was renamed Prince of Wales Hospital, followed by the establishment of the Sydney Children's Hospital in the 1970s and a second major redevelopment in the 1990s. Further consolidation and major development of the Campus took place with the relocation of the Women's Hospital from Paddington and Prince Henry Hospital from Little Bay in 1997 and 2001 respectively. A significant presence at the Campus includes the Prince of Wales Medical Research Institute, the Children's Cancer Institute and the Black Dog Institute.

Residential accommodation for staff, remote outpatients and carers has historically been provided on Campus. Since the 1970s this has been in the 350 room Vera Adderley Residence, which was closed in 2009, and is now due to be demolished. A smaller number of rooms are provided by charities such as Ronald McDonald House which accommodates up to 80 people, for young patients receiving treatment and their families.

Royal Randwick Racecourse

Royal Randwick Racecourse is metropolitan Sydney's oldest and longest continually operating racecourse and a place of State heritage significance. It is the premier racecourse in NSW.

Royal Randwick Racecourse is one of 4 racecourses in Sydney and has the largest track, with a circumference of 2200m. It has recognised significance for thoroughbred racing in Australia providing economic benefits to the local and state economies. The site has unique historic, associative and aesthetic and social links to the development of horseracing in Sydney and New South Wales

The site covers 85 ha, and employs 100 permanent staff and 300-400 training and track workers, with additional employment during race days as well as flow on benefits to local/regional equestrian suppliers e.g. saddle makers, farriers, straw and horse food, fertilisers, stabling and veterinary services. There are currently some 600 stables on site with training for 800 horses. Residential accommodation on the site for key workers has a long history, although this has decreased over time. Houses are currently provided for on-course track workers, caretaking staff and the clerk of the course.

The land is under a long term lease to the Australian Jockey Club (AJC), and while racing, stabling and training are the core activities at the racecourse, the site is also used for major public events, private functions, exhibitions, and University of NSW examinations. It has been associated with visits from national and international dignitaries such as Queen Elizabeth II, Pope John Paul II and in 2008 World Catholic Youth Day Papal mass celebrated by Pope Benedict XVI was held at the site and attended by 230,000 pilgrims. Today some 12,000 people attend each major race and around 400,000 visitors are attracted each year.

Before development of the racecourse the site was covered in sandy hills, scrub land and low-lying swamps. The first official race began in the autumn of 1833 following formal course set out. The spectator precinct developed reflecting a traditional approach to racecourse design, and the site's distinctive architectural qualities and its continuity of uses are recognised in a Heritage Conservation Area.

The racecourse acted as a catalyst for establishment of public transport and road infrastructure to the east, and played a pivotal role in the development and growth of surrounding residential areas. The opening of the steam tramway to Randwick in 1880 was intended to facilitate access to the Racecourse and very soon after the line expanded to other parts of the Municipality including Coogee Beach. The site is a major area of open space in the Randwick LGA, and forms a system of regional open space south of the Sydney CBD including Centennial Park, Moore Park, Queens Park and golf courses extending south to Botany Bay.

Relationships

Clustering

Located within the global economic corridor of Sydney, the Randwick Specialised Centre is a location of “magnet infrastructure”, with a combination of physical and knowledge assets that can act as a catalyst for new investment, driving knowledge, information exchange and innovation that is crucial in maintaining Sydney’s global competitiveness. Complex formal and informal networks of synergies and connections have evolved, linking activities within the Centre’s boundaries and beyond, especially in research.

Research

The Centre is nominated as one of 8 medical and scientific research hubs in NSW, with a large aggregation of independent and University-sponsored research groups focusing on medical research, physical and bio-sciences, engineering, sustainable development and technology. UNSW alone operates, supports or participates in over 80 research organisations. Some of the research organisations operating in the Centre include:

- Prince of Wales Medical Research Institute (POWMRI)
- Black Dog Institute
- Children’s Cancer Institute of Australia for Medical Research
- National Drug and Alcohol Research Centre
- Dementia Collaborative Research Institute
- UNSW Cancer Research Centre
- Australian Solar Institute
- National Centre in HIV Epidemiology and Clinical Research
- National Information and Communication Technology (ICT) Australia
- National Centre of Excellence in Desalination
- National Centre for Groundwater Research and Training
- Centre of Excellence in Advanced Silicon Photovoltaics and Photonics
- Centre for Sustainable Materials Research and Technology
- Climate Change Research Centre

Several major recent and planned developments within the Centre have a research focus, including:

- Lowy Cancer Centre, completed in 2009
- Prince of Wales Medical Research Institute (POWMRI) - Neuroscience Research Precinct – approved 2010
- UNSW Solar Research Facility – approved 2010
- UNSW Energy Technologies Building – awaiting approval 2010
- Advanced Treatment Centre (clinical trials) – planning stage
- Integrated cancer care centre – planning stage

These developments will further strengthen opportunities for coordination and collaboration within the Centre, and enhance its capacity to attract leading research staff, future funding and investment.

Local Links

The recent formation of the Randwick Hub Governance Body has formalised the coordination of research activities in the Centre, linking the University, hospitals, independent institutes and government agencies. This reflects a

shift from traditional research into a more collaborative, multi-disciplinary approach that strengthens the potential for innovation and sharing of infrastructure and intellectual resources.

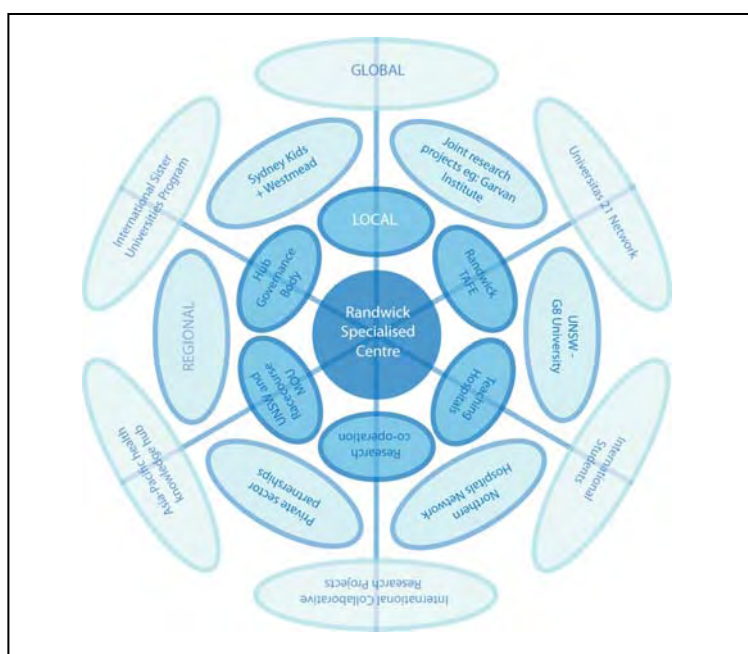
Health and Education

The hospitals and medical research institutions in turn have strong links with various schools within UNSW, most notably the Schools of Medicine, Biosciences, Psychiatry and the Australian School of Business as well as private sector medical services. Nearby Randwick TAFE with its 7,500 students and 700 staff provides a range of diploma courses enabling entry into University including English language courses and assessment.

Regional Links

Strong research linkages beyond the Centre include the Garvan Institute of Medical Research, the Skin and Cancer Foundation, and the Victor Chang Cardiac Research Institute. UNSW uses 5 principal teaching hospitals for its medical students: Prince of Wales, Sydney Children's, St Vincent's, St George, and Liverpool Hospitals.

The hospitals collaborate with other hospitals within the Sydney region such as Sydney/Sydney Eye Hospital, St George and Wollongong Hospitals (e.g. renal transplants) and War memorial Hospital (older persons Chronic Care initiatives). The recent announcement of the formation of a single body overseeing children's health services, Sydney Kids, will strengthen existing links between Sydney and Westmead Children's Hospitals.



Networks of Linkages within and beyond the Centre

International Links

International links and some of the specific achievements generated by the Centre include:

- Creation of a health knowledge hub by UNSW in the Asia-Pacific Region in partnership with AusAID to improve health outcomes
- United Nations High Commission of Refugees/UNSW joint research project
- Extension of solar cell manufacturing research in Asia
- Major collaborative programs in Thailand and Cambodia by the National Centre in HIV Epidemiology and Clinical Research (NCHECR)-recognised internationally as a research leader in the field of HIV/AIDS
- International alliances with major research universities through Universitas
- Expanded National Drug and Alcohol Research Centre programs in Asia
- UNSW 200-plus sister universities around the world
- Overseas patients being treated at the Health Campus
- Achievement of international accreditation by Sydney Cord Blood Bank at Sydney Children's Hospital – providing donations to overseas patients.

3.2 The People

Understanding the Centre's residents, workers, students and visitors is essential for planning for socially sustainable communities that are healthy, happy, safe, interactive and inclusive.

Overview

While the Centre's community is diverse it also has distinct features arising from the key attractors, the University and Health Campus. The population has high numbers of young adults, many undertaking or having recently completed their tertiary studies, often living in group households and often earning little or no income. Not surprisingly, car ownership is relatively low, while the use of public transport, walking and cycling is higher than other parts of Randwick City and Sydney generally.

With the Centre bridging the early established suburbs of Randwick, Kensington and Kingsford, housing styles and densities are varied. Renting is more common than purchasing, especially in apartments, and given the location's popularity and accessibility to public transport, beaches, Sydney CBD and local services, housing affordability is increasingly an issue.

The Centre is also home to couples, families and older residents, often professionals, with many on high incomes, and a significant proportion working within the Centre itself or nearby.

The following provides an outline of these key features and trends, primarily based on 2006 ABS Census data. Further detail is included in the Community Profile, in Appendix 1.

Residents

Compared to the rest of Randwick City and to Sydney, residents in the Centre's three suburbs show the following:

- Significantly higher proportions of young adults are in the 18-24, and 25-34 year age groups, with fewer children in the 17 years or less age group
- Higher proportions of residents born overseas and from non-English speaking backgrounds (especially China)
- Higher proportions of people attending University, and lower proportions attending primary or high schools
- Higher proportions of people working in Professional/ Scientific/Technical, Health and Education sectors
- More people living in higher density housing (3 storeys and over) and group households
- More households renting compared to buying/owning
- Higher rates of mobility rates are higher, with many having moved in the last five years
- As a busy location, safety is important and some crimes are higher in the Centre (such as theft from persons and from cars), especially around UNSW, and targeting students

Travel Behaviour

Sustainable transport use (public transport, walking and cycling) in the Centre is very high, reflecting the proximity of employment and study close to home:

- Of all Sydney's employment centres, the Centre has the highest percentage of workers who walk to work (15.1%)
- The Centre has the highest prevalence of non-car work-related travel (37.1%) of any centre outside the CBD and North Sydney and Bondi Junction
- Cycling is a small but growing travel option (for 1.5% of residents in the Centre)
- Car ownership is lower, with over 20% of households having no vehicle
- A high proportion of residents both live and work in the Centre (37% of Randwick City's workers)
- Over 32% of University students live within 3km of the University. This has increased with the recent addition of 1300 beds on campus
- Around 50,000 people visit the Centre each day (students, workers, patients and visitors).

Trends

- Population of the Centre over 10 years (1996-2006) has grown by a modest 1.6%.
- Population growth was evident, but declined in the 18-34 year age group.
- Numbers of University and TAFE students living within the Centre declined from 2001-2006 but the number of students attending pre schools has increased.
- Numbers of residents working in health and education as well as property and business services (dominated by home-based businesses) has grown.
- Average household size has decreased throughout the City and the Centre.
- Numbers of people living close to the University have increased.
- Home ownership rate is declining.
- Proportion of high income households has increased, and of low income households has decreased slightly.
- Weekly rental rates have increased substantially, and are well above the Sydney average.

3.3 The Place

The Centre has a complex and diverse urban environment which is reflected in its topography, urban structure, rich mix of land uses, built form and character.

3.3.1 Land uses

Commercial Areas

- The Centre is supported by four defined commercial/retail areas all with a primarily local catchment, but each with their own specific roles and characters.
- Randwick Junction is the largest of these, with a higher concentration of convenience and speciality retail, business, health and related uses. It acts as a service centre to the surrounding residential areas and the Health Campus in particular.
- Kingsford serves as a local service centre to nearby residents, UNSW staff, students and visitors. It contains a significant night economy with a high concentration of restaurants and food outlets, popular with students.
- The Spot is a popular dining and cultural destination for the district, focussed around an historic cinema. It contains a predominance of restaurants, cafes and some speciality retail, but limited local convenience retail.
- Kensington contains a mixture of uses, primarily acting as a local retail, dining and service centre, with Peter's of Kensington acting as a regional retail destination.

Residential Areas

- The Centre is surrounded by established residential areas, several with heritage values and distinct characters. Included in these areas is a significant student presence in various housing forms, reflecting the demand generated by the UNSW and Hospitals. Many older flat buildings provide a more affordable accommodation type, and increasingly boarding houses area returning as a favoured affordable option.

Equestrian Activities

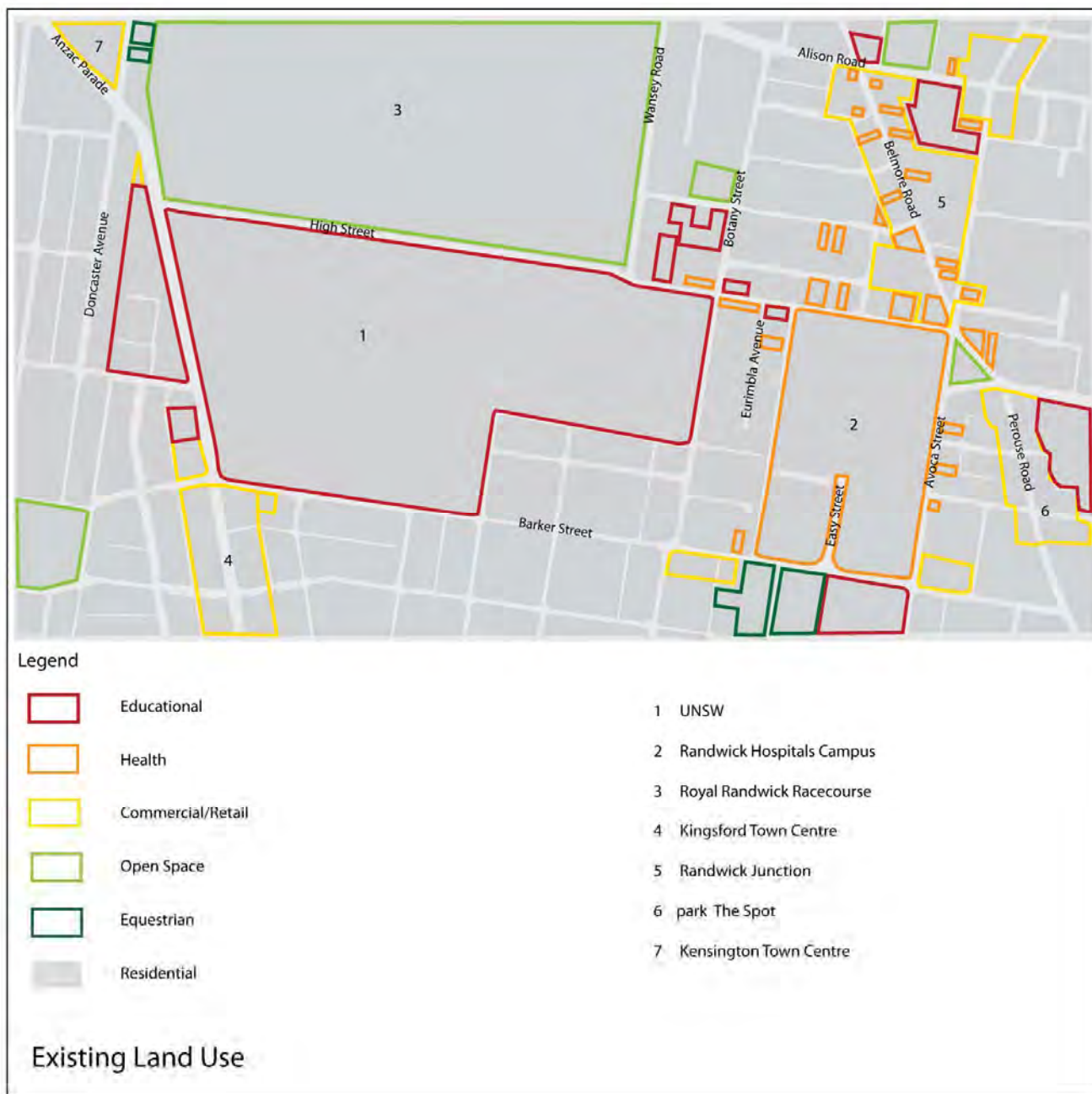
- While racing, stabling and training are the core activities at Royal Randwick Racecourse significant equestrian activities also occur elsewhere throughout the centre. These include:
 - Equestrian stables adjacent to the racecourse
 - Thoroughbred auction facility (Inglis' "Newmarket" site)
 - Equine hospital
 - Residential properties owned by the AJC

Health and Research

- The Randwick Health Campus contains a number of independently operating institutions, with diverse activities:
 - Core clinical functions including emergency
 - Outpatients' services and clinics
 - Mental health uses
 - Medical research
 - Ancillary administration and support
- The Health Campus is surrounded by a significant number of related activities:
 - Medical, allied health and supporting uses in Randwick Junction
 - Dispersed medical consulting rooms in residential areas
 - Health-related research and education facilities on UNSW campus

Education

- UNSW and Randwick TAFE are the significant tertiary education uses in and around the Centre
- A significant number of state and private high schools and public schools are also present



3.3.2 Urban Structure

Landform and topography

The Centre contains varying topography and ground conditions which strongly influence urban structure:

- A ridge runs north-south along Avoca Street, sloping down strongly towards Anzac Parade on the western side of the Centre. There is a total drop from east to west of over 34m, with the slope most pronounced in the centre of the University campus where the land drops 16m over 160m; an average gradient of 1:10.
- A more gradual slope exists from High Street in the north, heading south towards Barker Street
- Low lying areas include Royal Randwick Racecourse, a former swamp, and the University's Village Green oval, which provide a stormwater detention function.
- Some parts of Barker Street near the Health Campus and Botany Street contain localised low points and overland flow paths.

Views/visual structure

The varying topography affords strong viewing experiences throughout the Centre.

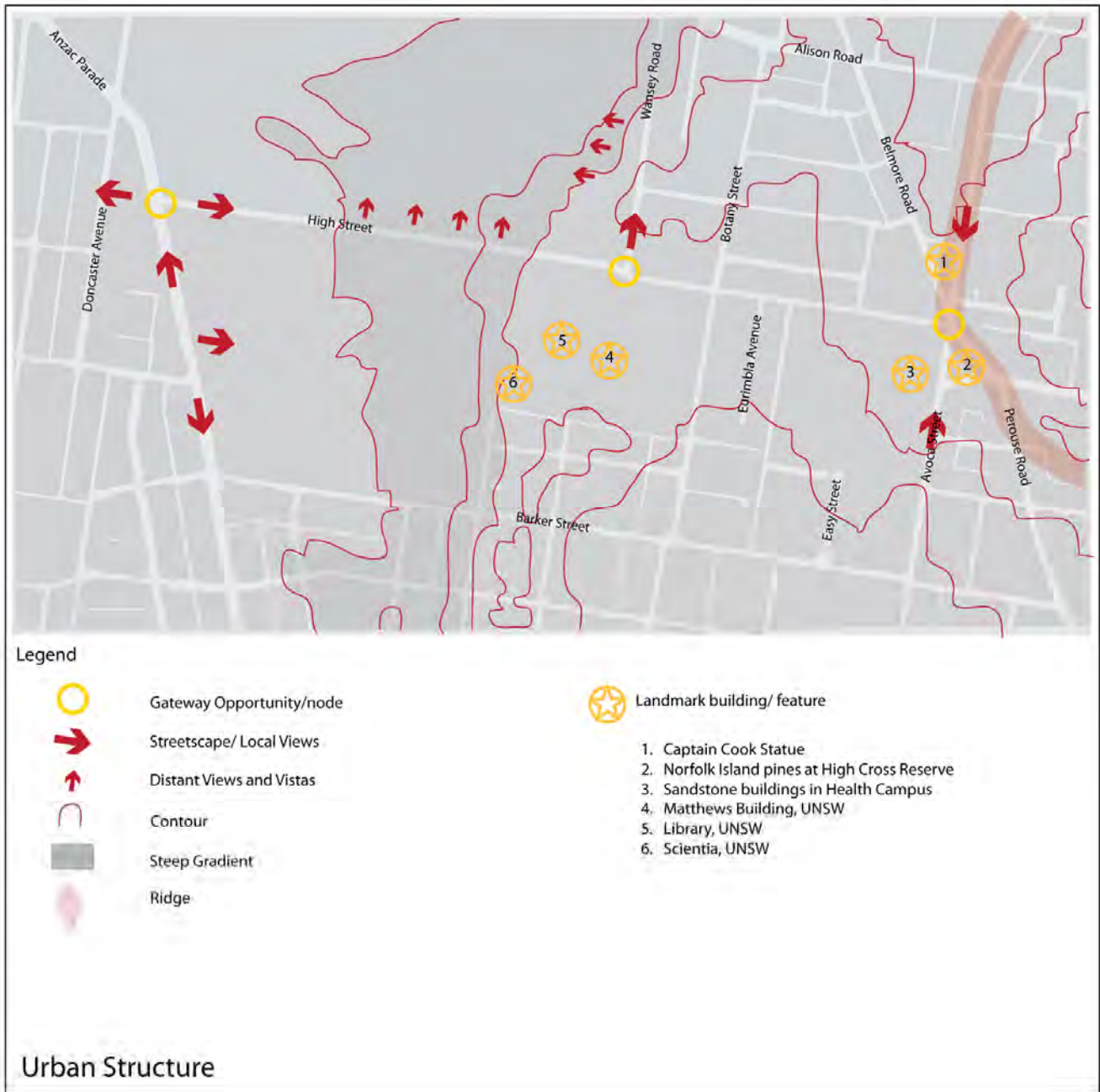
- Distant views exist from the ridge on Avoca street eastwards to the ocean. Views are also provided north to the Sydney CBD across the racecourse from High Street.
- Views from the ridge also lie to the south and west towards Botany Bay, and beyond towards the Blue Mountains.
- The connection of significant green spaces to the north of the Centre allows for strong views across them, both to and from the Centre. A significant vista of the Centre exists from Oxford Street in the north, across Centennial Park and Royal Randwick Racecourse towards High Street.
- The varying topography allows many district views, significant ones including across Royal Randwick Racecourse, and the residential slopes towards Coogee Beach.
- Strong yet varying streetscape views include High Street, Anzac Parade, Wansey Road and Avoca Street.
- Views into both the University and Health campuses are generally limited and un-inviting, with the exception of the dramatic axial view along University Mall from Anzac Parade, and the Health Campus heritage precinct on Avoca St. Views into the major internal University campus spaces and buildings from the High Street and Botany Street entries in particular are minimal.

Landmarks

The Centre's landmarks are generally in the form of buildings and landscape elements, which identify the Centre from a distance, and also act as local orientation and focal points. These include:

- Norfolk Island Pines at High Cross Reserve
- Captain Cook monument and old Post Office building, Avoca Street
- Prince of Wales Hospital buildings
- UNSW Library and Matthews buildings

The recent student housing and Lowy Cancer Centre on High Street are increasingly bringing this street into focus as a strong structural element. Other structural elements/streets include Anzac Parade and Avoca Street.



3.3.3 Built Form

Subdivision Pattern, Scale and Grain

University and Health Campuses

- Institutional buildings are generally larger in footprint and vary in height from 1-2 storeys up to the 14 storey Library and 15 storey Matthews building (landmark buildings on the University campus);
- The higher institutional buildings are generally located in the centre of the Health and University campuses, with perimeter buildings typically ranging from 3-6 storeys.

Residential areas

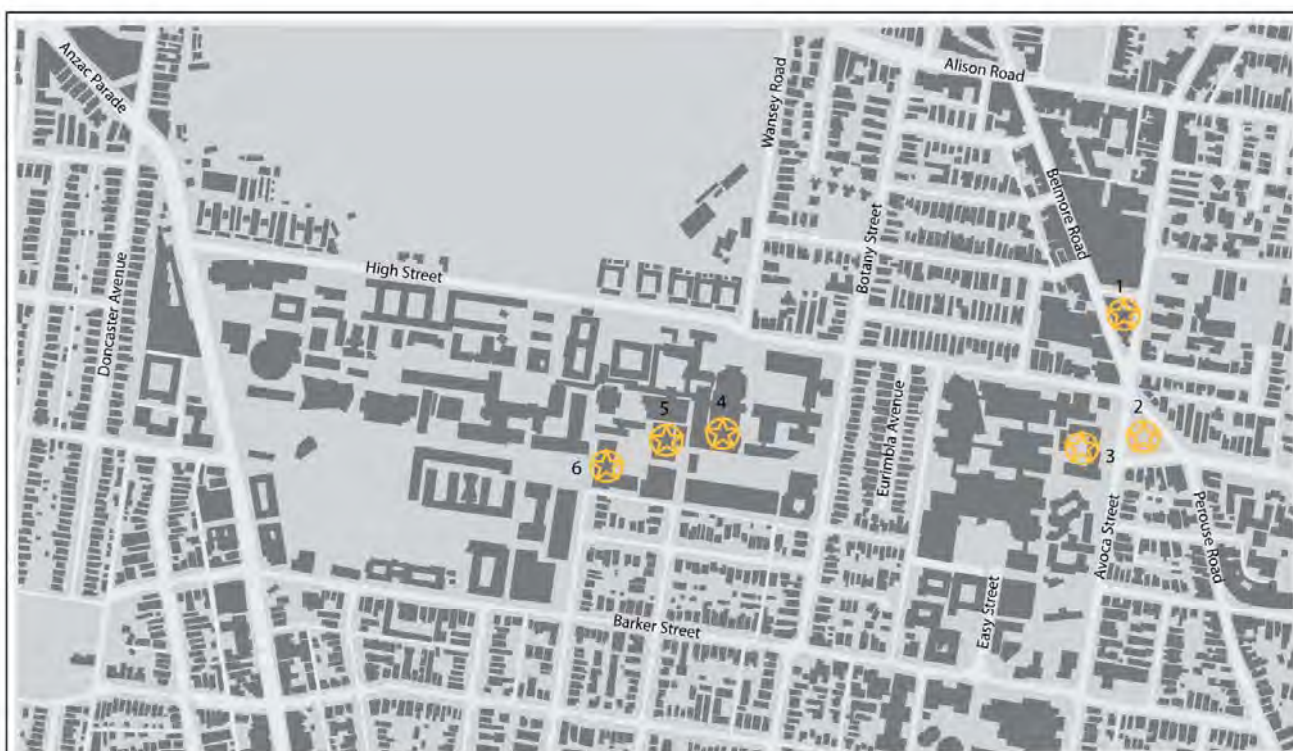
- Areas are medium-density and a relatively fine grain overall but with a mixture of juxtaposed 1-2 storey dwellings and 3-4 storey walk-up flat buildings.

Royal Randwick Racecourse

- Buildings on the southern side of the racecourse have a generally small footprint, low scale stable and ancillary structures, with major buildings and grandstands concentrated on the north-western portion of the site.

Town Centres

- Town centres traditionally have developed as retail strips with shop-top housing of 2-3 storeys. This remains the case, except for the centres along Anzac Parade which have been largely replaced by multi-storey mixed use developments, with a significant residential component up to 8 storeys.



Legend



Landmark

1. Captain Cook Statue
2. Norfolk Island pines at High Cross Reserve
3. Sandstone buildings in Health Campus
4. Matthews Building, UNSW
5. Library, UNSW
6. Scientia, UNSW



Building Outlines

3.3.4 Character and Typology

University

- Founded in the 1950s, the University has a modern character with the exception of the Old Tote and White House buildings, reflecting its original racecourse function. The campus has developed along an internal street structure, which has evolved and strengthened around a strong east-west spine, University Mall.
- Common building types are multi-storey concrete framed faculty buildings, and lower rise masonry residential colleges, schools, administration and student facilities.
- Lower rise buildings are often characterised by a courtyard typology, providing a series of connected intimate public rooms.
- Many are strong examples of the architecture of the day, reflecting the University's commitment to design excellence and innovation. More recent buildings are award-winning examples of environmentally sustainable development.

Health Campus

- The campus contains a layering of buildings reflecting the characters and typologies of their time. The oldest buildings date from the 1850s, and are typically located along the Avoca Street ridge. Sandstone features strongly in these buildings.
- The campus is dominated by the Prince of Wales main hospital building, built in the 1970s and the more recent major redevelopment in the early 1990s containing the Royal Women's, Prince of Wales Private and extended Prince of Wales hospitals.

Residential areas

- Residential development is characterised by periods of rapid growth; the first phases in the late 19th century and federation period, followed by a second boom in the 1920s which saw the majority of the suburbs surrounding the Centre established.
- Subsequent interwar development and the 1960s and 1970s saw residential flat buildings replace many earlier dwellings, and flats now form almost 20% of the residential buildings, and over 60% of the dwellings in Randwick, Kensington and Kingsford.
- Recent development has been confined to rejuvenation of existing housing stock, and new multi-unit and mixed use developments on large single sites.

Protection of Heritage Significance

- The north eastern end of the Health Campus, High Cross Park and the town centres of Randwick Junction and The Spot have the greatest clustering of buildings with heritage values reflecting the early road pattern. This is reflected in the number of Heritage Conservation Areas and Heritage Items in these locations.
- Royal Randwick Racecourse is also a heritage conservation area (with the heritage listed Members Stand) with a number of significant trees with heritage value.
- The Struggletown conservation area is one of the earliest settlements in Randwick that provided essential housing for the tradesmen and labourers of Randwick. A number of mid 19th century sandstone cottages and stables still survive.



3.3.5 Public Domain

Legibility

The fine grain grid-based subdivision pattern around the major sites provides a legible public domain and circulation framework, and the major streets surrounding the Centre have well-defined roles. However the circulation and way-finding at the interface with institutions is poor and navigation through the institutions themselves is complex.

- High Street provides the only significant public domain element linking the Centre's activities and sites, and contains major entries to the University and hospitals.
- Barker Street is the primary vehicular access point to the Health Campus, and the face of its research facilities.
- Botany Street is the public domain interface between University and Hospital activities, although segregated by residential uses
- Avoca Street provides a formal address to the Health Campus and Randwick Junction.
- Anzac Parade is an important boulevard with a regional role.
- Institutions have multiple entry points that are not always clearly expressed.
- University Mall is a strong internal east-west organising element for the University's lower campus, and provides a high level of legibility.

Permeability

A high level of permeability through the Centre is important to encourage safe walking and support its public life. Opportunities for spontaneous encounter and interaction between different people are linked to improved innovation and creativity.

- The University and Health campuses are "inclosed land", and therefore there is a need to manage the balance between public access and separation/security.
- The major sites are impermeable, and generally not well integrated with their surrounds.
- North-south links through the University and Health Campuses are limited, with restricted views into the centres of institutions.
- There is no continuous east-west pedestrian connection linking the Health and University campuses.

Quality, capacity and safety

The public domain in the Centre lacks cohesion, and is of varying quality and amenity.

- There is a lack of defined public space apart from streets and footpaths. Footpaths are subject to high pedestrian traffic, and are not always adequate in capacity or amenity.
- Safety of students, workers and visitors to the University and Health campuses is critical, especially after dark.
- Existing spaces within the University and Health campuses that link with and add to the public domain can take on a stronger role.
- The public domain is poorly activated by the buildings in the Centre, with the exception of the town centres and the Health Campus fronting High Street.



3.3.6 Landscape, recreation and open space

Open space/recreation

While the supply of open space is high overall in the Randwick LGA, it is distributed away from the Centre.

- Smaller open spaces and active recreation opportunities in particular are limited in close proximity to the Centre. Indoor recreation facilities are currently identified as deficient across the LGA.
- Future recreation needs will grow with the population, and projected increase in students and key workers living close to the Centre.
- Recent and planned developments/property disposals by the University have reduced the provision of recreational facilities for students/staff on campus.
- Larger regionally significant open spaces such as Centennial Park, Heffron Park and coastal beaches and walkways are located within a 2.5km radius of the Centre.

Significant landscape elements

Consistency of uses over time in the Centre has allowed significant landscape elements to emerge:

- Significant trees are located on the University and Health campuses, and on Royal Randwick Racecourse
- Royal Randwick Racecourse is a significant landscape element in its own right, providing important distant views and visual relief
- High Cross Park is a heritage item.

Street Trees

Street trees are inconsistently provided in the Centre. Randwick's Street Tree Masterplan outlines the intended street tree provision in the LGA. Street trees in some parts of the Centre contribute to a sense of identity and improve pedestrian amenity:

- Important street trees include mature fig trees along the western end of High Street, and along Alison Road
- Several streets provide significant tree canopy which improves pedestrian amenity
- The eastern end of High Street, fronting the Health Campus has little or no street tree coverage.



3.4 Transport

Transport facilitates movement to, from and throughout the Centre. It plays an integral role in supporting economic growth and vitality by enabling access to jobs, education and health services, and social and recreational facilities. The existing transport network presents a number of opportunities and challenges for the Centre.

3.4.1 Public Transport

Existing Public Transport

Public transport services to the Centre are provided by buses only. The Centre lies on the key transport corridor of Anzac Parade, between Maroubra in the south and Sydney CBD in the north, with a daily usage of 2.28 million passenger kilometres.

Four strategic bus corridors serve the Centre, primarily north-south operating and linking other key Centres such as Sydney Airport, Sydney CBD, Hurstville, Burwood and Bondi Junction. A “Metrobus” service also operates between Maroubra and Leichhardt via Sydney CBD. There is no peak connection to the Centre from the nearby growth area of Green Square.

While there is a high level of bus frequency to the Centre overall, accessibility mapping does not indicate if routes are appropriate to demand, or if the road infrastructure has the capacity to accommodate the service.

The majority of services are peak oriented, operating to and from UNSW and Sydney CBD. UNSW is the largest single customer of Sydney Buses and serves its most profitable routes. Off-peak services to the Health Campus are rated moderate to poor.

- Services to UNSW are experiencing major congestion problems at both origin and destination. This limits options to address capacity shortages by increasing individual bus size, such as using articulated buses.
- To mitigate congestion and capacity problems and avoid increasing private car use the University has trialled a free staff bus to Redfern Station, and staggered timetables.
- Local bus services are especially important for the Health Campus, with a significant number of outpatient services being delivered to a local and subregional catchment.
- Bus services to the south of the LGA and the Botany Bay area serving the Health Campus are indirect and infrequent, as are those towards the north of the subregion.
- Waverley Community Transport commenced a trial scheduled bus service from the south of the LGA to the Health Campus in 2008.

Mass Transit Opportunities

A range of mass transit options have been identified for the Centre:

- Randwick Council’s Transport Study indicated a heavy rail link to Bondi Junction or a light rail connection between Sydney CBD and Malabar as preferred options to address the LGA’s current and future demands.
- A future Sydney East underground metro rail line was identified by the NSW Government as a mass transit link to the Centre, connecting it to Sydney CBD in the north and Malabar in the south. This does not have a commitment to a timeframe, funding or delivery.
- The recent Metropolitan Transport Plan indicates only incremental improvements to existing bus services to the Centre.
- In order to offer education to students across Sydney, equitable access to the University from across the metropolitan region is critical.
- Existing heavy rail stations are located in reasonable proximity to the Centre:
 - o Green Square and Bondi Junction stations lie 3km to the west and north respectively. Green Square better suits the origins of workers and students, but is less accessible due to the higher prices imposed by its private owners, and lack of a bus link to the Centre.

- o Redfern Station lies 4.5km from the Centre, and provides similar rail connections to metropolitan Sydney as Central Station, but lacks a bus link to the Centre.
- o Central and Museum stations are the closest CBD stations, at 4.2km and 5.5km from the Centre respectively. However, peak bus services linking the Centre with Sydney CBD are already severely congested.



Existing transport services to the Centre

3.4.2 Local Transport and Access

Walking and cycling

The Centre enjoys the highest proportion of workers and visitors walking or cycling than any other employment centre in Sydney.

- With a high proportion of workers and students living close to the Centre, walking is the preferred mode for journeys up to 2km.
- For distances of 2-3km, cycling becomes more popular, with around 10% of students this distance from campus cycling.
- Studies show cycling becomes feasible for local trips within 5km when dedicated cycle paths are provided.

High pedestrian areas within the Centre include Anzac Parade, High Street, Avoca Street, Botany Street, Belmore Road and the west end of Barker Street. These generally coincide with bus stop locations, major institution entry points and/or shopping destinations.

Regional and local cycle strategies provide a network of paths to and through the Centre. Implementation is being staged, with detailed design for cycle paths in the Centre to be undertaken in the future.

Roads and traffic

The Centre is bounded by major roads carrying subregional eastern suburbs and local traffic.

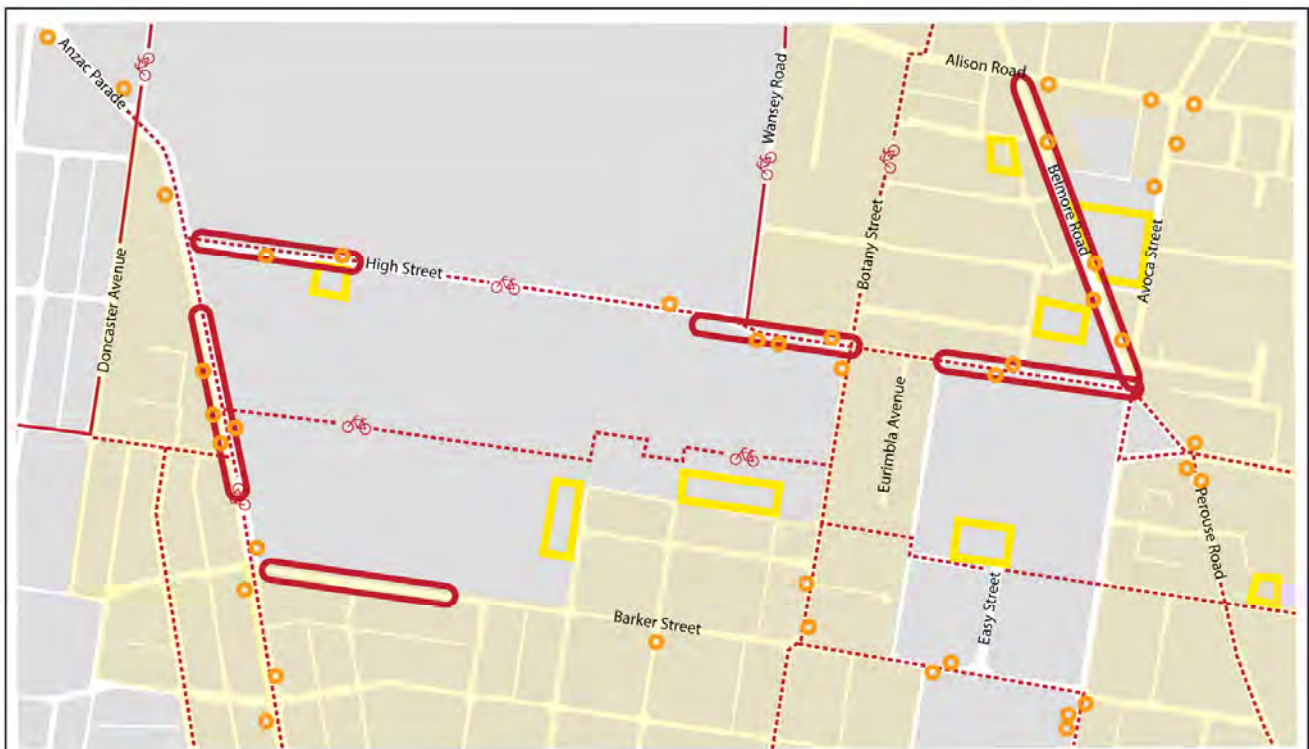
- Avoca Street, Anzac Parade and Alison road are state arterial roads.
- High, Barker and Botany Streets are local collector roads.

The local traffic network is performing satisfactorily, with some points of congestion at morning and afternoon peaks.

- Considerations are underway for traffic in the Barker Street (west) high pedestrian area to be reduced to 40kmh.
- Coordination of pedestrian priorities with traffic movements and local transport infrastructure such as bus stops is complex, and in places not well resolved.

Parking

- Over 5800 off-street spaces are available to the public, visitors, shoppers and/or workers in the Centre:
 - 48% on the University campus
 - 38% on the Health Campus
 - 14% in Randwick Junction and The Spot
- Over 2700 on-street spaces:
 - 22% are located on a non-residential frontage (e.g.: High Street, Belmore Road)
 - 52% are unrestricted spaces with residential frontages
 - 22% have residential parking schemes applied
 - 4% are time restricted spaces with residential frontages
- Peak parking demand varies across the Centre:
 - At the Health Campus it occurs at shift changeovers; 8-9am and 2-3pm
 - At the University it occurs from 10am-12pm
 - On both campuses highest peak demand is generally Tuesday to Thursday.
 - At these times parking on the campuses reaches capacity, while the off-street spaces in the town centres usually retain some capacity.
- Conflict between residents and student/worker parking is a longstanding issue. The University has adopted a Transport Strategy which seeks to limit the supply of on-campus parking, in coordination with a number of measures to discourage students to drive, and increase mode share of sustainable travel.
- Resident parking schemes are continually under review, with investigations into extensions to schemes in the area, with a focus on Kensington and Kingsford.



Legend

-  Residences covered by residential parking schemes
-  Cycle Path (Planned)
-  Cycle Path (Existing)
-  High Pedestrian Area
-  Bus stop
-  Off Street Parking

Local Transport

3.5 Sustainability

Sustainable resource management is the overarching theme in Council's 20 year City Plan: 'Leadership in sustainability'. It is also a key focus of UNSW research, and has emerged as a major theme from discussions with key stakeholders.

Current Initiatives

Current sustainability initiatives within the Centre include partnerships, education programs and incentives, and environmental performance improvement strategies. Some examples include:

Partnerships

UNSW and Randwick City Council sustainability partnerships deliver joint promotions, programs and projects such as using the University's Kensington campus Village Green as a stormwater detention area, which re-charges the Botany Sands aquifer, and a partnership exploring sustainable transport opportunities. Sustainable transport programs include support and promotion of car-share and car pool schemes.

Programs and incentives

Randwick City's "Sustaining our City" programs promote and deliver energy, water and waste efficiencies across the City, with incentives for residents and businesses to improve environmental performance.

UNSW Environmental Management Plan 2009 aims 'to develop and promote a culture of environmental leadership, responsibility and continual improvement across the UNSW community'. Initiatives include environmental auditing and towards zero waste programs, and environmental leadership achievement awards.

Environmental performance improvement strategies

The UNSW Energy Saving Action Plan identifies new projects to be progressively implemented over the next 4 years to save 53,000 gigajoules (Gj) per annum equivalent to 31,600 tonnes of CO₂.

Opportunities

There is an opportunity to build upon these individual initiatives, in a comprehensive way, showcasing this as a Centre of excellence in environmental performance. A Centre-wide approach could provide a model for similar employment districts across Sydney and beyond. Areas that use significant resources within the Centre, and opportunities for leadership and innovation include:

Transport

While the use of public transport, walking and cycling in the Centre is relatively high, there is room to enhance the efficiency of, and incentives to use sustainable transport. Examples include adopting a Centre-wide approach to parking provision, extending car-share schemes, and other coordinated travel demand management measures.

Buildings

Recent large-scale developments are transforming the Centre and this growth is likely to continue given employment growth estimates. The UNSW is committed to meet 'Green Building' design and construction efficiency standards in new projects and this should be encouraged across the Centre, assisted by university and collaborative research to extend and lead in these standards.

Energy, water and waste minimisation

The functions of the large institutions and the racecourse necessitate high energy and water use and waste outputs, but by working collaboratively, coordinated measures across the Centre can offer more cost effective efficiencies. Key avenues for innovation could include public/street lighting on and around the large institutions, water re-use and recycling measures, and coordinated investment in measures such as tri-generation and solar energy.

Approaches such as the Greenstar for Communities program and Landcom's PRECINX tool (which extends the NSW Government's BASIX measures) are being developed for communities and across whole residential/commercial precincts, and should be evaluated for use within the Centre.

Climate change

Recognition of likely long term changes needs to be planned for well in advance. Climate change may require further change to many aspects of our lives, with potentially more extreme weather patterns such as higher temperatures and rainfall. This again calls for innovation in use of resources, and the Centre is well placed to investigate and implement such advances.

3.6 Key Messages

In summary, key messages for planning for the Centre are to:

- Strengthen and communicate the Centre's identity to maintain its competitiveness and eminence as a place for learning, knowledge and innovation.
- Enhance the physical identity for the Centre while its key components retain and enhance their own distinct identity and character.
- Recognise the eclectic mix of scale, grain and development that is an inherent feature of the Centre's built form and character
- Create a land use planning framework that addresses long term growth in health, education and research, acknowledging its highly variable pattern and pressures on surrounding established residential areas.
- Recognise the primacy and future needs of the commercial centres and strengthen their relationship with health and education and related activities of the Specialised Centre.
- Accommodate continuing demand for housing in the Centre within and close to the institutions and with a diversity of housing forms.
- Encourage new affordable housing as a priority to improve broad community access to the institutions and assist key workers to live and work locally.
- Enhance the quality, quantity and access to existing limited open space and recreation within the Centre for all users including key workers, students and visitors.
- Establish an effective governance body can drive change through strong and effective leadership and can provide a platform for collaboration and cooperation across multiple stakeholders.
- Incorporate sustainable transport improvements as a critical factor in the continuing growth and success of the Centre.
- Plan and advocate for mass transit public transport services to the Centre to serve the community's current and future needs acknowledging that without a form of mass transit the potential of the Centre and its institutions will be constrained.
- Extend travel demand management measures to increase the already high utilisation of sustainable transport (bus, walk, cycle) by the Centre's workers, students and visitors and discourage unnecessary use of private vehicles.
- Manage parking supply to discourage unnecessary private vehicle trips to, from and within the Centre, while allowing for parking demand recognizing that vehicle use may be the preferred choice for some trips.
- Encourage, promote and facilitate walking and cycling to, from and within the Centre as the primary way of getting around.
- Manage traffic in residential areas to protect residential amenity, and balance the needs of pedestrians, cyclists and vehicles in the Centre's road network
- Create a legible, safe, connected and attractive public domain that enhances ground level experiences and encourages public life/interaction
- Place a high value on the landscape qualities in the Centre, preserving key views and enhancing the role of landscape in its connecting fabric.
- Demonstrate the Centre's leadership in environmental best practice/excellence by developing and implementing innovative sustainability measures.

4 Directions

This section examines the likely changes that we need to plan for, based on the Centre's attributes, trends in key activities, government policy, Council commissioned research and input from the Technical Working Group.

4.1 Trends and Drivers

The sites and activities of the University, hospitals, research institutions and racecourse will continue to change and evolve as they seek to maintain leadership in their fields. Patterns of growth and change in health, education and research tend to be highly variable rather than predictable and incremental, particularly given their high dependency on government and philanthropic grant funding. The following trends and drivers highlight this complexity in long term planning for the Centre.

Education

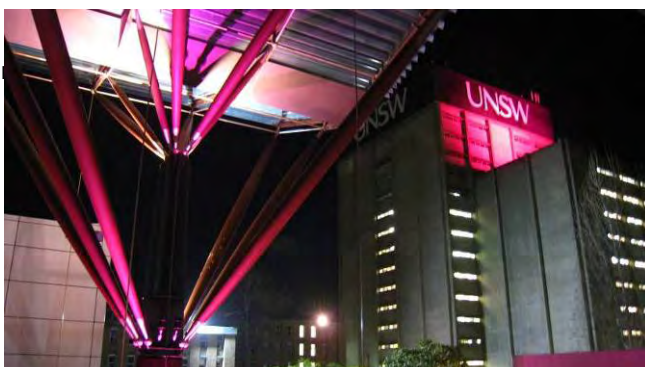
The education setting is evolving. Access to technology is increasing opportunities for off-site learning and research, though the extent of this trend may be limited due to the high value of the on-campus experience and the benefits of face-to-face contact in stimulating innovation and cross-disciplinary learning.

While the move to year round study (e.g.: summer sessions) and after hours courses can absorb some staff and student growth within existing floor space, trends indicate that more floor space will be needed to accommodate growth in education employment.

In NSW higher education services were the state's 2nd biggest export earner with \$9.5 billion education services exported in 2008. A focus on international students and teaching and research exchange will continue to be a key feature of the higher education environment.

The Federal Government is committed to making Australia one of the most educated and highly skilled workforces in the world and has adopted recommendations in the Bradley Review (2008) in relation to structural reforms and investment. The target of 40% of 25-34 year olds with a degree by 2020 is a key policy direction (up from 29%), as is improved access to higher education for lower socio-economic areas, and financial assistance to international students.

These policy directions will impact on the operation of the University and extend the demand for campus services and accommodation.



Feature lighting at UNSW to support breast cancer research



Lowy Cancer Centre, UNSW Campus

Health

Health care trends indicate that more people are living longer, with a higher incidence of chronic illness placing increased demands on all levels of health care. Conversely, with evolving technology those admitted to hospital tend to be either day admissions or have more serious conditions requiring longer, more complex care and greater spatial needs. Increased demand is also evident for health care in specific areas such as mental health.

The Federal Government's National Health and Hospitals Reform Commission provided a national plan for health reform in 2009: *A Healthier Future for all Australians*. This report highlights the need for improved equity of health service delivery, adaptability through integration of multiple health disciplines, and development of a culture of innovation and continuous learning.

This suggests the increasing importance of providing a networked range of health-care options from education and prevention programs, community-based care, primary care, outpatient's services, allied health, and acute services. Many of these are conducive to a non-hospital setting, but will benefit from the synergies offered by locating near existing health services and hospitals. It is important to note that when promoting clustering of health services and facilities, appropriate and accessible public transport infrastructure is critical.

Research

The Centre envisages a strong future in research focusing on multi-disciplinary activities that benefit from the co-location of intellectual resources and infrastructure in medical, scientific, engineering, technology, environmental and energy research fields. Research activities will also increasingly concentrate on building international networks and partnering in research projects across institutional and geographical boundaries.

This integrated approach is already apparent with the formation of the Randwick Hub Governance Body, a collective of the University, area health service and research institutions forming a platform for research collaboration and coordinated strategic decision-making.

The recently opened Lowy Cancer Centre reflects this, being the first in Australia to bring together childhood and adult cancer research with over 400 specialists from multi-disciplinary backgrounds.

4.2 Scenarios for Growth and Change

Increasing demand for health and education services will have implications for the Centre in terms of additional employment floor space and related affordable housing requirements.

Employment

Health and Education

The Centre is a major hub for health, education and retail/town centre jobs, employing around 13,200 people which equates to almost 40% of Randwick City's jobs.

The University is the largest employer, with around 6400 staff (total headcount). The Health Campus employs 5,600, and other jobs employ around 1,200 people.

Health and education jobs have experienced strong growth in recent years increasing by 10% and 12% respectively from 2001 to 2006. Overall employment in Randwick City and the Sydney SD increased by 4% and 3% respectively over this period. Research suggests that this strong employment growth will continue.

The draft East Subregional Strategy recognizes the importance of concentrating jobs in Specialised Centres to strengthen their economic role and promote public transport use. The Strategy sets a target for 23% growth in jobs in the Centre by 2031 (or 0.8% per year). Using 2001 transport data, it notes jobs of 9,800 to increase by 2,300 jobs to 12,100.

Council research, using more recent data, notes Centre employment of 13,200 (2006) and estimates a higher employment growth rate of about 30% or 1.2% per year. Using these employment estimates, this equates to around 4,000 additional jobs by 2031.

Health and related services jobs are expected to slightly outpace those in education. Continued growth is also expected in support industries such as property and business services, retail, cafes and restaurants. The breakdown of this 32% growth is, broadly, 14% in health, 12% in education and 6% in support/other jobs.

While health and education jobs are primarily located at the two campuses, education jobs are also notable at Randwick TAFE and nearby schools and, in health, growth continues in support/related health care services located close to the Health Campus.

Other Employment Areas

The racecourse employs around 500 people, with additional casual employment on event days. Other horse racing activities throughout the Centre provide for up to 100 jobs. While significant in terms of economic and recreation/leisure input to the local economy, the jobs (and floor space needs) of the racing industry appear unlikely to increase, with additional racecourse related jobs likely to be offset by the proposed relocation of the Inglis stables from "Newmarket" in Randwick to Warwick farm.

The town centres of Randwick Junction, The Spot, Kensington and Kingsford have the potential to experience flow-on effects as a consequence of employment growth in the Centre. An increase in population of workers and students may lead to greater demand for supporting services such as retail and dining. Investigations of the role and expected growth of these town centres will be considered in future detailed town centre studies.

Floor Space Implications

Health, Education and Research

The unpredictability of growth trends in health, research and education mean that it is difficult to accurately quantify future requirements for floor space. Variables include grants funding and changes to conventional modes of teaching through the introduction of off campus online courses, night classes and summer semesters which can reduce the demand for additional floor space. Furthermore different types of health-related employment require different amounts of floor space per employee and it is difficult to predict the exact mix of health related employment that will occur in the Centre.

Notwithstanding this uncertainty, the amount of additional floor space required can be estimated using a conservative approach based on employment and current industry trends.

Current floor space provision is as follows:

- Existing floor space on the two major campuses totals 735,000 sqm.
- Conservative modelling estimates that the UNSW campus, with 500,000 sqm, will require an additional 100,000 to 150,000 sqm by 2031.
- The Randwick Health Campus, with 235,000 sqm, will require an additional area of 40,000 to 50,000 sqm by 2031.

The draft East Subregional Strategy notes a planned medical research facility of 75,000 sqm for the Centre. While this has not yet eventuated as a single development, the combination of the recent and planned research-related developments in the Centre total over 100,000sqm (70% of total additional on-campus floor space since 2006)

The health, education and research floor space demands should be accommodated where possible within the existing campuses, via redevelopment and consolidation on the campuses.

Demands related to health and medical uses outside the hospitals, while also difficult to estimate, will need to be accommodated in suitable surrounding areas and town centres, allowing for clustering of related activities and improved accessibility.

- Conservative research indicates that we need to plan for floor space of around 30,000 sqm in the areas outside the Health Campus.
- This will be influenced by the type of health use and the potential for some overlapping floor space demands between the Health campus and surrounds.

The floor space demands for town centres will be addressed separately in the town centres discussion paper.

Recent Development Activity

Recent development activity in the Centre indicates a higher growth rate than predicted in the draft East Subregional Strategy, with the majority of the additional floor space being for teaching and research, or pure research purposes. The increase in research projects possibly reflects the recent rise in funding through federal economic stimulus and other grant programs.

Approved medical, research, educational and residential projects in the last five years are illustrated on the following tables and map.

	Address	Medical, Research, Education	FSR	GFA (sqm)	Value (\$)
4	13-15 Silver St Randwick	Medical Centre	1.9:1	840	3.7M
5	164 Belmore Rd Randwick	Dav Surgerv/Medical Centre	2.2:1	993	1.2M
6	UNSW	Lowv Cancer Research Centre	NA	16.500	100M
8	Svdnev Children's Hospital	Hospital extension	NA	5.300	22.8M
9	UNSW	Solar research facility	NA	1.870	13.78M
10	Randwick Health Campus	Neuroscience research precinct	NA	61.000	128M +
17	2-2A Middle St Kingsford	Medical Centre	2.15:1		1.8M
7	UNSW	Wallace Wurth extension (proposal)	NA	20.800	30M+
14	UNSW	Tvree Energy Technologies building	NA	15.000	91.3M

	Address	Residential Use	FSR	Dwellings	Value (\$)
1	14 Frances St Randwick	Multi-unit housing		12 dwellings	
2	120 Alison Rd Randwick	Multi-unit housing	0.98:1	14 dwellings	
3	13-17 Botany St Randwick	Multi-unit housing	1.26:1	53 dwellings	
11	152-6 Barker St Kingsford	Multi-unit housing	1.39:1	18 dwellings	
12	UNSW	Student Housing	NA	1030 beds	85M
13	UNSW	Student Housing	NA	319 beds	28M
15	32-42 Barker St Kingsford	Barker Lodge	1.65:1	65 dwellings	13.5M
16	390 Anzac Pde Kingsford	Multi-unit housing	2.1:1	36 dwellings	
18	438 Anzac Pde Kingsford	Mixed use residential	2.99:1	74 dwellings	
19	305 Anzac Pde Kingsford	Boarding House		47 rooms	
20	66A Doncaster Ave	Multi-unit housing	0.98:1	82 dwellings	41.6M

Table: Recent Approvals for Residential Uses



Approved developments in the Centre 2005-2010

Housing

The draft East Subregional Strategy sets a target of an additional 8400 dwellings to be built across Randwick City from 2004 to 2031 (an increase of 16% from the total of 52,000 dwellings in 2004, or approximately 0.6% p.a.). This reflects Randwick's lower population growth rate compared to 1% for the Sydney SD.

While there is no specific dwelling target for the Centre itself, the Strategy notes that planning for additional housing is important in this accessible location, and should provide for a mix of housing types and more accommodation for students, older persons and key workers in walking distance to their jobs, study and services. This is consistent with Council's City Plan direction to focus housing growth in and around employment centres, town centres and good transport routes.

Estimated population growth, largely comprising students and key workers, and also employment growth, will add to the demand for more affordable housing options. Recent student accommodation projects on the UNSW campus have provided an additional 1,300 beds, and over 29,000 sqm of floor space.

The Centre currently has about 7,000 dwellings in a mix of housing types. Council research notes that under the current planning controls there is capacity for a further 900 dwellings (an 18% increase). However it is unlikely to be realised given the impact of high land costs on redevelopment feasibility and other market conditions.

To provide additional housing in the Centre, a number of scenarios will need to be investigated.

Scenarios for housing:

Infill housing and large site redevelopment

- Council research notes that a substantial change in planning controls would be required to make infill redevelopment viable across the residential areas. This Paper will instead focus on specific locations along key roads/public transport routes for providing additional housing potential. Large sites, such as the Inglis stables (Newmarket) site, can also provide some housing potential.

Town centres

- The nearby town centres of Kensington, Kingsford, Randwick and the Spot have varying capacity for additional dwellings. Planning for the town centres will be addressed primarily in the town centres discussion paper.

Student/key worker housing on the University, Health Campus and racecourse site

- These sites all currently provide housing for students and/or key workers related to their activities, and all sites have further potential to upgrade and intensify accommodation without compromising their primary uses. While UNSW has the most substantial provision (3100 beds) this provides for only 15% of students. Further student and key worker housing on or near these sites is critical.

Affordable/accessible housing and seniors housing

- The NSW Government State Environmental Planning Policy (Affordable Housing) introduced in July 2009 provides a range of measures to encourage new affordable rental housing in residential areas. Given the high need for affordable housing for student and key workers in the Centre, further measures specific to this Centre are needed.
- Two recent developments (1 built and 1 approved) provide 429 seniors housing beds within 600m of the Centre. Opportunities for additional seniors and adaptable housing should be investigated as part of a diverse residential mix within the Centre.

4.3 Key Messages

- Planning for the Centre should recognise employment growth of around 25-30% by 2031, (around 1% per year with some variability each year), equating to around 3,500- 4,000 additional jobs.
- Planning for the Centre should provide for additional floor space of 140,000 to 200,000 sqm for the health and education campuses by 2031, approximately equating to a 20 - 25% increase for each campus.
- Further growth in related services, particularly health care services, also needs to be accommodated, where suitable. There is an opportunity to plan for improved concentration and accessibility, with additional floor space estimated at around 30,000 sqm.
- Planning for additional housing should investigate a range of scenarios for a mix of housing types across the Centre including affordable student, key worker and seniors housing.

5 Vision and Strategies

The vision for the Randwick Specialised Centre capitalises on its many assets and strengthens its potential as a place of innovation, learning and enjoyment. Strategies follow which collectively establish a framework to protect and enhance these assets, and support the Centre's core health, education and research activities.

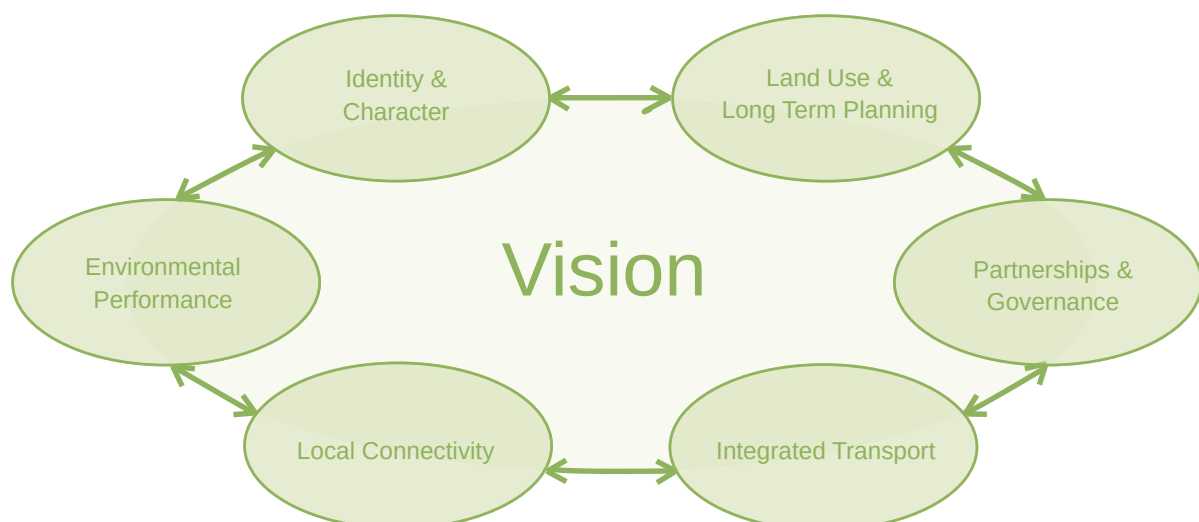
Vision

The Randwick Specialised Centre fosters collaboration, innovation and distinction in education, health and research. It is home to a diverse community, enjoying a range of work and lifestyle opportunities in a high quality, sustainable urban environment. It is an accessible, walkable Centre, connecting the community and beyond with efficient, integrated transport.

Strategies

A broad range of strategies in this Section explain how the vision for the Centre can be realised. Section 6 then illustrates how these strategies can come together to create an integrated and attractive Centre, with strong linkages and enhanced public spaces. Section 7 suggests a range of delivery mechanisms to implement the strategies which will require actions of key stakeholders, landowners and different levels of government.

Strategies are articulated through 6 key elements:



5.1 Identity and Character

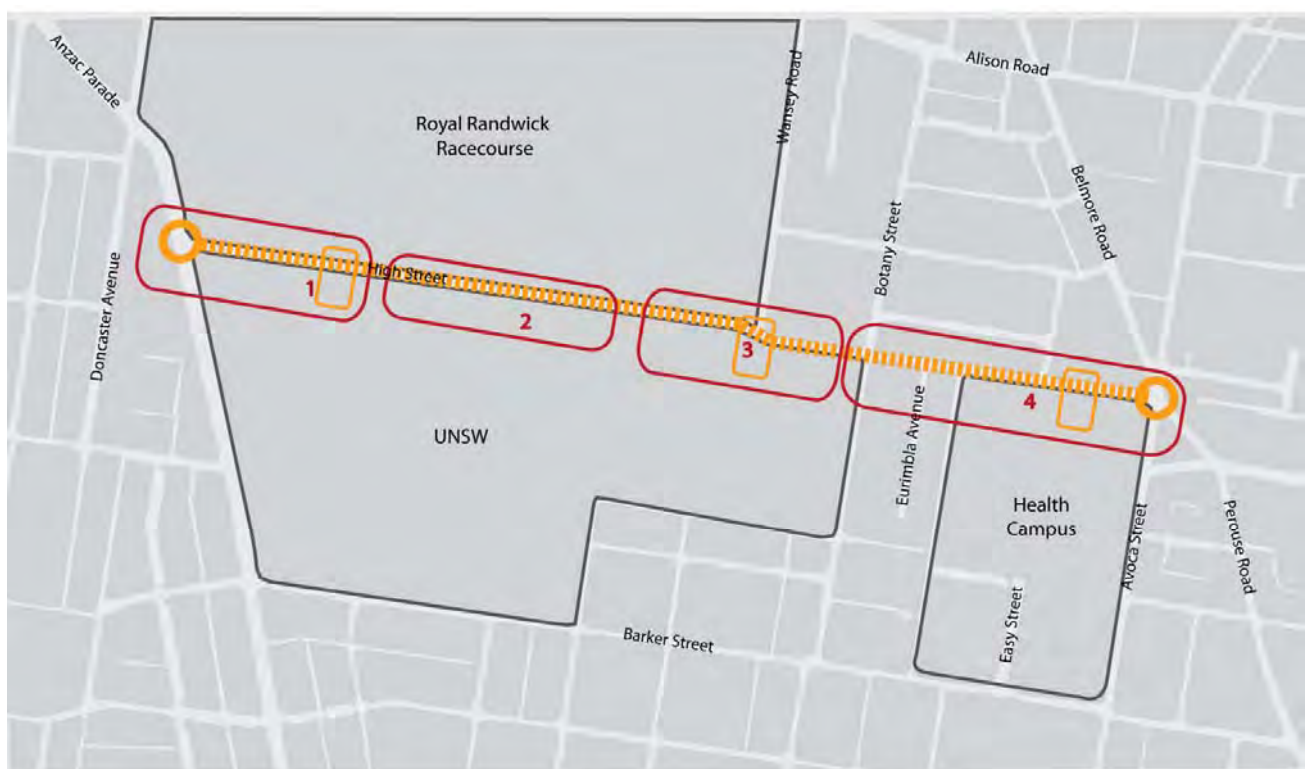
Strengthen High Street as the Centre's spine. Express the desired character of different areas within the Centre and define gateways that help provide a cohesive identity and sense of place.

Strategies

5.1.1 Define and plan for different areas in the Centre by aspects such as topography, synergies of uses and street typology

5.1.2 Reinforce the roles of key streets in the Centre:

- Identify High Street as the main spine of the Centre
- Identify opportunities for better defining/highlighting key nodes along the transport corridors of Anzac Parade and Avoca Street
- Consolidate Belmore Road as a retail/shopping street
- Express Barker Street as a secondary focus of the Centre.



Legend



Create a future built form that identifies and enhances the Centre as a place for learning and innovation.

Strategies

5.1.3 Built form should respond to the desired role and character of key streets and locations in the Centre:

- Specify street edge heights on institutional sites with increased height/scale internally
- Create active, permeable street frontage to High Street (east)
- Recognise a transition to higher density/scale of development in adjacent key institutions
- Reinforce buildings fronting Anzac Parade as a formal boulevard
- Provide for a transition in the height/scale of development on key streets adjacent to the institutions (e.g. High Street, Barker Street and Avoca Street)
- Respect the scale of surrounding heritage items/areas
- Extend the linked courtyard typology and structure of UNSW to the Health Campus and other future development on large sites.

5.1.4 Recognise, preserve and respond to heritage and institutional landmarks

5.1.5 Future built form should protect residential amenity and enhance public spaces:

- Respond to sensitive residential interfaces and provide a suitable transition in scale
- Maximise solar access to public spaces
- Preserve and enhance important public views and view corridors along key streets.



Legend

- | | | | |
|--|-----------------------|--|--------------------------------------|
| | Institution core | | Active frontage to High Street spine |
| | Institution perimeter | | Gateway |
| | | | Formal address to major corridor |

5.2 Land Use and Long Term Planning

Create a land use planning framework that addresses the long term growth needs in health, education and research

Strategies

5.2.1 Facilitate growth of the Centre's core uses within the walking catchment of the Centre:

- Cluster health/education and research uses in and adjacent to the institutions in a planned rather than ad hoc manner
- Require design excellence and competitions for major development
- Retain flexibility in the planning controls for institutional sites in terms of height, and floor space ratio/controls (e.g. FSR)
- Strengthen the linkages between health, research and educational uses and surrounding town centres
- Recognise and enhance the commercial/retail primacy of the commercial centres.

5.2.2 Allow for suitable complementary retail and commercial uses outside town centres:

- On institutions/major sites, ancillary to their primary uses only
- Neighbourhood shops and commercial uses in surrounding locations, that serve the needs of the local community only.



Legend

	Town Centre		UNSW
	Health Campus		Transition areas

Provide for a diversity of housing forms in and around the Centre, focussing on affordable options for students and key workers to enhance opportunities to live, work and learn together.

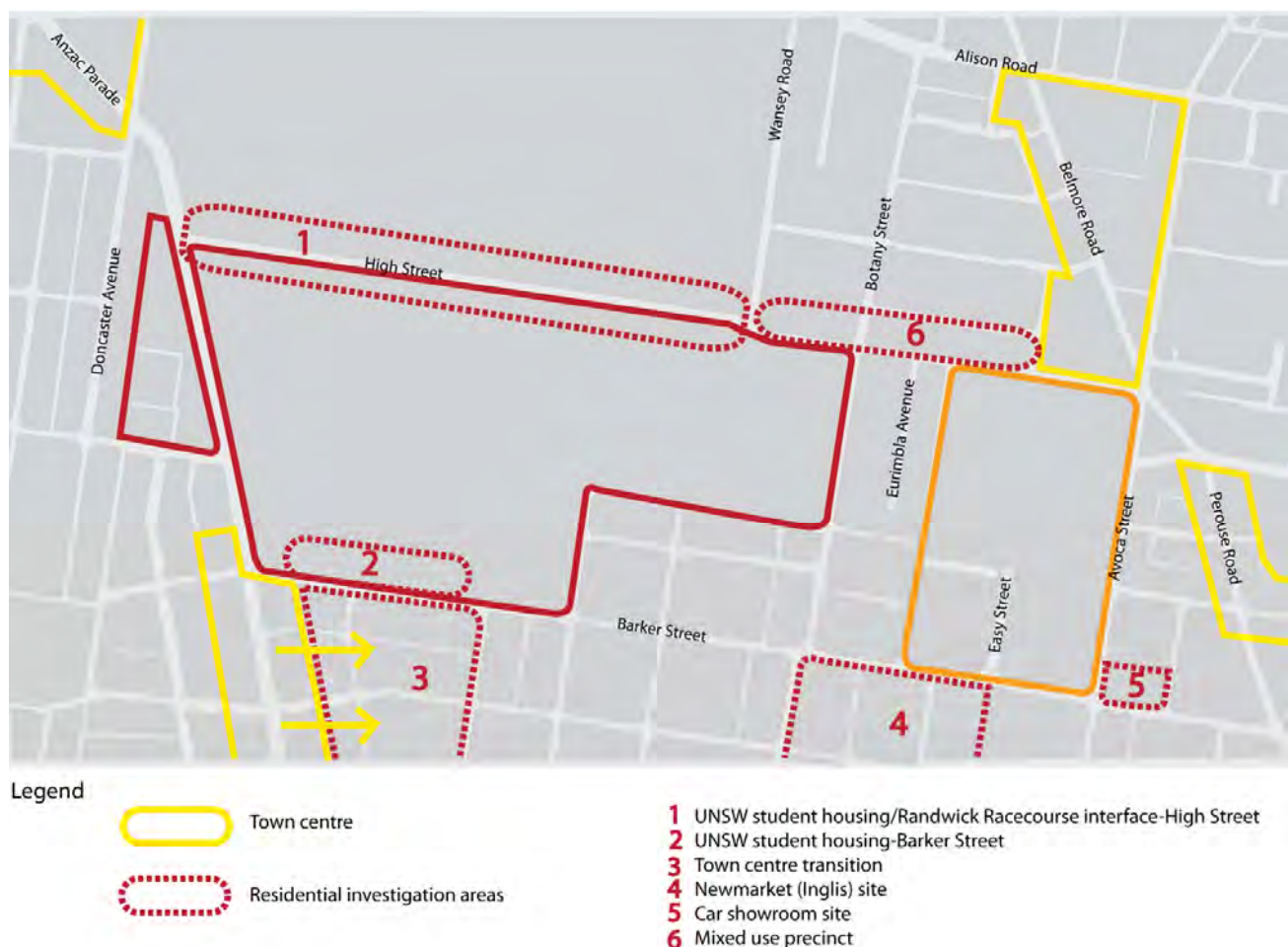
Strategies

5.2.3 Require major new residential development to incorporate a mix of dwelling forms addressing the housing needs of the Centre:

- Identify locations for additional dwellings on the institution sites themselves and adjacent suitable sites within the Centre
- Monitor opportunities for and delivery of additional dwellings, including student housing and boarding houses within 5km of the Centre.

5.2.4 Provide for opportunities for affordable housing for students and key workers:

- Investigate incentives beyond current state and local planning provisions in locations close to institutions, such as reduced car parking provision, floor space incentives
- All new residential accommodation on the UNSW and Health campuses to be affordable, providing accommodation for remote patients, carers, staff and/or students.



Plan for and enhance public access to recreation opportunities and open space within the Centre, for the current and future needs of the community, including residents, workers and students.

Strategies

5.2.5 Preserve all existing publically accessible recreational and open spaces, and plan for new recreation/open space in line with growth in the Centre:

- Identify new public space requirements to improve the quality and connectivity of the Centre, including potential land dedications/setbacks for footpath widening, mid-block connections and through-site links
- Require high quality public space which provides active/passive recreation opportunities with any large site redevelopment involving a change of use or intensification such as on the Racecourse and Newmarket sites
- Plan and enhance publically accessible open space on the Racecourse site, as part of development scenarios for its High Street frontages
- Plan for connected, courtyard-style spaces on the key institutional sites, as is already occurring on the UNSW site
- Require all new development to consider innovative options for recreation e.g. roof-top gardens and indoor facilities.



Legend



Enhance open space/landscape connections

Enhance links to regional open space



Existing recreation facility

Existing significant open space/landscape elements

5.3 Partnerships and Community

Create effective governance for the Centre by bringing stakeholders together to provide a platform for joint advocacy and further collaboration.

Strategies

- 5.3.1** Establish a Network body representing the key stakeholders, with a formalised structure and procedures to:
- Strengthen and communicate the Centre's identity and eminence in learning, research and innovation
 - Investigate synergies and opportunities to share physical and knowledge resources
 - Jointly advocate for improvements to public transport, parking and infrastructure serving the Centre
 - Identify a range of community benefits to create attractive, safe neighbourhoods.

Possible Members	Key Responsibilities	Starting Conditions
• UNSW • SEASIAHS/Randwick Health Campus • AJC • POWMRI/other research bodies • Prince of Wales Private Hospital • NSW Government agencies • Randwick City Council • Local business representative • Community representative • Other members as determined by the Network Body	• Strengthen partnerships and synergies between key stakeholders • Advocate for mass (rail) transit to the Centre, and other infrastructure delivery • Advocate and contribute to a precinct-wide approach to parking management • Reinforce the Centre's role and identity • Facilitate knowledge and learning exchange • Coordinate input to state and local government decision-making processes • Strengthen leverage for government funding and private sector investment • Strengthen the research and economic competitiveness of the Centre • Coordinate planning and management of assets on key sites • Coordinate existing agreements between members • Coordinate best practice environmental performance measures • Provide a range of cultural activities, awards and other community programs • Coordinate monitoring of key issues, such as travel patterns	• Identify membership, facilitation and administrative needs • Identify funding sources and ongoing budget requirements • Establish a clear management structure, and transparent rules of engagement • Establish reporting and decision-making procedures • Identify objectives and directions linked to prioritised actions and performance measures • Identify information/data/ knowledge and resources gaps required for ongoing operation and decision-making

5.4 Integrated Transport

Seek regional public transport improvements, critical to the continuing growth and success of the Centre. The Centre has outgrown bus-based public transport, and without higher capacity mass transit the potential of the Centre and its institutions is constrained.

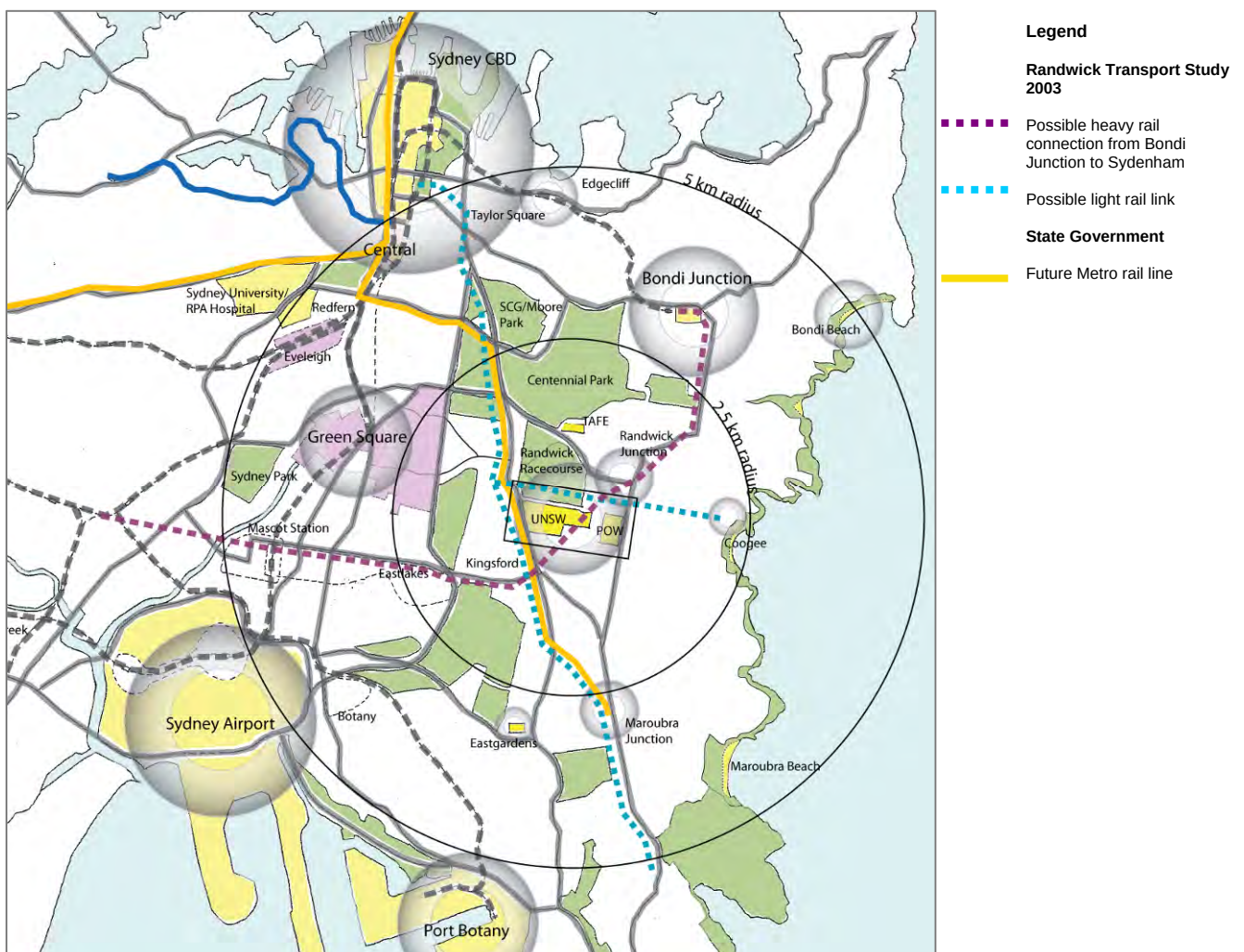
Strategies

5.4.1 Provide interim and short term improvements to bus capacity and route integration:

- Advocate for urgent increases in bus capacity, especially to UNSW, including reducing congestion at Central station
- Advocate for increased public transport services to Green Square/Redfern to the north-east and south-east subregional catchments.

5.4.2 Advocate for prioritised planning and commitment to rail-based mass transit to the Centre:

- Plan and advocate for high volume mass transit serving the Centre, including options for station locations and commitment to design and delivery of rail-based public transport services
- Monitor travel through regular surveys, and consider future mode share targets for the Centre based on introduction of rail-based mass transit
- Continue to engage with neighbouring councils and major trip generators on opportunities/investigations into rail-based mass transit.



Focus on local sustainable transport measures to manage the impacts of vehicular traffic, reduce reliance on cars, and balance needs of pedestrians and cyclists and vehicles to provide a safe, accessible local transport network

Strategies

5.4.3 Encourage walking, cycling and public transport use as the preferred way of getting around:

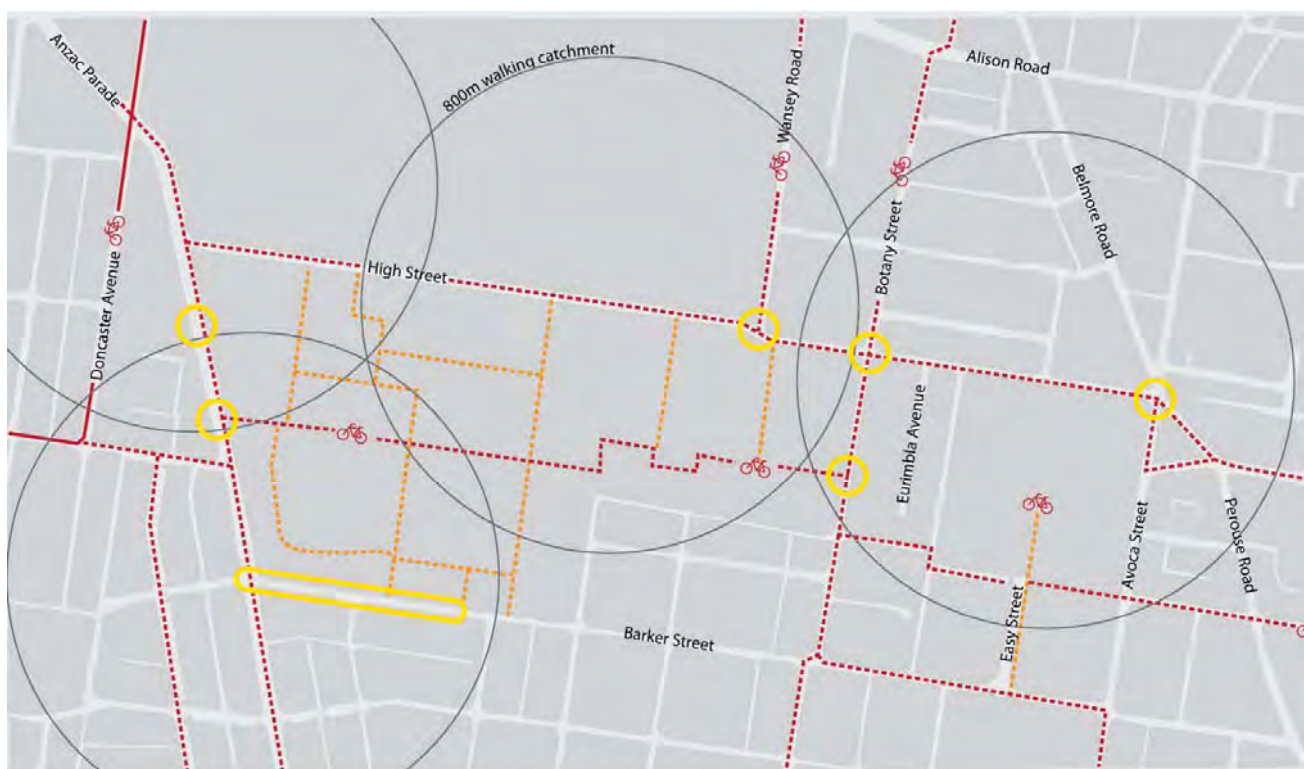
- Prioritise design and delivery of cycle paths in the Centre, including a dedicated cycle path on High Street
- Develop a coordinated Centre Green Travel Plan, investigating travel demand management measures such as car share/car pool, promotion/support of active transport, better public transport information.
- Require on-site bicycle parking/facilities in all new developments.

5.4.4 Investigate a precinct-wide parking approach to on and off-street parking management and supply:

- Review parking controls to reflect accessibility of the Centre to public transport and live/work opportunities
- Continue reviews of on-street parking and resident parking schemes, including investigating unrestricted parking locations, and excluding student housing/boarding houses from residential parking schemes
- Investigate shared parking provision to meet demands of additional commercial/health/education and business services and new affordable housing (only) including parking stations on the institutional sites and use of “Go Get” type schemes (this would not be parking for commuters, students, but for health/education/visitors to provide more affordable housing without encouraging more car travel).

5.4.5 Investigate key intersections and high pedestrian areas to manage conflicting uses:

- Consider options for traffic calming, adjusting bus stop locations and safer pedestrian crossings.



Legend

- Existing cycle strategy route
- Additional cycle routes
- 40kmh high pedestrian zone
- Intersection investigation area

5.5 Local Connectivity

Create a legible, safe, permeable and attractive network of streets and spaces in the public domain that supports public life, encourages interaction and enhances the experience of being in the Centre

Strategies

5.5.1 Increase the permeability and connectivity within the Centre and major institutions:

- Identify new and strengthened public through-site links and mid block connections, and encourage more open, active edges to major sites and institutions
- Preserve and enhance significant trees, gardens and green spaces, and provide green connections between existing local public spaces and to regional open space destinations.

5.5.2 Strengthen the legibility of the Centre to enhance way-finding and reflect its desired future character:

- Provide a distinct hierarchy of major and minor entries to institutions, clearly visible and accessible from the public domain
- Incorporate CPTED (crime prevention through environmental design) principles into design of major entries, perimeters of major sites and along pedestrian desire lines
- Develop a cohesive public domain design for the Centre's streets, including paving, street trees, lighting and urban elements.

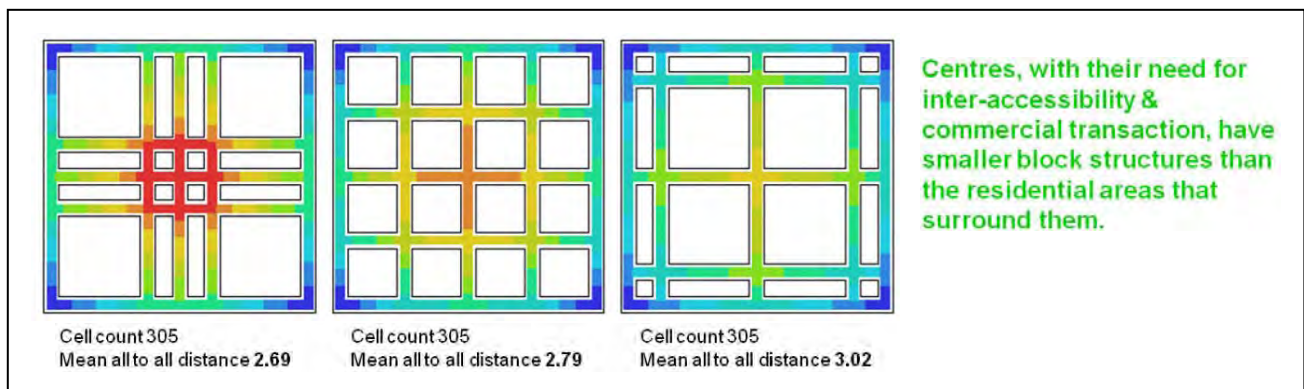
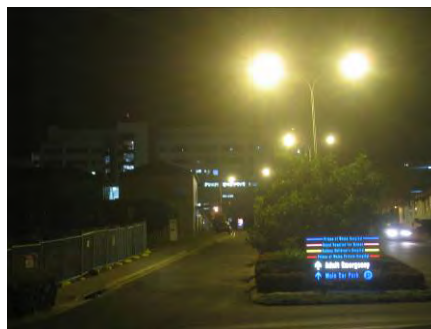


Diagram showing the higher connectivity, and reduced travel distances of a centre with smaller block sizes (Source: Space Syntax, 2008)



Images showing the high pedestrian use within the centre, and important role of the public domain both day and night

5.6 Environmental Performance

Demonstrate and showcase best practice environmental performance standards in sustainable building and infrastructure design, development and use of energy efficient technologies, and innovation in environmental management practices

Strategies

5.6.1 Investigate the extension and application of Environmental Management Plans across the Centre:

- Consider opportunities to implement innovative sustainable practices and technologies in infrastructure, energy and water cycle management, and the potential to collaborate on sustainable projects, including operational aspects such as waste management and sustainable purchasing opportunities
- Monitor evolution of comprehensive precinct-wide sustainable ratings tools, and encourage their application to the whole Centre.

5.6.2 Express and promote environmental leadership and best practice in physical development of the Centre:

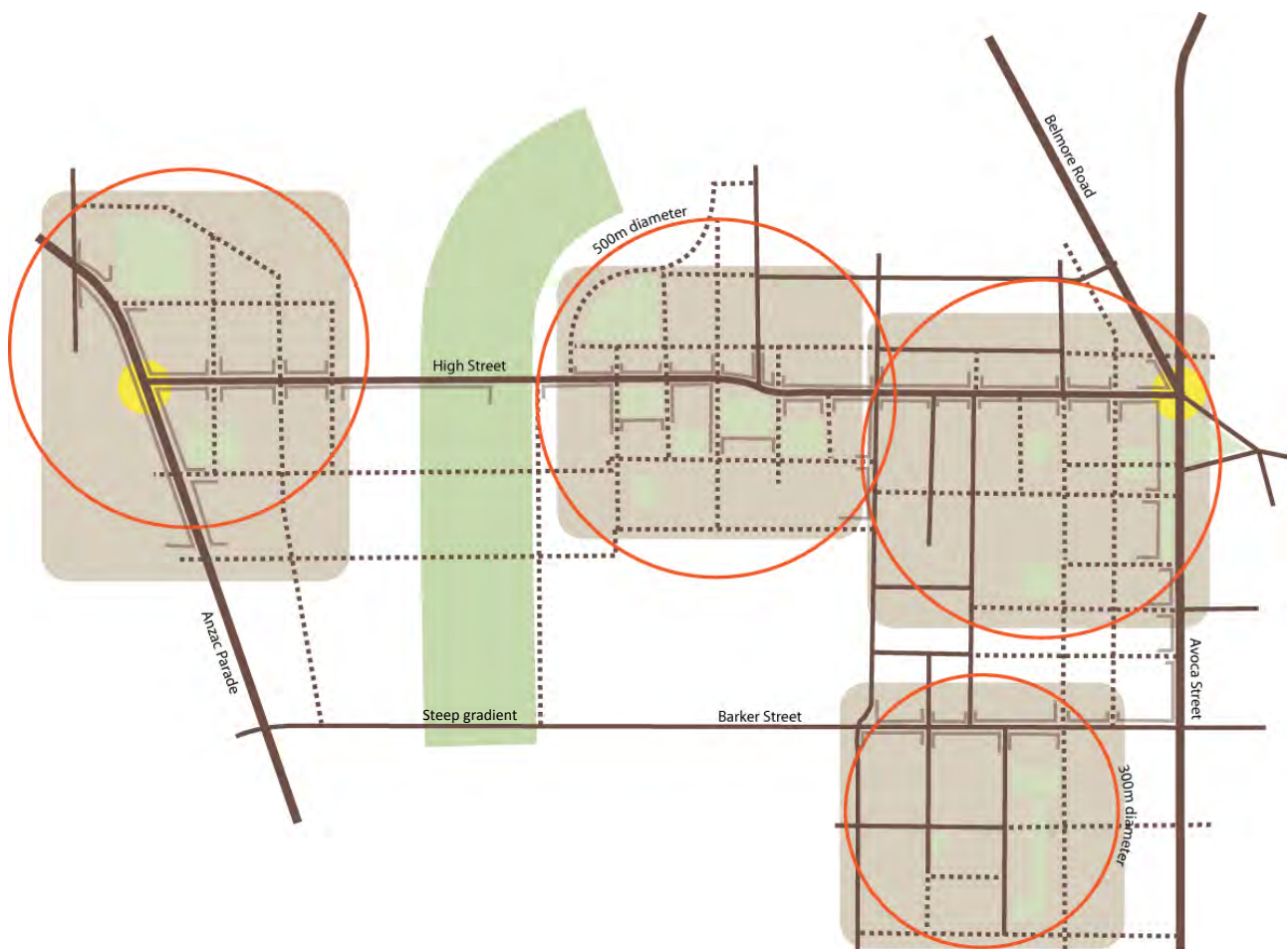
- Achieve design and construction of sustainability excellence in new buildings, with a best practice target of 5 Greenstar or equivalent ratings for commercial/institutional buildings, and sustainable measures beyond BASIX for residential development
- Showcase innovative projects and technologies to the broad community at visible, accessible locations within the Centre such as High Street.



Images of the proposed Tyree Energy Technologies Building, UNSW

6 Illustrations

This Section illustrates how the strategies can combine to influence physical outcomes for the Centre and the community. It focuses on strategies which reinforce High Street as the Centre's major spine, linking health, education, residential and town centre activities with a pleasant and walkable network of streets and public spaces.



This diagram shows High Street as the Centre's spine, with gateways at its eastern intersection with Avoca Street, and its western intersection with Anzac Parade.

A steep gradient separates the western and eastern ends of High Street. High Street itself contains 3 walkable and permeable clusters (500m in diameter) which break down the boundaries between the institutions and their surrounds, to create an interconnected network of streets and publicly accessible spaces. A secondary cluster is located at Barker Street, showing a 300m diameter area centred on the evolving neighbourhood centre on Barker Street.

These clusters are characterised by streets with short block lengths, buildings with active ground level uses oriented towards the key streets. Buildings create a strong, vibrant edge to High Street, with clustered related uses to encourage walking, and connected public spaces to promote interaction.



1 2 RACECOURSE

Preserve views across racecourse from Alison Road and south-western boundaries of the site. Preserve the iconic landscape and traditional built form character of the Spectator Precinct.



3 WESTERN GATEWAY

Strengthen the western gateway with a generous public domain and buildings addressing the street with active frontages.



4 ANZAC PARADE

Opportunity to integrate with Kensington town centre on Anzac Parade



5 6 7 PUBLIC DOMAIN

Improve the quality, capacity and safety of the footpaths on Anzac Parade and High Street to cater for high pedestrian use and bus waiting areas. Building design at bus stops to provide passive surveillance and generous waiting areas



8 HIGH STREET (EAST)

Preserve the canopied streetscape and enhance the public domain with active uses, widened footpaths and a dedicated cycle path



9 UNSW CAMPUS

Retain the formal spine of University Mall, and enhance the campus' public role. Strengthen entries and open the campus interface with its surrounds



POOLED PARKING

P Existing off-street parking

P Potential new pooled parking locations

Explore pooled parking provision for health, education and related uses, to reduce on-site parking requirements and benefit from complementary demand

11 12 CENTRAL AREA

Open up views into racecourse, and activate the racecourse's High Street frontage. Opportunity to integrate with surrounding uses



13 HIGH STREET (EAST)

Buildings should activate and orient towards the street. Improve public domain and waiting areas at bus stops



14 EASTERN GATEWAY

Strengthen the eastern gateway to the Centre



15 16 HIGH STREET (EAST)

Open High Street frontage of the Health Campus and link to circulation network. Reinforce the cluster of health and medical related uses at the east end. Link the forecourt of the Health Campus' Avoca Street frontage to High Street



17 18 19 HEALTH CAMPUS

Link forecourt of Health Campus to High Street, and create publicly accessible landscaped open space. Protect and enhance existing landscaped areas. Provide on-campus accommodation for patients, staff and carers on the Health Campus to replace the Vera Adderley Bld



20 21 HERITAGE

Celebrate the rich heritage along Avoca Street, including Health Campus, Newmarket site and Struggletown



10 BARKER ST

Recognise the emerging neighbourhood centre, and intensified health/medical and research activities



7 Implementation

This Section considers how the strategies identified in Section 5 can be implemented through actions, with different delivery mechanisms and primary points of responsibility. It also identifies funding options, and suggests a timeframe for implementation.

Delivery Mechanisms

Strategies are often delivered through adopted statutory and local plans, policies and guidelines, such as the Comprehensive LEP/DCP and Public Domain Strategy, or they can be other delivery mechanisms, such as the Network body, or other governance group. Further information on the recommendations for the Comprehensive LEP/DCP and Public Domain Strategy for the Centre is included in Section 9.

Timeframes

Timeframes identify the broad period (defined below) in which the actions for each strategy can be implemented. The physical and planning outcomes themselves will emerge over a longer period.

- Already established/in place or in progress
- Short term 1-2 years
- Medium term 2-4 years
- Long term 5-10+ years
- Ongoing

Funding Options

Actions for the Council to implement using Council's budget and resources are subject to confirmation through its four-yearly Management Planning and annual Operational Planning processes. Actual available funds may vary for these and other actions funded by developer contributions or external grants.

Monitoring and Review

The Actions and their implementation will be monitored by the Council, in collaboration with the Network Body. It is intended they will be reviewed and updated to coordinate with Council's four-yearly Management Planning Process, and reviews of the Randwick City Plan.

Identity and Character

Strategy	Action / Delivery Mechanism	By	Funding	Time
5.1.1	Develop land use zones, planning provisions and design principles/controls for character areas Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short
5.1.2	Develop design guidelines for buildings addressing key streets, and a coordinated public domain design for the Centre's streets - Comprehensive DCP - Public Domain Strategy	Randwick City Council	Council budget/resources	Short
5.1.3	Ensure built form guidelines for institutions, major sites and buildings fronting key streets respond to desired future character of the Centre and its precincts Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short
5.1.4	Review significance of heritage items/features, investigate possible new heritage items, and develop guidelines for future development of/around heritage items Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Review in progress
5.1.5	Ensure design controls for building bulk, scale, alignment and orientation address impacts on surrounding residences and public space Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short

Land Use and Long Term Planning

Strategy	Action/Delivery Mechanism	By	Funding	Time
5.2.1	Develop land use zones and planning provisions/controls to facilitate growth in health, education and research Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short
5.2.2	Identify neighbourhood centre and ancillary retail/commercial uses in planning controls Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short
5.2.3	Identify and monitor locations for additional dwellings, and plan for a diverse housing mix - Comprehensive LEP/DCP - Future town centre reviews	Randwick City Council	Council budget/resources	Short - medium

Strategy	Action/Delivery Mechanism	By	Funding	Time
	Development monitor			
5.2.4	Develop planning provisions and incentives to encourage affordable housing: Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short
5.2.5	Develop planning provisions/controls for open space/recreation provision and protection Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short

Partnerships and Governance

Strategy	Action/Delivery Mechanism	By	Funding	Time
5.3.1	Approach key stakeholders to establish a Network Body. Approach state government for funding and support Network body	RCC and state govt	Seek govt funding	Short
5.3.2	Seek Memorandum of Understanding with major landowners to advocate public transport improvements.	RCC	N/A	In progress

Integrated Transport

Strategy	Action/Delivery Mechanism	By	Funding	Time
5.4.1	Advocate for improved bus capacity and route integration Network Body	Network body	Seek govt funding	Short
5.4.2	Advocate for rail-based public transport commitment and delivery - Network Body - Eastern Councils/mayors working group	Network body/ Eastern councils	Network body/ councils	Short
5.4.3	Develop design for High Street Cycle path as a priority, and Centre-wide travel demand management measures - Public Domain Strategy - Centre Green Travel Plan	Randwick Council/ Network body	Council budget/resources/ S94 funds	Short
5.4.4	Review parking DCP, and coordinate with on-street parking policies	Randwick City	Council budget/	In progress

Strategy	Action/Delivery Mechanism	By	Funding	Time
	• Parking DCP • Council on-street parking policies	Council	resources	
5.4.5	Investigate key intersections and high pedestrian areas • Traffic Study	Randwick City Council	Council budget/resources	In progress

Local Connectivity

Strategy	Action/Delivery Mechanism	By	Funding	Time
5.5.1	Include new open space land dedications/setbacks and significant landscape features in planning provisions/controls • Comprehensive LEP/DCP	Randwick City Council	Council budget/resources	Short
5.5.2	Develop design principles and controls to foster a safe, legible built environment and public domain • Comprehensive LEP/DCP • Public Domain Strategy	Randwick City Council	Council budget/resources/S94 funds	Short

Environmental Performance

Strategy	Action/Delivery Mechanism	By	Funding	Time
5.6.1	Review existing environmental policies on major sites and discuss potential for a Centre-wide approach • Network Body	Network Body	Seek govt funding	Short
5.6.2	Incorporate sustainability principles into design controls and management of sites and public domain • Network Body • Public Domain Strategy • Comprehensive LEP/DCP	Network Body/ Randwick City Council	Seek govt funding/S94 funds/ Council budget/resources	Short